Response of Market Price Relative to Fundamentals of Stocks

A Case Based Approach on Pharmaceutical Industry Listed In DSE

BRAC Business School

2013

Response of Market Price Relative to Fundamentals of Stocks

A Case Based Approach on Pharmaceutical Industry Listed In DSE

Presented for

Course supervisor– Internship (BUS401)

Ms. Samina Haque
BRAC Business School
BRAC University

Prepared by-

Murtaza Faruquee – ID 09104002

RUNNING HEADER: Market Price and Fundamentals of Stock

January 07, 2013

January 07, 2013

Ms. Samina Haque

Internship supervisor,
BRAC Business School,
BRAC University, Dhaka.

Sub: Submission of report on- Respond of Market Price Relative to Fundamentals of Stocks

Dear Madam,

This is to inform you that, I have completed the report on "**Response of Market Price Relative to Fundamentals of Stocks"** as required by you for the course purpose. The report focuses on a case based approach on pharmaceutical industry listed in DSE.

In writing this paper, I have followed your instructions for report writing so as to present my views and understanding in the easiest way. However, I will be glad to clarify any discrepancy that may arise.

Thank you.

Sincerely,

Murtaza Faruquee

Acknowledgment

Any comprehensive work such as the performance evaluation of any company must owe credit to a multitude of people. My gratitude must be shown to some people, who helped me without their own interest to complete the report successfully. Certainly I should acknowledge the contribution of my respective internship supervisor whose advice and guidance have played very important function in this paper. I am really grateful to my most honorable teacher and supervisor Ms. Samina Haque, for giving me her important and valuable suggestions and advice and for being available promptly on mail. I am very thankful to my line manager Mr. Golam Safwat Chowdhury, he allowed me to have enough time for work with my research project and finish this paper. I am especially indebted to those persons, who have given me their valuable time and information to make this study credible.

Executive summery

This paper contain two different segments, chapter one and two is all about internship related segment. It contains all information about organization, internship and job. This paper is highly optimistic about using numbers to explain the nominal issues for price change of stocks. British American Tobacco Bangladesh is one of the largest multinational companies in Bangladesh and has been operating for over 100 years. Even BAT is one of the largest tobacco companies of the world. BATB manufacture and market high quality and well established international cigarette brands. All BATB's activities reflect through its belief that 'Success and Responsibility Go Together'. Therefore, BATB has in place very robust CSR initiatives. In BATB Marketing department is the advantage and differentiating factor over its competitors. The job of a CPO is more like a numeric data analysis than marketing operation. This position works in a vast field of data and knows how to bring information from unsorted data. Then the project segment, works with the PCI of DSE. Over the last decade this market shows so much change in color. The sudden change in price pattern, so much apex and fall in a single day, destroy uncountable small investors' capital. Definitely there are some issues over the ideal price of stocks which are causing these dynamic effects. The primary objective of this report is to understand the influence pattern of different factors on the price of stocks of Pharmaceuticals and chemical industry. Price of a stock reflects all available information about the stock in a perfect market, but we are not in an ideal market at Bangladesh. It must be established that investors are not the source of profits; they are the cash providers which should be use to earn profit.

Table of Contents

Table of Illustration

List of abbreviations

- BATB – British American Tobacco Bangladesh
- CPO – Cycle Planning Officer
- DSE – Dhaka Stock Exchange
- FDR – Fixed Deposit Rate
- FMCG – Fast Moving Consumer Goods
- IPO – Initial Public Offering
- NAV – Net Asset Value
- PCI – Pharmaceuticals and Comical Industry
- ROA – Return on Assets
- ROE – Return on Equity
- SEC – Security and Exchange Commission
- SPI – Strategy Planning & Insight
- VAT – Value Added Tax

Introduction

Though finance is a subject of number and the language of finance is number but still it has lots of scope to be optimistic. This paper is highly optimistic about using numbers to explain the nominal issues for price change of stocks. This paper contain two different segments, chapter one and two is all about internship related segment. It contains all information about organization, internship and job.

Segment two is dedicated for a project. This project is based on the performance of the stocks in the Dhaka Stock Exchange (DSE). From the very beginning of DSE, market is always show peak and fall without any logical forecasting. That leaves room for questioning; how the fundamentals of any stock influencing the market price, or even do these have any influence at all?

The primary objective of this report is to understand the influence pattern of different factors on the price of stocks of Pharmaceuticals and chemical industry. Time frame of this research is seven years slot (2005 to 2011). Every company has analyzed with same parameter over this periods. This is a combination of qualitative and quantity research, so samples are not just a source of numeric value here. Every sample is working as a case study. As this is a concentrated study so this paper covers 70% (14 companies out of 20) of the total population for data collection. Price of a stock reflects all available information about the stock in a perfect market, but we are not in an ideal market at Bangladesh. One regression model will be applied to understand the impact of fundamentals. This paper considers NAV (up to date) as ideal value of stock rather than direct price calculation model, because of extreme level unavailability of information; and compares that with recent market price. The result of this report can only be applicable for the Pharmaceuticals and chemical industry. Based on the outcome of this paper further study can done, which will consider sample from every industry based on weight so that investor can get proper idea about the total market and apply that findings for any portfolio combination.

Chapter – 1

British American Tobacco Bangladesh

British American Tobacco (BAT)

"Success and responsibility go together", with this philosophy BAT is operating all over the world. British American Tobacco Bangladesh is one of the largest multinational companies in Bangladesh and has been operating for over 100 years. Even BAT is one of the largest tobacco companies of the world.

BAT has more than 1,000 employees and it is one of the most desired employers in Bangladesh. Responsibility to its shareholders, employees, business partners, customers and any other stakeholders, is at the core of the business and that is why BAT personnel believes they are part of the British American Tobacco family, the world's most international tobacco group with brands sold in more than 180 markets.(batb, 2012)

The first foot step of British American Tobacco in this part of the world can be traced back to 1910. Beginning the journey as Imperial Tobacco 102 years ago, the Company set up its first sales depot at Armanitola in Dhaka. After the partition of India in 1947, Pakistan Tobacco Company was established in 1949. The first factory in Bangladesh was set up in 1949 at Fauzdarhat in Chittagong. In 1965, the second factory of Pakistan Tobacco Company went into production in Mohakhali, Dhaka. Then it became Bangladesh Tobacco Company Limited in 1972 immediately after Bangladesh's independence. In 1998, the Company changed its name and identity to British American Tobacco Bangladesh Company Ltd.(BATB, 2011)

Brands & products

"Our business is not about encouraging people to start smoking or to smoke more, but about meeting the preferences of adults, who have chosen to consume tobacco, and differentiating our brands from the competitors."(BATB, 2012) This is the marketing believe of BATB, as they are dealing with product which has strong social obligation.

BATB manufacture and market high quality and well established international cigarette brands. Its current brands are Benson & Hedges, John Player Gold Leaf, Pall Mall, Capstan, Scissors, Star, Starlight, Pilot, Bristol and Hollywood which are positioned in four segments in the Bangladesh cigarette market.

Benson & Hedges

In Bangladesh this brand was launched in 1997, Benson & Hedges maintains BATB's prime market share in the Premium segment. Within very short time Benson & Hedges became a successful brand and BATB manage the entire premium segment with this one single brand. (BATB, 2012)

John Player Gold Leaf, Pall Mall and Capstan

John Player Gold Leaf, Pall Mall and Capstan are located in the High segment. Since launch in 1980, John Player Gold Leaf is one of the highest selling brands of Bangladesh and confidently dominating large market share in the High segment. On the other hand Pall Mall was the Group's first Global Drive Brand to be launched in Bangladesh in 2006 and its growing over market rapidly.

Star, Starlights and Scissors

Star and Scissors are positioned in the Medium segment. Star, launched 40 years ago, since then it is a leading brand in this segment. Currently, it is the highest volume generating brand for the BATB. In September 2012 they launched a light tobacco version of Star called 'Starlights' and from the very first week it showing rapid move toward apex. (BATB, 2012)

Pilot, Hollywood and Bristol

Pilot was launched in 2009 in the Low segment, which is growing rapidly in Bangladesh. Bristol was launched also in the Low segment in October 2010. All these three brands bring remarkable success to take over the consumer of 'Biri'.

Operational pattern

BATB were one of the first companies listed on Dhaka and Chittagong stock exchanges and currently ranked amongst the top 10 companies in terms of market capitalization. The British American Tobacco Group holds 65.91% of the shares in British American Tobacco Bangladesh. 17.52% is owned by Investment Corporation of Bangladesh; Shadharan Bima Corporation, Bangladesh Shilpa Rin Shangstha, Government of People's Republic of Bangladesh, Sena Kalyan Shangstha own 4.71% and a further 11.86% is owned by other shareholders.

BATB grows its tobacco leaves through its own registered farmers in Kustia, Chittagong, Manikganj and Rangpur zones. BATB's head office and Cigarette manufacturing plant are located in Mohakhali, Dhaka. It also has green leaf threshing plant in Kustia and redrying plant in Manikgonj. Its management work strongly under the global chain of command based on three stages. It starts with BAT group then BAT Asia Pacific and finally BAT Bangladesh. (BATB, 2011)

British American Tobacco Bangladesh employs more than 1,186 people directly and about 50,000 people indirectly as farmers, distributors and local suppliers. Moreover, around 900,000 retailers in the country sell its brands to earn their living. (batb, 2012)

All BATB's activities reflect through its belief that 'Success and Responsibility Go Together'. Therefore, BATB has in place very robust CSR initiatives. Through such activities, BATB aim to achieve the necessary balance of sustainable environmental, social and economic development.

Forestation program: BATB started forestation program with the Forest Department in 1980 to conserve the forests and combat the negative impacts of climate change. Till now, BATB has contributed around 67.5 million saplings throughout Bangladesh.

Safe drinking water-Probaho: For millions of people in Bangladesh, the only available drinking water is laced with arsenic and therefore extremely hazardous to health. Having recognized the gravity of the issue, BATB has stepped forward with the 'Probaho'project. Through Probaho, BATB aims to provide rural communities with safe drinking water. This initiative is also aligned with the Government's aim to achieve the Millennium Development Goals (MGDs). Using Government approved community based water filtration technology, its 18 water filtration plants in Manikganj, Satkhira, Meherpur, Kushtia, Jhenidah, Tangail, Kurigram, Lalmonirhat and Chuadanga districts provide approximately 95,000 liters of pure drinking water for 47,000 people every day. (BATB, 2011)

Sustainable agriculture: BATB's supply chain starts with the hard work of around 34,000 registered farmers within the village community. Therefore, it tries its best to ensure that sources are sustainable and responsible. Its initiatives include Green Manuring with Dhaincha (Sesbania aculeata)- an effective approach in enriching soil health and fertility. Dhaincha is also promoted as alternate fuel in leaf growing areas. (batb, 2012)

British American Tobacco Bangladesh is the largest private sector tax payer in Bangladesh. In 2010, BATB contributed Tk 46.27 billion in the form of Supplementary Duty, Value Added Tax (VAT) and other taxes to the national exchequer. (batb, 2012)

The principle of Mutual Benefit is the basis on which BATB build relationships with its stakeholders. BATB are primarily in business to build long term shareholder value and it believe the best way to do this is to seek to understand and take account of the needs of all stakeholders.

