The Effect of Internal and External Factors on the Stock Price of Pharmaceutical Companies in Emerging and Emerged Markets

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Abstract:
Purpose: The global financial crisis of 2008, considered by many economists to have been the most consequential since the great depression of the 1930s, altered the very fabric of global macro-economy and left many short and long-term impressions at various levels. Though the catastrophic effect of that meltdown penetrated the global market with lightning speed, the aftermath was rather uneven in its manifestation. Countries of American and European continent suffered severely but Asian countries were rather mildly affected and the reason behind this uneven perfusion could be the disparity in the economic environment at the microeconomic and macroeconomic levels in different continents.

The Purpose of carrying out this research is to unveil the influence of internal microeconomic factors at firm level as well as external macroeconomic factors at country level on the overall stock price of Pharmaceutical companies of Asia's emerging market (India) and emerged markets of United States of America and Western European countries (Germany, France, UK, and Switzerland) after the global financial crisis of year 2008.

Research Design/Methodology: During the present course of the investigation, secondary data of forty pharmaceutical companies from the year 2008 to the year 2017 has been employed to perform an empirical analysis. Moreover, an explanatory and comparative research design has been applied to corroborate the statistical outcome.

For statistical analysis, EViews 10 student version, statistical software has been used on the dependent variable "Organization Stock Price" and several internal independent variables such as Return on Equity (ROE), Earnings Per Share (EPS), Dividend Per Share (DPS), Dividend Payout Ratio (DPR), PE ratio, firm's asset as well as few macroeconomic level independent variables such as corporate tax, inflation rate, GDP and exchange rate.

Findings: Price movement of stocks is not independent in nature and doesn't follow a random walk. There are several factors responsible for the stock price movement such as investor sentiment, social, economic, environment and organization's operational and financial situation etc. This study shows how the aforementioned factors affect the stock prices of sample companies of emerging and emerged markets.

Practical Implications: The outcome of this research could be helpful to managers to regulate organization's financial ratios and address the macroeconomic fluctuations to sustain the momentum of the stock price that will inadvertently increase the value of the company. From the investor's point of view, this study could provide them with better anticipation of future trends in the stock prices.

Originality/Value: This study offers a contemporary review of the role of organizational and macroeconomic factors on the share price of companies and the stock market, thus contributes to the available literature in this domain.

Keywords: *Pharmaceutical Companies, Emerging Market, Emerged Market, Microeconomic Variables, Macroeconomic Variables*

1. Introduction

The year 2008 brought about successive quarters of negative growth in the gross domestic product (GDP) of countries across the continents and had a damaging effect on the industries because economic downturns directly triggered a strong decline in the performance of various macroeconomic Key Performance Indicators (KPIs). Against that grim backdrop, global pharmaceutical industry fared better as they were not dangerously reliant on borrowing and therefore less exposed to the macro environment (Law, 2008). Although the pharmaceutical industry has always had its own share of problems, crash of 2008 had got two things going for them: they became more attractive for investors and unsettled times raised the demand for medicines. On the other hand, lack of global spending from governments and disparity in public medicines coverage inadvertently pushed the Pharmaceutical industry to uncharted territories.

To thrive and excel in the testing times, pharmaceutical companies have come under great pressure to increase the efficiency and effectiveness of their operations. A looming patent cliff, with approximately 40% of the top-selling products worldwide going out of patent, has been resulting in companies losing their patents with the substantial impact of the revenue. There is also a consolidation of providers (doctors, group practices, hospitals, health systems) into larger accounts that have greater influence and economies of scale. Healthcare reform, driven by government policy, is reshaping the delivery of healthcare, from care coordination to reimbursement strategies, impacting behaviours and tactics within the marketplace (O'riordan et. al., 2016). Tightening regulations and ballooning healthcare cost have also impacted the healthcare operating models, reflecting the major shift in marketing tactics and customer engagement to reporting requirements by the government, payers, and providers.

Amidst the mounting pressure coming from the aforementioned fronts, the fundamentals of the pharmaceutical industry have remained strong. The output of new drugs has been increasing and looks set to remain elevated over the next five years, largely based on the exciting new science of speciality medicines, to offset current and future patent expiries. After four years of falling or stagnating revenue from the year 2011to year 2014, the industry returned to growth in year 2015 with acceleration and improved operating margins in the year 2016. But, the new science of speciality medicines faces a persistent affordability gap between payers and governments budgets and the sales forecasts for new products. Some notable, recent new launches have been struggling to perform on account of concerns over the prevailing price sensitive climate. The key impact of accelerating revenue growth and improving operating margins, despite falling profit margins, on investors has been profound. The shift to speciality drugs, backed by strong pipeline, has opened up avenues to investors worldwide to favour stocks backed by value driven companies with focus on personalized patient outcomes by leveraging technology collaboration and driving operational efficiency. Aftermath of the year 2008 meltdown was momentum-driven move to the downside soaked in pessimism and massive liquidity crunch.

The stock price is the primary indicator for investors to gauge the financial health of institutions. Listed institutions deploy their shares in the market to collect more funds to expand the business, unlike unlisted companies, who follow the Initial Public Offering (IPO) process. Moreover, stock price directly correlates with the amount of assets that the institution owns after the shareholder invests in the business, so this value is incurred on the balance sheet by the asset (Uddin, 2009). At firm-specific level, a bullish trend in the stock price of the firm reflects the confidence of investors in the fundamentals and performance of the firm and a bearish trend in the stock price of the firm reflects low confidence of investors in the fundamentals and performance of the firm. At the macroeconomic level, consumer prices, industrial production, exchange rate and the market rate of interest reflect bidirectional causation with stock prices affecting companies in both the short and long term.

From the standpoint of financial experts and economist, there are many firm level and macroeconomic factors, play a pivotal role in the firm's financial and business operations differently and eventually drive the stock price. It is important to take into consideration that macroeconomic factors are more decisive in their impact on the oscillation of many firm-level factors controlling the stock rally. Therefore, the overall impact of the aforementioned factors varies, depending on the nature of business and industry in which firms operate. Basically, there are two types of industries, based on their sensitivity towards fluctuation in the economic cycle:

- Cyclical Industries: Cyclical Industries and their stocks adhere tightly to the economic cycle. During the ascending economic phase, their stocks perform above average. However, during the descending economic phase, they get dipped into a downward direction. Example of cyclical industries such as automobile, Information technology, steel, tourism, fashion and so on.

- Non-Cyclical Industries: Since non-cyclical industries manufacture and distribute goods and services, which are always required for society such as food, power, medicine, and other utilities, their stocks do not tightly attached with the economic cycle. As a result, they tend to perform rather neutrally during both the ascending and descending phases of the economic cycle.

Since medicines are one of the most basic needs for human being and animals to treat diseases and maintain a healthy life and pharmaceutical sector manufactures medicines to cater to this need of the global population, this industry is considered as a non-cyclical industry by economists and financial experts.

The main objectives of this study to investigate the collective and individual effects of internal microeconomic factors and external macroeconomic factors on the market stock price of Pharmaceutical companies in emerging and emerged markets. In case of India: most of the Indian companies had positive net income throughout the sample period that in turn made all financial ratios such as EPS, DPS, DPR, and PE ratio stay in positive territory. Since most of the companies were having consistent profit, the distributed dividends to stockholders followed a regular pattern whereas in the emerged market, apart from few big companies, most of the companies registered negative net income that affected their EPS which turned out into no dividend to shareholders. Though the pharmaceutical sector was generally considered as a non-cyclical industry, the fluctuation in GDP, inflation, interest rate, corporate tax, and exchange rate didn't affect the stock price of Indian pharmaceutical sector any significantly. But, in the case of the emerged market, fluctuation in corporate tax and exchange rate were the main drivers affecting the pharmaceutical industry.

2. Literature Review

Literature review section begins by shedding light on key trends and advancements the pharmaceutical industry has seen in the last 40 years, with emphasis on its outlook post-2008 global financial crisis. Subsequently, it focuses on explicatory research works related to the significance of firm-level factors and macroeconomic factors on the price of stocks by analyzing the current and previous studies done by the various researches and academicians. This section also gives a chance to understand whether managers and financial experts can predict the momentum of stocks more precisely by employing the outcome of these studies. Furthermore, by going through the multiple research works and studies, this section also tries to get insight into possible relationship between macroeconomic factors and firm-specific factors and impact of their mutual influence.

Pharmaceutical Industry Overview:

In the last 40 years, the pharmaceutical industry has seen myriads of scientific, technological and legal advancements; however, the industry has also been marred by various controversies in areas of clinical trials management, approval mechanism, increased pricing and pharmacovigilance.
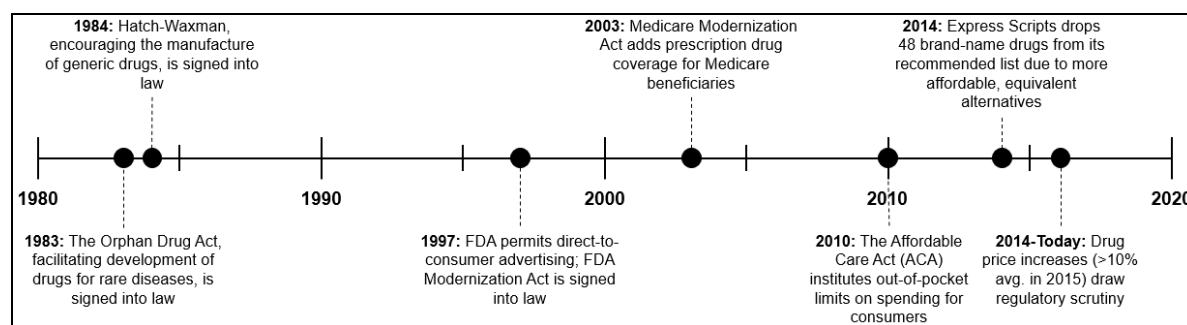
Figure 1: Key Milestones in the pharmaceutical industry (Accenture Research, 2016)

The key factors driving the Pharmaceutical industry are high R&D cost, the discrepancy between list and real price, rising ageing population and high affordability of drugs. As a result, the pharmaceutical industry is increasingly moving towards sustainability through more segmentation, robust regulatory framework and continuous breakthroughs in New Drug Discovery process.

