# FORMULATION OF STRATEGY APPLYING QUANTIFIABLE FINANCIAL INDICATORS FOR LONG TERM STOCK MARKET IN INDIA 

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#### Abstract

The Capital market scenario in India has been changed. Thus it is important to develop and integrate the useful financial indicators into an overall system of market prediction and thereby evolve a strategy. We include the fifty companies listed on the index NSE Miscap50. The data is related to the year 2005-2010. The result of the empirical study showed that the investors should look for two important variables namely Yield and Beta before making investment decision and also reveals that the closing price of the share depends on Yield and Beta. Keywords: Financial indicators, share market, Strategy, Investment decision.


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## 1. INTRODUCTION

### 1.1 Indian Capital Market

The India Capital market is an 'Emerging Stock Market'. This essentially means that though India might not be trade as high volumes as developed nations, but when it comes to churning volumes, India is one of the toppers.
In the last two decades, the pace of growth in the Indian capital market has been unparralled in the history of any nation. These two decades have truly been the 'Age of Shares and Bonds' for middle class investors in India, where millions of them have had their first experience of investing in securities.

### 1.2 Secondary Market

The Indian stock market stands among the top three stock market of the world with respect to the no. of companies listed, market capitalization and magnitude of participating investors. The level of activities in stock markets is measured through stock indices. The more prominent indices are BSE Sensex and S \& P CNX Nifty which include script on the criteria of: market capitalization, liquidity and proper representation of all industries in the economy.

### 1.3 Reforms in the Security Market

The period since 992 witnessed several reforms in the securities market. Efforts were made to strengthen and modernize legislative framework through the Government Securities Act, and abolishment of stamp duty on transfer of dematerialized debt securities to promote dematerialization.

The following reforms were undertaken since 1992
SEBI Act, 1992
A major reform was the repeal of the Capital Issues (Control) Act. 1947. The securities and Exchange Board of India was constituted on $12^{\text {th }}$ April, 1988 as a non-statutory body through an administrative resolution of the government for dealing with all matters relating to development and regulation of securities market, investor protection, and to advise the government on all these matters. It was given statutory status and powers through an ordinance promulgated in 1992. The ordinance was further replaced by an Act of Parliament in 1992. Its objectives are to protect the interest of investors in securities market and to promote the development of and to regulate the
securities market. The statutory powers of SEBI were further strengthened through the promulgation of the Securities Laws (Amendment) ordinance on $25^{\text {th }}$ January, 1995.
$>$ Disclosure and Investor protection guidelines
In the interest of investors, SEBI issued Disclosure and Investor Protection Guidelines. The guidelines contain a substantial body of requirements for issues/intermediaries, the broad intention being to ensure that all concerned observe high standards of integrity and fair dealing, comply with all the requirements with due skill, diligence and care, and disclose the truth. Equity research and credit rating improved the quality of information about issues.

## > Screen Based Trading

The trading on stock exchanges in India takes place though open outcry without use of information technology for immediate matching or recording of trades. This was time consuming and inefficient. In order to provide efficiency, liquidity and transparency, NSE introduced a nation-wide online fully automated screen based trading system (SBTS) where a member can punch into the computer quantities of securities and the prices at which he likes to transact and transaction is executed as soon as it finds a matching sale or buy offer from a counter party. It has cut down the cost, time and risk involved.

## > Trading Cycle

Gone are the days when the seller had to wait for weeks and perhaps a month for settlement. This risk has been considerably minimized by introduction of compulsory rolling settlement and contraction of the trading cycle. Rolling settlement on $\mathrm{T}+5$ basis, was made compulsory, initially, for 200 actively traded scripts on BSE and NSE, reducing the trading cycle to one day and settlement period to 6 days. This was extended to cover all the scripts in Dec, 2001. The transition has been so smooth and successful that it has received worldwide acclaim.

