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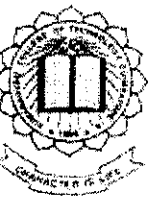

TECHNICAL ANALYSIS ON HINDUSTAN UNILEVER LTD LISTED UNDER BOMBAY STOCK EXCHANGE – A DESCRIPTIVE STUDY

P-2130

By

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Department of Management Studies
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Coimbatore

A PROJECT REPORT
Submitted to the

FACULTY OF MANAGEMENT SCIENCES

In partial fulfillment of the requirements
For the award of the degree

Of

MASTER OF BUSINESS ADMINESTRATION

August, 2007

DECLARATION

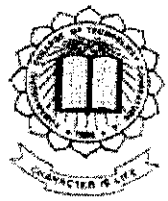
I, hereby declare that this project report entitled as "Technical analysis on Hindustan Unilever Ltd listed under Bombay Stock Exchange – A descriptive study", has undertaken for academic purpose submitted to Anna University in partial fulfillment of requirement for the award of the degree of Master of Business Administration. The project report is the record of the original work done by me under the guidance of Mr. A.Senthil Kumar during the academic year 2007-2008.

I, also declare hereby, that the information given in this report is correct to the best of my knowledge and belief.

Place: Coimbatore

Date: 29/10/2007

(C.V.NAVEEN KUMAR)



DEPARTMENT OF MANAGEMENT STUDIES

KUMARAGURU COLLEGE OF TECHNOLOGY

COIMBATORE

BONAFIDE CERTIFICATE

Certified that this project report titled "TECHNICAL ANALYSIS ON HINDUSTAN UNILEVER LTD LISTED UNDER BOMBAY STOCK EXCHANGE – A DESCRIPTIVE STUDY" is the bonafide work of Mr. C.V.NAVEEN KUMAR (71206631034) who carried out the research under ny supervision. Certified further, that to the best of my knowledge the work eported herein does not form part of any other project report or dissertation on ne basis of which a degree or award was conferred on an earlier occasion on this r any other candidate.

aculty Guide

Director

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valuated and vice-voce conducted on 29/10/2007

aminer I

Examiner II

iabulls

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August 16, 2007

TO WHOM SO EVER IT MAY CONCERN

is to certify that **Mr.C.V.Naveen Kumar (06MBA34)** doing his MBA in KCT Business School,
u College of Technology, had successfully undergone a Project between June 19 to August 01,
d **Technical Analysis on Hindustan Unilever Limited.**

tenure his performance was very good

n all the best.

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ACKNOWLEDGEMENT

It is inevitable that thoughts and of other people tend to drift into the subconscious when one feels to acknowledge helping derived from others. I acknowledge to all those who have helped me in the preparation of this project work.

I wish to express my deep gratitude to the principal Prof. Joseph V. Thanikal for his guidance and encouragement to complete my project work.

I wish to express my sincere thanks to Prof.S.V.Devanathan– Director, KCT Business School, for his continuous encouragement throughout my project.

I wish to express my sincere thanks to Mr. A.Senthil Kumar, Lecturer, KCT Business School, for his continuous encouragement throughout my project.

I like to extend my heartfelt thanks to Mr. L. Anto Vinosh, Regional Manager, Indiabulls Securities Limited, Coimbatore, who guided me throughout the Industrial plant training to visit the various departments successfully and for granting permission to do my project work.

I extend my sincere gratitude to Mr.D.Sivakumar, Relationship manager, Indiabulls Securities Limited, for his guidance to complete my project successfully.

EXECUTIVE SUMMARY

The methods used to analyze securities and make investment decisions fall into two very broad categories: fundamental analysis and technical analysis. Fundamental analysis involves analyzing the characteristics of a company in order to estimate its value. Technical analysis takes a completely different approach; it doesn't care one bit about the "value" of a company or a commodity.

The valuation of investment depends both on rational and irrational factors. The psychological expectations of investors have long influenced the irrationality existing in the stock market. The technical analysis captures the psychological expectations of the investor through analyses of the price behavior. The investment advice could also be generated using the above premises. Hence the researcher considers the price behavior of the scrip in a problem to be studied upon.

The objectives of the study is to use the tools and techniques for analyzing the stocks Hindustan Unilever Ltd. in the BSE FMCG (fast moving consumer goods) and to analyze the stock returns performance and interpret the future movement of the stock market value using indicators in the retail market.

This study comes under analytical research, here totally 10 indicators have been selected for having different views in the stock. Depending upon the each characteristics of the indicator the future movements are interpreted.

The researcher found that it will be a wise suggestion to buy the stock in the month of July and sell it in later period else investor can go for short selling in the end of September 2006 and in mid of February 2007 as the fall of price in the stock is realized.

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INTRODUCTION

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INTRODUCTION

1.1 BACKGROUND

"Technical analysis is the study of market action, primarily through the use of charts, for the purpose of forecasting future price trends."In its purest form, technical analysis considers only the actual price behavior of the market or instrument, based on the premise that price reflects all relevant factors before an investor becomes aware of them through other channels.

Technical analysts (or technicians) identify non-random price patterns and trends in financial markets and attempt to exploit those patterns. While technicians use various methods and tools, the study of price charts is primary. Technicians especially search for archetypal patterns, such as the well-known head and shoulders reversal pattern, and also study such indicators as price, volume, and moving averages of the price. Many technical analysts also follow indicators of investor psychology (market sentiment).

Technicians seek to forecast price movements such that large gains from successful trades exceed more numerous but smaller losing trades, producing positive returns in the long run through proper risk control and money management.

There are several schools of technical analysis. Adherents of different schools (for example, candlestick charting, Dow Theory, and Elliott wave theory) may ignore the other approaches, yet many traders combine elements from more than one school. Technical analysts use judgment gained from experience to decide which pattern a particular instrument reflects at a given time, and what the interpretation of that pattern should be. Technical analysts may disagree among themselves over the interpretation of a given chart.

Technical analysis is frequently contrasted with fundamental analysis, the

markets. Pure technical analysis holds that prices already reflect all such influences before investors are aware of them, hence the study of price action alone. Some traders use technical or fundamental analysis exclusively, while others use both types to make trading decisions.

The principles of technical analysis derive from the observation of financial markets over hundreds of years. The oldest known example of technical analysis was a method used by Japanaese traders as early as the 18th century, which evolved into the use of candlestick techniques, and is today a main charting tool.

Dow Theory is based on the collected writings of Dow Jones co-founder and editor Charles Dow, and inspired the use and development of modern technical analysis from the end of the 19th century. Modern technical analysis considers Dow Theory its cornerstone.

Many more technical tools and theories have been developed and enhanced in recent decades, with an increasing emphasis on computer-assisted techniques.

1.2 REVIEW OF LITERATURE:

Below is the review most cited literature on technical analysis.

Lo, Andrew W., Harry Mamaysky and Jiang Wang. (1992) [1] observed that Technical analysis, also known as charting,' has been part of financial practice for many decades, but this discipline has not received the same level of academic scrutiny and acceptance as more traditional approaches such as fundamental analysis. One of the main obstacles is the highly subjective nature of technical analysis the presence of geometric shapes in historical price charts is often in the eyes of the beholder. In this paper, we propose a systematic and automatic approach to technical pattern recognition using nonparametric kernel regression, and apply this method to a large number of U.S. stocks from 1962 to 1996 to evaluate the effectiveness to

[1] Lo, Andrew W., Harry Mamaysky and Jiang Wang (2000). "Foundations of

technical analysis. By comparing the unconditional empirical distribution of daily stock returns to the conditional distribution conditioned on specific technical indicators such as head-and-shoulders or double-bottoms we find that over the 31-year sample period, several technical indicators do provide incremental information and may have some practical value.

Osler, Karen (July 2000)[2] observed that "Support" and "resistance" levels—points at which an exchange rate trend may be interrupted and reversed—are widely used for short-term exchange rate forecasting. Nevertheless, the levels' ability to predict intraday trend interruptions has never been rigorously evaluated. This article undertakes such an analysis, using support and resistance levels provided to customers by six firms active in the foreign exchange market. The author offers strong evidence that the levels help to predict intraday trend interruptions. However, the levels' predictive power is found to vary across the exchange rates and firms examined.

Neely, Christopher J., and Paul A. Weller (2001)[3] observed that the genetic programming techniques developed in Neely, Weller and Dittmar (1996) to show that technical trading rules can make use of information about intervention by the Federal Reserve to improve their out-of-sample profitability. A considerable part of the improvement in performance results from more efficient use of the information in the past exchange rate series. They show that much of the profitability of the rules is accounted for by returns from t - 1 to t, when intervention takes place at date t. This supports the view that intervention is intended to check or reverse strong and predictable trends in the market. However, the rules interpret intervention as a signal that an existing trend will continue, rather than undergo a reversal.

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[2] Osler, Karen (July 2000). "Support for Resistance: Technical Analysis and Intraday Exchange Rates," FRBNY Economic Policy Review

[3] Neely, Christopher J., and Paul A. Weller (2001). "Technical analysis and Central

Prechter, Robert R., Jr., and Wayne D. Parker (2007) [4] observed that "Neoclassical economics does not offer a useful model of finance, because economic and financial behavior have different motivational dynamics. The law of supply and demandoperates among rational valuers to produce equilibrium in the marketplace for utilitarian goods and services. The efficient market hypothesis (EMH) is a related model applied to financial markets. The socionomic theory of finance (STF) posits that contextual differences between economics and finance produce different behavior, so that in finance the law of supply and demand is irrelevant, and EMH is inappropriate. In finance, uncertainty about valuations by other homogeneous agents induces unconscious, non-rational herding, which follows endogenously regulated fluctuations in social mood, which in turn determine financial fluctuations. This dynamic produces non-mean-reverting dynamism in financial markets, not equilibrium"

Griffioen.[5], observed that the efficient markets hypothesis states that in highly competitive and developed markets it is impossible to derive a trading strategy that can generate persistent excess profits after correction for risk and transaction costs. Andrew Lo, in the introduction of Paul Cootner's "The Random Character of Stock Prices" (2000 reprint, p.xi), suggests even to extend the definition of efficient markets so that profits accrue only to those who acquire and maintain a competitive advantage. Then, those profits may simply be the fair reward for unusual skill, extraordinary effort or breakthroughs in financial technology. The goal of this thesis is to test the weak form of the efficient markets hypothesis by applying a broad range of technical trading strategies to a large number of different data sets. In particular, we focus on the question whether, after correcting for transaction costs, risk and data snooping, technical trading rules have statistically significant forecasting power and can generate economically significant profits.

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[4] Prechter, Robert R., Jr., and Wayne D. Parker (2007). "The Financial/Economic Dichotomy in Social Behavioral Dynamics: The Socionomic Perspective," *Journal of Behavioral Finance*, vol. 8 no. 2 pp. 84-108

David M. Cutler, James M. Poterba, Lawrence H. Summers.[6], observed that the fraction of the variance in aggregate stock returns that can be attributed to various kinds of mews. First, we consider macroeconomic news and show that it is difficult to explain more than one third of the return variance from this source. Second, to explore the possibility that the stock market responds to information that is omitted from our political and world events. The relatively small market responses to such news, aling with evidence that large market moves often occur on days without any identifiable major news releases, casts doubt on the view that stock price movements ate fully explicable by news about future cash followed and discount rates.

Eugene Fama[7], observed that the theoretical and empirical literature on the efficient markets model. After a discussion of the theory, empirical work concerned with the adjustment of security prices to three relevant information subsets is considered. First, weak form tests, in which the information set is just historical prices. Are discussed. Then semi-strong form tests, in which the concern is whether prices efficiently adjust to other information relevant for price formation are reviewed. Then shall conclude that, with but a few exceptions, the efficient markets model stands up well.

B.Egeli et al[8], observed that prediction of stock market returns is an important issue in finance. Artificial neural networks have been used in stock market prediction during the last decade. Studies were performed for the prediction of stock index values as will as daily direction of change in the index. In some applications it has been specified that artificial neural networks have limitations for learning the data patterns or that they may perform inconsistently and unpredictable because of the complex financial data used.

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[6] David M. Cutler, James M. Poterba, Lawrence H. Summers, "What Moves Stock Prices?", NBER Working Paper #2538 (March 1988), pp 13-14.

[7] Eugene Fama, "*Efficient Capital Markets: A Review of Theory and Empirical Work,*" The Journal of Finance, volume 25, issue 2 (May 1970), pp. 383-417.

R. Lawrence [9], observed that the application of neural networks in forecasting stock market prices. With their ability to discover patterns in nonlinear and chaotic systems, neural networks offer the ability to predict market directions more accurately than current techniques. Common market analysis techniques such as technical analysis, fundamental analysis, and regression are discussed and compared with neural network performance. Also, the Efficient Market Hypothesis (EMH) is presented and contrasted with chaos theory and neural networks. This paper refutes the EMH based on previous neural network work. Finally, future directions for applying neural networks to the financial markets are discussed.

Skabar, Cloete[10], observed that the efficient markets hypothesis asserts that the price of an asset reflects all of the information that can be obtained from past prices of the asset. A direct corollary of this hypothesis is that stock prices follow a random walk, and that any profits derived from timing the market are due entirely to chance. In the absence of any ability to predict the market, the most appropriate strategy—according to proponents of the efficient markets hypothesis— is to buy and hold. In this paper we describe a methodology by which neural networks can be trained indirectly, using a genetic algorithm based weight optimization procedure, to determine buy and sell points for financial commodities traded on a stock exchange. In order to test the significance of the returns achieved using this methodology, we compare the returns on four financial price series with returns achieved on random walk data derived from each of these series using a bootstrapping procedure. These bootstrapped samples contain exactly the same distribution of daily returns as the original series, but lack any serial dependence present in the original. Our results indicate that on some price series the return achieved is significantly greater than that which can be achieved on the bootstrapped samples. This lends support to the claim that some financial time series are not entirely random, and that—contrary to the predictions of the efficient markets hypothesis— a trading strategy based solely on historical price data can be used to achieve returns better than those achieved using a buy-and-hold strategy.