In the wake of the Global economic crisis of 2008, where most of the Industry sectors had been hard hit, the pharmaceutical industry remained relatively unscathed. Key underlying factors behind that resilience were less sensitivity of economic trends and no price elasticity in time of crisis.

Despite the relatively modest outlook, biotech and smaller pharmaceutical niche players are feeling the pressure because of depleting funding sources on account of the credit crunch. On the other end of the spectrum, larger players are also feeling the heat because of intensified scrutiny on healthcare budget by both public and private players and that has let to further cost containment measures to reduce drug prices, increase generic substitutions and demand for new drug formulation. In contrast with many other industries, pharmaceutical companies especially the larger once generally have a strong balance sheet with little debt and therefore have maintained stronger leverage in this time of crisis and uncertainty.

2.1. Theoretical Basis and Development of Hypothesis

Since financial ratios are the computational result of several inter-connected firm-level factors, it is one of the most prevalent ways to make an estimation of the financial and operational efficiency of a firm. The financial ratio can be used to determine irregularities in the implementation of the company's operational activities by comparing the financial ratio with that of previous years (Wild et al., 2008). Hence, financial ratios are being used as a major pointer in order to examine the current position of firm's profitability, liquidity, income, utilization of assets, liability, etc., by performing intra-comparative analysis between current report and previous report of the same firm or inter-comparative analysis among many firms.

Return on Equity (ROE): Return on equity ratio (ROE) is considered a key measure of a company's earnings performance. The ROE provides information to common shareholders on how efficiently their money is being used. By analyzing ROE, shareholders can understand whether a firm is profit-enhancing or profit-depleting and whether management has the profit-earnings ability or not (Kijewska 2016). A rising ROE can signal that a company is able to grow profits without adding new equity into the Business, which dilutes the ownership share of existing shareholders **(Thorp 2012).**

$$\text{Return on Equity (ROE)} = \frac{Net\ Income\ (NI)}{Shareholder\ Equity\ (E)}$$

The higher Return on Equity (ROE) implies the higher profitability of firm that shows firm's management is utilizing investors' money in an efficient manner and investors can expect a higher rate of return on their investments which enhances the overall value of the firm and eventually increases the stock price. This ratio is also used to measure the ability of a company to use its own capital to generate profits for all shareholders, through both common and preferred stock. An increase in the company's stock price will provide a high return for investors. This will further increase the attractiveness of the company for investors. Karnawi Kamar (2017), conducted research to see the effect of Return on Equity and Debt to Equity ratio on the share price of listed cement companies at the Indonesian stock exchange. Statistical analysis revealed that together both factors produce a significant impact on the share price of companies. Moreover, ROE alone demonstrated a significant positive relationship with the share price of companies which proves that efficient utilization of inventors' money increases the price of shares. On the other hand, Haque and Faruquee (2013), studied the impact of fundamental factors on the share price of listed pharmaceutical companies of Dhaka stock exchange and found that ROE doesn't have any effect on the share price of companies. Fouzan Al Qaisi et. Al. (2016), showed in their study that ROE didn't have any effect on the stock price. However, Ursula Tamuntuan (2015), found a collective significance of ROE, ROA, and EPS on the stock price of food and beverages companies at Indonesian stock market but, ROE alone didn't produce any significant effect on stock prices. Another study conducted by Fitri Sukmawati and Innes Garsela (2016), observed an inverse relationship between ROE and Share Price which means an increment in return on equity causes a decrement in the share price. Joanna L Saragih (2017), also found that ROE together with ROA and Debt-to-Equity ratio has no significant effect on the share price. However, ROE shows the insignificant positive partial effect on the share price.

Earnings per Share (EPS): Earning per share (EPS) is generally one of the most important financial ratios, uses to evaluate the stock price and the value of the firm. Earnings per share measures the amount of net income earned against each share. In other words, this is the amount of money each share of stock would receive if all of the profits were distributed to the outstanding shares at the end of the year.

EPS are also a calculation that shows how profitable a company is from a shareholder's perspective. Therefore, a larger company's profits per share can be compared to the smaller company's profits per share.

EPS or basic earnings per share are calculated by subtracting preferred dividends from net income and dividing by the weighted average common shares outstanding.

$$\text{Earnings per Share (EPS)} = \frac{\text{Net Income (NI)} - \text{Dividends on Preferred Stocks}}{\text{Average Outstanding Shares}}$$

EPS are generally considered to be the single most important variable in determining a share's price. It is also a major component used to calculate the price-to-earnings valuation ratio (Besley 2006).

EPS is a carefully scrutinized metric that is often used as a barometer to gauge a company's profitability per unit of shareholder ownership. As such, earnings per share are a key driver of share prices. It is also used as the denominator in the frequently cited P/E ratio (Md. Rashidul et. al., 2014).

Pankaj Kumar (2017), studied the influence of EPS on the listed Indian automobile companies. The regression result showed a significant effect of EPS on the share price of automobile companies. Budhi Suparnihgsih (2017) and Ursula Tamuntuan (2015) found that EPS and other chosen variables simultaneously showed a significant effect on the share price of textile and garment companies of Indonesia stock exchange. Moreover, a partial significant positive effect of EPS was observed on the stock prices. Subramaniam V. A. and Tharshiga Murugesu (2013), studied the effect of the EPS on the share price of listed manufacturing companies in Sri Lanka. By employing regression techniques on the sample data, they found a strong significant positive relationship between EPS and Share Prices.

Md. Bellal Hossain and A. H. M. Asaduzzaman (2017) and Sayed Akif and Umara Nareen (2016), also supported the significant positive effect on the stock prices of sample companies. Sanjeet Sharma (2011), found in his study that EPS showed a significantly positive impact on the share price of sample companies.

Dividend per Share (DPS): Dividends are commonly defined as the distribution of earnings (past or present) in real assets among the shareholders of the firm in proportion to their ownership (Kapoor 2009). In other words, Dividend per share is the amount of perquisite issued by a firm for every common share outstanding. Dividends per share can be calculated by dividing the total number of dividends paid out by a firm, including interim dividends, over a period of time, by the number of shares outstanding *(investopedia.com)*.

$$\text{Dividend per Share (DPS)} = \frac{\text{Total dividends} - \text{Special dividends (if any)}}{\text{Annual weighted Average of Outstanding Shares}}$$

In a favourable economic environment, raising the dividend amount and frequency gives a very prominent signal about the strong performance and higher profitability of the firm to its shareholders. However, at times in order to maintain the confidence of shareholders in the firm, many big firms pay dividends on a regular basis to their shareholders even after getting an average or weak financial result.

Onyango Benedict Enrile (2018), conducted a research to understand the relationship between dividend per share (DPS) and the stock prices of listed companies at the Nairobi Stock Exchange, where author observed that DPS had a positive and significant effect on the share price of companies. Similarly, Sanjeet Sharma (2011), also observed a significant positive impact of DPS on share Prices.

On the other hand, Sayed Akif and Umara Nareen (2016), studied fifty non-financial companies of Karachi stock exchange to check the role of dividend policy on stock prices volatility and they found a significant negative effect of DPS on stock prices of companies. Similarly, Sebastianus Laurens, (2018) and Hashemijoo, M., Ardekani, A. M., &Younesi, N. (2012) also found an inverse relationship between DPS and share price of companies. This inverse relationship between DPS and share price supports the dividend irrelevance theory.

Dividend Payout Ratio (DPR): According to Akinsulire (2014), the dividend payout ratio is the ratio of ordinary dividends to retained earnings. It signifies that what portion of the net profits distributed to shareholders as dividends and what portion kept for internal reinvestment. A high payout ratio simply shows a liberal distribution of profits whereas a low payout ratio reflects a conservative distribution policy. However, from the share valuation model, Simon (2009) asserts that the value of a share depends very much on the amount of dividend distributed to shareholders such that the higher the dividend payout ratio, the more attractive the share is to the shareholders.

Conversely, Hasan M, et, al (2015) found in their study that there is a negative impact of dividend payout ratio on the profitability of a firm in Pakistan's energy and textile sector. Similarly, Md. Bellal Hossain and A. H. M. Asaduzzaman (2017) did a study on the relationship between dividend policy and the stock price of

the listed fuel, power, and cement industry of Bangladesh. They applied the random effect panel data regression model and observed a negative influence of DPR on stock prices.

Onyango Benedict Enrile (2018), conducted a research to understand the relationship between dividend per share (DPR) and the stock prices listed companies at the Nairobi Stock Exchange, where author observed that DPR didn't have any significant effect on the share price of companies whereas another research conducted by Hunjra et. al.(2014), to understand role of dividend policy, EPS, ROE, and profit after tax on the stock price. The regression result reflected a significant positive correlation between DPR and share price that shows distributing more dividends and keeping less retained earnings is a positive signal for increment in share price and this result also refutes dividend irrelevance theory.

$$\text{Dividend Payout Ratio} = \frac{\text{Dividends Paid}}{\text{Net Income}} \quad or \quad \frac{\text{Dividend per Share (DPS)}}{\text{Earnings per Share (EPS)}}$$

In practice, decisions as to whether to pay out dividends or not, how much of the profits to pay a dividend and in what form the dividend should be paid are influenced by many internal and external factors. According to (Alfred, D. D. 2007) there are many internal and external factors such as company's operational sector, nature of the company, liquidity constraints, tax constraints, reinvestment opportunity, risk factors, and so on can influence the dividend payout strategies of a company.