## Derivatives Trading

To assist market participants to manage risk through hedging, speculation and arbitrage, securities contract act was amended in 1995 to lift the ban on options in securities. However there was no suitable legal and regulatory framework to govern the trading in derivatives. Derivatives trading started in a gradual manner with stock index futures, in June 2000. The market presently offers index futures, index options, stock options and stock futures. This has enhanced the liquidity, efficacy of the market and also provided hedging opportunities besides tempering volatility in the cash market.

Lastly, we can say that Indian bourses have taken investors for a bumpy ride for almost half a decade. The unpredictable behavior of the markethas shown it to be the second highest volatile nation in the world so far in 2005 after Brazil, though it has declined substantially since1992 due to an array of reforms, greater transparency and higher maturity among investors.

To conclude it can be said that despite the reforms instituted by SEBI and other streamlining measures by the government, the capital market shows abrupt movements and trends.

The present research tends to study the various trends over past 5 year and formulate a strategy for long term portfolio investment.

## 2. FINANCIAL INDICATORS

### 2.1 P/E Ratio

The $\mathrm{P} / \mathrm{E}$ ratio (price-to-earnings ratio) of a stock is a measure of the price paid for a share relative to the annual net income or profit earned by the firm per share. P/E reflects the capital structure of the company in question. $\mathrm{P} / \mathrm{E}$ is a financial ratio used for valuation: a higher $\mathrm{P} / \mathrm{E}$ ratio means that investors are paying more for each unit of net income.

The $\mathrm{P} / \mathrm{E} /$ ratio is defines as:

$$
\text { P/E ratio }=\frac{\text { Price per Share }}{\text { Annual Earnings per Share }}
$$

The price per share in the numerator is the market price of a single share of the stock. The earnings per share is in the denominator.

### 2.2 P/BV

P/BV is a valuation ratio and is arrived at by dividing the market price of a share with the respective company's book value per share. Now, book value is equal to the shareholder's equity (share capital plus reserves and surplus). Book value can alsobe arrived at by subtracting current liabilities and debt from total assets. For the banking and finance companies,book value is calculated as "share capital plus reserves minus miscellaneous assets not written off.

Book value is the net result of capital contributed by the shareholders and retention of profits after deducting the losses. The various formulas for calculating $\mathrm{BV} /$ share are.
BV per share $=($ Equity Share Capital + Reserves $) /$ Total no. of equity shares subscribed

Or
BV per share $=($ Net Worth - Preference Share Capital $) /$ Total no. of equity shares subscribed.
The Book Value per share is calculated on the basis of values shown in the balance sheet. Mostly these values reflect the cost at which assets are purchased and not what the assets would be worth if they were liquidated or replaced at current price. In other words, BV per share indicates the amount that will be left for each equity share after the company has met all its liabilities to creditors, debenture holders and preference shareholders.

### 2.3 Yield

The dividend yield or the dividend-price ratio on a company stock is the company's annual dividend payments divided by its capitalization, or the dividend per share, divided by the price per share. It is often expressed as a percentage. Its reciprocal is the Price/Dividend ratio.
Unlike preferred stock, there is no stipulated dividend for common stock. Instead, dividends paid to holders of command stock are set by management, usually in relation to the company's earnings. There is no guarantee that future dividends will match past dividends or even be paid at all. Due to the difficulty in accurately forecasting future dividends, the most commonly-cited figure for dividend yield is the current yield which is calculated using the following formula.
Current Dividend Yield $=\frac{\text { Most Recent Full-Year Dividend }}{\text { Current Share Price }}$

### 2.4 Beta

In finance, the Beta $(\beta)$ of a stock or portfolio is a number describing the relation of its returns with that of the financial market as a whole.

An asset has a Beta of zero if its returns change independently of changes in the market returns. A positive beta means that the asset's returns generally follow the market's returns in the sense that they both tend to be above their respective average together, or both tend to be below their respective averages together. A negative beta means that the asset's returns generally move opposite the market's returns: one will tend to be above its average when the other is below its average.
The beta coefficient is a key parameter in the capital asset pricing model (CAPM). It measures the part of the asset's statistical variance that cannot be removed by the diversification provided by the portfolio of many risky assets, because of the correlation of its returns with the returns of
the other assets that are in the portfolio. Beta can be estimated for individual companies using regression analysis against a stock market index.