The principle of Good Corporate Conduct is the basis on which all its businesses should be managed. Business success brings with it an obligation for high standards of behavior and integrity in everything they do and wherever they operate. These standards shall not be compromised for the sake of results.(BATB, 2011)

Future prospects

British American Tobacco Bangladesh's products and brands are concerned to be developed, manufactured and marketed in a responsible manner. Therefore BATB also aspire to develop tobacco products with critical mass appeal that will, over time, be recognized by scientific and regulatory authorities as posing substantially reduced risks to health.(batb, 2012)

Like any other FMCG industry Tobacco industry is also very dynamic on the consumer demand. Market is facing strong influence of globalization and Bangladeshi people are strongly influenced by brands and on that they are strongly indifferent in age, occupation or earning level. (Faruquee, Akareem, & Newaz, 2012)So bringing more globally recognized brands in local market will be the main concern for BATB in near future.

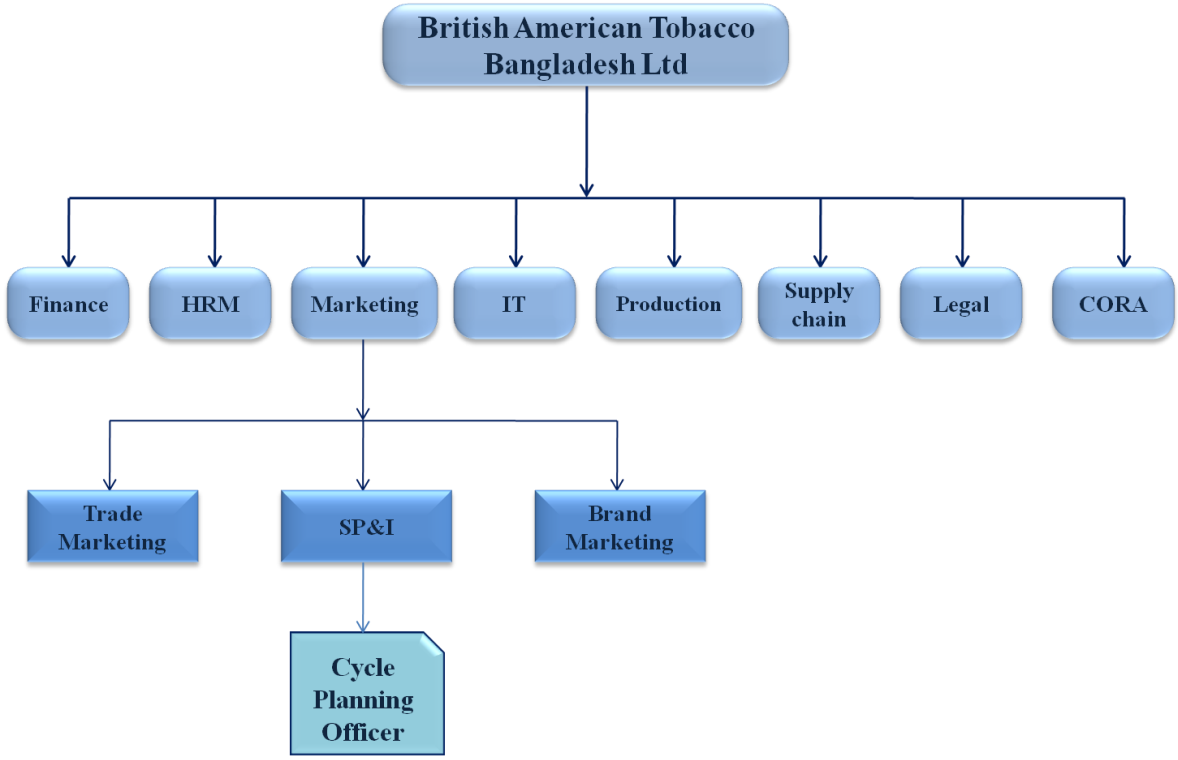
Global tobacco brands have one extra advantage in local market, which is global brands are comparatively less harmful than local brands so even in near future if people get more concern about tobacco caused health hazards then those global brands will be more preferable. BAT group has many world class brands, therefore it will not be very difficult for BATB to bring more global brands in local market, to ensure the sustainability of their current growth.

Chapter – 2

Job description (Cycle Planning Officer)

Root of the job

Marketing is always in core of any FMCG company, but for BATB Marketing department is the advantage and differentiating factor over its competitors. As BATB itself a very large organization so it must have very strong and vast marketing operation, and they surely do have that.



The job nature of a Cycle Planning Officer (CPO) is a combination of data analysis and marketing. The position of CPO comes under SPI wing of marketing department. The Marketing department of BATB has three wings of operation, Trade marketing, Brand marketing and Strategy, planning & Insight (SPI).

Trade marketing is concern about sales, promotion, and all relevant activities of trade marketing. They look after promotional and incentive sell packages. Promoting tobacco is highly guided by laws, so they also have to be concern about that to under the supervision of head of trade marketing.

Brand marketing is about establishing brand image in market and maintains that. There are brand manager for every brand of cigarette, and they look after every issue of that brand.

They are also responsible for launching new brands in market. There is a head of brand marketing who maintain the connection between brand marketing and other departments.

Strategy, Planning and Insight is the technical wing of marketing; this department manages all the raw data and converts them to valuable information so that trade marketing and brand marketing can make logical decision about their proceedings.

The job of a CPO is more like a numeric data analysis than marketing operation. This position works in a vast field of data and knows how to bring information from unsorted data. So this is very obvious that the job require good understanding of number and knowledge of statistic rather than theories of marketing. But the soft skills of this job are very relevant to marketing. In short the job is 'understanding the market by numbers'.

Responsibilities

Daily jobs	Monthly jobs	Project work
Keep record of the last day's sales	Prepare materials for Cycle Planning meeting	Electronic consumer feedback module
Find trend of change in sales pattern	Prepare materials for Demand Planning meeting	Introducing Advisor software
Check order of next day	Prepare sales forecast for next period	
Provide sales figure to brand managers	Prepare shipment limit for different regions	
	Analysis sales of the competitors	
	Prepare delivery plan	

The operational field of the CPO is very vast. There are many different routine works and some intensive project work too. Among all the tasks some remarkable works are given below –

- Keep track record of sales in different time slot like daily, weekly and monthly. Record of sales also divided in five sales regions (Dhaka, Bogra, Khulna, Shilyt and Chittagong) and get sum for national sales.

- Analysis the current sales pattern compared with year to date (YTD), same period last year (SPLY) and average of the period.
- Based on the current sales pattern the forecasting has done, which includes preparing running estimate of sales for the month and the annual sales. Task of forecasting is also include maintain the target sales of next three years in monthly basis.
- Prepare the summery of all sales information and forecasting and arrange them by different key fields so that other wings of marketing and supply chain can use those to make their future plan.
- Analysis the strategy and sales of the competitors and try to find the pattern from that. So that the trade and brand marketing wings can reshape their strategy. Also provide the strategic numeric information to brand managers.
- Handle projects of data analysis software improvement, managing logistics and literatures for training on the uses of that software. So that the general users of the marketing can be able to find the information from server and can properly interpret the meaning of the numbers.
- Manage e-feedback from consumers to keep record about the patterns of quality faults of different brands. So that the relevant brand manager and production unit can work with that and recover that.
- Make the numeric findings and strategies presentable in meetings. Put information in charts, pies and graphs but keep them easily understandable at the same time.
- Prepare and provide production and demanded amount of cigarettes; and their distribution map for the factory and distribution points. Keep track and connection between the production and distribution points.
- Maintain mail communication with the area managers and regional managers to get update information of every territory and sales pattern of the own brands and competitors.

Different aspects of performance

Cycle Planning Officer stands in the center hub of the marketing department. This position has very unique opportunity to get involve with every operation of marketing. Though most

of the task of CPO is based on the prescribed format of software but even after that this position has lot of scope to show own creativity and leave remarkable value addition.

In the field of numeric information, it requires high concern about presentation of information and that is the portion where CPO becomes very valuable to all departments.

Converting solid and isolated numbers into qualitative strategy can be considered as a technical creativity. At some point this job provide scope to understand the overall condition of the market of tobacco, not only for the own company but even for the whole industry. His position have maximum chance to be informed about the demand and trade pattern form both micro and macro stages.

In order to create bold career in any industry the parson must have excellent understanding about the entire industry and the market. Fortunately CPO is the position where the fresh graduate personnel will get to understand the market and industry like back of own hand, that's what make this job highly desirable to any fresh graduate who wants to develop long-term career in tobacco industry.

There are soft skills which can be adjustable with many different types of jobs, but there are individual's traits, that can be applicable to few work patterns. On the other way every job has some requirement of particular traits and the position need person who can matchup with the requirements. CPO needs a person who is good with numbers, good understanding of statistical software, high concentration ability and creativity of graphical presentation. Once it gets match with job holder's quality then the personnel can provide best level of performance by enjoying the work.

Critical observations

- First of all this job and position require extreme level of commitment about the confidentiality of information. CPO needs to handle much information about the condition of market, competitors and future planning; miss communication on any of these can cause huge damage to the company.
- This job require high concentration at time of handling numbers, one number can have long snowball effect that it can cause big accidental damage to company and the worst part is, it is quite difficult to find the root of the mistake.

- After working in CPO position it become more meaningful to work with the real market. Because the person will have good understanding that how the target is comings and how they are getting shipment allocation. So instructions from head office will become more meaningful.
- CPO position requires ability to handle so many tasks at the same time, which strong time management ability and CPO needs should have strong instinct to do priorities different tasks. It surely not good idea in a position like this to arrange work like series. Because a job can come later but with high urgency.