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[9] R. Lawrence. Using Neural Networks to Forecast Stock Market Prices

1.3 STATEMENT OF THE PROBLEM

The valuation of investment depends both on rational and irrational factors. The psychological expectations of investors have long influenced the irrationality existing in the stock market. The technical analysis captures the psychological expectations of the investor through analyses of the price behavior. The investment advice could also be generated using the above premises. Hence the researcher consider the price behavior of the scrip in a problem to be studied upon

1.4 OBJECTIVES OF THE STUDY

- To use the tools and techniques for analyzing the stocks Hindustan Unilever Ltd. In the BSE FMCG (fast moving consumer goods).
- To analyze the stock returns performance and interpret the future movement of the stock market value using indicators in the retail market.

1.5 SCOPE OF THE STUDY:

An investor evaluates an company based on the value created by it for him. The behavior of the stock returns will enable the investors to make appropriate investment decision. The fluctuations in shareholders wealth maximization may be due to volume traded in the market including the psychology of other investors.

This study helps the investor to analyze how the stock moves and predict the future.

1.6 RESEARCH METHODOLOGY

1.6.1 TYPE OF STUDY

There are three types of research design, they are:

- Exploratory research,
- Descriptive,
- Analytical research design.

This study comes under analytical research.

Meaning:

Under this research, the researcher goes into the researching stage with a specific topic about which he have not made any kind of conclusions. Often it is called as question. The researcher surveys the information and views already out there--both before and during research. That will require reading, plus evaluation of the resources handled by the researcher. By the end of the research the researcher will be able to contribute his own thoughts to the academic discussion by drawing some conclusions about the topic he has chosen. Hence this study comes under analytical research.

1.6.2. METHOD OF DATA COLLECTION:

Secondary data is used in this study. The data is collected from the website www.bseindia.com

1.6.3. TOOLS FOR ANALYSIS:

Here indicators are to be considered as tools and 10 such tools are selected on the basis of diversified view for analyzing the performance of Hindustan Unilever Ltd. The list of tools with its description is given in the below table

Table 1.1

TOOLS	DESCRIPTION
Accumulation/Distribution Line	A technical indicator that attempts to quantify the flow of money into and out of a given stock.
Bollinger Bands	A technical indicator that shows a stock's volatility and direction.
Commodity Channel Index(CCI)	A technical indicator that attempts to display cyclical turns in a stock or commodity.
Moving Average Convergence/Divergence (MACD)	A popular technical indicator system that combines several moving averages to better show a stock's trend and momentum.
On Balance Volume (OBV)	One of the first technical indicators that attempted to measure money flow into and out of stocks.
Price By Volume	A technical overlay that resembles a horizontal histogram and shows which price levels a stock has been heavily trading at.
Rate Of Change (ROC)	A technical indicator that shows the speed at which a stock's price is changing.
Relative Strength Index (RSI)	A popular technical indicator that tries to quantify a stock's current direction and strength.
Stochastic Oscillator	A popular technical indicator that tracks a stock's up and down movements closely. This article describes all three types of Stochastic oscillators.
Williams %R	A popular technical indicator that uses

1.6.4 PERIOD OF STUDY

- The period of study is for one year, focuses from June 2006 to June 2007

1.7 LIMITATIONS

- One of the limitations of technical analysis results is that they are generally prepared with the benefit of hindsight.
- There are numerous other factors related to the markets in general or to the implementation of any specific trading model which cannot be fully accounted for the prediction of stock value.
- The technical analysis alone cannot predict the stock value. Therefore it must have the support of fundamental analysis of that company.

1.8. CHAPTER SCHEME:

The FIRST CHAPTER is introductory in nature. This chapter tells about the objectives and scope of the study and its limitations.

The SECOND CHAPTER conveys about the history of the INDIABULLS SECURITIES LTD., highlights the origin and development, objectives, financial and working of the company, development programmes and plan of the company.

The THIRD CHAPTER gives the macro and micro scenario with respect to the capital market.

The FOURTH CHAPTER presents the data analysis and interpretation.

The FIFTH CHAPTER gives summary of findings and concludes the study with relevant suggestions.

CHAPTER 2

ORGANIZATION PROFILE

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ORGANIZATION PROFILE

2.1 HISTORY OF THE ORGANIZATION

Indiabulls Financial Services Limited was incorporated on January 10, 2000 as M/s Orbis Infotech Private Limited at New Delhi under the Companies Act, 1956 with Registration No. 55 - 103183. The name of Company was changed to M/s. Indiabulls Financial Services Private Limited on March 16, 2001 due to change in the main objects of the Company from Infotech business to Investment & Financial Services business. It became a Public Limited Company on February 27, 2004 and the name of Company was changed to M/s. Indiabulls Financial Services Limited. The Company was promoted by three engineers from IIT Delhi, and has attracted more than Rs.700 million as investments from venture capital, private equity and institutional investors such as LNM India Internet Ventures Ltd., Transatlantic Corporation Ltd., Farallon Capital Partners, L.P., R R Capital Partners L.P., and Infinity Technology Trustee Pvt. Ltd. and has developed significant relationships with large commercial banks such as Citibank, HDFC Bank, Union Bank, ICICI Bank, ABN Amro Bank, Standard Chartered Bank, Lord Krishna Bank and IL&FS. The Company and its subsidiaries have facilities from the above mentioned banks and financial institutions aggregating to Rs. 1760 million. The Company headquarters are co-located in Mumbai and Delhi, allowing it to access the two most important regions for Indian financial markets, the western region including Mumbai, rest of Maharashtra and Gujarat; and the Northern region, including the National Capital Territory of Delhi, nearby cities, parts of Haryana, Uttar Pradesh and Punjab; and access the highly skilled and educated workforce in these cities. The Marketing and Sales efforts are headquartered out of Mumbai, with a regional headquarter in Delhi; and its back office, risk management, internal finances etc. are headquartered out of Delhi, allowing The Company to scale these processes efficiently for the nationwide network.

Indiabulls Financial Services Ltd fixes an issue price of Rs 19 per share for its initial public offering (IPO), which was oversubscribed 18.5 times.Indiabulls Financial Services IPO closed on September 10, with an impressive response from all categories of investors. The book was finally subscribed 18.5 times with over 1.3 lakh bids. The institutional portion was subscribed more than 12 times, the retail portion 25 times and the non-institutional portion 24 times.

2.2 MANAGEMENT

Promoters and Their Background

The Company was established by three engineers from IIT Delhi, and has attracted significant amount of investments from venture, private equity and institutional investors. The details are as follows:

Sameer Gehlaut, Chairman, CEO & Whole Time Director:

Sameer, aged 30 years, graduated with a Mechanical Engineering Degree from the Indian Institute of Technology, Delhi. He was one of the three engineers selected by Halliburton to work for its international services business in the year 1995 and worked in many countries during his tenure there. He gained experience, learned international best practices and imbibed professional work culture at Halliburton, which he brought to Indiabulls Group as one of the founders of their Company. He has gained extensive experience in the Financial Services Sector and developed in-depth knowledge and strong understanding of all aspects of the Securities Industry and Financial Services Business. Under his leadership, Indiabulls Group has grown from one office, 310 clients, and 8 employees in FY 2000 to 32,359 clients, 70 offices and 606 employees as on April 30, 2004.

Rajiv Rattan, President, CFO & Whole Time Director:

Rajiv, aged 31 years, an NTSE Scholar, graduated with an Electrical Engineering Degree from the Indian Institute of Technology, Delhi. He was the

He gained extensive experience in international best practices, process management, and risk management, which he brought to Indiabulls Group as one of the founders of their Company. He has gained extensive experience in the Financial Services Sector, and has developed understanding of risk management, efficient processes and operational excellence.

Saurabh Mittal, Director:

Saurabh, aged 30 years, graduated with an Electrical Engineering Degree from the Indian Institute of Technology, Delhi and was declared the best graduating student in 1995. He was one of the engineers selected by Schlumberger to work for its international services business in the year 1995 and worked in many countries during his tenure there. He graduated with a Masters of Business Administration from the Harvard Business School where he graduated as a Baker Scholar. He worked at Citigroup Asset Management as an investment analyst, and is currently a senior portfolio manager at Farallon Capital Partners L. P. He has developed an understanding of international financial markets, and extensive experience in the Securities industry. Saurabh is responsible for strategic decision-making and is the director of their Company.

Key Managerial Personnel

Tejinderpal Singh Miglani, Chief Technology Officer

Tejinder, 29 years is an NTSE Scholar, graduated with a Computer Sciences Degree from Indian Institute of Technology, Delhi with high academic honours. He graduated with a management degree from the Indian Institute of Management, Calcutta. He worked at Dresdner Kleinwort Bensonas as senior engineer and project manager and was responsible for creating financial transaction systems for its international trading operations, with cutting edge technology and processes. He also worked at ICICI Ltd., and managed the development of financial systems.

Gagan Banga, Head, Online Sales & Insurance -

Gagan, 28 years graduated as a Master of Business Administration. He worked at NIIT as Regional Sales Head and gained extensive experience in high value-add sales, managing and developing large sales team in a competitive industry and strong management skills. Gagan is responsible for Online trading Sales team with 298 Relationship managers, and is also responsible for launching third party financial products such as mutual funds and insurance products in the network.

Divyesh B. Shah, Head, Offline Sales

Divyesh, 35 years has over 12 years of experience in the Indian Financial markets. He has worked at leading securities firms and gained extensive experience managing and developing large brokerage sales team and cultivating deep client relationships. He joined on August 5, 2000 and has brought his extensive sales and management skills to Indiabulls Securities Limited and is a key member of the management team. He is directly responsible for a team of over 86 relationship managers, and heads the west and South India regions.

Kavi Kumar, Head Compliance

Kavi, 35 years has over fourteen years of experience in secondary markets. He joined on October 1, 1999. Over the years Kavi has gained vast experience and knowledge of the regulatory compliance required in retail financial services in general and more specifically in capital market operations. Kavi is responsible for all reporting and compliance required by the SEBI, NSE and BSE and interacts with them regularly.

Suresh Jain, Vice President

Suresh, 39 years is a qualified Chartered Accountant with over 15 years of experience at senior levels in professional organizations like Abbott Laboratories (India) Ltd. He has extensive experience in the field of finance, risk management and taxes. Suresh has joined on March 18, 2004 as Vice President Finance. Suresh has implemented the industry best practices and has developed multi level processes and reporting structure to enhance the efficiency and profitability of the business.

Amit Jain, Company Secretary

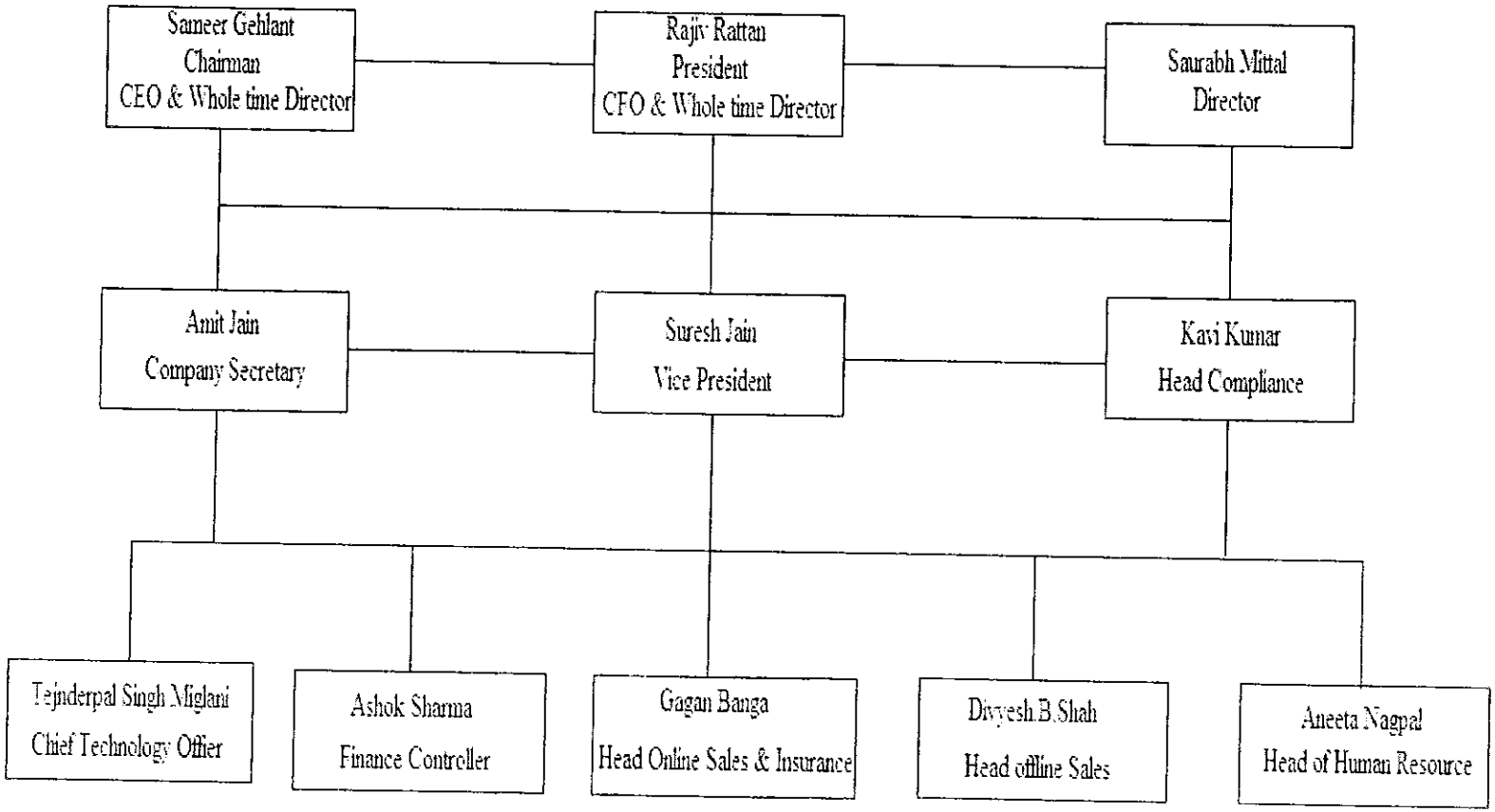
Amit Jain, is a qualified Company Secretary and a law graduate. He has more than five years of experience in the financial services and manufacturing industries. He has gained extensive knowledge of the statutory regulations governing private and public corporations. He is the Company Secretary and heads the secretarial and legal division for IFSL and its subsidiaries.