By definition, the market itself has a beta of 1.0, and individual stock are ranked according to how much they deviate from the macro market (for simplicity purposes, the $\mathrm{S} \& \mathrm{P} 500$ is usually used as a proxy for the market as a whole). A stock whose returns vary more than the market's returns overtime can have a beta whose absolute value is greater than 1.0 (whether it is, in fact, greater than 1.0 will depend on the correlation of the stock's returns and the market's returns). A stock whose returns vary less than the market's returns has a beta with an absolute value less than 1.0.

### 2.5 ROCE and RONW

While analyzing a company, the most important thing you would like to know is whether the company is efficiently using the capital (shareholder's funds plus borrowed funds) entrusted to it. While valuing the efficiency and worth of companies, we need to know the return that a company is able to earn on its capital, namely its equity plus debt. Those companies thatearn a higher return on the capital it employs aremore valuable than those which earn lower return on their capital. The tools for measuring these returns are:

1. Return on Capital Employed (ROCE)
2. Return on Net Worth (RONW)

Return on Capital Employed and Return on Net Worth (shareholders' funds) are valuable financial ratio for evaluating a company's efficiency and the quality of its management.

A company raises its capital its capital from two sources, namely debt and equity. The shareholders contribute the equity portion of the company's capital. The debt portion may consist of loans from banks and financial institutions, money raised through bonds, fixed deposits, and secured or unsecured loans obtain from directors and other private parties. Shareholders, who are the owners of the company, have a right to the annual profits of the company after all its expenses have been met. As described earlier, part of these profits are ploughed back into the accumulated reserves of a company, while the remaining profit are distributed to its shareholders in the form of dividends. The net worth (also known as shareowners funds) of company comprises its equity plus its accumulated reserves. Therefore, the total capital employed by the company in its business operations comprises net worth plus debt.

The net profit company is the residual surplus it earns after meeting all expenses, including noncash expenses such as depreciation on assets. The net profit is a useful figure, but it does not give us a true picture of a company's operating performance. To judge the operating performance we must look at a company's operating profit which is different from its net profit.

The figure for operating profit is arrived at after adding back taxes paid, depreciation, extraordinary onetime expenses, and deducting extraordinary ne time income and other income (income not earned through mainline operations), to the net profit figure. The operating profit of a company is a better indicator of the profit earned by it than is the net profit.

## 3. Review of Literature

In order to have a proper insight into different aspects of the problem under study, it will be desirable to review studies conducted in the past.
Gupta (2000) tracked the results of Sensex from 1980 to 1999 and found P/E ratios, growth rate of EPS and the duration of holding periods of investment to be important determinants of future equity returns.
Jia\&lilian(1994) found that size \& Book to market values of equity are measures of stock rise and affect average stock returns.
R K Dixit (1982) analyzed the various trends and major developments in the securities market and investment climate in India. To study the trends in the movement of the share price various variables like BV, DPS, EPS, size, ROI, leverage and growth were monitored on a diverse range of 42 companies from various industries over a period of twenty years were used. He found out that safety, income, liquidity, marketability, capital appreciation, tax benefits, public policy and diversification were important investment criteria which influenced investment decisions. It was found that EPS, size and book value per share have an influence on the share prices. The investment climate and environment external factors too have been responsible for conditioning the share price behavior. Dixit concluded that share prices in stock market in India can best indicate a trend or trends rather than identify a set pattern with a view to developing a model, capable of interpreting the complex share price situation in an integrated and systematic way. Jain (1989) dwelled on various factors which very prudent investor should keep in mind before investing in the stock market. To assess whether the share price is attractive or not, several aspects need to be reviewed. Some of these are P/E ratio, comparison with average market \& industry sector average, EPS and Dividends.