Recommendation

- There should be requirement of supervision and joint access on server so that the personnel should not feel extra stress about the confidential information beside it also provide scope to double check if instate of one there should be two CPOs. So that one personnel should not get solid information.
- This CPO position needs some rearrangement on the balance of the authority and responsibility of the position. CPO has so many responsibility but very small authority (as because of an entry level job), which make the tasks more complex to perform properly.
- CPO needs to perform many tasks together, which courses extra hours of work, so when one person works too long then there is very good chance to loosing concentration on the tasks. So managing work of CPO more on routine based can reduce the number of last hour's extra work load.
- BATB can consider to put all the ATOs at the CPO position for some period in state of keeping one CPO for long period can give those ATOs scope to understand the roots and background of the head office instructions, which can ensure more smooth operation at territory level.
- As CPO in a hub of the information server so many different people ask for different types of information. So SPI marketing wing need more software to present information to others, which will reduce the multi-tasking back load of the CPO.

If these recommendations get proper consideration then there is strong chance of immense improvement in the quality of the performance of CPO.

Chapter – 3

Respond of Market Price Relative to Fundamentals of Stocks

Abstract

Dhaka Stock Exchange (DSE) is not mature enough to consider it as an ideal market. The inception of DSE takes place more than sixty years ago. Over the last decade this market shows so much change in color. Definitely there are some issues over the ideal price of stocks which are causing these dynamic effects. It is not a visible idea to try to find out why market price is not ideal price in a developing country's stock market, rather this study is about to measure the difference between the ideal price and real price. Real population of this study is all public limited companies of the pharmaceutical and chemical industry listed in DSE. This paper covers 70% (14 companies) of the total population for data collection. The first segment will compare companies' market price with the fundamentals of stock valuation and second segment evaluate the current market condition for PCI compare to ideal value. The result of this report can only be applicable for the Pharmaceuticals and chemical industry. Generalization can be possible up to limited extent for other industries of DSE. One conclusion from all the available information could be, market price is very insensitive toward fundamentals of companies' and current market is performing far behind than ideal condition. Any developing stock market like DSE is always operate based on sudden information. Investors are generally never look for credibility of the information they just follow the apex of curve and make investment decision.

Section – 1

Dhaka Stock Exchange

Dhaka Stock Exchange (DSE) is not mature enough to consider it as an ideal market. The inception of DSE takes place more than sixty years ago. The necessity of establishing a stock exchange in the then East Pakistan was first decided by the government, early in 1952, when former Indian government had declared Calcutta Stock Exchange prohibited for the transactions in Pakistani shares and securities. The provincial industrial advisory council soon thereafter set up an organizing committee for the formation of a stock exchange in East Pakistan. (DSE, 2011)

The eight promoters integrated the formation as the East Pakistan Stock Exchange Association Ltd. on 28 April, 1954. But the formal trading was started in 1956 and in 1958 it started functioning at the Narayangonj Chamber Building in Motijheel C/A.On 23 June, 1962 the name was revised to East Pakistan Stock Exchange Ltd, as public company, but very soon on 14 May, 1964 the name of East Pakistan Stock Exchange Limited was changed to "Dhaka Stock Exchange Ltd." (DSE, 2011)
The Dhaka Stock Exchange (DSE) is registered as a Public Limited Company and its activities are regulated by its Articles of Association rules & regulations and bye-laws along with the Securities and Exchange Ordinance - 1969, Companies Act - 1994 & Securities & Exchange Commission Act - 1993. (DSE, 2011)

Over the last decade this market shows so much change in color. The sudden change in price pattern, so much apex and fall in a single day, destroy uncountable small investors' capital. Definitely there are some issues over the ideal price of stocks which are causing these dynamic effects. It is not a visible idea to try to find out why market price is not ideal price in a developing country's stock market, rather this study is about to measure the difference between the ideal price and real price. So that investors of DSE can have some idea that how behind we are from an excellent stock market. This study is not highly optimistic about finding one simple solution of pricing problem, but this study is confident enough to explaining the difference up to remarkable extent.

Objective of the project

The primary objective of this report is to understand the influence pattern of different factors on the price of stocks of Pharmaceuticals and chemical industry. Price of a stock reflects all available information about the stock in a perfect market, but we are not in an ideal market at Bangladesh. The causes of price change are highly dynamic and respond differently towards different types of information. So the study will investigate price against fundamentals of stocks and micro investors' perception toward fundamentals. After that this study will try to put some light on the impact of unauthorized information.

Within this focused target this report will also try to find the prototype of difference between the ideal price and the market price.

Very specifically the research questions, which the researchers have attempted to find out the results through the whole analysis, are:

- How market is responding to fundamental information?
- Is there any influence of qualitative or unauthorized information?
- How much the market price is related with the ideal value?

Hypotheses

In this paper, it has tried to nullify the null hypotheses. The null hypotheses are,

1. H_o: The price of stocks is highly influenced by the fundamentally analyzed information not by any other immeasurable factors.

2. H_o: In current situation of market is very close to the ideal condition.

The key alternative hypotheses of this paper are,

1. H_a: The price of stocks is not considerable influenced by the fundamentally analyzed information rather by any other immeasurable factors.

2. H_a: In current situation of market is not close to the ideal condition at all.

Based on the findings these hypotheses will be evaluated, in place where statistical analysis model has applied (like regression, ANOVA, correlation etc.) on those cases hypothesis will be tasted based on model otherwise it will be based on the preset assumptions.

Methodology

This study is broadly designed for find out which types' of information have what level of influence on stock price. That was the primary question had considered for finalizing the detail methods of the study.

Sample

Real population of this study is all public limited companies of the pharmaceutical and chemical industry (listed in DSE), and there are 20 of them. As this is a concentrated study so this paper covers 70% (14 companies) of the total population for data collection. These 14 companies are randomly selected by the computer software.

At the level of the investors' perception toward fundamentals, the size of population is very large, and hard to trace. So it requires quota sampling. However this is the secondary segment of the study so small numbers of sample have considered (42 samples). Findings from this section will not be used to draw any conclusions about the hypothesis. This section will only add some market reflection in theoretical study.

Measurement

In all part of this study have a direct relation among measurements. Statistical method of multiple regression analysis has applied in study. There are two different types of factors are anticipated to influence stock price of DSE.

First segment consider the numerical information of companies' performance, which includes earning per share (EPS), dividend per share, return on equity, return on assets, and the ratio of fixed asset to total asset. These are the five factors for the first segment. For regression analysis significance value will be accepted up to 0.05 (as general statistical standard).

Second segment evaluate the current market condition for PCI compare to ideal price. For this a randomly selected normal day's (not influenced by any extreme factor) market price

will be compared with the theoretically calculated ideal price. Here for the sake of analysis that will consider as done at a single time point.

The effect of unauthorized information is highly qualitative and difficult to compare with numerical information, so this study assumed the difference of ideal price (based on fundamental) and market price is caused by those unauthorized information.

Design

Time frame of this research is seven years slot (2005 to 2011). Every company has analyzed with same parameter over this periods. All those measurements are analyzed to find the possible association among them, through statistical analysis of qualitative variables.

N_1	N_2	O_1	O_2	X

'N_1' represents the sample from industry (here it is 14 companies out of 20), where this study gets the regression test those samples to get the attributes, denoted by 'O_1'. 'N_2' represents market price of stock in a given day and the analysis of theoretical value is denoted by 'O_2'. Finally the measurement is done to find possible association is represented by 'X'.

Procedures

This is a combination of qualitative and quantity research, so samples are not just a source of numeric value here. Every sample is working as a case study. Though to make the analysis easier all measurement are done based on predefined parameters.

These parameters are decided based on two different sections (fundamental and price principle), where the fundamentals get compared with the real market price of that year separately, so two different sates of data has collected to create the database for analysis. For this study samples are heterogeneous so 70% of the total population gets considered as data source. The value of different fundamental indicators will get compared with the price of stock for each year. One regression model will be applied to understand the impact of fundamentals. Five most relevant fundamental will be considered as independent variables, where market price is dependent variable. So the equation is –

$$\boldsymbol{Y\ (Stock\ price)} = \boldsymbol{\beta_1 + \beta_2 * (EPS) + \beta_3 * (dividend\ yield) + \beta_4 * (FA\ to\ TA) + \beta_5 * (ROE) + \beta_6 * (ROA)}$$

This model is trying to explain how dependent variable (market price of stock) is definable by these five independent variables (only if they show significant level of correlation). Though 14 companies average will not be a good reflection of industry (because of heterogeneous nature of companies') but it will provide some idea, and individual case will also indicate the condition of the industry.

For the second segment price is also considered from these 70% population. This second segment will work as supportive information for first segment, so that's another reason to not take total population for price analysis.

This section will work with the current market price and compare that with ideal value of stock. To accomplish that, this paper considers NAV (up to date) as ideal value of stock and compares that with recent market price. The status of undervalued or overvalued stock can provide example of industry performance with price.

Formula for NAV per share is –

$$\boldsymbol{NAV\ per\ share} = (\boldsymbol{Total\ Asset - Total\ liabilities}) / \boldsymbol{number\ of\ share\ outstanding}$$

Finally this ideal value will be compared with the market price of given days to analysis the current price condition of the stock market in PCI.

All these analysis of qualitative and quantities factors will take place (by SPSS and MS Excel). So the hypothesis will be tested based on the findings of those analyses. Finally this study will try to draw some conclusion and remarks to find a pattern of price for PCI at DSE.

Limitations

Though this report has tried best to provide standard and generalized information about the pricing model but still some limitations need attention.

- The result of this report can only be applicable for the Pharmaceuticals and chemical industry. As samples had collected only from this industry so it will not be convenient to generalize the outcome for any other industry.
- There are well defined and widely acceptable formulas to calculate ideal price of any stock (expelled in literature review) but because of extreme level unavailability of

information is the key issue to ignore those. That condition forced to go for second level formulas rather than first level stock valuation models.

- Database of stock related information is not very strong in Bangladesh so the analysis has only considered the data of year 2005 to year 2011.
- This paper did not have enough scope to take large sample for micro investors' field study to use the survey as a segment of reliable analysis.
- There is no data base of stock's price so it is not possible to compare ideal price with market price for long passed period. Long data collection period could do that in more intensive stage.
- Most of the unauthorized and uncensored information about stock are nonnumeric so it is not possible to put those side by side with available numerical information. That's why this paper takes help of assumption here.

Scope

This paper is trying to set a base line model to explain the difference of price in market. So in this first phase it is concentrating only one industry (PCI), based on the findings of this study second phase well be designed; which will consider sample from every industry based on weight so that investor can get proper idea about the total market and apply that findings for any portfolio combination.