Ashok Sharma, Finance Controller

Ashok, 35 years is a qualified Chartered Accountant with over twelve years experience in the financial services industry. He has gained extensive experience in back-office procedures and financial accounting and management of Securities firms. He joined them on January 31, 2000 and is a key member of their senior management team and heads the finance, risk management and back office operations. He has designed and implemented procedures in the back office and finance department, and manages a large team of professionals. Ashok is responsible for their operational efficiency account management of 32,359 clients. ISL pays a fixed gross monthly salary Rs.150,000 pm. Ashok has 2,00,000 Employee Stock Options in their Company.

Aneeta Nagpal, Head of Human Resources

Dr. Aneeta Nagpal, 42 years Ph.D. in Organizational Behavior. She started her career as UGC Research Fellow and taught at postgraduate level in the areas of industrial and experimental Psychology. She guided and counseled UGC fellowship and civil services aspirants and also undertook various consulting assignments for industrial clients in the area of Organizational Behavior. An experienced Human Resources consultant and researcher for the past eighteen years, she is credited with design, development and delivery of various HR related training programmes and organizational development oriented interventions for highly reputed corporate clients. Before joining them, she was working as managing director of Mega Mind, an HR Consultancy organization. Aneeta who joined on January 1, 2004 heads the human resource department and is responsible for developing HR policies and processes along with ensuring recruitments


Sameer Gehlant
Chairman
CEO & Whole time Director
Rajiv Rattan
President
CFO & Whole time Director
Saurabh Mittal
Director
Amit Jain
Company Secretary
Suresh Jain
Vice President
Kavi Kumar
Head Compliance
Tejinderpal Singh Miglani
Chief Technology Offier
Ashok Sharma
Finance Controller
Gagan Banga
Head Online Sales & Insurance
Divyesh B.Shah
Head offline Sales
Aneeta Nagpal
Head of Human Resource

2.4 PRODUCTS PROFILE AND MARKET POTENTIAL

The Company has following three subsidiaries:

1. Indiabulls Securities Ltd. (ISL)
2. Indiabulls Insurance Advisors Pvt. Ltd.(IIAPL)
3. Indiabulls Commodities Pvt. Ltd. (ICPL)

ISL, IIAPL and ICPL provide financial products and services to its customers. ISL provides equity & debt broking, depository services, derivatives broking services and research services to its clients. IIAPL has a tie up with Birla Sun Life and sells its insurance products to its customers in the capacity of a corporate agent of Birla Sun Life. ICPL has been incorporated to provide services in the commodities market. ICPL is a member of NCDEX.

Indiabulls Securities Ltd.

Indiabulls Securities Limited was incorporated as GPF Securities Private Limited on June 9, 1995. The name of the company was changed to Orbis Securities Private Limited on December 15, 1995 to change the profile of the company and subsequently due to the conversion of the company into a public limited company; the name was further changed to Orbis Securities Limited on January 5, 2004. The name of the company was again changed to Indiabulls Securities Limited on February 16, 2004 so as to capitalize on the brand image of the term "Indiabulls" in the company name. ISL is a corporate member of capital market & derivative segment of The National Stock Exchange of India Ltd. At present, ISL accounts for approximately 3% of the total daily turnover of the Exchange with 32,359 client relationships and 70 branches spread across the country as of April 30, 2004

Indiabulls Commodities Pvt. Ltd.

Indiabulls Commodities Pvt. Ltd. was incorporated on October 30, 2003 and is a member of National Commodities Derivatives Exchange (NCDEX). NCDEX has been promoted by the NSE for derivatives trading on commodities in India. Being a member of NCDEX, ICPL will function as an intermediary for commodity's derivatives. The Company commenced its activities from March 30

Indiabulls Insurance Advisors Private Limited ("IIAPL")

IIAPL is engaged in the agency business for life insurance business. IIAPL is licensed under section 42 of the Insurance Act, 1938

1. The Insurance Act, 1938 ("Insurance Act") embodies the law relating to the business of insurance in India. Under section 40 of the Insurance Act no person shall pay or contract to pay any remuneration or reward whether by way of commission or otherwise for soliciting or procuring insurance business in India to any person except an insurance agent. Under the Insurance Act an "insurance agent" means an insurance agent licensed under section 42 of the Act. Under section 42 of the Act, Insurance Regulatory & Development Authority established under The Insurance Regulatory and Development Authority Act, 1991 is authorized in the manner determined by the regulations made by the Authority to issue to any person making an application in the manner determined by the regulations, a licence to act as an insurance agent for the purpose of soliciting or procuring insurance business.

2. The Insurance Regulatory and Development Authority Act, 1991 provides for the establishment of an Authority to protect the interests of holders of insurance policies, to regulate, promote and ensure orderly growth of the insurance industry and for matters connected therewith or incidental thereto.

3. The Insurance Regulatory and Development Authority ("IRDA") (Licensing of Corporate Agents) Regulations, 2002 provide, inter-alia, for issue or renewal of license to corporate agents. As per Regulation 3 a person desiring to obtain or renew a license to act as a corporate agent or a composite corporate agent shall make an application to a designated person by the IRDA if its insurance executives possess the necessary qualifications and meet the criteria including having undergone necessary training as prescribed under the said Regulation and the Insurance Act, 1938.

2.5 COMPETITIVE STRENGTH OF THE COMPANY

Indiabulls is essentially engaged in providing financial services in equity, derivatives and debt markets. The company's other financial services include distributorship of insurance products, mutual fund advisory, depository for listed shares, equity research and other non banking financial services. The company operates through a network of 75 branches spread across the country. The graphs below indicate the breakup of the revenues from its online and offline brokerage businesses.

Brokerage business (both online as well as offline) accounts for nearly all of the company's revenues from operations. While the online segment contributes 35% of brokerage revenues, offline contribution stands at 65%. As far as size of the business is concerned, the overall revenues from the brokerage business were Rs 695 m in FY04, while the overall revenues from operations were to the tune of Rs 696 m.

Online trading potential is huge: Online trading accounted for 5% of overall market in FY04 as compared to an estimated 3% in FY03. Indiabulls currently has almost 20% market share of volumes in the Internet trading space. The table below indicates the growth in volumes of the Internet trading segment on the NSE over the last few years. The growth is indicative of the potential of this segment, which they believe is likely to be robust going forward as well. This is primarily driven by increasing penetration of computers, significant decline in Internet charges, convenience of usage and cost advantage. To put things in perspective, the offline brokerage on equities is around 1.0% as compared to 0.5% in the online trading space.

Advisory services: Indiabulls is also into mutual fund and insurance advisory businesses. Though this field is extremely competitive and requires significant research skills, these are highly profitable business segments. Though these businesses currently account for an insignificant portion of overall revenues, considering the penetration levels of mutual funds and insurance in the country, prospects are promising.

Aggressive growth plans: Indiabulls has set aggressive targets to expand its business in the offline space. This includes investments in upgradation of branch network and opening another 75 branches by the end of calendar year 2006 (150 in total). The company has also indicated its intent to acquire strategic stake in other companies towards growing the business inorganically

2.6 FUTURE PLANS IF ANY

The objects of the Issue are to achieve benefits of listing and to raise capital. They believe that listing will enhance their brand value and provide capital to promote new business activities, upgrade existing fixed infrastructure, open new offices and make investments & strategic acquisitions. The net proceeds of this Issue before deducting underwriting and management fees, brokerage, fees to various advisors and all other Issue related expenses payable by us is estimated at Rs. 550 million. The main objects clause and objects incidental or ancillary to the main objects clause of the Memorandum of Association of their Company enables us to undertake their existing activities and the new activities for which the funds are being raised by us, through the present Issue. Further, we confirm that Their registration under the NBFC regulations allows them to carry out the activities currently being carried out and under the NBFC regulations; they are entitled to carry on Asset Management Activities through their subsidiaries.

Promote new Business Activities

They propose to enter into retail finance business through IFSL with a otal outlay of Rs 200 million. They also plan to enter into Asset Management usiness by deploying a total sum of Rs 200 million, either through setting up heir own Asset Management Company or by acquiring strategic stake in an xisting Asset Management Company.

Upgrade Fixed infrastructure and Open new branches

They intend to invest Rs 150 million in upgrading their technology systems and installing a Virtual Private Network (VPN) to connect their offices. They believe that investments in technology would enable them to low their operating costs, improve client response time and allow them to handle more business. They plan to deploy Rs 200 million towards increasing their geographical footprint through physical presence in new locations. They believe that opening offices in new locations will increase their reach to new customers. They intend to open 75 more branch offices by the end of calendar year 2006.

Investments and Acquisitions

They propose to make investments of Rs 250 million in one of their subsidiary companies, ISL. By way of this capital infusion of Rs 250 million in their subsidiary, ISL they will be able to strengthen its balance sheet, increase its working capital and enhance its capability to undertake more business in equities, derivatives and wholesale debt markets. They plan to deploy up to Rs 320 million for the purposes of acquisitions of strategic stake in other companies. They plan to focus on growing the business through the inorganic route to enter new markets and gain significant capabilities and immediate scale. The investment through inorganic route will be in the form of acquisitions of full or partial stakes in other companies. The Board of Directors looks at various opportunities periodically from the perspective of maximizing shareholder value and long-term growth potential of their Company.

2.7 ABOUT HINDUSTAN UNILEVER LIMITED

Hindustan Unilever Limited (HUL) is India's largest Fast Moving Consumer Goods company, touching the lives of two out of three Indians with over 20 distinct categories in Home & Personal Care Products and Foods & Beverages. They endow the company with a scale of combined volumes of about 4 million tonnes and sales of Rs.10,000 crores.

HUL is also one of the country's largest exporters; it has been recognised as a Golden Super Star Trading House by the Government of India.

The mission that inspires HUL's over 15,000 employees, including over 1,300 managers, is to "add vitality to life." HUL meets everyday needs for nutrition, hygiene, and personal care with brands that help people feel good, look good and get more out of life. It is a mission HUL shares with its parent company, Unilever, which holds 51.55% of the equity. The rest of the shareholding is distributed among 380,000 individual shareholders and financial institutions.

2.7.1 Product Profile

Home & Personal care

Personal Wash

- Lux
- Hamam
- Pears
- Lifebuoy
- Breeze
- Rexona
- Liril
- Dove

Laundry

- Surf Excel
- Rin
- Wheel

Skin Care

- Fair & Lovely
- Pond's
- Vaseline

Hair Care

Oral Care

Deodorants

- Axe
- Rexona

Colour Cosmetics

- Lakme

Ayurvedic personal and health care

- Ayush

Foods

Tea

- Brooke Bond
- Lipton

Coffee

- Brooke Bond Bru

Foods

- Kissan
- Annapurna
- Knorr

Ice cream

- Kwality Wall's

2.7.2 HUL's Exports

HUL's Exports geography comprises, at present, countries in Europe, Asia, Middle East, Africa, Australia, North America etc

2.7.3 Financial Performance

10-YEAR RECORD

Rs. Lakhs	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Profit & Loss Account										
Sales*	8342,75	10215,24	10917,69	11392,14	11781,30	10951,61	11096,02	10888,38	11975,53	13035,06
Other Income	183,87	244,74	318,98	345,07	381,79	384,54	459,83	318,83	304,79	354,51
Interest	(33,89)	(29,28)	(22,39)	(13,15)	(7,74)	(9,18)	(66,76)	(129,98)	(19,19)	(10,73)
Profit Before Taxation @	850,25	1130,44	1367,94	1665,09	1943,37	2197,12	2244,95	1505,32	1604,47	1861,68
Profit After Taxation @	580,25	837,44	1069,94	1310,09	1540,95	1731,32	1804,34	1199,28	1354,51	1539,67
EPS of Re. 1 (adjusted for bonus)	2.81	3.67	4.66	5.95	7.46	8.04	8.05	5.44	6.40	8.41
DPS of Re. 1 (adjusted for bonus)	1.70	2.20	2.90	3.50	5.00	5.16	5.50	5.00	5.00	6.00
Balance Sheet										
Fixed Assets	794,09	1053,77	1087,17	1203,47	1320,06	1322,34	1369,47	1517,56	1483,53	1511,01
Investments	531,57	697,51	1006,11	1769,74	1635,93	2364,74	2574,93	2229,56	2014,20	2413,93
Net Deferred Tax	—	—	—	—	246,48	269,92	267,44	226,00	220,14	224,55
Net Current Assets	122,42	226,06	187,25	(373,38)	(75,04)	(239,83)	(368,81)	(409,30)	(1355,31)	(1353,40)
	1448,08	1977,34	2280,53	2599,83	3127,43	3717,17	3843,03	3563,82	2362,56	2796,09
Share Capital	199,17	219,57	220,06	220,06	220,12	220,12	220,12	220,12	220,12	220,68
Reserves & Surplus	1062,33	1493,46	1893,20	2268,16	2823,57	3438,75	1918,60	1872,59	2085,50	2502,81
Loan Funds	186,58	264,31	177,27	111,61	83,74	58,30	1704,30	1471,11	56,94	72,60
	1448,08	1977,34	2280,53	2599,83	3127,43	3717,17	3843,03	3563,82	2362,56	2796,09

@ Before Exceptional Items

* Sales before Excise Duty Charged

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
L Share Price on BSE (Rs. per Share of Re. 1)*	138.35	166.35	225.00	206.35	223.65	181.75	204.70	143.50	197.25	216.55
irket Capitalisation (Rs. Crores)	27,555	36,525	49,513	45,409	49,231	40,008	45,059	31,587	43,419	47,788
orts (Rs. Crores)**	1,152	1,664	1,803	1,934	1,845	1,411	1,416	1,459	1,461	1,369
ntribution to Exchequer (Rs. Crores)	1,640	2,062	2,341	2,524	2,478	2,609	2,999	2,674	2,638	2,813
onomic Value Addition (EVA) (Rs. Crores)	365	548	694	858	1,080	1,236	1,429	887	1,014	1,125

Based on year-end closing prices quoted in the Bombay Stock Exchange, adjusted for bonus shares.

Includes exports made by subsidiaries.