Jiten Mehta (1993) for evaluating the long term potential of scrip, cash savings per share is a better indicator. The cash earnings of a company are equal to its profits after tax plus provisions of depreciation. When these cash earnings per share. Since, cash earnings per share are calculated by ignoring depreciation they are a better indicator of operational efficiency. Further it gives a better idea of cash available for use within a company.
BasudevDass (1993) undertook a study of hundred companies to accurately determine investors return in terms of potential capital appreciation and dividends and rights or bonus prospects. A meaningful ratio according to him would be the sum of company's market capitalization and its total debt. Working from this figure one can arrive at the returns on investment made: take the operating profit (PBDIT), divide it by the total investment cost and express it as a percentage.

## 4. Need of the Study

The capital market scenario in India, as it has unfolded itself in the last two decades and the potential that it has displayed is there for all to see. The most outstanding development of the last decade about the Indian share market is that share ownership has become a middle class phenomenon. It was earlier largely confined to the wealthy class. Foreign investors are showing keep interest in investment in many sectors. Therefore, a major change in the psychology of the investor is becoming evident. Most of the investors look for studies which can assist them in making decision with respect to investments in stock markets, which provides a good return with capital gain opportunities and which can be liquidated quickly if required. Also, the yield on capital market instruments has been several times higher than the returns from other sources of savings; hence it has become an attractive venue for the investors.
Most of the investors have virtually no clue to the intricacies of the stock investment and are looking for quick returns. It is difficult to quantify the average returns because they vary from individual to individual depending on the knowledge, experience and understanding of the investors and the time and effort he is willing to put in.

Thus it is important to develop and integrate the useful financial indicators into an overall system of market prediction and thereby evolve a strategy.
Through use of ratios to analyze trends and predict future changes, this study intends to evolve a reliable system of share price prediction which can have direct practical usage. With the help of this strategy investors can evolve their own investment portfolio plan.

## 5. Objective of the Study

1. To study the trends in BSE Sensex over the past five years.
2. To use various financial indicators to evaluate stocks for stock selection
3. To devise an investment strategy given a superior rate of return.

## 6.Research Methodology

- The research done to study the financial indicators for stock market investments has been based on Secondary Data.
- The data was obtained from the corporate database PROWESS, an online facility provided by CMIE (Centre for Monitoring Indian Economy)
- Period of Study: The period of study for the research project has been taken from March, 2005 to March,2010.
- Sample: The sample chosen for conducting the analysis corresponds to the fifty companies listed on the index NSE midcap 50.The Midcap companies have been specifically chosen for the purpose of the research project because such companies generally display a marked change in their parameters maybe in the upward or downward directions over the course of time and hence would yield results that are more prominent and reliable than any mature company or any startup venture.
- Tools used

The research project uses the statistical technique of regression and correlation analysis to analyze the relation between the dependent and independent variable.

Six quantifiable indicators have been taken as independent variables namely
$>$ Price/Earning
> Price/Book Value
> Yield
$>$ Beta
> Return on Net Worth
> Return on Capital Employed
The dependent variable is the Adjusted Closing Price
Regression \& Correlation Analysis has been implemented to determine both the nature \& strength of relationship between the two variables.

## 7. Data Collection

For the purpose of analysis the data pertaining to P/E, B/V, Beta, Yield, ROCE RONW for all the 50 companies on NSE Midcap 50 for every month over the five year period from March, 2005 to March, 2010 was tabulated as shown in Annexure I.

After tabulating the data, the mean values for all the indicators for each of the fifty companies over all the months was calculated for March 2005 to March 2010.

SPSS was used to analyze the entire data for Correlation and Regression.
The result for correlation has been tabulated in Appendix II.
The results for Regression have been tabulated in Appendix III.

## 8. Correlation Results

Results for period March, 2005, 2010
The following results have been concluded from Tablelisted under Appendix II.