Section – 2

Literature review

The basic fundamentals of any public limited company are commonly known as financial performance of the company to the micro investors. Now in any perfect condition the market price of any stock should be explained by the fundamentals, though in reality it is the rarest case to observe.

One question that is important to consider is: "*What is the difference between a great business and a great investment?*" -the answer is "price". Well according to the investor experts, if you pay too high price for even the best stock in the world, you will never make a good return on your investment. Therefore, a great investment does not likely have a high price. The point of this question is that the price you pay for a stock does matter enormously; it is the most important factor in your return. Accordingly, doing your fundamental analysis (thoroughly) is of a great importance when making your investments (euro investor, 2012).

There are basic and specific factors under fundamentals of any stock. That includes earning per share (EPS), price to earning (P/E), return on equity (ROE), return on assets (ROA), dividend yield, fixed asset to total assets as most relevant (Heatona & Luca, 1999). All these factors have combine impact on the stock price even though each one has individual impact too.

Earning per share is the final amount of profit after tax company could have for every single share (Kiplinger's personal finance magazine, 2005). The key element all investors look after is earning per share. Before investing in a company you want to know how much the company is making in profits. Future earnings are a key factor as the future prospects of the company's business and potential growth opportunities are determinants of the stock price (euro investor, 2012).

The price to earnings (P/E) ratio is possibly the most scrutinized of all the ratios. If sudden increases in a stock's price are the spit, then the P/E ratio is the steak. A stock can go up in value without significant earnings increases, but the P/E ratio is what decides if it can stay up. Without earnings to back up the price, a stock will eventually fall back down (investopedia, 2011). P/E explains how long it will take to recover the investment and how much investor

needs to pay to earn one taka. For illustrate, if any stock has price of taka 20 and it has earning of taka 2 then the P/E will be 10 (20/2=10), which means investor needs 10 years to recover the total investment and for earning one taka investor has to pay ten taka (Block, Hirt, & Danielsen, 2010).

But somehow always a low P/E is not good sign a company cannot be able to maintain that level of commitment for longer period so P/E cannot be the only factor to make investment decision (Kiplinger's personal finance magazine, 2005).

Return on equity (ROE) is a measure of profitability that calculates how many dollars of profit a company generates with each dollar of shareholders' equity. Let's assume Company ABC generated $5 million in net income last year. If Company ABC's shareholders' equity equaled $10 million previous year, then according to theory their ROE is 50% (investing answers, 2012).This means that company ABC earned $0.50 of profit for every $1 of shareholders' equity last year, giving the stock an ROE of 50%.

ROE is not just a measure of profit; it's a measure of efficiency. A rising ROE suggests that a company is increasing its ability to generate profit without requiring as much capital. It also indicates how well a company's administration is deploying the shareholders' capital. In other words, higher ROE is better for investment and falling ROE is usually a problem (Ross, W, & Jordan, 2011).

However, it is important to note that generally if the value of the shareholders' equity goes down, ROE goes up. Thus, write-downs and share buybacks can artificially boost ROE. Similarly, a high level of debt can artificially boost ROE; after all, the more debt a company has, the less shareholders' equity it has (as a percentage of total assets), and the higher its ROE is (investing answers, 2012). That is the concept of the financial leverage, where the ROE can managed to attract higher share price (Brigham & Gapenski, 1996).

But after all discussion experts provide very important suggestion, which is “Some industries tend to have higher returns on equity than others. As a result, comparisons of returns on equity are generally most meaningful among companies within the same industry, and the definition of a "high" or "low" ratio should be made within this context” (investing answers, 2012).

Return on assets (ROA) is a company's net earnings divided by its average of total assets. The return on assets formula looks at the capability of a company to utilize its assets to grow net profit.

Net income in the numerator of the return on assets formula can be found on a company's income statement. Net income is the amount earned by a company after subtracting out the expenses incurred, including depreciation and taxes (finance formulas, 2010).

Average total assets in the denominator of the return on assets formula is found on a company's balance sheet. The average of total assets should be used based on the period being evaluated. For illustration, if an investor is calculating a company's 2012 return on assets, the beginning and ending total assets for that year should be averaged(finance formulas, 2010).

The return on assets formula can be applied by an investor or by a company internally to evaluate if the company is turning a profit relative to their assets. It is important for an investor to reflect on that a company's return on assets can vary depending on which industry the company operates in. A particular corporation may provide a product that requires additional assets to manufacture the product relative to another industry (finance formulas, 2010).

Dividend yields a financial ratio that shows how much a company pays out in dividends each year relative to its share price. In the absence of any capital gains, the dividend yield is the return on investment for a stock. Dividend yield is a way to measure how much cash flow investors are getting for each taka invested in an equity position - in other way, how much "bang for a buck" stockholders are getting from dividends. Investors who require a minimum stream of cash flow from their investment portfolio can secure this cash flow by investing in stocks paying relatively high, stable dividend yields (investinganswers, 2010).

To get better understanding about the application of dividend yield could be explained by: If two companies both pay annual dividends of taka 10 per share, but ABC company's stock is trading at taka 200 while XYZ company's stock is trading at taka 400, then ABC has a dividend yield of 5% while XYZ is only yielding 2.5%. Thus, assuming all other factors are equivalent, an investor looking to supplement income would likely prefer ABC's stock over that of XYZ (investinganswers, 2010). But like all other factors, considering only the ROA

may not be the best path to make investment decision though it helps comparing firms of the same industry.

Fixed asset to total assets is another relevant concept of fundamental analysis because that actually explains the stability of the company. When fixed asset cover the larger portion of the total asset which ensure that risk of losing investment is very low at the point of bankruptcy. Beside that fixed assets have high depreciation and that gives tax advantage. But this concept is not applicable in every industry (Midani, 1988). A pharmaceutical company supposes to have more fixed assets compare to a nonbanking financial institution because of basic difference between their operations. So comparing fixed asset to total asset ratio can be applicable within the industry but not for evaluation different industries together.

Capital Asset Pricing Model (CAPM) is used to calculate the required rate of return for any risky asset. Because required rate of return is the increase in value that investor should expect to see based on the inherent risk level of the asset. CAPM is most often used to determine what the fair price of an investment should be. When investor calculate the risky asset's rate of return using CAPM, that rate can then be used to discount the investment's future cash flows to their present value and thus arrive at the investment's fair value(investinganswers, 2010).

For illustration investors could use CAPM to decide what price you should pay for a particular stock. If Stock A is riskier than Stock B, the price of Stock A should be lower to compensate investors for taking on the increased risk.

Market returns (r_m) –input of market rate of return, can be based on past returns or projected future returns. Economist Peter Bernstein famously calculated that over the last 200 years, the stock market has returned an average of 9.6% per year (investinganswers, 2010).

To find the ideal price of any stock the best way to go for CAPM, this model work with two

Required return on stock S= return on risk free asset + beta [expected return on market - return on risk free asset]

$$\mathbf{R(r_s)= r_f + B_s\,[E(r_m)-r_f]}$$

Where,
Required return on stock = $R(r_s)$
Risk free rate = r_f
Company beta value = B_s
Market risk premium = $E(r_m)-r_f$

levels of formulas. First one is required rate of return on stock [R(r_s)] which is given above.

To apply this theory in this paper relevant information has collected from market. Bangladesh government's one year Treasury bill's return rate has considered as a risk free rate, at June 2012 which is 11% (IMF, 2012). Beta value of all companies can be collected from the stock news web site 'www.stockbangladesh.com' (Stock Bangladesh , 2012). To find the market risk premium a back calculation method could be applicable, which is the difference between Treasury bill rate and commercial bank's one year fixed deposit rate. In 2012 according to some commercial banks (like The City bank, BRAC bank, Prime bank, Standard Chartered bank, Dutch Bangla bank) their one year fixed deposit rate is 12.50%. So that means the risk premium is (12.50% – 11.00% = 1.50%) 1.50%.

The value of the stock = next year's dividend / required return on the stock - the expected dividend growth rate

$V = D1 / \{R(r)-g_n\}$

Where,
Ideal value of stock = V
Dividend of next year = D1
Required return on stock = R(r)
Expected growth rate = gn

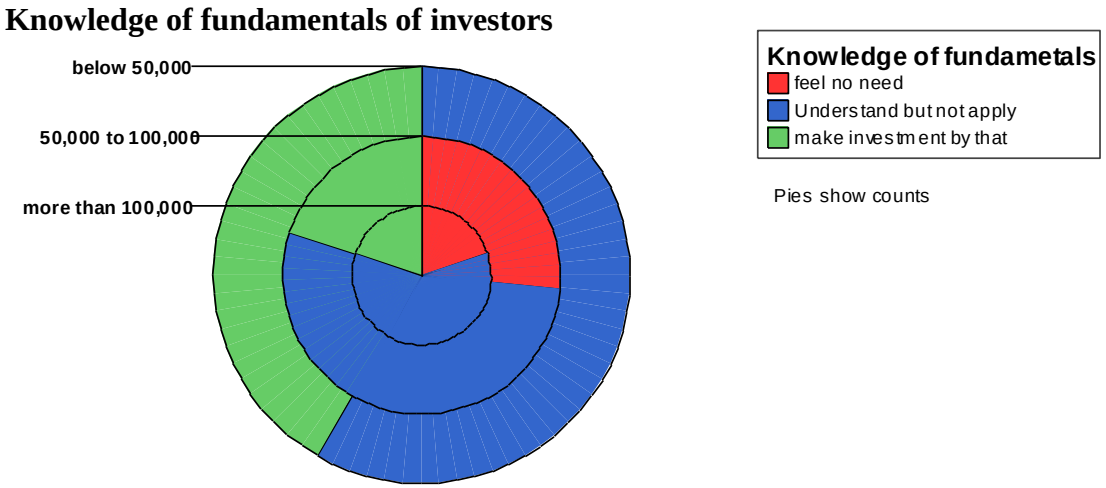
To find the ideal stock price for any company, second set of formula is given above. Based on that growth rate next year dividend will be calculated and the required return on stock will come from the first set of formula. But in this paper this formula will not be applicable because relevant information for that is not available in market (mentioned in limitation).

There is another concept of NAV (Net Asset Value) which can provide idea about the closest ideal value of a stock. According to the fixed-price method, the issuers arrive at the fixed price, when they consider the reasonable value of their company plus any similar company traded in the market. Hypothetically, this price is equal to net asset value (NAV) of the firm and firm has to disclose all the quantitative and qualitative factors to justify this price (Chowdhury, 2009).Mostly this NAV is applicable for IPO, but taking the NAV comparable with market price in state of the CAPM model is logically applicable, because finally the idea is to evaluate the condition of market price.