Source: www.hll.com/investor/financial_trends.pdf

2.7.4 Listing

The Company's shares are listed and traded at the Stock Exchanges in Ahmedabad, Bangalore, Chennai, Cochin, Delhi, Kolkata, Guwahati and Mumbai, as well as the National Stock Exchange.

Stock Codes

Name of the Stock Exchange	**Stock Code**
The Stock Exchange, Mumbai	500696
National Stock Exchange	HINDLEVER
Madras Stock Exchange	HLV
Cochin Stock Exchange	HLV
Guwahati Stock Exchange	794
Bangalore Stock Exchange	HINDLEVER
Ahmedabad Stock Exchange	HINDLEVER
Delhi Stock Exchange	100018
Calcutta Stock Exchange	100052
Reuters	hll.bo
Bloomberg	huvr.in

The ISIN Number of Hindustan Lever (or demat number) on both the NSDL and the CDSL is INE030A01027.

CHAPTER 3

MACRO-MICRO ANALYSIS

CHAPTER 3

MACRO-MICRO STUDY

Macro Analysis

Global equity markets, as measured by the MSCI World index, returned 2.4% over the quarter, whilst in terms of style leadership, growth oriented stocks outperformed their value counterparts as the MSCI World Growth and Value indices returned 2.7% and 2.0% respectively.

At a sector level the best performing sector on a global basis was MSCI World Materials which returned 9.4%, whilst the defensive areas of MSCI World Utilities (6.2%) and MSCI World Consumer Staples (4.7%) also performed well. The worst performing areas included MSCI World IT (-0.6%) and MSCI World Financials (0.2%).

Markets had moved into 2007 against a positive backdrop of solid earnings growth expectations, strong cash flows and dividends, and an environment supportive of corporate restructuring, augmented by merger and acquisition activity and private equity appetite. However, by the end of February all major global indices had experienced significant downward movements. A wave of selling on the Chinese stock market in response to the threat of a new capital gains tax on stock transactions was the initial trigger, amid wider concerns surrounding the possibility of an economic slowdown in the region. Investor nerves were further jangled by comments from ex US Federal Reserve Chairman, Alan Greenspan (during a talk in Asia), suggesting that the US itself may also be heading for a recession. Whilst none of the reasons cited, in isolation, would necessarily have caused the market weakness and no material change to the fundamental global outlook, the timing of these events in combination prompted investors to begin taking money out of the market. That said, given the heightened levels of volatility which were experienced, markets held up remarkably well through March to end the quarter in positive territory.

US inflation and housing data continued to remain at the forefront of

the period, giving credence to the current Fed Chairman, Ben Bernanke's, message that inflation remains the central bank's primary concern. Whilst policy makers expect inflationary pressures will gradually dissipate over the next two years, recent data releases are likely to have firmed the Fed's resolve not to lower interest rates from their current level of 5.25% in the immediate term. However, in countering the comments made by his predecessor, Bernanke noted in his February congressional testimony that the US economy should grow ''at a moderate pace'', again downplaying concerns that the US housing slump might spill over into the rest of the economy. It is, however, anticipated that US unemployment data will gradually shift upwards over the next few months as slowdowns in housing and manufacturing act as a hindrance to economic growth and companies trim payrolls in an attempt to maintain a lid on costs.

As noted in our last quarterly commentary, given the assumption of a soft landing scenario in the US, coupled with continued solid growth in Europe, the phase of incremental tightening of interest rates has continue outside the US. This was largely prevalent in Europe, amid concerns that the fastest economic expansion in 6 years may fuel wage demands and lead to more persistent inflation in the economy of the dozen euro nations. The ECB raised interest rates for the seventh time in 16 months in March, to 3.75%. Meanwhile, in the UK, the Bank of England raised interest rates by 0.25% to 5.25% in January, as economic growth continued to push inflation above target. The market consensus is that, in order to contain inflation and house price growth, the Bank of England has more to do, albeit that the MPC have indicated we may pause a while before increasing rates further, thereby allowing more time for the economy to absorb the three increases since August 2006. Rates were subsequently left unchanged at both the February and March meetings.

As markets fell sharply at the end of February, among the issues impacting sentiment were fears of higher than expected Chinese consumer price inflation prompting further interest rate hikes by the central bank. Whilst short term policy risks remain, as the government seeks to cool off excessive stock market speculation, and with monetary tightening likely to continue as inflation picks up (the 27bp hike in

in the region will slow significantly. Earnings growth has remained supportive and should be underpinned by potential tax reform and asset injection.

Of greater concern, remains the ongoing effect of China's trade surplus, which widened to $15.9 billion in January, adding pressure on the Chinese authorities to let the reminbirise faster against the currencies of its trading partners amid criticism that we are artificially keeping the currency weak to maintain the competitiveness of their exports. This itself is flooding the financial system with cash hindering efforts to prevent investment bubbles and accelerating inflation.

Elsewhere in Asia, the Bank of Japan raised interest rates in February for a second time since the end of the zero interest rate policy in 2006, taking rates to 0.5%, whilst in India inflation was pushed to a 2 year high as record bank lending and higher salaries continued to spur consumer spending. The likelihood is that the Reserve Bank of India may well increase interest rates at its April meeting for the sixth time in 16 months.

Micro Analysis

Indian Share Market started functioning from 1875. The name of the first share trading association in India was Native Share and Stock Broker's Association which later came to be known as Bombay Stock Exchange (BSE). This association kicked of with 318 members.

Indian Share Market mainly consists of two stock exchanges:-

Bombay Stock Exchange (BSE)

National Stock Exchange (NSE)

Bombay Stock Exchange (BSE)

Bombay Stock Exchange is the oldest stock exchange not only in India but in entire Asia. Its history is synonymous with that of the Indian Share Market history.

Association in 1875. It got Government of India's recognition as a stock exchange in 1956 under Securities Contracts (Regulation) Act, 1956. At the time of its origin it was an Association of Persons but now it has been transformed to a corporate and demutualised entity.

BSE is spread all over India and is present in 417 towns and cities. The total number of companies listed in BSE is around 3500. Bombay Stock Exchange's trading system is popularly known as BOLT (BSE's Online Trading System). It makes the trade efficient, transparent and time saving. In BSE, the trades that takes place are :-

- Equity or Shares
- Derivatives (Futures and Options)
- Debt Instruments

The main index of BSE is called BSE SENSEX or simply SENSEX. It is composed of 30 financially sound company stocks which are liable to be reviewed and modified from time-to-time. The index calculation is done on the methodology of "Free-float Market Capitalization" method. This method is also followed by the leading bourses like Dow-Jones. During early 1990s it was at 1000 mark, 5000 in 1999, and 8000 in September 2000 but at the time of writing the article (30.05.07) it is hovering around 14500. The credit behind this meteoric rise of the Indian bourse goes to the pro-market New Economic Policy adopted by the government in July, 1991. This momentum of SENSEX reflects the splendorous performance of Indian Inc. and the consequent success story of the Indian economy.

National Stock Exchange (NSE)

National Stock Exchange (NSE) is the leading most stock exchange in India in terms of total volume traded. It is based in Mumbai but has its presence in over 1500 towns and cities. In terms of market capitalization, NSE is the second largest bourse in Sought Asia.

National Stock Exchange got its recognition as a stock exchange in July 1993 under Securities Contracts (Regulation) Act, 1956. The products that can be traded in NSE are :-

- Equity or Share
- Futures (both index and stock)
- Options (Call and Put)
- Wholesale Debt Market
- Retail Debt Market

NSE provides its customers with a fully automated screen based trading system known as NEAT system with speedy, efficient and transparent transactions. The stocks are hold in a demutualised format helping in fast, transparent and efficient preservation and transactions. The risk management system of National Stock Exchange is of highest quality and can be used as a benchmark for other bourses.

NSE's leading index is Nifty 50 or popularly Nifty and is composed of 50 diversified benchmark Indian company stocks. Nifty is constructed on the basis of weighted average market capitalization method.

Regulatory Authority of Indian Share Market

SEBI or Securities and Exchange Board of India is entitled to protect the investors' interests, regulate and develop securities market in India. It passes laws for streamlining the Indian share market for efficient outcomes.

Portfolio investments of the Foreign Institutional Investors (FIIs) are increasing steadily which shows increasing reliance of the FIIs on the Indian Share Market.

The upbeat mood of the Indian bourses got a trip because of the infamous Harshad Mehta Scam. He had fraudulently diverted huge sum of money from the banks and manipulated 270 million shares and causing mayhem for the small investors and BSE was on its knees shedding 570 points in a day.

But with the introduction of online trading system and high end risk management facilities the chances of scams and fraudulent practices has been reduced sharply. This has led to increased investor confidence on the market and consequently helped in mopping up the volume of trade of the Indian bourses.

Indian Share Market is the reflection of the overall performance of the Indian Corporates and is seeing new highs regularly. So, it is in an upbeat mood. Economists predict that the economy will be growing around 10% in the near future and we hope to see more and more bullish trends in the due course of time. Hence, Indian Share Market along with the Indian Inc. is signaling positive signs to the investors for a robust growth trajectory.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

CHARTS OF SELECTED INDICATORS.

The data is been analyzed from the historical market values (given in the appendix) of the selected sample Hindustan Unilever Ltd. which are presented below

4.1 ACCUMULATION/DISTRIBUTION LINE

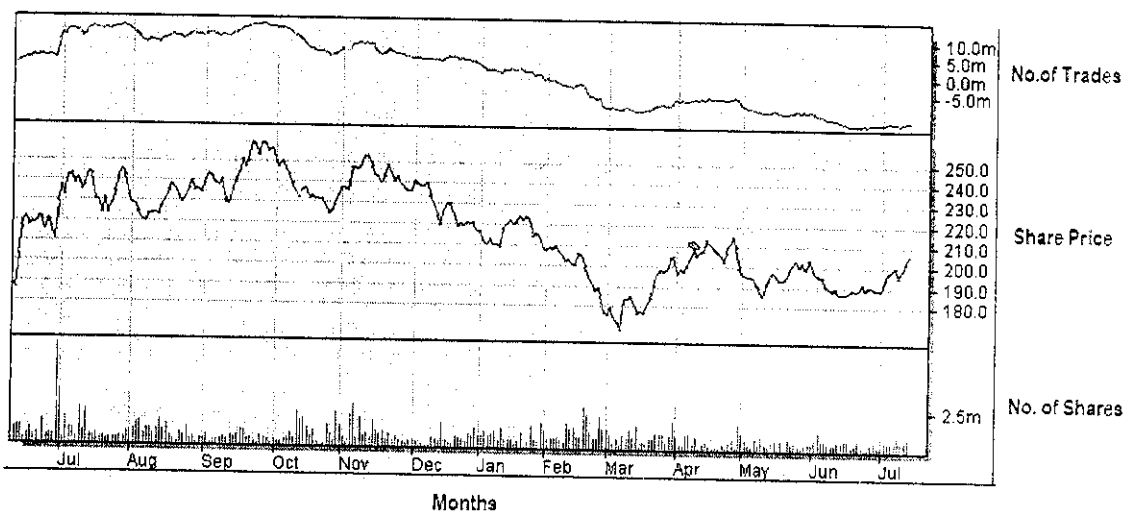
A technical indicator that attempts to quantify the flow of money into and out of a given stock.

Formula

CLV = (((Close Price-Low Price)-(High Price-Close Price)) / (High Price-Low Price))

CLV → Close Location Value (Range +1 to -1)

Accumulation/Distribution Line = (Cumulative value) CLV * Corresponding period's volume



Interpretation

From the above chart we can interpret that the volume of trade made is more in the months July to October with slight variation it means it represents a bullish signal (there is an upward movement in price) in those periods.

Then from October to the following months we can find number of trades made is in declining stage which means the stock represents bearish signal (there is an downward movement in price)

In the month of June and July the number of trade being made is less when compared to other months.

Inference

The investor can invest in this stock in the month of July and must sell those stocks in the month October. And also he can buy the stocks in the month of July by expecting the price hike in future with proper fundamental analysis.

4.2 BOLLINGER BANDS

A technical indicator that shows a stock's volatility and direction.

Formula

The first step in calculating the **Bollinger Bands** is to find the simple moving average.

$$MA = \frac{\sum_{i=1}^{n} Y_i}{n}$$

MA → Moving Average

Y_i → Close Price

The upper and lower **Bollinger Bands** are calculated by determining a simple moving average and then adding/subtracting

$$UpperBB = MA + D\sqrt{\frac{\sum_{i=1}^{n}(y_i - MA)^2}{n}}$$

$$LowerBB = MA - D\sqrt{\frac{\sum_{i=1}^{n}(y_i - MA)^2}{n}}$$

In the above formulas, D represents the number of standard deviations applied to the **Bollinger Bands** indicator.

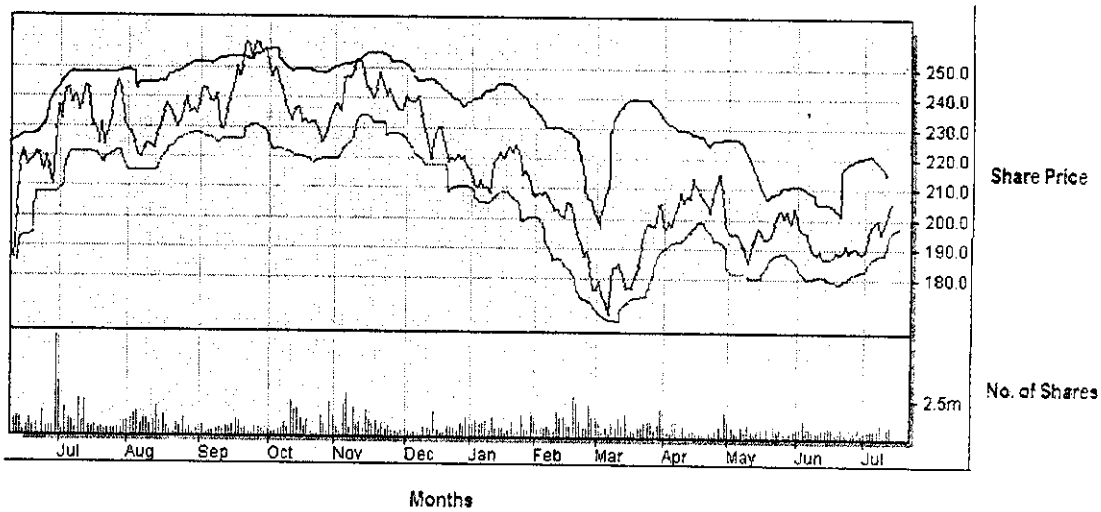


Chart 4.2

nterpretation

Bollinger Bands serve two primary functions:

- To identify periods of high and low volatility
- To identify periods when prices are at extreme, and possibly unsustainable, levels.