Price-to-Earnings Ratio (P/E Ratio): The price-earnings ratio (P/E Ratio) is the ratio for assigning a value for a firm that measures its current share price relative to its per-share earnings (Nicholson, S. F.1960).The price-earnings ratio often called the P/E ratio or price to earnings ratio, is a market prospect ratio that calculates the market value of a stock relative to its earnings by comparing the market price per share by the earnings per share.

The price-earnings ratio is normally calculated as the market value per share divided by earnings per share. In other words, the price-earnings ratio shows what the market is willing to pay for a stock based on its current earnings.

$$\text{Price-to-Earning Ratio (P/E Ratio)} = \frac{\text{Market Value Price per Share}}{\text{Earnings per Share (EPS)}}$$

Normally, a high P/E ratio implies that investors are anticipating higher earnings growth within the next years while firms with a lower P/E are expected lower growth (Ghaeli, 2017). Investors often use this ratio to evaluate what a stock's fair market value should be by predicting future earnings per share. Companies with higher future earnings are usually expected to issue higher dividends or have appreciating stock in the future.

There are two key drivers responsible for the increment in the P/E ratio; the first one is rapid growth in Price-Earnings ratios and the second one is slower growth in dividend yields. Rapid growth in price-earnings ratios simply shows the strong confidence of existing investors in a company due to the favourable market-wide environment. On the other hand, slower growth in dividend yields shows the company's management strategies focusing on reinvestment by employing a bigger chunk of retained earnings. Hence, sometimes lower dividend yields give hope to investors to accumulate even better return in future and this situation leads to a higher stock price as well as higher P/E ratio. These findings are consistent with Myers's (1984) pecking order and stakeholder hypotheses of dividend behaviour. There is also evidence that the P/E ratio is high when the price growth rate is high. This study indicates that a high P/E ratio signals faster growth in short-term stock prices (Raymond Y. C. Tse., 2002).

Pankaj Kumar (2017), studied the influence of P/E ratio on the listed Indian automobile companies. The regression result showed a significant effect of P/E on the share price of automobile companies.

Sanjeet Sharma (2011), conducted research on 115 listed companies of six different industries of India. Regression analysis showed that the P/E ratio exerts a significant positive impact on the share price of the companies. Similarly, Taimur Sharif et. al., (2015), studied the effect of PE ratio along with other firm-specific variable and they found that PE ratio is one of the main driving factors for the upward price movement of stocks. On the other hand, Onyango Benedict Enrile (2018) and Budhi Suparnihgsih (2017), respectively found positive yet insignificant effect and no significant effect of P/E ratio on the stock price. Similarly, AtyHerawati and Angger (2018) and George Gatheru Githinji (2011), observed no effect of the P/E ratio on the stock price.

The Asset-Growth Effect: There is a significant and negative relationship between asset growth and future stock returns in emerging markets. Watanabe et al. (2012) find a weaker asset-growth effect in emerging markets relative to developed markets. In the context of this study, the asset growth effect has been analyzed and investigated, with a focus on the global financial crisis of 2008 and compare the existence of the asset-growth effect between normal and crisis periods. Since the financial crisis has effects globally on emerged as well as

emerging countries, our analysis on stocks traded in emerging markets provides the opportunity to identify whether mispricing or optimal investment explanation would find support in those countries. It has been observed that the asset-growth effect is stronger during the crisis period relative to more normal periods. During the peak year of the Global Financial Crisis, 2008, strong indicators have been found to support the existence of the asset growth effect during the crisis period, but not in other periods.

That points to a significant association between the asset-growth effect and the global financial crisis period. The logic is that an episode of crisis gives investors the possibility to improve their assessment of the real value of firms' investment even in those countries where the agency problems and asymmetric information are commonly assumed to be higher.

In particular, the negative relation between asset growth and subsequent taxes returns holds only for the subset of firms with low innovation potential. Innovation based firms with high asset growth not only do not suffer negative excess returns subsequent to asset growth but actually, earn significantly positive subsequent excess returns. In addition, the significantly positive interaction effect between asset growth and innovative capacity on subsequent stock returns is robust to the industry effect, the size and BTM effects, and the IE effect documented in Hirshleifer et al. (2012). Asset Growth in innovative Pharmaceutical companies driven by huge investments and aggressive M&A strategy can generate new growth options.

Gross Domestic Product (GDP): Gross Domestic Product (GDP) is the prime reflector of a country's economic growth; it gives a clear view about the degree of growth in almost every type of industry of a country. The high tide of economic growth marks the high probability of higher cash flow and low probability of the firm's chances to bankrupt, which provides a good environment for higher profitability, investment and so on which in turn increases value and stock prices of firms. On the other hand, during the time of economic downturn, the situation turns upside down.

Economic growth occurs when an economy's productive capacity increases, which in turn is used to produce more goods and services. Economic growth is measured by an increase in the amount of goods and services that are produced in a country. Therefore, a growing economy produces more goods and services each successive time period. (Jhingan, M. 1997 Cited in Kampamba Shula (2017)).However, it is not always true that we get a correlation between GDP and stock return (www.wise-owl.com).

Inflation Rate: Inflation is always and everywhere a monetary phenomenon in the sense that it is and can be produced only by a more rapid increase in the quantity of money than in output. Empirically, the variability of inflation tends to increase with the level of inflation, reinforcing the negative effect of higher inflation on the quantity of money demanded (Friedman., M. 1987). Higher inflation generally decreases the purchasing power of individuals and companies that eventually produces a negative influence on productivity, profitability and stock price of firms. Firms operate in a high inflation environment have a lower degree of willingness to opt debt financing which disrupts long investment plans and short-term purchasing power of firms (Öztekin., Ö. (2015).

Interest Rate: Interest rates greatly affect a company's plan in fulfilling its capital needs, either by issuing equity securities or bonds. The low-interest rate will encourage investment and economic activity which generates a higher stock price as the result. *(Thobarry, A. A. 2009 Cited in Kampamba Shula (2017).* Similarly, Md. Gazi Salah Uddi and Md. Mahmudul Alam (2010) found an inverse relationship between the interest rate and share prices of listed companies at the Dhaka Stock Exchange**.** Low-interest rates will lead to lower borrowing costs since the borrower (the company) is charged to pay less interest. There is a negative relationship between the interest rate and borrowing capacity of the firm *(Jõeveer, K. (2013). Firm, Country and Macroeconomic Determinants of Capital Structure: Evidence from Transition Economics. Journal of Comparative Economics, 41(1), 294-308).*

Corporate Tax: Reduction of government economic activity in the past 30 years in the wake of sweeping capitalism resulted in limiting both the scope and form of government taxation but the financial crisis of 2008 changed this paradigm, as it was expected from federal authorities to once again bail out the situation to restore calmness to markets. In this context, taxation became the most important tool of government policy (Renata Perić, LjubicaKordić, 2014).

In the aftermath of the financial crisis of 2008, many pointed out that the reason lies in the fact that too many firms had loaded up on debt while relying on only a thin layer of equity. The reason is straightforward: whereas equity can absorb a business downturn – profits fall, but the firm does not immediately fail – debt is less forgiving because creditors do not wait around to be paid (Mark Roe, 2013, World Economic Forum). The tax system that was skewed towards allowing, firms to use more debt than is safe. Tax deductions for interest

payments encourage them to borrow which in turn resulted in more tax-induced lending from financial institutions. The tax reform measures, brought in after the global crisis, had both positive and negative impacts on the global pharmaceutical investment outlook. Opportunities to access new markets mitigate risk due to pricing pressures and patent expirations continued to be the main impetus for the new operating model.

- Corporate tax rates and repatriation as key drivers spurred M&A activity by making more cash available.
- Many life sciences companies have chosen to keep their intellectual property (IP) rights offshore for tax reasons (Jeff Ellis and Dennis Howell, 2018).
- R&D expenditures to boost new drug discovery and maintain a lucrative pipeline enjoyed cash infusions from various tax reforms. Counties like the US are also trying to retain intangible benefits by asking companies to amortize the cost of R&D performed onshore and offshore rather than deduct it all immediately.

Exchange Rate: There is no theoretical consensus on the relationship between stock prices and exchange rates either. For instance, portfolio balance models of exchange rate determination postulate a negative relationship between stock prices and exchange rates and that the causation runs from stock prices to exchange rate. In contrast, a positive relationship between stock prices and exchange rates with the direction of causation running from exchange rates to stock prices can be explained as follows: domestic currency depreciation makes local firms more competitive, leading to an increase in their exports. This, in turn, raises their stock prices.

A weak or no association between stock prices and exchange rates can also be postulated. The factors/news that causes changes in exchange rates may be different from the factors that cause changes in stock prices. Under such a scenario, there should be no link between the said variables *Muhammad, N and Rasheed, A.,(2002)*.

Some studies have found a significant positive relationship between stock prices and exchange rates for instance Smith (1992); Solnik (1987)* and Aggarwal (1981)*, while others have reported a significant negative relationship between the two e.g., Soenen and Hennigar (1998)*. On the other hand, there are some studies that have found very weak or no association between stock prices and exchange rates, for instance, Franck and Young (1972); Bartov and Bodnor (1994)*. Note: *references are cited in *Muhammad, N and Rasheed, A.,(2002)*

3. Methodology

3.1. Data Collection:

The data for this research work has been collected from the different relevant secondary sources such as the annual stock price of companies collected from www.Investing.com, other internal data of companies, for instance ROE, EPS, DPS, DPR, P/E ratio, and asset from Thomson Router EKion Data Stream, Macroeconomic data such as GDP, Inflation Rate, etc from www.knoema.com, and Currency Exchange Rate from www.poundsterlinglive.com. Since this research study is related to the pharmaceutical industry of emerging and emerged markets, quantitative data of twenty listed companies selected from emerging market (India) and twenty listed companies form emerged market (USA, Germany, France, United Kingdom, and Switzerland) have been sampled and analyzed.