1. There is a direct correlation with a coefficient of 0.355 between closing price and $\mathrm{P} / \mathrm{BV}$ ratio i.e. closing price increases/decreases with increase/decrease in $\mathrm{P} / \mathrm{BV}$ ratio.
2. There is a direct correlation with a coefficient of 0.388 between closing price and ROCE i.e. closing price increase/decreases with increase/decrease in ROCE.
3. There is a direct correlation with a coefficient of 0.366 between closing price and RONW i.e. closing price increase/decreases with increase/decrease in RONW.
4. For all other independent variable the correlation with closing price is not significant.
5. The inter correlation between various independent variables is shown in table given under appendix II.

## 9. Regression Results

Results for period March, 2005 to March, 2010
The following results have been concluded from SPSS Results outputs listed under appendix III.

1. It is seen from the SPSS results given In appendix II that R square is $29.9 \%$. That means that the model derived after applying SPSS to the data for period 2005 to2010is able to explain $29.9 \%$ of the variance in closing price.
2. The regression for the model as a whole displays a significance of 0.014 which is less than 0.05 Therefore, the model as an entity is significant and its results hold good.
3. To determine the role of different independent variables namely the six financial indicators in our study, their significance levels and subsequently the coefficients are considered.
4. Coefficient of Beta is -214.419 which shows that it has an inverse relation with the closing price i.eWhen beta increases the closing price would decrease and this statement support the traditional view.
5. Coefficient of Yield is -58.422 which shows that it has an inverse relation with the dependent variable closing price i.e. when yield increase, the closing price would decrees.
6. The coefficient of $\mathrm{P} / \mathrm{BV}$ is positive, though the variable as such is insignificant which means that when P/E ratio increases the closing price also decreases.
7. The coefficient of $\mathrm{P} / \mathrm{E}$ is negative, though the variable as such is insignificant which means that when ROCE ratio increases the closing price also increases.
8. The coefficient of ROCE is positive, though the variable as such is insignificant which means that when ROCE ratio increases the closing price also increases.
9. The coefficient of RONW is positive, though the variable as such is insignificant which means that when RONW ratio increases the closing price also increases.
10. The collinearity statistics are well within acceptable limits.

## 10. Strategy for Investors

The results of the research indicate that the investors should look for two important variables namely Yield and Beta before making their investment decisions.

Moreover the research indicates that the regression coefficient of both yield and beta are negative.
We can explain that on the basis that the companies that are relatively young tend to payless in dividends to their shareholders since their focus is on growth and thus they need funds to finance the growth. On the other hand, older companies tend to pay more dividends to their shareholders since they have reached their growth capacity.
Negative coefficients for beta support the traditional theory that lesser the risk associated with a company, the more is its closing price or the better it performs.

## 11. Summary and Conclusion

From the study conducted on the sample of fifty midcap companies over the time periods march 2005 to march 2010.
The following regression equations have been derived.

$$
\text { Closing price }=478.422-214.419 * \text { (beta) }-58.42 *(\text { yield }) \text { [from Mar } 05-\text { Mar' 10] }
$$

The results clearly reveal that closing price of a share depends on
$\checkmark$ The risk associated with it which is represented by beta and
$\checkmark$ The returns contributed by it which is represented by yield
Both the above factors are negatively correlated with the share price meaning thereby that any increase in beta and/or yield leads to a decrease in share price and any decrease in beta and/or yield leads to an increase in share price.
ANNEXTURE I