- It is found that as the band tightens in the month of July 2006 the volatility lessens
- When the price moves outside the bands after the September the continuation of the trend is implied

Inference

The volatility is less in the month of July so it is safe for the investor to buy the stock in this period and sell it in later period

4.3 Commodity Channel Index(CCI)

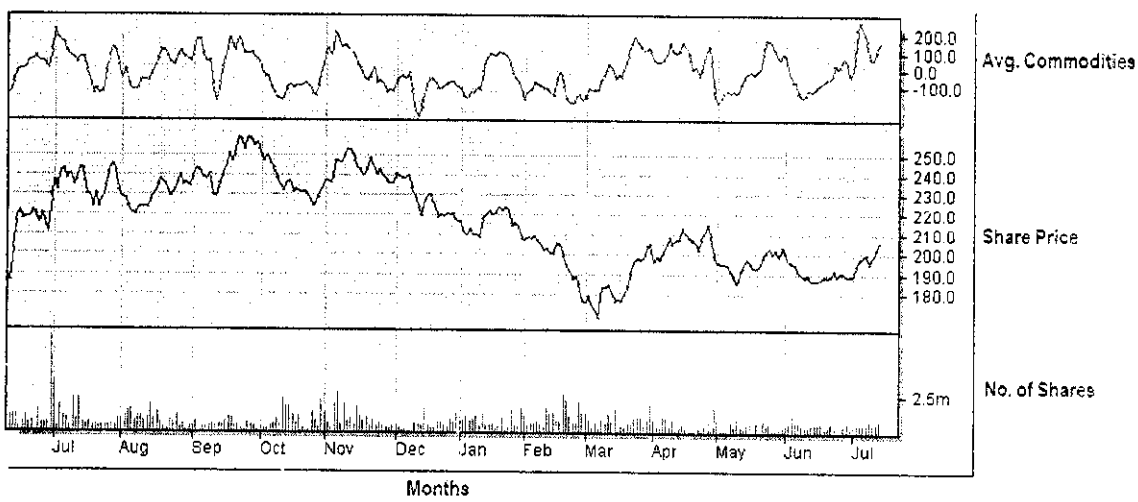
A technical indicator that attempts to display cyclical turns in a stock or commodity.

Formula

$$CCI = \frac{Price - MA}{0.015 \times D}$$

MA → Moving Average of close price

D → Normal deviation



Interpretation

The Commodity channel index (CCI) is otherwise called as overbought/oversold indicator.

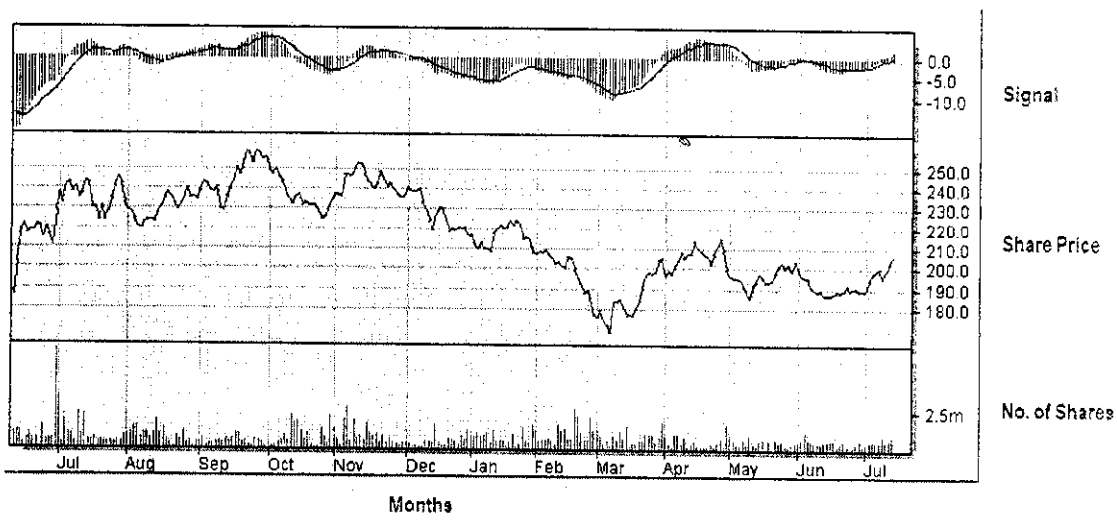
Here in the end of the August and in the mid of September is found that a huge negative divergence which means there is an oversold of the stock. And in the end of October and in early stage of November there is an huge positive divergence hence there is an overbought of the stock.

Inference

This indicator helps the investor to find whether the stock is in bullish or in bearish condition and he can make the plans accordingly.

4.4 Moving Average Convergence/Divergence (MACD)

A popular technical indicator system that combines several moving averages to better show a stock's trend and momentum.



Interpretation

In the above chart we can see a line in the signal portion this is a virtual drawn at point 0.0(zero) this is called as signal line.

Here the interpretation in MACD trading rule is to sell when the MACD falls below its signal line. Similarly, a buy signal occurs when the MACD rises above its signal line. It is also popular to buy/sell when the MACD goes above/below zero.

The MACD strategy can be used by an investor in the intra-day trading.

Inference

From the month of December to March the MACD falls below signal line which instructs the investor to sell the stocks. And at the end of March we can see the MACD rises above the signal line which indicates the investor to buy the stock.

4.5 On Balance Volume (OBV)

One of the first technical indicators that attempted to measure money flow into and out of stocks.

Formula

If Today's close is higher than yesterday's close:

OBV = OBV (yesterday) + Volume (today)

If Today's close is lower than yesterday's close:

OBV = OBV (yesterday) - Volume (today)

If Today's close is equal to the yesterday's close:

OBV = OBV (yesterday)

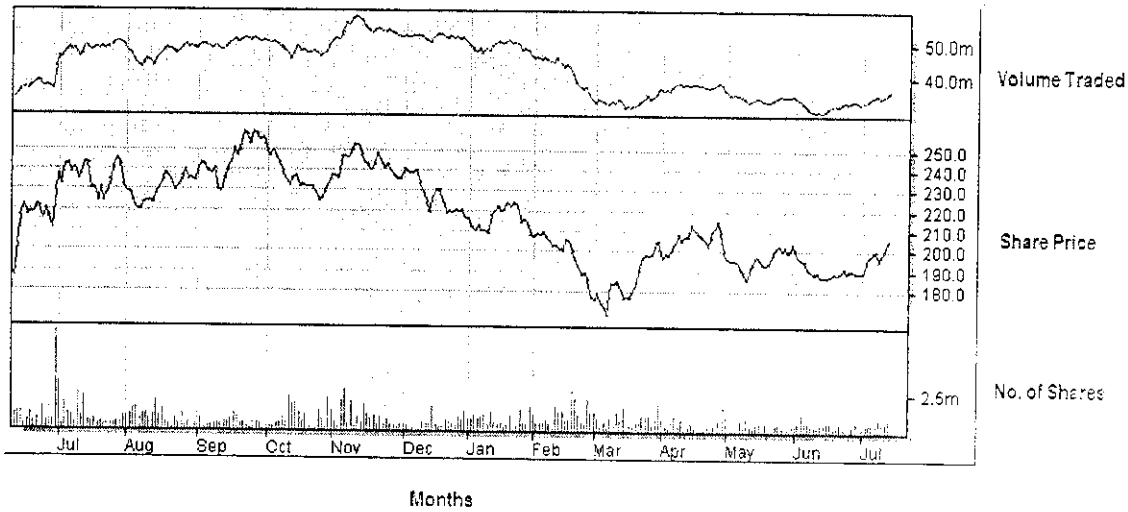


Chart 4.5

Interpretation

The basic assumption, regarding OBV analysis, is that OBV changes precede price changes. The theory is that smart money can be seen flowing into the security by a rising OBV. When the public then moves into the security, both the security and the OBV will surge ahead.

Inference

Here in between the month of November and December we can find non-confirmation occurs i.e., security rises without the OBV (bull market). Then from mid of February to mid of March bear market exists.

4.6 Price By Volume

A technical overlay that resembles a horizontal histogram and shows which price levels a stock has been heavily trading at.

Formula

The first step to calculate Price volume trend is to find percentage change in the close price:

Change = (Close(today) - Close(yesterday)) / Close(yesterday)

Price volume trend (PVT) is calculated using following formula:

PVT(today) = Change * Volume(today) + PVT(yesterday)

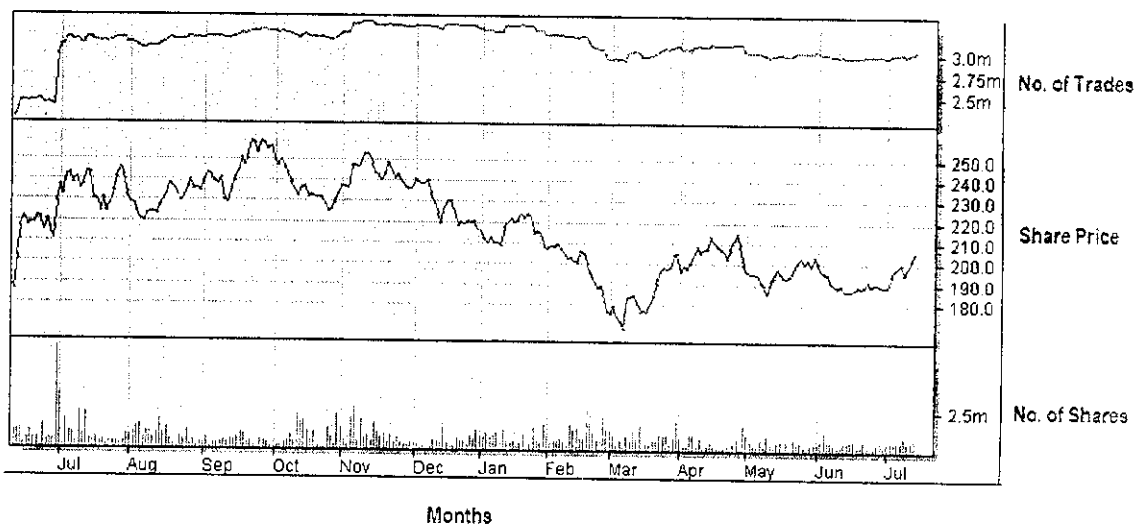


Chart 4.6

Interpretation

The volume traded in the month November is much higher than any other month in the selected period of time. Hence the price is judged according to the volume traded i.e., if the volume is more the price of the stock is high and vice versa.

Inference

This indicator will be useful to the arbitrageur and short selling person by selling the stock in the month of October first and then buying the same in the month of March

4.7 Rate Of Change (ROC)

A technical indicator that shows the speed at which a stock's price is changing.

Formula

$$\left(\frac{Close(today) - Close(Periods\ ago)}{Close(Periods\ ago)}\right) * 100$$

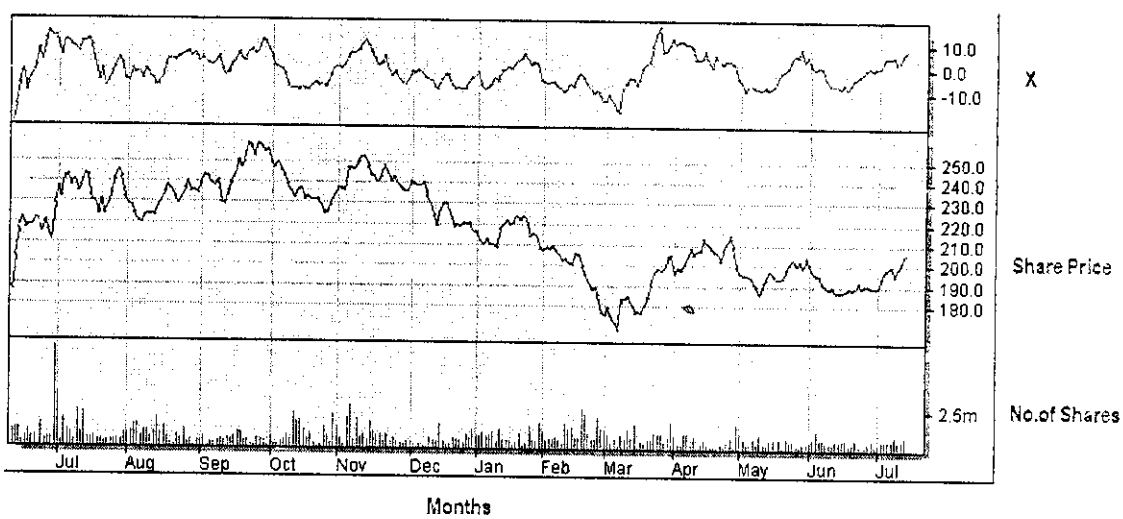


Chart 4.7

X = Difference between the current price and the price x-time periods ago.

Interpretation

Here the time period used to calculate the ROC is 12-day. It is based on the interpretation that higher the ROC, the more overbought the security; the lower the ROC, the more like a rally. However, as with all overbought/oversold indicators, it is prudent to wait for the market to begin to correct (i.e., turn up or down)

Inference

From the above chart it can be infered that the ROC is high in the months September, November and March. Therefore there is more overbuying the security or stock and the price is also high respectively. And in rest of the months it is found that the ROC is less and hence it can be determined that there is a overselling of the stock and the price of the stock during those periods is also less.

4.8 Relative Strength Index

A popular technical indicator that tries to quantify a stock's current direction and strength.