By extension, once investors have calculated the investment's fair value, and then compare it to its market price. If price estimate is higher than the market's, investor could consider the

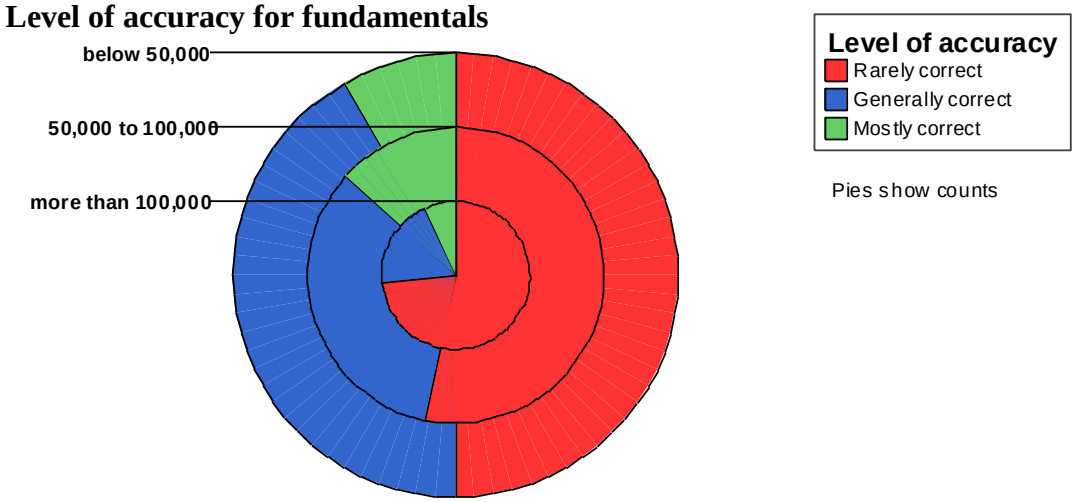
stock a bargain or if price estimated lower, investor could consider the stock to be overvalued (investinganswers, 2010).

Finally after all the principals and theories market is never expected to behave on these, because these are so many qualitative factors and market rumors in any developing stock market(money-zine, 2011). If market price is not very close to the fundamentals then where is the point of analyze these fundamentals? In developing stock market overpriced stock is very common reason to micro investors for losing their investment. That's the point where investor should understand the fundamentals so that they can evaluate how much the stock is overvalued or undervalued (Stock Research Pro, 2008).



But in DSE investors are not very concern about the fundamentals of stocks, most of them understand the fundamentals but they don't feel to consider that for make investment decision.

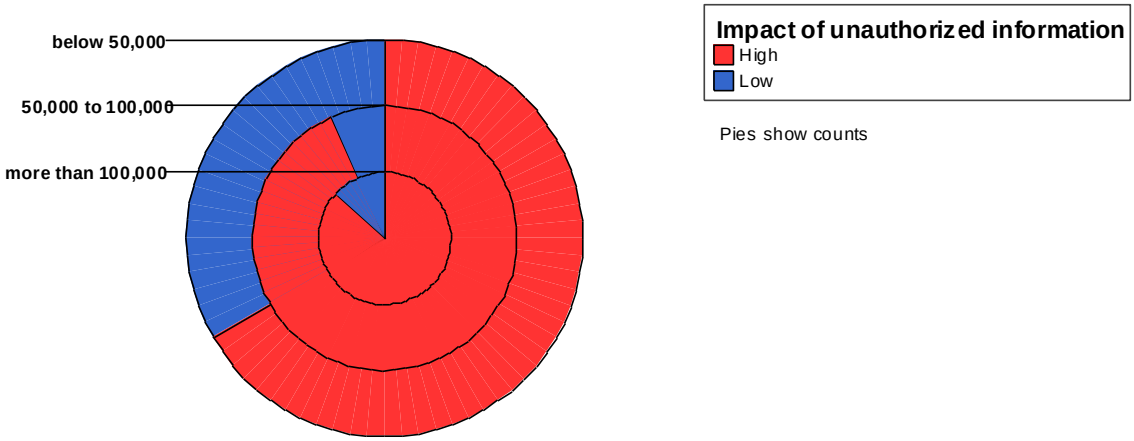
From different investment level most of the cases investors are not very willing to apply their knowledge of fundamentals, but they have knowledge of fundamentals. That strikes an



uncertainty about their perception towards fundamentals.

Investors' that understating was caused by the reason of believe that fundamentals are not accurate at all. Because most of the investor have no faith on the level of accuracy of the fundamentals and investors are indifferent on this issue no matter how much they have invested in DSE.

Impact of unauthorized information on investors



No wonder investors have strong faith and experience about the applicability of unauthorized information. In any stock market like DSE, where rumor plays a heavy influence on investors decision there expecting fundamentals to get valid consideration will be very paradoxical. That opens many opportunity to study the pulse of DSE.

Section – 3

Demographic feature

Table -1: PCI in DSE at a glance				
	Company	**Trading code**	**Sample code**	**listing year**
1	ACI Limited	ACI	S 01	1976
2	ACI Formulations Limited	ACIFORMULA		2008
3	Active Fine Chemicals Limited	ACTIVEFINE		2010
4	Ambee Pharma	AMBEEPHA	S 02	1986
5	Beacon Pharmaceuticals Limited	BEACONPHAR		2010
6	Beximco Pharma	BXPHARMA		1986
7	Beximco Synthetics	BXSYNTH	S 03	1993
8	Glaxo SmithKline	GLAXOSMITH	S 04	1976
9	The Ibn Sina	IBNSINA	S 05	1989
10	Imam Button	IMAMBUTTON		1996
11	Keya Cosmetics	KEYACOSMET	S 06	2001
12	Kohinoor Chemicals	KOHINOOR	S 07	1988
13	Libra Infusions Limited	LIBRAINFU	S 08	1994
14	Marico Bangladesh Limited	MARICO	S 09	2009
15	Orion Infusion Ltd.	ORIONINFU	S10	1994
16	Pharma Aids	PHARMAID	S11	1987
17	Reckitt Benckiser(Bd.)Ltd.	RECKITTBEN	S12	1987
18	Renata Ltd.	RENATA	S13	1979
19	Salvo Chemical Industry Limited	SALVOCHEM		2011
20	Square Pharmaceuticals Ltd.	SQURPHARMA	S14	1995

(DSE, 2012)

In 1976 PCI industry entered in DSE with two companies and now twenty companies are listed under PCI industry at DSE (**Table 1**). Here 14 companies have selected for study. These companies' last seven years financial performance had evaluated to explain market price.

This sample distribution contains 36 years old company as well as 3 years old too, which means sample are highly indifferent about maturity consideration (**Table 1**). This group also contains emerging, growth and mature firms. That indicates test group is surely representing different profit margin firms. So here sample is strong representation of population and

findings of this study can acceptably generalized for the industry and even for market up to an extent.

Association & Significance

Table 2: Regression of Market price to Fundamental

Analysis Summary	Model Summary		ANOVA
Company	R square	Adjusted R square	Sig.
S 01	0.975	0.849	0.266
S 02	0.678	-0.930	0.816
S 03	0.891	0.344	0.531
S 04	0.931	0.586	0.430
S 05	0.971	0.836	0.285
S 06	0.988	0.929	0.184
S 07	0.952	0.712	0.363
S 08	0.793	-0.239	0.694
S 09	1.000	1.000	0.000
S 10	0.795	-0.228	0.692
S 11	0.958	0.749	0.340
S 12	1.000	0.998	0.031
S 13	1.000	1.000	0.015
S 14	0.813	-0.120	0.667
Industry Avg.	0.910	0.463	0.380

Appendix – II

Significance (Sig.) value shows that how much this model fit in data. In this study some samples are showing very high value of significance, which means scale of unacceptability of the relationship, is very high. Only three samples are showing significance less than 0.05 (**Table 2**). But others' high values of significance reduce overall level of acceptability about association.

R square clarifies that how much depended variable can explain by the independent variable. Most of the sample refers that more than 80% dependent variable can explain by the independent variables (**Table 2**). But some of them are showing negative value in adjusted R square, which creates puzzlement about the strength of association (**Table 2**).

So based on the concern values it is expected that model is representing weak relationship between depended variable and independent variables.

Table 3: β value	
Company	**β value**
S 01	0.78365
S 02	1.01683
S 03	0.98304
S 04	0.73097
S 05	0.62886
S 06	1.02575
S 07	0.22816
S 08	0.54051
S 09	0.81038
S 10	1.08237
S 11	0.75266
S 12	0.52486
S 13	0.32888
S 14	0.53845
Industry Avg.	0.71253

(Stock Bangladesh , 2012)

From the entire beta values one common factor can be found, which is all have value of more than zero. That means assets are moving at the same duration as the market is moving, and particularly some are showing value more than one (**Table 3**), certainly their growth is higher than the market.

These beta values have proved one issue that the performance of the firms on PCI is profitable and they are in good condition to provide high return on investment.

Test of Hypothesis 1

Table 4: Summary of regression coefficients							
Analysis Summary	**Fundamental to Market price**						
	Coefficients						
company	**β 1**	**β2** EPS	**β3** Dividend	**β4** FA to TA	**β5** ROE	**β6** ROA	**Sig.**
S 01	-714.4	8.9	4.4	1013.0	-190.7	1379.6	**0.27**
S 02	1891.4	274.6	49.5	-12336.9	-14124.8	20685.6	**0.82**
S 03	415.6	27.8	-53.8	345.3	-63414.5	146665.6	**0.53**
S 04	-30.0	-20.7	6.3	1065.5	17585.4	-25916.3	**0.43**
S 05	-3552.4	43.8	-18.8	6336.7	408.2	-9415.8	**0.29**
S 06	555.2	83.3	-2.4	-378.5	-3637.4	816.1	**0.18**
S 07	-198.6	3.6	-22.7	382.7	799.6	20796.3	**0.36**
S 08	-1642.2	-32.7	66.1	2740.3	6595.0	12250.0	**0.69**
S 09	529.0	-3.0	7.0	244.1	-3222.4	4023.2	**0.00**
S 10	2973.7	33.5	25.8	-4895.5	-306.5	-597.8	**0.69**
S 11	-542.9	0.4	50.5	-799.7	425.4	-248.8	**0.34**
S 12	-2450.6	18.9	-1.7	2915.3	3942.7	4479.5	**0.03**
S 13	-14124.4	33.4	524.5	16609.8	-87831.0	-17441.8	**0.02**
S 14	7792.2	-10.5	4.4	-3854.4	-20875.2	2469.3	**0.67**
Industry Avg.	-649.9	33.0	45.6	670.5	-11703.3	11424.6	**0.38**

Appendix – II

All firms of PCI are not showing acceptable range of significance value. So even when the fitted model is providing scope of explain the dependency of fundamentals there is no point to go through that model and explain the level of influence of different deferent variables because of high unacceptability of relation.

$$\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 \neq 0$$

As betas are not accepted in the model and high significance (Sig.) value caused no relation between variables. Even different samples are not showing any common pattern in values (**Table 4**) or value range. Under same beta some have very high positive value and some are negative, and that is not followed by any particular characteristics of firms. Last but the most particularly significance value of more than 0.05 is rejecting first null hypothesis ($1H_0$).