1. Mean values of financial indicators from March, 2005, 2010

| Company name | Closing <br> Price | Beta | P/BV | P/E | ROCE | RONW | Yield |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Allahabad Bank | 84.90 | 1.06 | 1.04 | 5.22 | 16.09 | 19.82 | 4.21 |
| Alstom Projects <br> India Ltd | 418.90 | 1.25 | 7.70 | 36.06 | 19.27 | 18.94 | 1.84 |
| Andhra Bank | 84.80 | 1.06 | 1.34 | 7.23 | 12.31 | 20.65 | 4.40 |
| Ashok Leyland <br> Ltd. | 35.42 | 1.17 | 2.70 | 15.34 | 14.01 | 19.32 | 3.77 |
| AurobindoPharma <br> Ltd. | 504.55 | 0.91 | 2.51 | 33.27 | 8.98 | 16.98 | 0.65 |
| BE M Ltd. | 972.36 | 0.91 | 3.32 | 18.49 | 17.97 | 17.54 | 1.45 |
| Bajaj Hindustan <br> Ltd. | 215.74 | 1.10 | 3.26 | 28.01 | 8.61 | 17.09 | 0.33 |
| C E S Ctd. | 324.70 | 1.18 | 1.45 | 12.59 | 6.83 | 7.96 | 0.93 |
| Chennai <br> Petroleum Corpn. <br> Ltd. 1.12 | 225.04 | 1.12 | 1.20 | 4.21 | 11.38 | 20.31 | 5.54 |
| Cummins India <br> Ltd. | 257.84 | 0.80 | 4.92 | 20.72 | 26.40 | 26.48 | 2.196 |
| Divi's <br> Laboratories | 398.12 | 10.08 | 7.64 | 27.13 | 31.46 | 34.70 | 0.544 |
| Educomp <br> Solutions Ltd. | 369.23 | 1.25 | 14.47 | 665.77 | 19.60 | 29.38 | 0.10 |
|  <br> infrastructure Ltd | 34.26 | 1.62 | 2.27 | 153.97 | 3.22 | 90.40 | 0.200 |
| Great <br> shipping cod. Ltd. | 265.67 | 1.23 | 1.32 | 5.68 | 15.01 | 26.65 | 4.296 |
| Hindustan <br> Construction Co. <br> Ltd. | 56.39 | 1.85 | 3.62 | 36.14 | 5.47 | 12.49 | 0.78 |


| Hotel Leela <br> Venture Ltd. | 47.92 | 1.27 | 2.72 | 20.10 | 4.41 | 85.53 | 1.19 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Housing <br>  <br> Infrastructure Ltd. | 351.26 | 2.04 | 2.69 | 14.48 | 38.67 | 68.14 | 0.75 |
| I D B I Bank Ltd. | 93.34 | 1.39 | 1.00 | 10.70 | 0.41 | 1.44 | 1.97 |
| I V R C L <br>  <br> Projects Ltd. | 135.84 | 1.86 | 3.93 | 25.19 | 13.62 | 16.21 | 0.44 |
| Projects Ltd. | 154.78 | 1.17 | 2.74 | 4.31 | 4.03 | 12.04 | 0.58 |
| India Cements <br> Ltd. | 116.07 | 1.02 | 1.27 | 5.79 | 7.84 | 19.46 | 1.41 |
| Indian Bank |  |  |  |  |  |  |  |
| Indian Hotel Co. <br> Ltd. |  |  |  |  |  |  |  |
| J S W Steel Ltd. | 513.36 | 0.42 | 1.50 | 8.08 | 11.61 | 23.08 | 2.35 |
| Lanco infra tech <br> Ltd. | 28.34 | 1.99 | 4.04 | 96.36 | 10.78 | 14.64 | 0.00 |
| Lupin Ltd. | 125.96 | 0.58 | 5.13 | 9.56 | 16.64 | 27.05 | 0.90 |
| Mahanagar <br> Telephoned <br> Nigam Ltd. | 124.15 | 1.04 | 0.68 | 18.48 | -2.46 | -2.45 | 3.23 |
| Moser Baer India <br> Ltd. | 151.14 | 1.21 | 1.28 | 121.13 | -0.68 | -1.59 | 0.63 |
| Mphasis Ltd. | 260.91 | 0.60 | 5.132 | 29.49 | 20.98 | 21.30 | 1.23 |
| Nagarjuna <br> Construction Co. <br> Ltd. | 151.59 | 1.70 | 3.39 | 25.48 | 10.96 | 14.76 | 0.78 |
| Oracle financial <br> services software <br> Ltd. | 1369.01 | 0.97 | 5.68 | 32.20 | 18.97 | 18.89 | 0.23 |
| Patel engineering <br> Ltd. | 374.33 | 1.55 | 4.68 | 23.6. | 16.02 | 25.46 | 0.42 |
| Petronet L N G <br> Ltd. | 57.66 | 1.06 | 3.24 | 16.6 | 8.84 | 18.59 | 1.16 |
| Piramal <br> Healthcare ltd. | 270.79 | 0.63 | 5.52 | 133.00 | 18.77 | 21.34 | 1.34 |
| Praj Industries <br> Ltd. | 108.21 | 1.47 | 12.52 | 30.17 | 558.03 | 583.00 | 1.36 |