Formula

The Relative Strength index is calculated using following algorithm:

1. Average Upward Price Move = EMA(Sum of all upward movements in Closing price)

2. Average Downward Price Move = EMA(Sum of all downward movements in Closing price)

3. Calculate Relative Strength (RS):

RS = Average Upward Price Move / Average Downward Price Move

4. Calculate the Relative Strength Index (RSI):

RSI = 100 - 100 / (1 + RS)

EMA = Exponential Moving Average

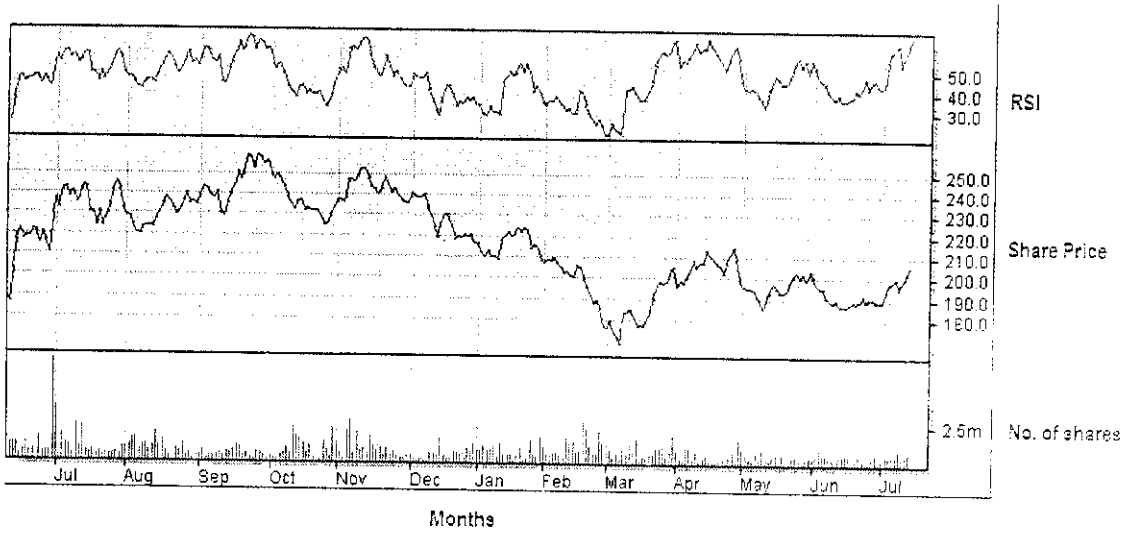


Chart 4.8

Interpretation

Here 14-days is used to calculate Relative strength index (RSI)

From the above chart it is observed that the stock is making certain pattern of head and shoulders in certain months and a new high can be found in the month of September with the following divergence in the next month (October)

From the above statement we can interpret that when RSI increases, the price of the stock will also increase and vice versa.

Inference

For the investors it is recommended that to buy the stock when RSI is above 70 and to sell the stock when RSI is below 30.

4.9 Stochastic Oscillator

A popular technical indicator that tracks a stock's up and down movements closely. This article describes all three types of stochastic oscillators.

Formula

The Stochastic indicator is calculated on the following way:

*%K = (Today's Close - LL) / (HH - LL) * 100*

where:

LL = Lowest Low price in PeriodK

HH = Highest High price in PeriodK

%D is calculated as a Moving Average of %K for PeriodD.

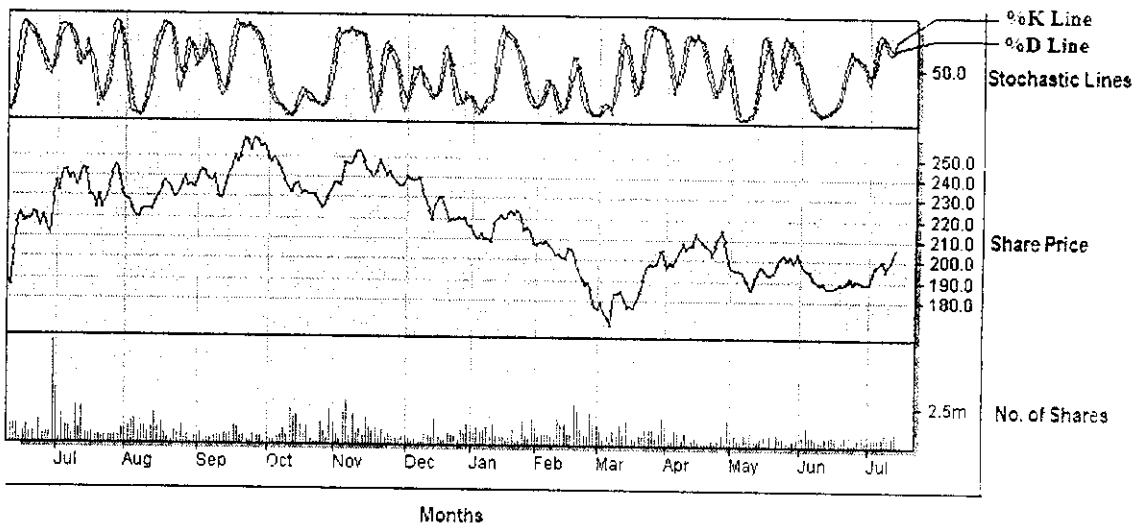


Chart 4.9

Interpretation

The Stochastic Oscillator is displayed as two lines. The main line is called "%K." The second line, called "%D," is a moving average of %K.

The Stochastic indicator value is always between 0 and 100, and is represented as a percentage. If the value is above 80 then the price is close

The %D line is more important than %K line, and the %K line changes direction before the %D line. When the %D line changes direction prior to the %K line, a slow and steady reversal is usually indicated. If both the %K and %D lines change direction and the %K line (the Fast Line™) changes direction and approaches the %D line but does not cross it then this is a good confirmation of the prior reversal stability.

Inference

From the above chart it can inferred and recommend the investors

To buy the stock when (%K or %D) falls bellow a specific level (e.g.,20) and then raises above that level. This happens in months August, October, January, February, May and June.

To sell the stock when (%K or %D) raises above a specific level (e.g.,80) and then falls below that level. This happens in months September and January.

Another interpretation is that to buy the stock when %K line rises above the %D line and sell when %K line falls below the %D line.

4.10 Williams %R

A popular technical indicator that uses Stochastics to determine overbought and oversold levels.

Formula

The William's %R indicator is calculated on the following way:

$$\%R = ((HH - Today's\ Close) / (HH - LL)) * -100$$

where:

LL = Lowest Low price in Period

HH = Highest High price in Period

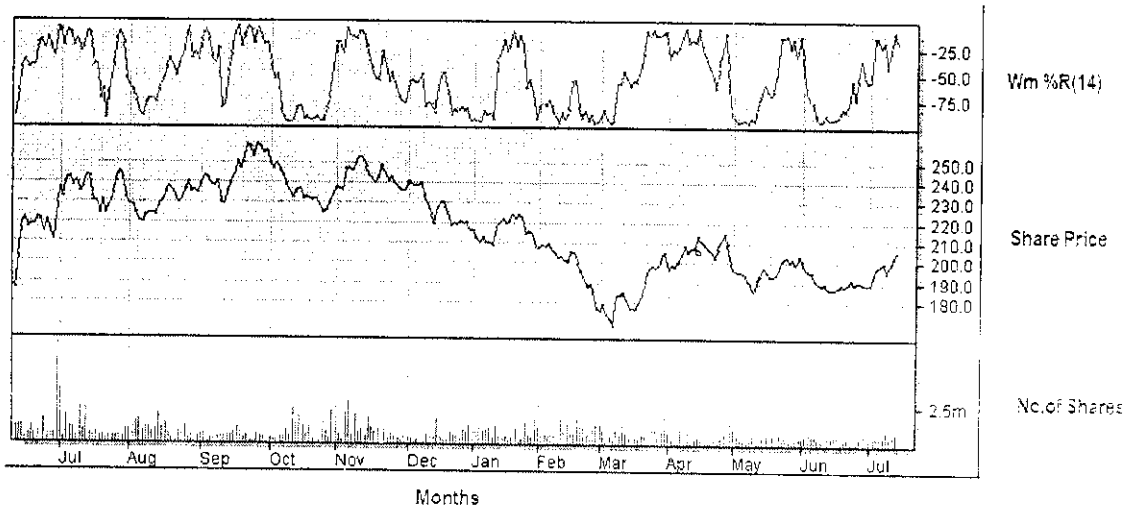


Chart 4.10

Wm %R(14) = Williams %R curve for 14 days

Interpretation

Here the Williams %R is calculated using 14 period and can be used on intraday, daily, weekly, or monthly data

The value for the William's %R indicator is always between 0 and -100, and is represented as a percentage. If the value is below -80 then the price is closing near the high price. If the value is above -20 then the price is closing near its low.

In the technical analysis this indicator is popular among the investors.

Inference

In the above chart when there is an upper trend in the Williams %R then there will be an higher trading opportunity and vice versa. The investor can invest in this stock in the month of July and must sell those stocks in the month October. And also he can buy the stocks in the month of July by expecting the price hike in future with proper fundamental analysis.

CHAPTER 5

FINDINGS AND CONCLUSION

CHAPTER 5

FINDINGS AND CONCLUSION

5.1 FINDINGS AND SUGGESTIONS:

The objectives of the study are (1) To examine the trend followed by the indicators as a technical analysis of Hindustan Unilever Ltd. stock. (2)To analyze the chart pattern and detailed study is made on Hindustan Unilever Ltd. stock. with technical indicators. These objectives are taken into account and Technical analysis is done and following has been found out:

5.1.1 Accumulation/Distribution Line

The investor can invest in this stock in the month of July and must sell those stocks in the month October. And also he can buy the stocks in the month of July by expecting the price hike in future with proper fundamental analysis.

5.1.2 Bollinger Bands

The volatility is less in the month of July so it is safe for the investor to buy the stock in this period and sell it in later period

5.1.3 Commodity Channel Index(CCI)

This indicator helps the investor to find whether the stock is in bullish or in bearish condition and he can make the plans accordingly.

5.1.4 Moving Average Convergence/Divergence (MACD)

From the month of December to March the MACD falls below signal line which instructs the investor to sell the stocks. And at the end of March we can see the MACD rises above the signal line which indicates the investor to buy the stock.

5.1.5 On Balance Volume (OBV)

Here in between the month of November and December we can find non-confirmation occurs i.e., security rises without the OBV (bull market). Then from mid of February to mid of March bear market exists.

5.1.6 Price By Volume

This indicator will be useful to the arbitrageur and short selling person by selling the stock in the month of October first and then buying the same in the month of March

5.1.7 Rate Of Change (ROC)

Here the ROC is high in the months September, November and March. Therefore there is more overbuying the security or stock and the price is also high respectively. And in rest of the months it is found that the ROC is less and hence it can be determined that there is a overselling of the stock and the price of the stock during those periods is also less.

5.1.8 Relative Strength Index (RSI)

For the investors it is recommended that to buy the stock when RSI is above 70 and to sell the stock when RSI is below 30.

5.1.9 Stochastic Oscillator

To buy the stock when (%K or %D) falls bellow a specific level (e.g.,20) and then raises above that level. This happens in months August, October, January, February, May and June.

To sell the stock when (%K or %D) raises above a specific level (e.g.,80) and then falls below that level. This happens in months September and January.

5.1.10 Williams %R

The investor can invest in this stock in the month of July and must sell those stocks in the month October. And also he can buy the stocks in the month

5.2 CONCLUSION

This study deals with analyzing the technical indicators of Hindustan Unilever Ltd. stock. From the calculated beta value of the stock is 0.76 in the sensex list it can be said that this stock is currently under reacting and from the study it is found that the scrip is highly volatile where it can be seen reaching highest value of Rs. 257.23 in the month of September 2006 and the lowest value of Rs. 163.50 in the month of March 2007. Hence for an investor the wise suggestion will be buy the stock in the month of July and sell it in later period and investor can go for short selling in the end of September 2006 and in mid of February 2007 as the fall of price is realized.

APPENDIX

Appendix

Scrip Code: 500696
Company Name: HINDUSTAN UNILEVER LTD
For the period: 1-Jun-2006 to 1-Jul-2006

ate	Open (Rs.)	High (Rs.)	Low (Rs.)	Close (Rs.)	Wtd Avg Price (Rs.)	No. of Shares	No. of Trades	Net T/O (Rs.)	* Spread (Rs.)	
									H - L	C - O
e	236.00	238.40	221.00	223.75	226.60	790935	6807	179,225,014.00	17.40	12.25
e	226.50	244.90	223.00	241.75	232.18	817175	6981	189,730,781.00	21.90	15.25
e	245.00	245.40	230.40	233.50	238.62	320036	4870	76,366,120.00	15.00	11.50
e	230.00	231.65	222.50	224.55	227.25	587815	5198	133,578,682.00	9.15	-5.45
e	224.55	229.00	218.00	220.00	221.88	430806	4215	95,586,815.00	11.00	-4.55
e	221.00	221.00	196.00	204.35	203.65	2451373	9105	499,225,518.00	25.00	16.65
e	201.35	213.50	201.35	207.90	209.75	1618227	5343	339,428,036.00	12.15	6.55
ne	209.80	209.90	194.30	196.70	200.68	829711	6460	166,503,915.00	15.60	13.10
ne	196.00	196.00	185.50	188.15	188.50	968943	5958	182,643,906.00	10.50	-7.85
ne	195.90	196.00	179.90	186.15	189.41	1151586	5934	218,117,057.00	16.10	-9.75
ne	190.05	204.55	189.90	202.30	200.01	1252407	7585	250,488,335.00	14.65	12.25
ne	207.00	219.90	206.90	216.20	214.89	1220218	6975	262,215,949.00	13.00	9.20
ne	208.00	224.00	205.00	221.75	217.25	400213	4852	86,945,113.00	19.00	13.75
ne	219.60	219.60	210.50	216.75	214.82	649729	5848	139,572,550.00	9.10	-2.85
ne	217.95	220.20	212.50	218.35	216.04	1144256	9627	247,204,154.00	7.70	0.40
ne	220.25	225.95	217.50	218.65	221.69	662826	5573	146,942,970.00	8.45	-1.60
ne	217.10	223.40	213.05	221.55	219.56	798387	5584	175,294,267.00	10.35	4.45
ne	222.00	224.90	220.15	220.90	221.49	67132	653	14,869,000.00	4.75	-1.10
ne	220.10	223.10	210.00	214.70	216.07	1621430	4407	350,338,692.00	13.10	-5.40
ne	214.00	221.60	210.50	220.20	218.14	643174	6025	140,304,671.00	11.10	6.20
ne	215.10	221.70	214.00	216.25	218.62	694268	4510	151,783,240.00	7.70	1.15
ne	218.05	220.60	207.00	210.80	215.72	673589	4306	145,309,528.00	13.60	-7.25
ne	216.20	231.00	216.20	229.10	219.74	6589492	11360	1,447,992,388.00	14.80	12.90
	230.00	239.90	227.20	236.90	236.69	3538097	12596	837,441,547.00	12.70	6.90
	240.00	240.00	231.15	232.35	234.33	409294	5051	95,910,915.00	8.85	-7.65
	229.00	244.40	229.00	242.20	241.75	1902321	11221	459,884,976.00	15.40	13.20
	239.05	246.35	237.50	242.80	243.21	1195858	7707	290,844,051.00	8.85	3.75
	244.50	245.75	236.00	237.95	241.34	1101480	5090	265,834,201.00	9.75	-6.55
/	237.95	242.90	232.10	240.60	236.85	483383	5269	114,489,484.00	10.80	2.65
/	241.00	241.95	234.30	235.40	238.34	2425109	5542	578,007,212.00	7.65	-5.60