Two-panel data have been constructed, first one for the emerging market from the year 2008 to the year 2017 with 200 observations and the second one for the emerged market for the same period with 181 observations.

In this study, selected companies were chosen based on their home countries and stock prices of those companies, belonging to their home stock exchanges, were collected along with other firm-specific data, retrieved from Thomson Ekion data stream. Since stock prices, EPS, DPS, and Asset of every company were collected in their local currency units, the currencies have been converted into US dollars, for the sake of congruency.

The reason behind selecting twenty companies is because most of the mid-sized and small-sized companies of the emerged markets are privately held and not listed in stock exchanges. Similarly, due to many

negative and unavailable values of Earnings per share and dividend per share respectively, only 181 observations were made for the emerged market companies.

3.2. Research Methodology

The multiple regression method has been employed in this study in order to understand the relationship between several independent variables and the dependent variable. The independent variables used in this study are namely ROE, EPS, DPS, DPR, PER, ASSET, GDPGR, INFR, INTR, CT, and EXCHR whereas the dependent variable is MPS. Moreover, panel data model is being used in current course of investigation. There are several reasons behind using panel data, such as higher number of informative data, higher level of divergence among data, lower chance of collinearity among variables and more degree of freedom, which contribute towards constructing a more efficient data model.

Four steps have been employed:

- Descriptive statistical analysis to obtain the overview of data in terms of mean, maximum, minimum, sum, standard deviation, kurtosis, and so on
- Correlation test has been employed to check the degree of Multicollinearity.
- The following are the two types of panel analytic models have been considered: (1) Fixed effect model and (2) Random effect model. The fixed effect model is the divergence across cross-sectional units which can be represented in divergence in the constant term and the intercept term of the regression model varies across the cross sectional units whereas the random effect model, the individual effects are randomly dispersed across the cross-sectional units and in order to represent the individual effects, the regression model is specified with an intercept term which represents an overall constant term (Seddighi, 2000)
- In order to obtain better statistical model between Fixed Effect and Random Effect, the Hausman test has been used
- Fixed effect Panel data regression model has been used to investigate simulations and partial effect of independent variables on dependent variables

3.3. Research Hypothesis

This section aims at providing a specific, clear, and testable proposition or predictive statement about the possible outcome of this study based on various variables and relationships between them in the context of the Pharmaceutical industry. Specifying the research hypotheses is one of the most important steps in planning a quantitative research study and it typically states *a priori* expectation about the research outcome in research hypotheses, because the design of the research often is determined by the stated hypotheses.
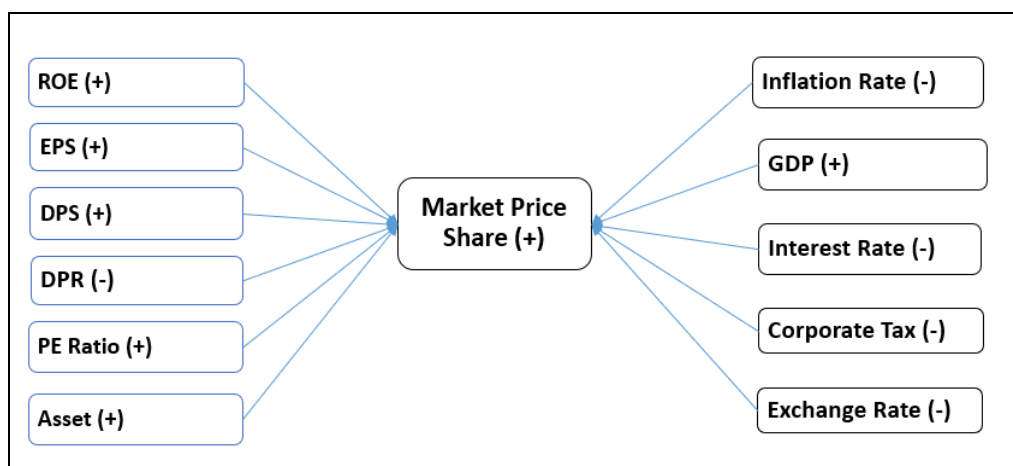
Figure 2: Conceptual Framework Figure

Serial Number	Variables	Measurement	Expected Hypothesis	Key Empirical Studies in support of Expected Hypothesis	Key Empirical Studies in contrary to Expected Hypothesis	Key Empirical Studies observed no effect of Expected Hypothesis
1	Market Price of Share (MPS)	Annual Closing Market Price of Share				
2	Return on Equity (ROE)	Net Income / Shareholder Equity	+	KarnawiKamar (2017),	FitriSukmawati and Innes Garsela (2016)	Haque and Faruquee (2013), Fouzan Al Qaisi et. Al. (2016)
3	Earnings Per Share (EPS)	(Net Income – Dividends on Preferred Stocks) / Avg. Outstanding Shares	+	BudhiSuparnihgsih (2017), Ursula Tamuntuan (2015), etc	--------	-------
4	Dividend Per Share (DPS)	Total Dividends – Special Dividends (If Any) / Annual Weighted Average of Outstanding Shares	+	Onyango Benedict Enrile (2018), Sanjeet Sharma (2011), etc	SebastianusLaurens (2018), Hashemijoo. et.al (2012)	------------
5	Dividend Payout Ratio (DPR)	Dividend Per Share / Earnings Per Share	_	Hunjra et. al. (2014)	Hasan M et. al. (2015), Hossain and A. H. M. Asaduzzaman (2017)	Onyango Benedict Enrile (2018)
6	Profit-Earnings Ratio (PER)	Market Value Per Share /Earnings Per Share	+	Pankaj Kumar (2017), Sanjeet Sharma (2011)	-----------	Aty Herawati and Angger (2018), George Gatheru Githinji (2009)
7	Asset (LASSET)	Company's Total Asset	+			
8	Gross Domestic Product Growth Rate (GDPGR)	Annual GDP Growth Rate of Countries	+	Jhingan, M. (1997)	--------	https://www.wise-owl.com/investment-education/is-there-a-correlation-between-gdp-growth-and-stock-market-returns
9	Inflation Rate (INFR)	Annual Inflation Rate of Countries	-	Milton Friedman (1987), Öztekin., Ö. (2015)	---------------	--------
10	Interest Rate (INTR)	Annual Real Interest Rate of	-	Md. Gazi SalahUddi and Md. Mahmudul	--------------	----------

		Countries		Alam (2010), Thobarry, A. A. (2009)		
11	Corporate Tax **(CT)**	Annual Corporate Tax of Countries	-	Mark Roe, 2013		
12	Exchange Rate **(EXCHR)**	Countries' Exchange Rate on the Last day of Financial Year of Companies	-	Soenen and Hennigar (1998)	Solnik (1987) and Aggarwal (1981	Franck and Young (1972)

Table1: Summary Table of Variables, Expected Hypothesis, and Studied Previous results

3.4. The Model

$$MPS_{it} = \beta_0 + \beta_1 ROE_{it} + \beta_2 EPS_{it} + \beta_3 DPS_{it} + \beta_4 DPR_{it} + \beta_5 PER_{it} + \beta_6 LASSET_{it} + \beta_7 GDPGR_{it} + \beta_8 INFR_{it} + \beta_9 INTR_{it} + \beta_{10} CT_{it} + \beta_{11} EXCHR_{it} + \varnothing_{it}$$

- **MPS $_{it}$** = Market Prices of Share for the Pharmaceutical Companies during the period t
- **ROE $_{it}$** = Effect of Return on Equity (ROE) on MSP of the Pharmaceutical Companies during the period t
- **EPS $_{it}$** = Effect of Earnings per Share (EPS) on MSP of the Pharmaceutical Companies during the period t
- **DPS $_{it}$** = Effect of Dividend per Share (DPS) on MSP of the Pharmaceutical Companies during the period t
- **DPR $_{it}$** = Effect of Dividend Pay Ratio (DPR) on MSP of the Pharmaceutical Companies during the period t
- **PER $_{it}$** = Effect of Price Earnings Ratio (PER) on MSP of the Pharmaceutical Companies during the period t
- **ASSET $_{it}$** = Effect of Log of Total Assets (LASSET) on MSP of the Pharmaceutical Companies during the period t
- **GDPGR $_{it}$**= Effect of GDP (GDPGR) on MSP of the Pharmaceutical Companies during the period t
- **INFR $_{it}$**= Effect of Inflation Rate (INFR) on MSP of the Pharmaceutical Companies during the period t
- **INTR $_{it}$**= Effect of Interest Rate (INTR) on MSP of the Pharmaceutical Companies during the period t
- **CT $_{it}$**= Effect of Corporate Tax (CT) on MSP of the Pharmaceutical Companies during the period t
- **EXCHR $_{it}$**= Effect of Currency Exchange Rate (EXCHR) on MSP of the Pharmaceutical Companies during the period t

β_0 = Intercept
$\beta_1 - \beta_{11}$ = Coefficient parameters
$\varnothing_{it}$ = error term