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| PunjLyoyd Ltd. | 215.94 | 1.61 | 3.94 | -1.16 | 3.88 | 5.52 | 0.11 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Rolta India ltd. | 156.67 | 1.30 | 2.22 | 12.51 | 14.56 | 14.10 | 1.74 |
| Shipping Corpn. <br> Of India Ltd | 117.99 | 1.09 | 0.969 | 6.19 | 12.95 | 17.42 | 4.19 |
| Sintex Industries <br> ltd. | 111.10 | 1.21 | 3.29 | 19.06 | 9.89 | 18.74 | 0.49 |
| Sterling Biotech <br> Ltd. | 138.50 | 0.64 | 3.00 | 21.92 | 7.11 | 15.52 | 0.33 |
| Syndicate Bank | 74.87 | 1.09 | 1.22 | 6.45 | 11.67 | 19.60 | 3.51 |
| Tata Chemicals <br> Ltd. | 236.29 | 1.14 | 1.90 | 11.95 | 12.11 | 17.06 | 3.49 |
| Tata Blobal <br> Beverages Ltd | 76.40 | 0.63 | 30.06 | 29.38 | 13.66 | 15.26 | 2.23 |
| Tata Teleservices <br> (Maharashtra) <br> Ltd. | 26.62 | 1.01 | 20.95 | -18.60 | 228.04 | 16.97 | 0.00 |
| Tech Mahindra <br> Ltd. | 1019.33 | 1.04 | 10.93 | 24.33 | 51.19 | 53.08 | 0.46 |
| Titan Industries <br> Ltd. | 923.90 | 0.97 | 12.12 | 34.96 | 21.15 | 32.15 | 0.47 |
| Ultratech Cement <br> Ltd. | 692.35 | 0.70 | 4.88 | 21.37 | 17.84 | 33.08 | 0.42 |
| United <br> Phosphorus Ltd. | 84.98 | 1.03 | 4.23 | 55.52 | 3.88 | 7.990 | 0.49 |
| Vijaya Bank | 50.27 | 1.15 | 1.17 | 13.31 | 8.83 | 14.46 | 3.73 |
| Voltas Ltd. | 102.12 | 1.35 | 8.30 | 33.25 | 30.64 | 33.20 | 1.02 |
| Welspun Corp <br> Ltd. | 164.00 | 1.58 | 2.92 | 16.20 | 9.21 | 22.64 | 0.45 |

## Appendix II correlation results

Correlation Results for period ranging from March, 2005, 2010

|  | Closing- <br> price (05- <br> 10) | Beta | P/BV | P/E | ROCE | RONW | Yield |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Closing_price (05-10) |  | .218 | $.355^{*}$ | 0.27 | 0.388 | $.336^{*}$ | -.245 |
| Pearson Correlation | 1 | .129 | .011 | .851 | .005 | .017 | 0.87 |
| Sig. (2-tailed) |  | 50 | 50 | 50 | 50 | 50 | 50 |
| N | 50 |  |  |  |  |  |  |
| Beta |  |  |  |  |  |  |  |