So alternative hypothesis has proved ($1H_a$), which means market is not considerably influenced by the fundamentals of the stocks for the PCI.

Test of Hypothesis 2

Table 5: NAV per share to market price				
Company	Current Price	Face value	NAV per Share	Percentage variance
S 01	137.7	10	206.72	-33%
S 02	225.1	10	24.4	823%
S 03	28.6	10	25.57	12%
S 04	518.8	10	114.65	353%
S 05	81.7	10	16.59	392%
S 06	29.6	10	22.87	29%
S 07	200	10	11.43	1650%
S 08	208	10	1566.71	-87%
S 09	378.1	10	69.69	443%
S 10	140.6	10	101.24	39%
S 11	138.1	10	21.39	546%
S 12	730	10	48.13	1417%
S 13	718	10	1817.01	-60%
S 14	168.5	10	43.07	291%
Industry Avg.	257.06	10	292.1	

Appendix - I

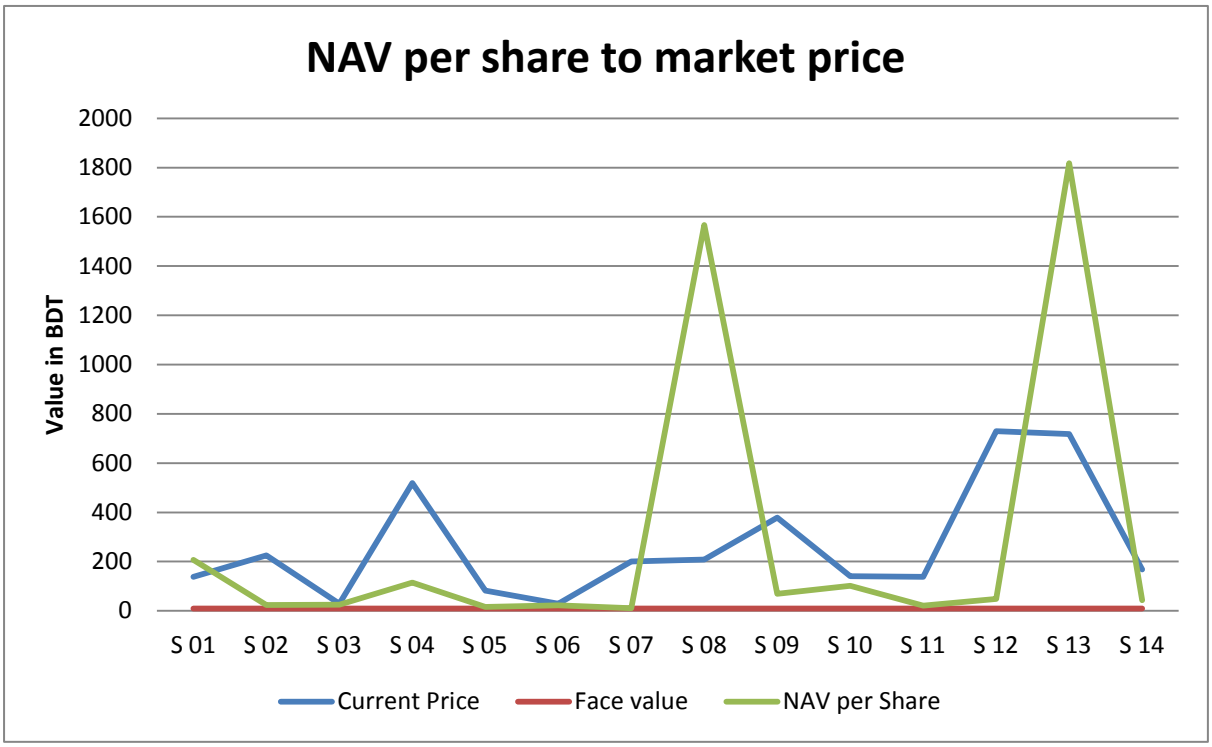
As every share has a face value of taka ten so their different market price is definitely indifferent about the issue of face value. Only three samples are showing higher NAV per share than market price (**Table 5**). But all others samples are providing higher market value than NAV per share. So it can be surely said that industry has a trend of over valued stock.

By considering the value of percentage of variance, one conclusion can be draw about the hypothesis two. Eight samples are giving indication that market is more than 200% over valued (**Table 5**). Even some are showing extreme over valuation in market, which is not a proper representation of stable market. These much over valuation will defiantly bring extreme fall in market and investors will highly affected by that.

At the condition of that much over valuation when investors are still interested to invest in PCI that indicates markets' price inefficiency. That means the second null hypothesis ($2H_0$) must be rejected, so alternative hypothesis two ($2H_a$) will be accepted. Market is not close to ideal condition yet, particularly so far away from perfect condition.

Results' overall interpretation

One conclusion from all the available information could be, market price is very insensitive toward fundamentals of companies' and current market is performing far behind than ideal condition. There is very small scope to apply the theoretical models in investment decision.



Market like DSE do performed based on many factors and all of them are not explainable by the theoretical models of fundamentals. There are many nominal factors about different stocks and those play very active role to motivate market price of stocks.

The difference between market price and ideal value (proximate), presented in the figure above is caused by the qualitative information and market rumors. As the market is performing very high then standard condition so the impact of those unauthorized information must be higher than the fundamentals of stocks.

Remarks

First of all any developing stock market like DSE is always operate based on sudden information. Investors are generally never look for credibility of the information they just follow the apex of curve and make investment decision. Now if this is the condition based on

which market will perform in coming years' then very soon public limited companies will be out of financing. It is very difficult to make micro investors' understand the fundamentals and follow them to make investment, because they are more comfortable to follow their rumors' duration. If the condition continued, very near future these micro investors will unprovoked to invest. People will prefer government bonds; FDRs types risk free investment over stocks.

Take a subjective understanding on the current condition of the market may provide some backup about acceptability of this paper's findings. Such as –

- Investors are more interested on manufacturing and export oriented companies. That makes PCI bit attractive than market average. Though end of year financial institutions and banks get most of the attention but PCI still in high demand.
- Market has no relation between last closing price and next day's performance. Because one day it shows remarkable growth and following day it has lowest index since last price fall.
- When price of one stock boost up, most of the time it is very difficult to ensure or put spot light on the reason for that. Even market experts' has no clue about that success factors.
- Perception of earning only short term gain is also causing big trust on the unauthorized information, which may seems as good scope to earn good profit by weeks.

Understanding the findings (statistical and numerical information) and knowing these factors providing chance to generalize the market as very strongly unstable and sensitive to the undercover information. There is strong understanding among investors that operation of any stock is very volatile and that makes them motivated to ignore fundamentals. In developing market it is too much to ask that even price is too high but it close to fundamentals. Over the period price and index come down a lot, which make investors' think market is in good condition, but still it's a long way to go.

It is not expected that market will get adjusted with ideal condition overnight. But the process of adjustment should be triggered very soon. Market becomes very volatile when self-stimulated readjustment takes place. But investors are strongly rigid to follow the apex and rising stock price. So the possible change needs to start from the perception of the investors towards fundamentals.

There is no hard and fast rule to bring the market close to stable condition, but some visionary stapes can stimulate the process of moving towards ideal price condition. Such as –

- Need to start teaching from higher secondary level, the easy interpretation of fundamentals. Also government's initiated trainings can help to motivate current micro investors' to focus more on fundamentals.
- Need to create enough scope of investment variation to reduce the impact of over demand than supply.
- DSE and SEC need to take strong actions against providing rumors in the market. Their strong steps will reduce the chance of increasing price more illogically.
- Institutional investors need to make investment more openly because they follow theories and models more than micro investors, so by following their portfolio micro investors are can also go for better investment decision.
- Every point where industry and the firm are not in a same direction, no reason to follow the industry because even the entire industry can also in a wrong duration.

Intensive concentration on the price pattern can open new path to bring the market at a stable condition, and every relevant stakeholder need to work for it together.

Conclusion

Sometime firms used the investors' short coming about stocks to gain financial benefits. But it must be established that investors are not the source of profits, they are the cash providers which should be used to earn profit. There are strong concerns about price and its direction, but the investment decision is the one issue which needs higher consideration, because proper investment decision will defiantly lead to stable price.