4. Findings and Analysis

4.1. Descriptive Statistics Analysis

	MPS	ROE	EPS	DPS	DPR	PER	LASSET	GDPGR	INFR	INTR	CT	EXCHR
Mean	5.017152	0.214122	0.263590	0.047207	0.208234	20.55632	5.780051	0.070600	0.077300	0.068960	0.338670	53.86850
Median	3.019759	0.186500	0.194419	0.034325	0.200525	18.02119	5.610477	0.069000	0.092500	0.073200	0.339900	52.62000
Maximum	32.14881	0.816000	1.572172	0.301864	1.568615	275.6667	9.155685	0.103000	0.110000	0.080000	0.346100	66.25500
Minimum	0.135349	-0.070000	0.009611	0.000000	0.000000	0.736363	3.319507	0.039000	0.036000	0.052500	0.324400	39.98000
Std. Dev.	5.381683	0.118203	0.231940	0.040955	0.160171	22.95119	1.378394	0.016529	0.025755	0.009534	0.007619	8.773534
Skewness	2.114633	1.416436	2.656942	2.318320	4.871247	7.495629	0.070622	0.061060	-0.407024	-0.467803	-1.027661	-0.031573
Kurtosis	8.321841	6.664292	13.18731	11.73509	39.16005	79.64759	2.240334	3.005369	1.491282	1.722949	2.725734	1.646541
Jarque-Bera	385.0724	178.7683	1100.156	815.0016	11687.21	50829.93	4.975352	0.124520	24.49088	20.88515	35.82978	15.29866
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.083103	0.939639	0.000005	0.000029	0.000000	0.000476
Sum	1003.430	42.82440	52.71798	9.441383	41.64673	4111.265	1156.010	14.12000	15.46000	13.79200	67.73400	10773.70
Sum Sq. Dev.	5763.540	2.780413	10.70540	0.333786	5.105326	104824.6	378.0942	0.054368	0.132002	0.018088	0.011552	15318.00
Observations	200	200	200	200	200	200	200	200	200	200	200	200

Table2: Results Descriptive Statistics Analysis of Indian Pharmaceutical companies (Processed by EViews-10)

	MPS	ROE	EPS	DPS	DPR	PER	LASSET	GDPGR	INFR	INTR	CT	EXCHR
Mean	182.5609	0.103425	2.401576	1.345293	0.868461	172.6613	8.820834	0.012310	0.095880	0.005643	0.307701	0.909303
Median	42.15102	0.143000	1.922450	1.119050	0.431267	17.55490	9.940290	0.017000	0.015000	0.002500	0.341500	1.000000
Maximum	3789.540	1.030000	17.26635	8.345960	80.00000	7233.280	12.26881	0.039000	1.650000	0.039500	0.350000	1.064100
Minimum	1.620000	-4.647000	-5.710000	0.000000	-10.94737	-497.1429	3.081910	-0.056000	-0.011000	-0.007500	0.177700	0.605000
Std. Dev.	559.6947	0.413980	3.588705	1.612761	6.013378	700.1737	2.530846	0.016686	0.357660	0.007692	0.063275	0.130422
Skewness	4.698629	-7.659486	1.383203	2.474909	12.65399	6.505117	-0.520661	-1.686224	4.120806	1.835959	-1.242271	-0.964057
Kurtosis	25.29681	88.33408	6.430707	10.17754	167.6029	57.32034	1.968180	5.564488	18.00747	7.947771	2.812989	2.350414
Jarque-Bera	4878.801	62638.14	161.8562	576.4683	209165.2	25869.71	17.90837	149.5834	2442.903	316.3618	51.73272	34.49657
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000129	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	36512.18	20.68508	480.3152	244.8433	157.1914	34359.60	1764.167	2.462000	19.17600	1.128600	61.54020	181.8605
Sum Sq. Dev.	62338370	34.10449	2562.882	470.7808	6508.929	97068151	1274.631	0.055403	25.45623	0.011775	0.796738	3.384965
Observations	200	200	200	182	181	199	200	200	200	200	200	200

Table3: Results Descriptive Statistics Analysis of US & European Pharmaceutical companies (Processed by EViews-10)

For Indian pharmaceutical companies, Table 2 shows descriptive statistics analysis of 200 observations of for one dependent variable and twelve independent variables. In the case of US and European pharmaceutical companies, Table 3 shows descriptive statistics analysis of DPS and DPR with 181 observations, PER with 199 observations and rest of variables with 200 observations.

Descriptive statistical analysis of MPS for US and European pharmaceutical companies reflects a key difference from Indian pharmaceutical companies by having a huge gap between the minimum (1.620000) and maximum (3789.540) MSP value, much higher mean (182.5609), and standard deviation (559.6947). This result shows that few companies have had very high share price throughout the taken time period. Similarly, for US and European pharmaceutical companies, other variables such as ROE, EPS, DPR, and PER are swinging from higher negative value for the minimum to higher positive values for maximum. Moreover, other statistical parameters for instance mean and standard deviation are also showing value on the higher side. The reason behind this surge could be attributed to a much better performance of few companies over others.

In the case of Indian pharmaceutical companies, MSP variable has a moderate range from minimum (0.135349) to maximum (32.14881) with mean of 5.017152 and standard deviation 5.381683. Similarly, other variables such as EPS, DPS, DPR, LASSET, and PER are also showing moderate variation in values for minimum, maximum, mean, and standard deviation. Results show that throughout the observed time period, most of the Indian pharmaceutical companies in this study had performed in a reasonable manner.

Descriptive statistical analysis of Indian as well as US and European pharmaceutical companies also depicts that dependent variable (MPS) and many independent variables have skewness greater than 1, which

shows high positive skewness whereas few variables have skewness less than -1, which shows high negative skewness. Both scenarios explain that data is not symmetrical. However, few variables have positive or negative skewness near to 0 which reflects that these variables have better symmetrical distribution than their peers.

Since all variables have Kurtosis value more than 0, it infers that data distribution of variables has a heavier tail, called leptokurtic distribution. Furthermore, Kurtosis results also show that variables are not distributed symmetrically. In case of Indian pharmaceutical companies, Jarque-Bera test for checking the symmetrical distribution of variables reflects that except LASSET and GDPGR, other variables have probability value less than 5%, which shows that variables are not normally distributed. However, in case of US and European pharmaceutical companies, Jarque- Bera test for checking the symmetrical distribution of variables shows each variable having probability value less than 5%, indicating that variables are not normally distributed.

4.2. Correlation Analysis

	ROE	EPS	DPS	DPR	PER	LASSET	GDPGR	INFR	INTR	CT	EXCHR
ROE	1.000000	0.480539	0.263484	-0.136942	-0.161969	0.221006	-0.055083	0.104760	0.052074	-0.074084	-0.156407
EPS	0.480539	1.000000	0.723002	-0.207805	-0.075762	0.128634	-0.024787	-0.269697	0.061018	0.091441	0.249788
DPS	0.263484	0.723002	1.000000	0.124588	-0.053951	-0.013739	0.034329	-0.222783	0.061242	0.098134	0.229039
DPR	-0.136942	-0.207805	0.124588	1.000000	0.591633	-0.272037	-0.000456	0.097938	0.088633	-0.084579	-0.021667
PER	-0.161969	-0.075762	-0.053951	0.591633	1.000000	0.093046	0.077463	-0.320882	0.059757	0.175649	0.312853
LASSET	0.221006	0.128634	-0.013739	-0.272037	0.093046	1.000000	-0.000143	-0.168783	0.038952	0.060398	0.167452
GDPGR	-0.055083	-0.024787	0.034329	-0.000456	0.077463	-0.000143	1.000000	-0.044101	-0.584998	0.289197	0.185959
INFR	0.104760	-0.269697	-0.222783	0.097938	-0.320882	-0.168783	-0.044101	1.000000	-0.009365	-0.643132	-0.842999
INTR	0.052074	0.061018	0.061242	0.088633	0.059757	0.038952	-0.584998	-0.009365	1.000000	-0.457664	-0.049103
CT	-0.074084	0.091441	0.098134	-0.084579	0.175649	0.060398	0.289197	-0.643132	-0.457664	1.000000	0.582928
EXCHR	-0.156407	0.249788	0.229039	-0.021667	0.312853	0.167452	0.185959	-0.842999	-0.049103	0.582928	1.000000

Table4: Results Correlation Analysis of Indian Pharmaceutical companies (Processed by EViews-10)

	ROE	EPS	DPS	DPR	PER	LASSET	GDPGR	INFR	INTR	CT	EXCHR
ROE	1.000000	0.420612	0.329006	-0.003524	0.036733	0.374162	0.100853	-0.019127	-0.147015	-0.226923	-0.025139
EPS	0.420612	1.000000	0.655097	-0.040519	-0.120871	0.447783	0.078046	-0.074960	-0.277622	-0.391630	0.200210
DPS	0.329006	0.655097	1.000000	-0.008333	-0.067289	0.556479	0.073373	-0.055722	-0.261344	-0.494865	0.180711
DPR	-0.003524	-0.040519	-0.008333	1.000000	0.265700	-0.003076	0.055695	-0.009277	0.049829	0.017572	-0.072630
PER	0.036733	-0.120871	-0.067289	0.265700	1.000000	-0.031576	0.090410	-0.034270	0.026866	-0.292712	-0.427684
LASSET	0.374162	0.447783	0.556479	-0.003076	-0.031576	1.000000	0.145368	0.072950	-0.180310	-0.110412	0.332583
GDPGR	0.100853	0.078046	0.073373	0.055695	0.090410	0.145368	1.000000	0.175232	-0.271363	-0.080916	0.153838
INFR	-0.019127	-0.074960	-0.055722	-0.009277	-0.034270	0.072950	0.175232	1.000000	-0.054430	0.158937	0.143092
INTR	-0.147015	-0.277622	-0.261344	0.049829	0.026866	-0.180310	-0.271363	-0.054430	1.000000	0.263986	-0.327848
CT	-0.226923	-0.391630	-0.494865	0.017572	-0.292712	-0.110412	-0.080916	0.158937	0.263986	1.000000	0.165459
EXCHR	-0.025139	0.200210	0.180711	-0.072630	-0.427684	0.332583	0.153838	0.143092	-0.327848	0.165459	1.000000

Table5: Results Correlation Analysis of US & European Pharmaceutical companies (Processed by EViews-10)

Based on table 4 and 5, the value of correlation coefficient among independent variables of Indian as well as US and European pharmaceutical companies can be seen. In the correlation matrix, a correlation coefficient shows the extent to which one variable is correlated with others. A positive correlation means any increment in one variable causes an increment in other variable and a decrement in one variable causes a decrement in other variable similarly in case of negative correlation it is vice versa i.e. an increment in one variable causes a decrement in other variables.