uly	240.00	244.90	235.00	243.65	239.29	2322765	9610	555,819,272.00	9.90	3.65
uly	242.00	244.00	238.20	242.85	240.97	676705	6382	163,066,058.00	5.80	0.85
uly	241.95	241.95	228.10	230.05	233.68	600421	5387	140,304,892.00	13.85	11.90
uly	230.40	234.50	226.45	230.35	231.05	774411	6667	178,927,818.00	8.05	-0.05
uly	233.05	234.45	222.50	224.05	226.19	487144	4883	110,189,188.00	11.95	-9.00
uly	225.50	233.25	225.50	231.20	229.82	580196	4896	133,342,374.00	7.75	5.70
uly	230.00	231.20	222.50	223.85	226.73	444520	4929	100,784,132.00	8.70	-6.15
uly	222.00	229.25	216.50	228.30	223.10	533506	6350	119,022,867.00	12.75	6.30
uly	230.05	236.90	230.05	234.35	234.52	524226	4232	122,943,563.00	6.85	4.30
uly	235.00	242.40	232.00	240.95	238.61	522374	5357	124,643,771.00	10.40	5.95
uly	241.25	247.50	240.15	245.35	244.90	597742	6379	146,387,637.00	7.35	4.10
uly	246.00	249.00	240.00	242.25	244.72	496652	5144	121,541,021.00	9.00	-3.75
uly	246.90	249.90	230.00	232.25	239.44	970065	9411	232,273,433.00	19.90	14.65
gust	233.75	236.40	226.40	228.75	230.19	977756	9572	225,070,406.00	10.00	-5.00
gust	250.00	250.00	225.40	228.05	228.02	1114509	9446	254,129,111.00	24.60	21.95
gust	232.95	232.95	223.10	224.80	227.67	1488865	10208	338,974,501.00	9.85	-8.15
gust	222.60	227.75	218.90	220.55	223.97	1651362	12481	369,861,565.00	8.85	-2.05
gust	224.10	224.10	218.10	219.45	220.94	795903	8337	175,846,499.00	6.00	-4.65
gust	215.10	224.00	215.10	222.95	221.55	1155351	9988	255,966,173.00	8.90	7.85
gust	223.50	227.85	221.25	224.00	225.49	1153929	8192	260,195,911.00	6.60	0.50
gust	225.50	227.70	222.15	223.90	225.01	813151	7384	182,969,377.00	5.55	-1.60
gust	224.30	227.00	221.30	222.95	223.68	1025158	7539	229,308,052.00	5.70	-1.35
gust	224.55	228.40	222.75	227.20	226.54	1954783	7711	442,827,107.00	5.65	2.65
gust	230.25	231.90	228.55	230.45	230.65	1085804	6652	250,441,958.00	3.35	0.20
gust	232.00	236.25	230.40	234.90	233.48	1403149	9252	327,607,551.00	5.85	2.90
gust	235.55	239.25	234.30	237.80	237.45	734134	6494	174,322,417.00	4.95	2.25
gust	239.00	239.00	234.65	235.85	236.02	375034	3352	88,516,772.00	4.35	-3.15
gust	236.50	238.90	231.15	232.25	235.55	269037	3171	63,372,554.00	7.75	-4.25
gust	232.10	233.40	229.00	229.75	230.95	853532	3984	197,120,585.00	4.40	-2.35
gust	228.10	232.90	227.00	231.70	229.84	656946	3778	150,992,017.00	5.90	3.60
gust	232.50	237.95	231.00	236.65	234.36	1258520	6375	294,951,307.00	6.95	4.15
gust	238.00	240.50	235.00	239.80	238.72	376861	4479	89,964,940.00	5.50	1.80
gust	241.00	241.85	234.00	234.80	237.55	637967	5646	151,549,530.00	7.85	-6.20
gust	236.00	237.50	235.00	236.10	236.22	253327	3108	59,841,032.00	2.50	0.10
gust	237.50	239.45	233.55	234.60	235.05	481731	3189	113,229,679.00	5.90	-2.90
mber	235.00	239.95	234.10	238.80	237.76	503682	3811	119,753,918.00	5.85	3.80
mber	240.10	244.15	238.90	243.30	242.70	757543	5183	183,856,361.00	5.25	3.20
mber	244.00	245.00	241.75	242.45	242.60	234975	2527	57,005,858.00	3.25	-1.55

ember										
ember	238.20	241.90	236.80	238.15	238.87	447796	4317	106,963,986.00	5.10	-0.05
ember	239.00	241.95	236.05	240.95	238.99	511377	4026	122,212,354.00	5.90	1.95
ember	238.20	242.00	228.25	230.05	233.69	563591	5429	131,707,733.00	13.75	-8.15
ember	229.80	231.90	225.05	229.10	228.01	491885	4850	112,154,812.00	6.85	-0.70
ember	230.50	237.00	230.05	235.65	235.11	712305	3927	167,470,521.00	6.95	5.15
ember	236.90	240.80	234.00	239.00	238.16	637864	4879	151,911,504.00	6.80	2.10
ember	238.00	244.45	236.40	243.55	241.80	795251	6427	192,288,036.00	8.05	5.55
ember	244.00	251.00	243.90	250.55	248.99	1134549	8138	282,496,191.00	7.10	6.55
ember	251.60	253.45	244.00	247.30	251.40	1051571	5426	264,364,421.00	9.45	-4.30
ember	242.10	251.00	242.10	250.15	248.59	482304	4208	119,893,609.00	8.90	8.05
ember	252.00	259.30	252.00	258.60	255.88	635142	5412	162,523,247.00	7.30	6.60
ember	258.65	258.90	253.20	257.25	256.22	366372	3864	93,870,802.00	5.70	-1.40
ember	258.10	258.10	251.70	252.75	254.77	202078	2272	51,483,360.00	6.40	-5.35
ember	253.25	259.70	250.30	258.65	255.94	652954	4889	167,117,482.00	9.40	5.40
ember	258.00	262.50	256.75	257.70	259.79	625370	5101	162,462,867.00	5.75	-0.30
ember	256.10	261.50	253.20	255.00	258.94	473567	3436	122,624,011.00	8.30	-1.10
ember	255.00	258.00	255.00	256.20	256.26	233679	2044	59,882,898.00	3.00	1.20
ober	257.00	258.00	248.25	249.40	251.30	443365	3844	111,415,721.00	9.75	-7.60
ober	249.40	253.00	245.05	246.95	247.96	365854	3552	90,718,111.00	7.95	-2.45
ober	248.10	251.90	248.10	249.95	250.00	334757	2182	83,687,810.00	3.80	1.85
ober	251.00	251.00	244.65	245.30	246.51	470159	2739	115,896,936.00	6.35	-5.70
ober	244.05	247.00	242.05	243.50	244.59	582356	3993	142,437,962.00	4.95	-0.55
ber	245.70	245.70	238.00	238.65	240.93	957111	6156	230,593,107.00	7.70	-7.05
ber	241.00	242.00	234.20	235.15	237.35	603166	5587	143,162,693.00	7.80	-5.85
ber	236.50	236.50	230.60	232.15	232.38	2318964	6830	538,879,426.00	5.90	-4.35
ber	235.50	239.20	234.50	236.05	236.89	1802507	5967	426,988,247.00	4.70	0.55

ber										
ber	237.95	238.20	230.00	231.80	232.56	1272931	5651	296,032,811.00	8.20	-6.15
ber	233.00	235.90	231.10	232.85	233.93	678776	4464	158,789,397.00	4.80	-0.15
ber	236.00	236.95	229.90	231.40	233.36	1149302	4016	268,202,928.00	7.05	-4.60
ber	232.65	233.90	230.80	231.55	232.58	302821	2233	70,430,039.00	3.10	-1.10
ber	235.00	235.00	231.50	231.85	232.24	109038	1517	25,323,238.00	3.50	-3.15
ber	233.00	233.00	228.05	229.15	229.56	259093	2164	59,478,322.00	4.95	-3.85
ber	230.00	230.00	223.80	224.95	226.81	1407074	5834	319,138,895.00	6.20	-5.05
ber	225.75	228.00	222.15	226.35	224.97	842743	5498	189,594,362.00	5.85	0.60
ber	230.00	230.00	226.90	228.75	228.46	455705	4314	104,108,873.00	3.10	-1.25
ber	230.00	236.50	226.90	233.60	231.47	2250708	13473	520,982,037.00	9.60	3.60
mber	237.95	238.40	233.20	236.95	236.41	1409792	8214	333,295,002.00	5.20	-1.00
mber	238.00	240.75	236.55	237.55	238.91	731587	5661	174,781,706.00	4.20	-0.45
mber	237.90	238.70	234.55	235.50	236.09	289537	3090	68,357,775.00	4.15	-2.40
mber	238.00	247.55	237.00	246.80	243.31	2042135	11225	496,869,811.00	10.55	8.80
mber	247.95	250.00	244.50	247.30	247.94	2838767	7388	703,838,129.00	5.50	-0.65
mber	248.50	249.25	240.60	246.55	245.89	560557	4713	137,835,958.00	8.65	-1.95
mber	246.50	254.90	246.00	250.00	251.57	2006810	10198	504,850,675.00	8.90	3.50
mber	251.00	254.45	248.50	252.80	251.65	772059	5800	194,292,481.00	5.95	1.80
nber	253.80	255.00	251.70	252.65	253.43	944850	4089	239,455,397.00	3.30	-1.15
nber	253.50	254.00	245.05	247.95	247.47	597655	3699	147,901,027.00	8.95	-5.55
nber	249.00	249.75	242.90	243.35	244.44	1766248	3711	431,736,332.00	6.85	-5.65
nber	245.00	248.75	241.55	242.95	244.99	1111869	5796	272,402,335.00	7.20	-2.05
nber	243.40	244.25	237.55	239.80	240.28	889274	4491	213,677,476.00	6.70	-3.60
nber	240.90	243.70	234.50	242.95	240.27	1032234	4255	248,048,474.00		

ember										
ember	248.75	249.95	244.15	244.80	246.39	966086	3490	238,032,976.00	5.80	-3.95
ember	245.70	247.00	239.75	240.65	242.82	547921	2736	133,046,999.00	7.25	-5.05
ember	241.40	245.95	240.00	243.10	244.21	782399	3400	191,066,699.00	5.95	1.70
ember	243.50	246.00	238.80	239.55	242.60	552442	3245	134,021,137.00	7.20	-3.95
ember	241.00	241.00	235.00	237.00	238.08	391912	2596	93,304,750.00	6.00	-4.00
ember	241.90	241.90	235.15	235.95	237.74	352504	2397	83,803,252.00	6.75	-5.95
ember	238.00	239.45	234.75	235.85	237.89	549780	2000	130,785,695.00	4.70	-2.15
ember	237.10	242.75	235.70	240.45	239.99	497905	2903	119,494,260.00	7.05	3.35
ember	241.50	242.50	238.10	239.15	240.04	415760	1897	99,800,352.00	4.40	-2.35
mber	240.00	243.00	238.05	238.55	240.58	258494	2236	62,188,846.00	4.95	-1.45
mber	240.00	241.50	237.05	238.60	239.07	330932	1898	79,116,810.00	4.45	-1.40
mber	239.75	242.40	237.20	240.35	239.71	247398	1850	59,303,467.00	5.20	0.60
mber	242.70	242.70	233.10	233.80	236.21	255623	2726	60,380,885.00	9.60	-8.90
mber	235.90	235.90	223.00	229.25	228.46	697387	4491	159,324,310.00	12.90	-6.65
mber	229.00	229.70	217.30	223.70	223.70	580869	5351	129,939,112.00	12.40	-5.30
mber	223.70	225.00	216.00	219.40	220.83	523696	4322	115,649,025.00	9.00	-4.30
mber	224.45	231.70	215.60	227.40	221.73	1746722	11778	387,297,389.00	16.10	2.95
mber	228.95	232.25	226.55	230.15	229.38	506973	5124	116,288,404.00	5.70	1.20
mber	230.40	232.00	224.25	230.15	227.49	277110	3481	63,041,063.00	7.75	-0.25
mber	229.00	232.00	221.50	224.75	225.91	280948	3567	63,467,639.00	10.50	-4.25
mber	225.50	227.40	217.20	218.45	221.28	814908	5376	180,318,881.00	10.20	-7.05
mber	218.00	221.35	217.15	219.95	219.62	658182	5914	144,550,528.00	4.20	1.95
mber	221.00	221.90	218.25	219.10	219.58	573069	3155	125,831,881.00	3.65	-1.90
mber	220.00	221.90	219.00	220.80	220.71	399475	[illegible]	[illegible]	[illegible]	[illegible]