| Pearson Correlation | -. 218 | 1 | . 047 | . 215 | . 041 | . 065 | -. 201 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sig. (2-tailed) | . 129 |  | . 745 | . 134 | . 776 | . 654 | . 161 |
| N | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| P/BV |  |  |  |  |  |  |  |
| Pearson Correlation | . 335 * | . 047 | 1 | . $335{ }^{*}$ | . 743 ** | . 400 ** | -. 181 |
| Sig. (2-tailed) | . 011 | . 745 |  | . 017 | . 000 | . 004 | . 210 |
| N | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| P/E |  |  |  |  |  |  |  |
| Pearson Correlation | . 027 | . 215 | . 335 * | 1 | 1.166 | . 097 | . 253 |
| Sig. (2-tailed) | . 851 | . 134 | 0.17 |  | . 250 | . 502 | 0.76 |
| N | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| ROCE |  |  |  |  |  |  |  |
| Pearson correlation | . $388{ }^{* *}$ | . 041 | . $743{ }^{* *}$ | . 166 | 1 | . $823{ }^{\text {*** }}$ | . 006 |
| Sig. (2-tailed) | . 005 | . 776 | . 000 | . 250 |  | . 00 | 0.967 |
| N | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| RONW |  |  |  |  |  |  |  |
| Pearson correlation | . 336 | . 065 | . 400 ** | 0.97 | . 823 ** | 1 | -. 087 |
| Sig. (2-tailed) | . 017 | . 654 | . 004 | . 502 | . 000 |  | . 548 |
| N | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Yield |  |  |  |  |  |  |  |
| Parson correlation | -. 245 | -. 201 | -. 181 | . 253 | -. 006 | -. 087 | 1 |
| Sig. (2 tailed) | 0.87 | . 161 | . 210 | 0.76 | . 967 | . 548 |  |
| N | 50 | 50 | 50 | 50 | 50 | 50 | 50 |

*Correlation is sigmificant at the .05 level (2-tailed)
**Correlation is significant at the .01 level(2-tailed
APPENDIX II
Regression results for period ranging from March 2005-2010
Variables entered/removed

| Model | Variable entered | Variables removed | Method |
| :--- | :--- | :--- | :--- |
| 1. | Yiel, ROCE, Beta, <br> P/E, P/BV, RONW |  | Enter |

a. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted square | Std. Error of The <br> estimate |
| :--- | :--- | :--- | :--- | :--- |
| 1 | $.547^{\mathrm{a}}$ | .299 | .201 | 254.76169 |

a. Predictors : (Constant). Yield, ROCE Beta, P/E, PV. RONW

| Model | Sum of Squares | Df | Mean squae | F | Sig. |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Regression | 1189826.699 | 6 | 198304.450 | 3.055 | $0.14^{\text {a }}$ |
| Residual | 279851.383 | 43 | 64903.521 |  |  |
| Total | 3980678.082 | 49 |  |  |  |

a. Predictors: (constant). Yield, ROCE, beta, P/E, P/BV, RONW
b. Dependent variable: closing_price (05-10)

## Coefficients ${ }^{\text {a }}$

| Model | Unstandaridized <br> Coefficient |  | B | Standardized <br> Coefficient |  |  | Collinearity statistics |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Model | Beta | T | Sig. | Toleranc <br> e | VIF |  |  |  |
| Constant | 478.422 | 155.457 |  | 3.078 | 0.04 |  |  |  |
| Beta | -214.419 | 101.179 | -.281 | -2.119 | 0.40 | .925 | 1.081 |  |
| P/BV | 6.772 | 15.859 | .112 | .427 | .672 | .239 | 4.192 |  |
| P/E | -.687 | 1.290 | -076 | -.53 | .597 | .808 | 1.237 |  |
| ROCE | 5.989 | 8.901 | .273 | .673 | .505 | 0.099 | 10.000 |  |
| RNOW | 1.45 | 6.355 | .066 | .228 | .8 .82 | .194 | 5.161 |  |
| Yield | -58.422 | 26.012 | -.293 | -2.017 | .50 | .771 | 1.297 |  |

a. Dependent Variable :closig_price (50-10).

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