In table 4, the correlation matrix of Indian pharmaceutical companies depicts the higher correlation between few variables for instance EPS has highest positive correlation value (0.723002) with DPS followed by a positive correlation value (0.591633) between DPR and PER. However, the highest negative correlation value (-0.842999) observed between INFR and EXCHR.

The Correlation matrix of US and European pharmaceutical companies in Table 5, EPS has the highest positive correlation with DPS with a correlation value of (0.655097). The second highest correlation in this matrix is the positive correlation value (0.556479) between DPS with LASSET.

Multicollinearity does not affect the properties of the OLS estimators. The estimator remains unbiased and efficient. But the fact is that when multicollinearity is present in the data then the OLS estimators are imprecisely estimated **(Paul)**. Since seriousness of multicollinearilty in dataset can be measured through the

degree of correlation among variables, generally, highest degree of accepted correlation between two variables should be less than 0.80 (Edhi, A., 2017). By analyzing the correlation matrices of both markets, it can be inferred that of the degree of correlation among most variables is less than 0.80. However, negative correlation value (-0.842999) is observed between INFR and EXCHR for Indian pharmaceutical market in Table 4 whereas and positive correlation value (0.143092) is observed between INFR and EXCHR for European pharmaceutical market. Since this study is primarily focusing on comparative analysis between two markets while keeping type and number of variables intact in both sides, this higher correlation between INFR and EXCHR for Indian pharmaceutical market in Table 4 has been overlooked.

4.3.   Regression Analysis

F-TEST

The F test is carried out to verify whether the independent variables ROE, EPS, DPS, DPR, PER, LASSET, GDPGR, INFR, INTR, CT, and EXCHR combined, can significantly influence the dependent variable MSP of companies.

Hypothesis: There is a simultaneous significant influence of independent variables on the dependent variable.

Indian Pharmaceutical companies	US and European Pharmaceutical companies
Result of the F test (simultaneous coefficient test) shows that F-statistic of 32.32335 with significance below (0.000000<0.05). It can be concluded that together with ROE, EPS, DPS, DPR, PER, LASSET, GDPGR, INFR, INTR, CT, and EXCHR have a simultaneous significant effect on MSP of Indian Pharmaceutical Companies.	Result of the F test (simultaneous coefficient test) shows that F-statistic of 99.05622 with significance below (0.000000<0.05). It can be concluded that together with ROE, EPS, DPS, DPR, PER, LASSET, GDPGR, INFR, INTR, CT, and EXCHR have a simultaneous significant effect on MSP of US and European Pharmaceutical Companies.
Hypothesis Accepted	**Hypothesis Accepted**

Regression Result Summary

Dependent Variable: MPS
Method: Panel Least Squares
Date: 04/22/19   Time: 21:17
Sample: 2008 2017
Periods included: 10
Cross-sections included: 20
Total panel (balanced) observations: 200

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-16.60750	16.20192	-1.025032	0.3068
ROE	-8.035798	3.537531	-2.271584	0.0244
EPS	7.059722	2.073999	3.403919	0.0008
DPS	61.00841	9.119055	6.690212	0.0000
DPR	-7.331832	2.236580	-3.278144	0.0013
PER	0.061568	0.013690	4.497197	0.0000
LASSET	2.031314	0.975845	2.081595	0.0389
GDPGR	-1.596778	12.73396	-0.125395	0.9004
INFR	-27.03355	15.69895	-1.721998	0.0869
INTR	-15.50890	25.39091	-0.610805	0.5421
CT	37.90745	36.99307	1.024718	0.3070
EXCHR	-0.045328	0.038517	-1.176839	0.2409

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.851585	Mean dependent var	5.017152
Adjusted R-squared	0.825239	S.D. dependent var	5.381683
S.E. of regression	2.249779	Akaike info criterion	4.601123
Sum squared resid	855.3947	Schwarz criterion	5.112362
Log likelihood	-429.1123	Hannan-Quinn criter.	4.808013
F-statistic	32.32335	Durbin-Watson stat	1.564283
Prob(F-statistic)	0.000000		

Figure 4: Regression Result of Panel Data of Indian Pharmaceutical companies (Processed by EViews-10)

Regression result of panel data of Indian pharmaceutical companies summarizes the regression test model in the following sections.

The regression output summary of Indian pharmaceutical companies revealed an R-squared value of 0.851585 which means that 85.1585% of the variation in the market share price of Indian pharmaceutical companies can be explicated by the independent variables included in the current study. Result of the F-test

(simultaneous coefficient test) also shows that F-statistic value of 32.32335 with significance below (0.000000<0.05) validates the inclusive simultaneous effect of all independent variables on the market price of a share of Indian pharmaceutical companies.

ROE for Indian Pharmaceutical companies has the negative coefficient value of -8.035798 and probability (0.0244<0.05), which implies that the ROE has a significant negative effect on the MSP that is why H0 can be deemed rejected. This result supports previous studies of Fitri Sukmawati and Innes Garsela (2016).

Independent variable EPS with positive coefficient value of 7.059722 and probability value of (0.0008<0.05) reflects that **EPS** has a significant positive effect on MSP of Indian pharmaceutical companies and thus H1can be deemed validated, which falls in line with the previous studies of Budhi Suparnihgsih (2017), Ursula Tamuntuan (2015).

Similarly, the regression output of **DPS** for Indian pharmaceutical companies gives a positive coefficient value of 61.00841 with a probability value of (0.0000<0.05). Therefore, DPS can be considered to have a significant positive effect on the market share price which ratifies H2and supports previous studies of Onyango Benedict Enrile (2018), Sanjeet Sharma (2011), etc.

However, Regression output of **DPR** has the negative coefficient value of -7.331832 and probability value of (0.0013<0.05) which depicts DPR with the significant negative effect on the stock price that means H3 is accepted and supports previous studies of Hunjra et. al.(2014). Regression output indicates that the estimation result of **PER** for Indian pharmaceutical companies shows a positive coefficient value of 0.061568 with a probability value of (0.0000<0.05). It reflects that the PER has a significant positive effect on the market share price, which is in line with H4and supports previous studies of Pankaj Kumar (2017), Sanjeet Sharma (2011).

Similarly, Regression output result of **LASSET** with positive coefficient value of 2.031314 and probability value lower than the specified significance level of 5% (0.0389<0.05), reflects that the LASSET has a significant positive effect on the stock price of Indian Pharmaceutical companies, hence it can be concluded that H5 is accepted.

Regression result of macroeconomic variables such as GDPGR, INFR, INTR, CT, and EXCHR doesn't show any significant effect on the market share price of Indian pharmaceutical companies. Hence, hypothesisH6, H7, H8, H9, and H10 are rejected.

Dependent Variable: MPS
Method: Panel Least Squares
Date: 04/22/19   Time: 21:56
Sample: 2008 2017
Periods included: 10
Cross-sections included: 20
Total panel (unbalanced) observations: 181

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1759.451	454.4975	3.871201	0.0002
ROE	24.38475	36.24807	0.672718	0.5022
EPS	3.928813	6.061408	0.648168	0.5179
DPS	33.59069	31.44775	1.068143	0.2872
DPR	-3.617106	2.025520	-1.785767	0.0762
PER	0.112454	0.026697	4.212300	0.0000
LASSET	-21.14702	27.00078	-0.783201	0.4347
GDPGR	-51.14591	688.0880	-0.074330	0.9408
INFR	14.50280	35.55964	0.407844	0.6840
INTR	2468.204	1683.991	1.465687	0.1448
CT	-7053.961	1062.856	-6.636798	0.0000
EXCHR	743.9563	221.1875	3.363465	0.0010

Effects Specification				
Cross-section fixed (dummy variables)				

R-squared	0.951949	Mean dependent var		192.5727
Adjusted R-squared	0.942339	S.D. dependent var		586.6521
S.E. of regression	140.8712	Akaike info criterion		12.88825
Sum squared resid	2976705.	Schwarz criterion		13.43606
Log likelihood	-1135.387	Hannan-Quinn criter.		13.11034
F-statistic	99.05622	Durbin-Watson stat		0.412744
Prob(F-statistic)	0.000000			

Figure 5: Regression Result of Panel Data of US and European Pharmaceutical companies (Processed by EViews-10)

Regression result of panel data of US and European pharmaceutical companies summarizes the regression test model in the following sections.

The regression output summary of US and European pharmaceutical companies revealed an R-squared value of 0.951949 which means that 95.1949 % of the variation in the market share price of US and European pharmaceutical companies can be explicated by the independent variables included in the current study. Result of the F-test (simultaneous coefficient test) also shows that F-statistic value of 99.05622 with significance below (0.000000<0.05) supporting the inclusive simultaneous effect of all independent variables on the market price of a share of US and European pharmaceutical companies.

In the case of US and European pharmaceutical companies, most of the microeconomic variables such as ROE, EPS, DPS, DPR, and LASSAT don't have any significant effect on the market share price of US and European pharmaceutical companies. Hence, hypothesis H0, H1, H2, H3, and H5 are rejected. However, microeconomic variable namely **PER** shows a positive and significant effect on the market share price of US and European pharmaceutical companies with a coefficient value of 0.076573 and probability value (0.0000<0.05) respectively. Therefore, Hence, H4 is accepted and the result supports previous studies of Pankaj Kumar (2017), Sanjeet Sharma (2011).

Regression result of macroeconomic variables such as GDPGR, INFR, and INTR don't show any significant effect on the market share price of US and European pharmaceutical companies. Hence, hypothesis H6, H7, and H8, are rejected. However, macroeconomic variables such as CT and EXCHR for US and European companies show the negative coefficient value of -7053.961 and positive coefficient 743.9563 respectively, while having probability value of (0.0000>0.05) for both variables. This result shows that **CT** and **EXCHR** have significant negative effect and positive effect respectively on the market share price of US and European pharmaceutical companies. Hence, hypothesis H9 is accepted which supports the previous study of Mark Roe (2013), whereas hypothesis H10 is rejected and supports the precious study of Solnik (1987) and Aggarwal (1981) and refutes the previous study done by Soenen and Hennigar (1998).