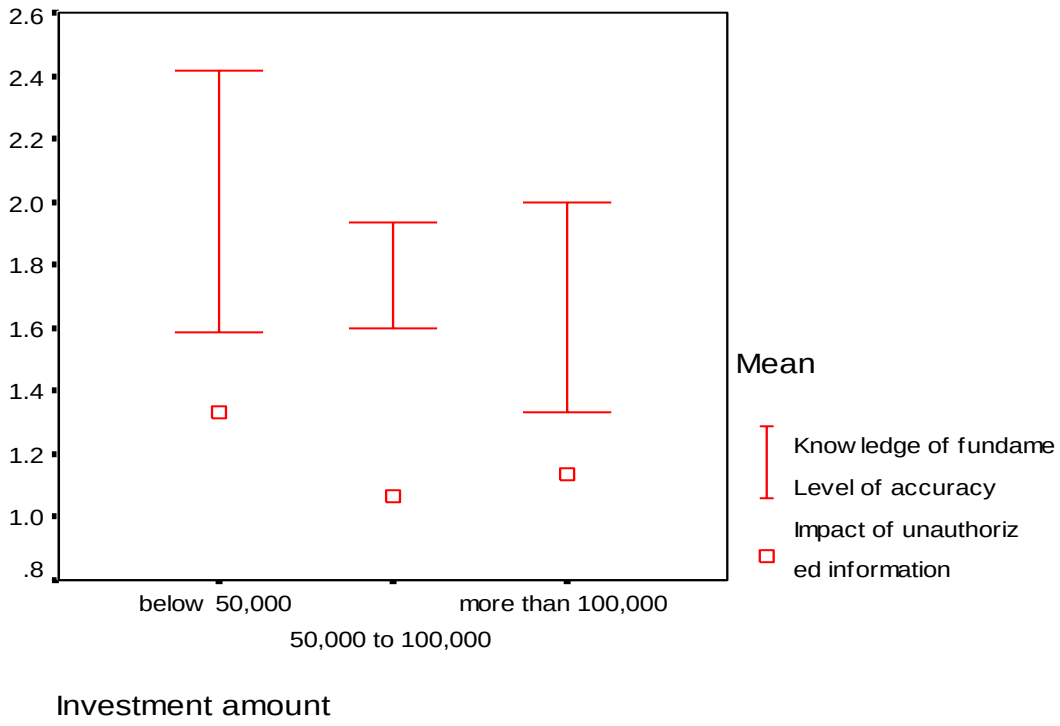
Bibliography

1. batb. (2012). *about us*. Retrieved Dec 11, 2012, from British American Tobacco Bangladesh: http://www.batbangladesh.com/group/sites/BAT_85DJTR.nsf/vwPagesWebLive/DO85DKEX?opendocument&SKN=1
2. BATB. (2011). *Annual Report* . Dhaka: BATB.
3. BATB. (2012). *batb brands*. Retrieved Dec 12, 2012, from www.batbangladesh.com: http://www.batbangladesh.com/group/sites/BAT_85DJTR.nsf/vwPagesWebLive/DO87ELTK?opendocument&SKN=1
4. Block, S. B., Hirt, G. A., & Danielsen, B. R. (2010). *Foundations of Financial Management* . New York: Mc Graw Hill.
5. Brigham, E. F., & Gapenski, L. C. (1996). *intermidiate financial management.* New York: Harcourt Brace College Publishers.
6. Campbell, J. Y., & Shiller, R. J. (1988). stock price earning and expected dividend. *national bureau of economic research* , 03-42.
7. Chowdhury, A. (2009). *Discovery of price in an IPO is both a science and an art*. Retrieved Dec 2012, from www.studymode.com: http://www.studymode.com/essays/Articals-506047.html
8. Dagilien, L., Kovaliov, R., Maerinskas, J., & Simanaviien, Ž. (2006). THE APPLICATION OF FINANCIAL VALUATION METHODS IN INVESTMENT DECISIONS. *VADBA/Management* , 28-33.
9. David, A., & Veronesi, P. (2009). What Ties Return Volatilities to Price Valuations and Fundamentals. *JEL* , 01-63.
10. DSE. (2011). *background*. Retrieved Dec 11, 2012, from Dhaka Stock Exchange: http://www.dsebd.org/ilf.php#fnd
11. DSE. (2012). *pharmaceutical and comical industry* . Retrieved Nov 12, 2012, from www.dsebd.org: http://www.dsebd.org/companylistbyindustry.php?industryno=18
12. euro investor. (2012, Feb). *5 Important Elements in Fundamental Analysis*. Retrieved Nov 12, 2012, from euro investor: http://www.euroinvestor.com/ei-news/2012/02/12/stock-school-5-important-elements-in-fundamental-analysis/15694
13. Evans, G. R. (2012). Stock (Equity) Fundamentals Essential features of pricing. *Mudd Finance* , 01-18.
14. Faruquee, M., Akareem, H. S., & Newaz, M. T. (2012). Imported Versus Local Products: Why and How People Respond Against Different Categories? *International Journal of Marketing and Technology, 2* (7), 11-26.
15. finance formulas. (2010). *Return on Assets*. Retrieved Dec 20, 2012, from finance formulas: http://www.financeformulas.net/Return_on_Assets.html
16. Heaton, J., & Lucas, D. (1999). Stock prices and fundamentals. *Microeconomics annual conference* (pp. 1-45). Microeconomics annual conference .
17. Heatona, J., & Luca, D. (1999). Stock prices and Fundamentals. *National Bureau of Economic Research, 14* (0-262-52271-3), 213-264.
18. Hickman, K., & Petry, G. H. (1990). a comparison of stock price predictions using court accepted formulas, dividend discount, and P/E models. *wiley-blackwell (www.jstor.org), 19* (2), 76-87.
19. Hirt, G. A., & Block, S. B. (2003). *Fundamentals of investment management* . New York: McGraw Hill.
20. IMF. (2012). *Selected Macroeconomic Indicators.* June. dhaka: InternationalMmonetary Fund.

21. investing answers. (2012). *return on equity*. Retrieved Dec 20, 2012, from investing answers: http://www.investinganswers.com/financial-dictionary/financial-statement-analysis/return-equity-roe-916
22. investinganswers. (2010). *CAPM*. Retrieved Dec 16, 2012, from www.investinganswers.com: http://www.investinganswers.com/financial-dictionary/stock-valuation/capital-asset-pricing-model-capm-1125
23. investopedia. (2011, Sep). *The 4 Basic Elements Of Stock Value* . Retrieved Nov 11, 2012, from investopedia: http://www.investopedia.com/articles/fundamental-analysis/09/elements-stock-value.asp#axzz2FToqxdnd
24. Khothri, S. P., & Sbanken, J. (1998). Fundamentals largely explain stock price volatility. *Journal of applied corporate finance* , 81-112.
25. Kiplinger's personal finance magazine. (2005). the basics for investing in stocks. *Kiplinger's personal finance magazine* , 1-20.
26. Midani, D. M. (1988). determinaats of kuwaiti stock prices: an empirical investigation of industrial services, and food company shares. *kuwaiti journal* , 314-324.
27. money-zine. (2011). *calculating stock prices*. Retrieved Dec 15, 2012, from www.money-zine.com: http://www.money-zine.com/Investing/Stocks/Calculating-Stock-Prices/
28. Ross, S. A., W, R., & Jordan, B. D. (2011). *Fundamentals of corporate finance.* new delhi: tata McGraw Hill.
29. Stock Bangladesh . (2012). *Beta coefficient* . Retrieved Dec 18, 2012, from Stock Bangladesh : http://www.stockbangladesh.com/resources/coefficient
30. Stock Research Pro. (2008, Sep). *What is Fundamental Analysis?* Retrieved Nov 14, 2012, from Stock Research Pro: http://www.stockresearchpro.com/what-is-fundamental-analysis/
31. Torrez, J., Jafari, M. A., & Juma's, A. H. (2006). CORPORATE VALUATION: A LITERATURE REVIEW. *Inter Metro Business Journal, 2* (2), 39-58.

Appendix – I

company	current p	face value	NAV	share outstanding	NAV/per Share
ACI	137.70	10.00	4914447794	23773833	206.72
Ambee pharma	225.10	10.00	48792993	2000000	24.40
Beximco synthetics	24.60	10.00	2015310518	78829418	25.57
Glaxo Smithkline	518.80	10.00	1381151000	12046449	114.65
Ibn Sina	81.70	10.00	268731129	16200000	16.59
Keya cosmetics	29.60	10.00	658689317	28800000	22.87
Kohinoor chemicals	200.00	10.00	57143605	5000000	11.43
Libra infusion	208.00	10.00	1960891930	1251600	1566.71
Marico	378.10	10.00	2195223284	31500000	69.69
Orion infusion	40.60	10.00	206116683	2035976	101.24
Pharma aids	138.10	10.00	66722598	3120000	21.39
Reckit benkiser	730.00	10.00	227398185	4725000	48.13
Renata	718.00	10.00	3284216062	1807480	1817.01
Square Pharma	168.50	10.00	15969561917	370768664	43.07
industry average	257.06	10.00	2375314073	41561316	57



Appendix – II

ACI

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.987(a)	.975	.849	91.22701	.975	7.744	5	1	.266

A Predictors: (Constant), Return on assets , Dividend%, Fixed asset to total asset, Earning per share, Return on equity

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	322229.360	5	64445.872	7.744	.266(a)
	Residual	8322.367	1	8322.367		
	Total	330551.726	6			

a Predictors: (Constant), Return on assets , Dividend%, Fixed asset to toal asset, Earning per share, Return on equity
b Dependent Variable: Market Price

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-714.367	1524.120		-.469	.721
	Earning per share	8.931	6.201	.798	1.440	.386
	Dividend%	4.428	3.055	.493	1.449	.384
	Fixed asset to total asset	1013.000	2643.596	.311	.383	.767
	Return on equity	-190.734	5234.112	-.117	-.036	.977
	Return on assets	1379.644	13095.496	.273	.105	.933

a Dependent Variable: Market Price

Ambee Pharma

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.824(a)	.678	-.930	260.95661

a Predictors: (Constant), Return on assets, Fixed asset to total asset, Dividend %, Earning per share, Return on equity

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	143618.352	5	28723.670	.422	.816(a)
	Residual	68098.351	1	68098.351		
	Total	211716.703	6			

a Predictors: (Constant), Return on assets, Fixed asset to total asset, Dividend %, Earning per share, Return on equity

b Dependent Variable: Market Price

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1891.436	4383.447		.431	.741
	Earning per share	274.645	478.219	1.118	.574	.668
	Dividend %	49.469	124.967	.643	.396	.760
	Fixed asset to total asset	-12336.862	18700.439	-.736	-.660	.629
	Return on equity	-14241.785	15012.768	-2.102	-.949	.517
	Return on assets	20685.374	78469.352	.338	.264	.836

a Dependent Variable: Market Price

Beximco Synthetics

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.944(a)	.891	.344	166.98688	.891	1.630	5	1	.531

a Predictors: (Constant), Return on assets, Fixed asset to total asset, Dividend %, Earning per share, Return on equity

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	227248.934	5	45449.787	1.630	.531(a)
	Residual	27884.617	1	27884.617		
	Total	255133.551	6			

a Predictors: (Constant), Return on assets, Fixed asset to total asset, Dividend %, Earning per share, Return on equity
b Dependent Variable: Market price

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	415.602	442.255		.940	.520
	Earning per share	27.776	54.699	1.065	.508	.701
	Dividend %	-52.675	38.955	-1.088	-1.352	.405
	Fixed asset to total asset	345.320	593.605	.261	.582	.665
	Return on equity	-63414.457	35962.205	-11.278	-1.763	.328
	Return on assets	146665.563	99334.677	10.411	1.476	.379

a Dependent Variable: Market price

Glaxo Smithkline

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.965(a)	.931	.586	223.55986

a Predictors: (Constant), Return on assets , Dividend %, Fixed asset to total asset, Return on equity, Earning per share