ember										
ember	221.00	221.45	218.70	220.30	220.34	781233	3726	172,137,965.00	2.75	-0.70
ember	220.80	221.40	215.55	216.55	217.07	1350922	7052	293,241,931.00	5.85	-4.25
nuary	218.00	219.20	215.50	216.45	217.39	874262	4777	190,057,420.00	3.70	-1.55
nuary	217.00	218.00	211.10	212.20	213.71	913971	8884	195,328,061.00	6.90	-4.80
nuary	213.95	214.40	209.50	210.35	211.63	1153586	9562	244,128,036.00	4.90	-3.60
nuary	212.00	214.00	209.55	212.70	211.74	834841	7710	176,770,253.00	4.45	0.70
nuary	214.00	214.00	207.30	210.00	209.31	998192	7298	208,930,342.00	6.70	-4.00
nuary	211.00	214.20	208.55	210.10	211.09	1198442	6183	252,976,948.00	5.65	-0.90
ary	211.00	211.50	208.00	208.55	209.26	515860	4057	107,948,172.00	3.50	-2.45
ary	210.00	218.75	208.05	218.00	214.57	1310313	9000	281,150,862.00	10.70	8.00
ary	218.50	221.35	218.05	219.60	219.76	604679	4569	132,885,612.00	3.30	1.10
ary	221.00	223.70	219.15	221.70	221.43	622621	3446	137,864,380.00	4.55	0.70
ary	223.40	224.40	219.00	220.00	220.01	558054	2708	122,779,208.00	5.40	-3.40
ary	220.50	222.40	219.20	220.80	220.97	327246	2626	72,311,373.00	3.20	0.30
ary	220.95	225.00	219.25	223.95	222.87	549758	4279	122,522,717.00	5.75	3.00
ary	224.55	226.00	221.05	221.85	223.14	1045972	4360	233,399,158.00	4.95	-2.70
ary	222.50	224.90	221.25	224.10	223.18	269902	2279	60,235,606.00	3.65	1.60
ary	223.90	225.00	219.60	222.25	221.59	427783	2420	94,791,727.00	5.40	-1.65
ary	222.50	223.35	212.75	214.25	216.01	1520453	5991	328,426,569.00	10.60	-8.25
ary	217.05	217.90	212.00	215.90	214.35	561025	4366	120,254,830.00	5.90	-1.15
ary	215.75	215.75	212.85	213.85	214.70	477373	1939	102,492,899.00	2.90	-1.90
ary	215.00	215.00	207.10	208.20	210.02	1681738	5569	353,202,585.00	7.90	-6.80
ruary	211.30	211.30	203.00	207.20	206.35	1185824	6450	244,694,201.00	8.30	-4.10
ruary	209.00	209.90	207.70	208.45	208.81	611214	3218	127,628,026.00	2.20	-0.55
ruary	210.00	210.00	206.60	207.80	207.67	726561	2465	150,886,144.00	3.40	-2.20
ruary	215.95	215.95	207.10	209.00	209.60	707370	3445	148,266,195.00	8.85	-6.95
ruary	210.00	210.90	206.00	207.50	208.04	785867	2959	163,487,869.00	4.90	-2.50
ruary	210.00	210.00	204.45	205.15	205.56	624887	4306	128,451,819.00	5.55	-4.85
ruary	206.00	207.30	202.10	202.60	203.96	405079	3446	82,619,400.00	5.20	-3.40

3										
ebruary	203.00	203.00	199.30	200.80	200.76	1367958	5376	274,628,926.00	3.70	-2.20
4										
ebruary	202.00	202.00	196.00	200.25	199.72	1392075	4170	278,023,370.00	6.00	-1.75
5										
ebruary	202.00	206.90	202.00	205.75	205.43	800671	3343	164,481,491.00	4.90	3.75
9										
ebruary	207.50	209.00	204.30	205.10	205.94	750300	4114	154,513,935.00	4.70	-2.40
1										
ebruary	207.00	207.85	197.65	199.65	204.66	2687039	13409	549,917,429.00	10.20	-7.35
ebruary	200.65	201.00	194.00	195.50	196.26	2298119	10618	451,024,331.00	7.00	-5.15
ebruary	195.95	197.90	188.20	192.10	195.06	1143115	5526	222,980,379.00	9.70	-3.85
bruary	192.50	193.50	186.00	187.45	189.56	737506	6651	139,798,835.00	7.50	-5.05
bruary	190.10	191.00	186.60	189.05	188.82	656069	4526	123,876,167.00	4.40	-1.05
bruary	191.00	191.00	184.65	185.30	186.85	2169767	5514	405,413,101.00	6.35	-5.70
bruary	185.00	185.00	175.00	176.15	179.37	1356731	11169	243,359,874.00	10.00	-8.85
March	176.00	178.00	173.00	176.00	175.22	1291489	7129	226,294,588.00	5.00	0.00
March	177.00	181.45	175.60	179.00	179.11	974209	5588	174,489,110.00	5.85	2.00
March	178.00	179.00	171.50	173.55	175.47	439426	4246	77,104,051.00	7.50	-4.45
March	175.10	177.00	170.75	171.40	174.13	682391	4139	118,825,469.00	6.25	-3.70
March	172.25	174.00	166.00	167.80	171.11	342318	3889	58,574,387.00	8.00	-4.45
March	170.00	185.00	168.10	183.80	178.91	976861	7725	174,767,643.00	16.90	13.80
March	185.00	187.55	180.05	183.55	183.55	660812	7101	121,292,310.00	7.50	-1.45
March	185.00	191.50	183.00	185.00	186.99	1328876	5811	248,481,465.00	8.50	0.00
March	185.00	186.50	179.80	181.20	181.31	750774	4908	136,126,373.00	6.70	-3.80
March	175.25	179.00	173.75	176.80	175.54	1651452	6694	289,896,123.00	5.25	1.55
March	179.85	180.40	175.25	177.30	177.91	243518	3193	43,324,248.00	5.15	-2.55
March	178.00	178.45	173.25	176.80	175.26	496356	3524	86,993,003.00	5.20	-1.20
March	178.00	180.65	177.00	180.20	179.61	411211	2526	73,858,606.00	3.65	2.20
March	181.50	184.75	181.00	184.00	183.81	722971	2829	132,887,489.00	3.75	2.50
March	184.00	192.45	183.50	190.75	187.87	683133	5076	128,339,356.00	8.95	6.75
March	191.90	199.90	191.90	196.55	197.27	1032391	7006	203,663,901.00	8.00	4.65
March	197.00	199.70	194.00	198.35	197.18	1053207	3750	207,673,553.00	5.70	1.35
March	199.00	201.00	196.50	197.50	197.59	1069201	3562	211,264,024.00	4.50	-1.50
March	198.00	200.00	194.90	197.80	197.18	519831	3504	102,502,856.00	5.10	-0.20
March	197.50	207.15	196.00	204.55	202.32	895396	7449	181,158,362.00	11.15	7.05
March	204.90	206.40	199.50	205.25	202.68	1900633	7242	385,215,712.00	6.90	0.35
ril	203.00	203.00	193.70	195.80	196.74	906980	5556	178,438,929.00	9.30	-7.20
ril	196.80	200.40	194.25	198.80	198.82	369174	4973	73,399,906.00	6.15	2.00

April	198.00	203.25	196.20	199.95	200.89	1081655	5814	217,296,994.00	7.05	1.95
April	200.00	206.00	199.95	203.65	203.85	1055609	5451	215,184,117.00	6.05	3.65
April	204.00	209.80	204.00	208.85	207.73	448125	5089	93,090,012.00	5.80	4.85
April	208.00	209.75	202.55	205.35	205.16	845162	3706	173,397,481.00	7.20	-2.65
April	205.00	208.00	202.50	207.25	206.05	238226	2845	49,086,368.00	5.50	2.25
April	208.00	210.00	205.50	207.15	207.88	429301	2924	89,243,806.00	4.50	-0.85
April	208.00	214.35	207.30	213.70	211.64	593155	5309	125,537,319.00	7.05	5.70
April	214.50	215.90	210.15	210.85	213.40	287868	3721	61,432,207.00	5.75	-3.65
April	212.45	216.00	207.50	208.30	211.13	191284	2657	40,386,211.00	8.50	-4.15
April	205.00	207.80	201.00	207.15	206.00	209410	2578	43,139,240.00	5.80	2.15
April	207.60	209.80	204.50	205.50	207.06	272362	2828	56,395,511.00	5.30	-2.10
April	207.00	207.75	201.10	202.20	203.07	414530	2952	84,179,286.00	6.65	-4.80
April	203.00	208.75	202.05	207.15	205.93	253453	2943	52,192,598.00	6.70	4.15
April	207.90	215.45	204.65	211.20	211.00	547298	5113	115,479,759.00	10.80	3.30
April	214.05	215.70	212.00	214.70	213.55	772382	4792	164,939,144.00	3.70	0.65
April	214.70	215.00	208.40	209.50	211.36	268577	3299	56,766,771.00	6.60	-5.20
April	210.00	211.45	197.10	199.40	202.07	1707110	12136	344,952,664.00	14.35	10.60
May	201.00	202.60	194.30	195.80	196.71	1082857	7994	213,005,208.00	8.30	-5.20
May	199.70	199.80	194.55	195.05	197.31	652315	4760	128,710,297.00	5.25	-4.65
May	196.10	198.25	194.65	195.45	195.98	390234	2886	76,476,742.00	3.60	-0.65
May	196.10	196.90	193.15	194.50	195.10	293724	1973	57,306,682.00	3.75	-1.60
May	194.00	195.20	190.55	191.05	191.82	743781	3277	142,669,085.00	4.65	-2.95
May	192.00	193.45	188.00	190.00	191.71	431802	2742	82,780,666.00	5.45	-2.00
May	189.00	189.10	184.00	185.45	186.35	992274	6123	184,905,571.00	5.10	-3.55
May	188.45	192.95	187.10	192.05	191.12	440329	3655	84,157,879.00	5.85	3.60
May	193.00	194.15	192.00	193.10	193.10	286544	2154	55,330,816.00	2.15	0.10
May	194.30	197.90	193.50	197.30	196.38	644185	3703	126,506,827.00	4.40	3.00
May	200.00	200.35	194.50	195.05	197.07	695308	3428	137,025,053.00	5.85	-4.95
May	195.50	196.00	192.65	193.50	193.80	166791	1908	32,324,641.00	3.35	-2.00
May	195.15	195.95	192.60	193.30	194.11	737193	1599	143,095,685.00	3.35	-1.85
May	194.25	196.00	192.00	194.20	194.23	173634	2045	33,724,327.00	4.00	-0.05
May	195.50	200.00	193.00	198.45	197.50	783684	4206	154,778,338.00	7.00	2.95
May	199.90	203.45	197.00	201.25	201.23	545749	5660	109,820,379.00	6.45	1.35
May	200.00	205.25	198.10	203.10	203.43	642412	5410	130,687,869.00	7.15	3.10
May	205.00	205.50	200.00	200.50	202.80	363010	3020	73,619,676.00	5.50	-4.50
May	201.00	204.25	199.50	202.60	202.58	237708	2994	48,154,042.00	4.75	1.60
May	202.70	202.70	198.00	198.70	199.97	375370	2111	75,061,443.00	4.70	-4.00
May	201.00	204.90	198.50	203.50	201.44	515060	2948	103,756,206.00	6.40	2.50
ne	205.00	205.50	200.50	201.25	203.92	544074	4234	110,949,831.00	5.00	-3.75
ne	203.00	203.50	195.30	196.45	200.63	698269	3954	140,096,705.00	8.20	-6.55
ne	196.50	199.05	193.20	195.55	196.60	1272615	3495	250,201,485.00	5.85	-0.95

June	195.00	195.75	189.90	191.45	191.95	697663	4032	133,914,383.00	5.85	-3.55
June	191.50	192.35	188.55	189.40	190.48	541891	3371	103,218,666.00	3.80	-2.10
June	190.00	192.50	187.50	188.35	190.38	395547	3526	75,304,150.00	5.00	-1.65
June	189.90	191.70	188.00	189.65	189.75	454372	2899	86,219,112.00	3.70	-0.25
June	190.00	190.90	185.60	186.70	187.80	595657	3371	111,866,074.00	5.30	-3.30
June	187.00	189.90	186.20	186.80	187.86	586131	2748	110,109,372.00	3.70	-0.20
June	189.45	189.45	186.50	187.05	187.68	652695	2522	122,496,890.00	2.95	-2.40
June	190.00	190.00	186.90	187.45	187.91	709715	1869	133,364,767.00	3.10	-2.55
June	187.55	189.70	187.10	189.00	189.02	361978	1822	68,419,655.00	2.60	1.45
June	190.00	190.50	187.60	188.50	188.82	381384	1736	72,011,618.00	2.90	-1.50
June	191.90	192.30	185.35	189.25	190.15	694649	3027	132,084,541.00	6.95	-2.65
June	190.05	192.40	189.55	191.60	190.90	318914	2611	60,880,896.00	2.85	1.55
June	190.05	192.40	189.55	191.60	190.90	318914	2611	60,880,896.00	2.85	1.55
June	193.00	193.50	188.05	188.80	190.52	171092	1980	32,596,766.00	5.45	-4.20
June	188.90	190.45	188.40	190.10	189.87	238010	1602	45,190,508.00	2.05	1.20
June	190.00	191.50	188.10	190.75	189.41	533953	1491	101,134,504.00	3.40	0.75
June	192.00	192.00	187.50	189.35	188.89	671946	1894	126,922,870.00	4.50	-2.65
June	190.00	190.25	186.50	188.85	188.43	311711	2183	58,736,047.00	3.75	-1.15
uly	189.80	189.95	188.10	189.05	188.91	423058	1569	79,918,853.00	1.85	-0.75
uly	189.90	195.95	189.05	194.65	193.47	621628	4614	120,267,848.00	6.90	4.75
uly	195.00	199.10	194.50	197.45	197.21	596718	4103	117,677,720.00	4.60	2.45
uly	199.00	202.70	197.50	198.90	199.55	614813	4712	122,685,505.00	5.20	-0.10
uly	199.50	201.50	198.90	199.95	200.44	631331	3455	126,545,569.00	2.60	0.45
uly	201.00	201.45	191.00	195.35	196.68	966269	3486	190,046,521.00	10.45	-5.65
July	191.30	199.95	191.30	198.50	195.70	573611	2508	112,253,882.00	8.65	7.20
July	197.00	203.40	195.90	202.40	201.00	683775	3859	137,437,973.00	7.50	5.40

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