S.N	Indian Pharmaceutical companies				US and European Pharmaceutical companies			
	Name of Variables	Coefficient value	Significance level	*Result*	Name of Variables	Coefficient value	Significance level	*Result*
(a)	ROE	-8.035798	(0.0244<0.05)	*Significant negative effect. H0 Rejected*	ROE	24.38475	(0.5022>0.05)	*Insignificant effect. H0 rejected*
(b)	EPS	7.059722	(0.0008<0.05)	*Significant positive effect. H1 accepted*	EPS	3.928813	(0.5179>0.05)	*Insignificant effect. H1 rejected*
(c)	DPS	61.00841	(0.0000<0.05)	*Significant positive effect. H2 accepted*	DPS	33.59069	(0.2872>0.05)	*Insignificant effect. H2 rejected*
(d)	DPR	-7.331832	(0.0013<0.05)	*Significant negative effect. H3 accepted*	DPR	-3.617106	(0.0762>0.05)	*Insignificant effect. H3 rejected*
(e)	PER	0.061568	(0.0000<0.05)	*Significant positive effect. H4 accepted*	PER	0.112454	(0.0000<0.05)	*Significant positive partial effect. H4 accepted*
(f)	LASSET	2.031314	(0.0389<0.05)	*Significant positive effect. H5 accepted*	LASSET	-21.14702	(0.4347>0.05)	*Insignificant effect. H5 rejected*

(g)	GDPGR	-1.596778	(0.9004>0.05)	*Insignificant effect. H6 rejected*	GDPGR	-51.14591	(0.9408>0.05)	*Insignificant effect. H6 rejected*
(h)	INFR	-27.03355	(0.0869>0.05)	*Insignificant effect. H7 rejected*	INFR	14.50280	(0.6840>0.05)	*Insignificant effect. H7 rejected*
(i)	INTR	-15.50890	(0.5421>0.05)	*Insignificant effect. H8 rejected*	INTR	2468.204	(0.1448>0.05)	*Insignificant effect. H8 rejected*
(j)	CT	37.90745	(0.3070>0.05)	*Insignificant effect. H9 rejected*	CT	-7053.961	(0.0000<0.05)	*Significant negative effect. H9 accepted*
(k)	EXCHR	-0.045328	(0.2409>0.05)	*Insignificant effect. H10rejected*	EXCHR	743.9563	(0.0010<0.05)	*Significant positive effect. H10rejected*

Table 6: Comparative Analysis of Regression Result between Emerging and Emerged Market

5. Conclusion and Recommendations

The main objective of this study was to investigate the effect of internal (microeconomic) and external (macroeconomic) factors on the market price of a share of pharmaceuticals companies of emerging market (India) and emerged market (the US and Europe). During the course of study, 200 observations for emerging market and 181 observations for emerged markets, were examined and analyzed to understand the diverse behaviour of the same variables in emerging and emerged markets. The statistical estimation method was based on panel OLS regression while considering the fixed effect model. This research strived to establish an association between the market price of the share (MPS) and other eleven variables for both emerging and emerged markets separately.

The empirical findings show a positive and significant relationship between EPS, DPS, PER, and LASSET with market price of the share (MPS) for emerging (India) market. This significant positive relation with MPS explains why higher EPS and DPS make companies more attractive for investment. Similarly, PER exerts the same impact on companies by making investors willing to buy their share at current market price even during the rally and thus fuel the overall upward growth. On the same note, higher LASSET growth boosts confidence in investors towards companies' growth and investment outlook. Having said that, significant negative relation of ROE and DPR with MPS show that higher return on equity causes decrement in share price because of possible approach of middle size companies in aggressive reinvestment of retained earnings and investors' money towards their expansion. Therefore, higher dividend payout ratio causes apprehension in investor's mind about investment and growth policy of companies and that affects MPS in a negative manner.

Since pharmaceutical companies are considered the non-cyclical industry, with better immunity against macroeconomic fluctuations, this study further reinforces that macroeconomic factors such as GDP growth, Inflation rate, interest rate and exchange rate do not affect significantly the market price of a share of pharmaceutical companies of the emerging market. In the case of emerged markets, most of the internal factors except PER do not show any significant effect on the MPS of US and European pharmaceutical companies. The possible reason behind this result could be the weak effect of ROE, EPS, DPS, and DPR on the MSP. As per data, these factors for many middle size pharmaceutical companies of the emerged market show that although they had negative EPS and they didn't pay DPS due to negative net income, MPS wasn't affected severely. Moreover, significant positive relationship between PER and MPS also brings to fore a crucial fact that despite successive bad results and unattractive dividend policies, investors showed their confidence in those companies. In emerged markets, the story is rather different. This study reveals macroeconomic factors such as GDP growth, Inflation rate and Interest rate, do not affect significantly the market price of a share of pharmaceutical companies of the emerged market. However, higher fluctuation in corporate tax and variation in exchange rates

show a significant negative and positive effect respectively on the MPS of pharmaceutical companies of the emerged market. The probable reason behind it could be the close relationship between the European and US economy.

Possible recommendations promulgated by this study are stemmed firmly into the domains of micro and macroeconomics factors affecting key performance of pharmaceutical companies of emerging and emerged markets. During the research, pharmaceutical companies from five countries in the emerged market and one country in the emerging market have been considered to study the patterns of stock price changes. Along the same line, this methodology can also be implemented to study the pharmaceutical companies of each country separately, to achieve a more comprehensive and precise results, which can be helpful for investors and managers to understand and predict the stock patterns before investing their capital in pharmaceutical stocks. Also, the further studies can be helpful for the investors to comprehend the potentials of different countries in the field of pharmaceutical developments beforehand. In conclusion, it is worthwhile to mention that this study has paved the path to delve deeper into financial conditions of pharmaceutical companies of different countries from a novel perspective.

6. Limitations

Considering a few limitations of financial ratios, in some situations, financial ratios don't necessarily give very precise financial information such as distorted balance sheet of the firm due to inflation, different accounting policies in place and practices of different firms (https://www.thebalancesmb.com/limitations-of-financial-ratio-analysis-393236).

Since many middle and small-sized pharmaceutical companies in the USA and Europe are private entities and not listed in the stock exchange, only twenty companies have been taken from emerged markets in this study.

Huge difference in operational, financial, other parameters between big and small emerged companies may cause biased regression results.

This study gives a generalized idea about the effect of internal and external factors on the stock price of pharmaceutical companies in emerging and emerged market and how these factors behave differently in a different market.

This study doesn't give a complete picture of share price fluctuation in the pharmaceutical sector of the entire emerging and emerged markets.

In this study, in order to compare the regression results of pharmaceutical companies, in both emerging and emerged markets, fixed effect model has employed. Additionally, Hausman test has been performed and it was inferred that Random effect would have been more appropriate for Indian firms but considering the objective of this study, which is doing a comparative analysis of regression results of two different markets, the fixed effect was given chosen instead of random effect.

References

Akif, S. & Noreen, U. (2016). Price Volatility and Role of Dividend Policy: Empirical Evidence from Pakistan. *International Journal of Economics and Financial Issues*, Vol. 6(No. 2), 461–472.

Akinsulire, O. (2014). *Financial Management* 8th ., Lagos: -Toda Ventures.

Alfred, D.D. (2007). . *Corporate Finance: Issues, Investigations, Innovation &nApplications* , Lagos: High Rise Publications.

Asmirantho, E and Somantri, O. K. (2017). The Effect of Financial Performance on Stock Price at Pharmaceutical Subsector Company Listed in Indonesia Stock Exchange.

Jurnal Ilmiah Akuntansi Fakultas Ekonomi Vol. 3(No. 2), 94-107

Besley, S. & Brigham, E.F. (2008). *Essentials of Managerial Finance*, Thomson South-Western.nhttps://epdf.tips/essentials-of-managerial-finance.html

Enrile, O.B. (2018). The Relationship Between Dividend Payout Ratio and the Share Prices of Companies Listed at the Nairobi Securities Exchange. *, International Journal of Economics, Commerce and Management*, Vol. 6(No.6), 615–642.

Ellis, J., & Howell, D. (2018). Tax reform's influence on life sciences investments, *Boston Business Journal.*

Friedman, M. (1987). "Quantity Theory of Money" *A Dictionary of Economics*, vol. 4, 3-20.

Githinji, G.G. (2011). Relationship between Price Earning Ratio and Share Prices of Companies Listed on the Nairobi Stock Exchange.

Ghaeli, M.R. (2017). Price-to-earnings ratio: A state-of-art review. *Accounting 3* , 131–136.

Haque, S. & Faruquee, M. (2013). Impact of Fundamental Factors on Stock Price: A Case Based Approach on Pharmaceutical Companies Listed with Dhaka Stock Exchange. *International Journal of Business and Management Invention*, vol.2(No.9), 34–41.

Hasan, M. et al., (2015). Dividend Payout Ratio and Firm's Profitability. Evidence from Pakistan. *Theoretical Economics Letters*, (No.5), 441–445.

Hashemijoo, M., Ardekani, A.M. & Younesi, N. (2012). The Impact of Dividend Policy on Share Price Volatility in the Malaysian Stock Market. *Journal of Business Studies Quarterly*, Vol. 4(No. 1), 111–129.

Hunjra, A.I. et al., (2014). Impact of Micro Economic Variables on Firms Performance. *International Journal of Economics and Empirical Research*, 65–73.

Islam, M.R. et al., (2014). How Earning Per Share (EPS) Affects on Share Price and Firm Value. *European Journal of Business and Management* , Vol. 6(No. 17), .97–108.'

Jhingan, M., (1997), Macroeconomic theory, *Vrinda publishing,* Delhi.