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	675229.570	5	135045.914	2.702	.430(a)
	Residual	49979.009	1	49979.009		
	Total	725208.579	6			

a Predictors: (Constant), Return on assets , Dividend %, Fixed asset to total asset, Return on equity, Earning per share

b Dependent Variable: Market price

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-29.990	1931.262		-.016	.990
	Earning per share	-20.657	252.558	-.773	-.082	.948
	Dividend %	6.286	34.366	1.395	.183	.885
	Fixed asset to total asset	1065.467	6057.570	.165	.176	.889
	Return on equity	17585.439	25929.146	5.976	.678	.621
	Return on assets	-25916.266	30965.626	-5.664	-.837	.556

a Dependent Variable: Market price

Ibne Sina

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.985(a)	.971	.826	247.69318

a Predictors: (Constant), Return on assets, Dividend %, Fixed asset to total asset, Return on equity, Earning per share

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2048907.925	5	409781.585	6.679	.285(a)
	Residual	61351.912	1	61351.912		
	Total	2110259.837	6			

a Predictors: (Constant), Return on assets, Dividend %, Fixed asset to total asset, Return on equity, Earning per share

b Dependent Variable: Market price

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-3552.428	10524.994		-.338	.793
	Earning per share	43.773	25.356	.922	1.726	.334
	Dividend %	-18.826	43.056	-.232	-.437	.738
	Fixed asset to total asset	6336.721	14528.644	.198	.436	.738
	Return on equity	408.188	5530.086	.027	.074	.953
	Return on assets	-9415.797	8377.961	-.266	-1.124	.463

a Dependent Variable: Market price

Keya Cosmetics

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.994(a)	.988	.929	7.52519	.988	16.712	5	1	.184

a Predictors: (Constant), Return on assets, Dividend %, Fixed asset to total asset, Earning per share, Return on equity

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4731.797	5	946.359	16.712	.184(a)
	Residual	56.628	1	56.628		
	Total	4788.425	6			

a Predictors: (Constant), Return on assets, Dividend %, Fixed asset to total asset, Earning per share, Return on equity
b Dependent Variable: Market price

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	555.195	81.597		6.804	.093
	Earning per share	83.274	13.040	3.072	6.386	.099
	Dividend %	-2.387	.395	-1.038	-6.050	.104
	Fixed asset to total asset	-378.532	90.945	-1.172	-4.162	.150
	Return on equity	-3637.431	480.660	-3.724	-7.568	.084
	Return on assets	816.076	343.151	.643	2.378	.253

a Dependent Variable: Market price

Kohinoor Chemical

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.976(a)	.952	.712	62.13003	.952	3.962	5	1	.363

a Predictors: (Constant), Return on assets, Fixed asset to total asset, Earning per share, Dividend %, Return on equity

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	76465.514	5	15293.103	3.962	.363(a)
	Residual	3860.141	1	3860.141		
	Total	80325.655	6			

a Predictors: (Constant), Return on assets, Fixed asset to total asset, Earning per share, Dividend %, Return on equity
b Dependent Variable: Market price

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-198.613	1067.662		-.186	.883
	Earning per share	3.563	8.150	.691	.437	.738
	Dividend %	-22.688	19.732	-2.228	-1.150	.456
	Fixed asset to total asset	382.715	2228.401	.216	.172	.892
	Return on equity	799.570	2060.474	1.141	.388	.764
	Return on assets	20796.331	35701.162	1.017	.583	.664

a Dependent Variable: Market price

Libra infusion

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.891(a)	.793	-.239	127.48249

a Predictors: (Constant), Return on asset, Dividend %, Fixed asset to total asset, Earning per share, Return on equity

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	62417.904	5	12483.581	.768	.694(a)
	Residual	16251.785	1	16251.785		
	Total	78669.689	6			

a Predictors: (Constant), Return on asset, Dividend %, Fixed asset to total asset, Earning per share, Return on equity
b Dependent Variable: Market price

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1642.204	5363.275		-.306	.811
	Earning per share	-32.715	49.009	-2.421	-.668	.625
	Dividend %	66.083	175.244	.996	.377	.770
	Fixed asset to total asset	2740.275	5555.196	2.780	.493	.708
	Return on equity	6595.031	23805.142	1.584	.277	.828
	Return on asset	12250.025	20258.496	.954	.605	.654

a Dependent Variable: Market price

Marico

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	1.000(a)	1.000	1.000	.	1.000	.	5	0	.

a Predictors: (Constant), Return on assets, Dividend %, Earning per share, Fixed asset to total asset, Return on equity

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	50553.333	5	10110.667	.	.(a)
	Residual	.000	0	.		
	Total	50553.333	5			

a Predictors: (Constant), Return on assets, Dividend %, Earning per share, Fixed asset to total asset, Return on equity

b Dependent Variable: Market price

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	528.979	.000		.	.
	Earning per share	-3.010	.000	-.278	.	.
	Dividend %	6.954	.000	1.324	.	.
	Fixed asset to total asset	244.066	.000	.337	.	.
	Return on equity	-3222.444	.000	-1.009	.	.
	Return on assets	4023.155	.000	1.392	.	.

a Dependent Variable: Market price

Orion infusion

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.892(a)	.795	-.228	229.29191

a Predictors: (Constant), Return to assets, Dividend %, Fixed asset to total asset, Earning per share, Return to equity

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	204362.120	5	40872.424	.777	.692(a)
	Residual	52574.779	1	52574.779		
	Total	256936.899	6			

a Predictors: (Constant), Return to assets, Dividend %, Fixed asset to total asset, Earning per share, Return to equity
b Dependent Variable: Market price

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2973.697	7457.775		.399	.758
	Earning per share	33.527	75.448	.824	.444	.734
	Dividend %	25.783	46.088	.617	.559	.675
	Fixed asset to total asset	-4895.498	11030.799	-.687	-.444	.734
	Return to equity	-306.497	478.384	-1.351	-.641	.637
	Return to assets	-597.781	28207.923	-.048	-.021	.987

a Dependent Variable: Market price

Pharma aid

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.979(a)	.958	.749	69.70498

a Predictors: (Constant), Return on assets, Return on equity, Fixed asset to total Asset, Earning per share, Dividend %

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	111403.283	5	22280.657	4.586	.340(a)
	Residual	4858.784	1	4858.784		
	Total	116262.067	6			

a Predictors: (Constant), Return on assets, Return on equity, Fixed asset to total Asset, Earning per share, Dividend %

b Dependent Variable: Market price

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-542.883	1135.773		-.478	.716
	Earning per share	.407	1.672	.191	.243	.848
	Dividend %	50.516	35.660	1.560	1.417	.391
	Fixed asset to total Asset	-799.673	561.464	-.388	-1.424	.390
	Return on equity	425.449	276.476	1.372	1.539	.367
	Return on assets	-248.815	1990.893	-.066	-.125	.921

a Dependent Variable: Market price

Reckitt Benckiser

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	1.000(a)	1.000	.998	24.36125

a Predictors: (Constant), Return on assets, Fixed asset to total asset, Return on equity, Earning per share, Dividend %

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1735961.913	5	347192.383	585.020	.031(a)
	Residual	593.471	1	593.471		
	Total	1736555.383	6			

a Predictors: (Constant), Return on assets, Fixed asset to total asset, Return on equity, Earning per share, Dividend %

b Dependent Variable: Market Price

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2450.608	250.061		-9.800	.065
	Earning per share	18.859	5.655	.299	3.335	.185
	Dividend %	-1.741	.357	-.725	-4.879	.129
	Fixed asset to total asset	2915.347	1283.164	.154	2.272	.264
	Return on equity	3942.672	341.367	1.034	11.550	.055
	Return on assets	4479.450	1491.944	.358	3.002	.205

a Dependent Variable: Market Price

Renata

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	1.000(a)	1.000	1.000	115.27806

a Predictors: (Constant), Return on assets, Fixed asset to total asset, Earning per share, Dividend %, Return on equity

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	170370806.642	5	34074161.328	2564.082	.015(a)
	Residual	13289.030	1	13289.030		
	Total	170384095.673	6			

a Predictors: (Constant), Return on assets, Fixed asset to total asset, Earning per share, Dividend %, Return on equity
b Dependent Variable: Market Price

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-14124.405	1654.917		-8.535	.074
	Earning per share	33.438	.949	.583	35.251	.018
	Dividend %	524.515	16.297	.526	32.185	.020
	Fixed asset to total asset	16609.820	2109.928	.155	7.872	.080
	Return on equity	-87831.012	11242.375	-.321	-7.812	.081
	Return on assets	-17441.816	13812.957	-.047	-1.263	.426

a Dependent Variable: Market Price

Squire pharmaceuticals

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.902(a)	.813	-.120	207.51590	.813	.872	5	1	.667

a Predictors: (Constant), Return on assets, Dividend %, Fixed asset to total asset, Return on equity, Earning per share

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	187648.216	5	37529.643	.872	.667(a)
	Residual	43062.848	1	43062.848		
	Total	230711.064	6			

a Predictors: (Constant), Return on assets, Dividend %, Fixed asset to total asset, Return on equity, Earning per share
b Dependent Variable: Market price

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7792.238	4236.459		1.839	.317
	Earning per share	-10.458	6.272	-2.424	-1.668	.344
	Dividend %	4.432	9.282	.431	.477	.716
	Fixed asset to total asset	-3854.446	3478.598	-.951	-1.108	.467
	Return on equity	-20875.168	19865.987	-1.412	-1.051	.484
	Return on assets	2469.269	16690.908	.220	.148	.906

a Dependent Variable: Market price

Appendix – III

Frequency Table

Earning level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	2.3	2.3	2.3
	below 50,000	15	34.9	34.9	37.2
	50,000 to 100,000	15	34.9	34.9	72.1
	more than 100,000	12	27.9	27.9	100.0
	Total	43	100.0	100.0	

Investment amount

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	2.3	2.3	2.3
	below 50,000	12	27.9	27.9	30.2
	50,000 to 100,000	15	34.9	34.9	65.1
	more than 100,000	15	34.9	34.9	100.0
	Total	43	100.0	100.0	

Knowledge of fundamentals

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	feel no need	7	16.3	16.7	16.7
	Understand but not apply	24	55.8	57.1	73.8
	make investment by that	11	25.6	26.2	100.0
	Total	42	97.7	100.0	
Missing	System	1	2.3		
Total		43	100.0		

Level of accuracy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rarely correct	25	58.1	59.5	59.5
	Generally correct	13	30.2	31.0	90.5
	Mostly correct	4	9.3	9.5	100.0
	Total	42	97.7	100.0	
Missing	System	1	2.3		
Total		43	100.0		

Impact of unauthorized information

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High	35	81.4	83.3	83.3
	Low	7	16.3	16.7	100.0
	Total	42	97.7	100.0	
Missing	System	1	2.3		
Total		43	100.0		