Jõeveer, K. (2013)*.* Firm, Country and Macroeconomic Determinants of Capital Structure: Evidence from Transition Economics. *Journal of Comparative Economics.* Vol.41 (No.1), 294-308.

Herawati , A. & Setiadiputra, A. (2018). The influence of Fundamental Analysis on Stock Prices: The Case of Food and Beverage Industries. *European Research Studies Journal*, Volume XXI (No. 3), 316–326.

Hirshleifer, D.A., Hsu, P. & Li, D. (2013). Innovative efficiency and stock returns. *Journal of Financial Economics*, Vol. 107.

Is there a Correlation between GDP Growth and Stock Market Returns? https://www.wise-owl.com/investment-education/is-there-a-correlation-between-gdp-growth-and-stock-market-returns

Kamar, K. (2017). Analysis of the Effect of Return on Equity (ROE) and Debt to Equity Ratio (DER) On Stock Price on Cement Industry Listed In Indonesia Stock Exchange (Idx) In the Year of 2011-2015. *IOSR Journal of Business and Management (IOSR-JBM)*, Vol.19(No.5), 66–76.

Kampamba, S. (2017)*.* The Impact of GDP, Inflation, Interest and Exchange rates GDP on the Stock Market in Zambia, Working Paper, *ECONOMICS ASSOCIATION OF ZAMBIA.*

Kapoor, S. (2009). Impact of Dividend Policy on Shareholders' Value: A Study of Indian Firms, Synopsis. *Jaypee Institute of Information Technology, Noida*, 1–39.

Kijewska, A., (2016). Determinants of the Return on Equity Ratio (ROE) on the Example of Companies from Metallurgy and Mining Sector in Poland. *Metalurgija*, Vol.55(No.2), 285–288.

Kumar, P. (2017). , Impact of Earning per Share and Price Earnings Ratio on Market Price of Share: A Study on Auto Sector in India. *International Journal of Research –GRANTHAALAYAH*, Vol. 5(No. 2), 113–118.

Laurens, S. (2018). Influence Analysis of DPS, EPS, and PBV toward Stock Price and Return. *The WINNERS*, Vol. 19(No.1), 21–29.

Law, J. (2008). Is Pharma recession-proof? *Pharmaceutical Technology Europe*, 20(11). Available at: http://www.pharmtech.com/pharma-recession-proof-0.

Muhammad, N., & Rasheed, A. (2002).Stock Prices and Exchange Rates: Are they Related? Evidence from South Asian Countries, *The Pakistan Development Review* Vol.41 (N0.4) Part II.

Nicholson, S.F. (1960). Price-earnings ratios. *Financial Analysts Journal*, Vol. 16(No. 4), pp. 43–45.

O'riordan, A., Julian, K., Brückner, A., Bajaaj, A. (2016). Global pharmaceutical company: developing a more customer-centric commercial model to meet rapid market changes. *Accenture Research*.

Öztekin., Ö. (2015). Capital Structure Decisions Around the World: Which Factors are Reliably Important? *Journal of Financial and Quantitative Analysis,* Vol. 50 (No. 3), 301-323.

Paul, R. K., Multicollinearity:Causes, Effects and Remedies M. Sc. (Agricultural Statistics), Roll No. 4405I.A.S.R.I, Library Avenue, New Delhi-110012

Pound Sterling Live. https://www.poundsterlinglive.com.

Qaisi, F.A., Tahtamouni, A. & AL-Qudah , M. (2016). Factors Affecting the Market Stock Price - The Case of the Insurance Companies Listed in Amman Stock Exchange. *International Journal of Business and Social Science*, Vol. 7(No. 10), 81–90.

Renata Perić, & LjubicaKordić. (2014). The Role of Taxation during the Financial Crisis 2008-2013: Selected Issues. Review paper, UDK 336.26:338.124.4"2008/2013"

Roe, M. (2013). Did taxes cause the financial crisis? *World Economic Forum*, 22 AUG 2013

Trading Economics. https://tradingeconomics.com/ (Corporate tax rate and interest rate for all countries using this site)

Raju, M.B.H. & Asaduzzaman, A.H.M. (2017). The Impact of Dividend Policy on Stock Price: A Study of Fuel, Power and Cement Industry in Bangladesh. *Journal of Economics and Finance (IOSR-JEF)* , Vol. 8(No.03), 84–91.

Raymond, T.Y.C. (2002). Price-Earnings Ratios, Dividend Yields and Real Estate Stock Prices. *Journal of Real Estate Portfolio Management*, Vol. 8(No. 2), 107–113.

Saragih, J.L. (2017). The Effects of Return on Assets (ROA), Return on Equity (ROE), and Debt to Equity Ratio (DER) on Stock Returns in the Wholesale and Retail Trade Companies Listed in Indonesia Stock Exchange. *International Journal of Science and Research Methodology, Human Journals*, Vol. 8 (No.3), 348-367.

Seddigi, H., & Lawler, K. A. (2000). Econometrics: a practical approach. New York: Routledge

Sharma , S. (2011). Determinants of Equity Share Prices in India, Journal of Arts, science, and Commerce. *Journal of Arts, science, and Commerce*, Vol. 2(No.4), 51–60.

Sharif, T., Purohit, H. & Pillai, R. (2015). Analysis of Factors Affecting Share Prices: The Case of Bahrain Stock Exchange. *International Journal of Economics and Finance*, Vol. 7(No. 3), 207–216.

Simon,S. P. (2009). Dividend Policy; T/Dialogue; www.hkiaat.org/images/uploads/articles/dividend.pdf.

Subramanian, V.A. & Murugesu, T. (2013). Impact of Earning Per Share (EPS) On Share Price (Listed Manufacturing Companies in Sri Lanka). *International Journal of Innovative Research & Studies*, Vol.2(No. 12), 251–258.

Sukmawati, F. & Garsela, I. (2016). The Effect of Return on Assets and Return on Equity to the Stock Price. *Advances in Economics, Business and Management Research*, Vol. 15. 1st Global Conference on Business, Management and Entreupreuneurship (GCBME-16)

Suparnihgsih, B. (2017). Effect of debt to equity ratio (DER), price earnings ratio (PER), net profit margin (NPM), return on investment (ROI), earning per share (EPS) In influence exchange rates and Indonesian interest rates (SBI) share price in textile and garment industry Indonesia stock exchange. *International Journal of Multidisciplinary Research and Development*, Vol. 04(No. 11), 58–62.

Tamuntuan, U. (2015). The Effect of Return on Equity, Return on Assets and Earnings Per Share Toward Share Price: An Emperical Study of Food and Beverage Companies Listed on Indonesia Stock Exchange. *JurnalBerkalaIlmiahEfisiensi*, Vol. 1 (No.05).

Thorp, W.A. (2012). Deconstructing ROE: DuPont Analysis. *Computerized Investing Articles*. Available at: https://www.aaii.com/journal/article/deconstructing-roe-dupont-analysis.

Uddin, M., Rahman, S. & Hossain, R. (2013). Determinants of Stock Prices in Financial Sector Companies in Bangladesh- A Study on Dhaka Stock Exchange (DSE). *Interdisciplinary Journal of Contemporary Research in Business*, Vol. 5(No. 3).

Watanabe, A. et al., (2012). The asset growth effect: Insights from international-equity markets. *Journal of Financial Economics* , Vol. 108(No. 2), 529–563.

What Are the Limitations of Ratio Analysis? https://www.thebalancesmb.com/limitations-of-financial-ratio-analysis-393236.

Wild, J.J. & Subramanyam, K.R. (2008). *Financial Statement Analysis* 10th., McGraw-Hill/Irwin.

World Data Atlas. https://knoema.com/atlas (for all countries using this site)

Appendices:

Key Financial Data of Selected Companies:

Year	Firm Specific Data of Indian Pharmaceutical Companies Annual Financial data in millions of US Dollars				
	Sun Pharmaceuticals India	Lupin Limited India	Cipla Limited India	Unichem Laboratory Ltd. India	Cadila Healthcare India
2007 - 2008	MPS:2.824662331 ROE:38.30% EPS:0.186843422 DPS:0.026263 DPR:0.141 PE_RATIO:15.118 ASSET:1520.46023	MPS:2.470735368 ROE: 37.90% EPS: 0.250125063 DPS:0.025013 DPR:0.100 PE_RATIO:9.878 ASSET:842.8464232	MPS:5.496498249 ROE:20.10% EPS: 0.225612806 DPS:0.050025 DPR:0.222 PE_RATIO:24.363 ASSET:1433.866933	MPS:1.301150575 ROE:12.80% EPS:0.142571286 DPS:0.050025 DPR:0.351 PE_RATIO:9.126 ASSET:151.5757879	MPS:0.801650825 ROE:26.80% EPS:0.068284142 DPS:0.015008 DPR:0.220 PE_RATIO:11.740 ASSET:637.2686343
2008 - 2009	MPS:2.196008694 ROE:30.20% EPS:0.173483501	MPS:2.723572417 ROE:37.10% EPS:0.240466311	MPS:4.342027267 ROE: 19.00% EPS:0.196008694	MPS:1.268128828 ROE: 24.10% EPS:	MPS:0.716854377 ROE:25.70% EPS:0.058486465

	DPS:0.027267 DPR:0.157 PE_RATIO:12.658 ASSET:1632.780083	DPS:0.049397 DPR:0.205 PE_RATIO:11.326 ASSET:793.7759336	DPS:0.039518 DPR:0.202 PE_RATIO:22.152 ASSET:1316.301126	0.236909702 DPS:0.063229 DPR:0.267 PE_RATIO:5.353 ASSET:139.794507	DPS:0.011855 DPR:0.203 PE_RATIO:12.257 ASSET:668.5437661
2009 - 2010	MPS:3.997769102 ROE:18.20% EPS:0.145454545 DPS:0.030786 DPR:0.212 PE_RATIO:27.485 ASSET:2023.892917	MPS:7.248410485 ROE:34.10% EPS:0.353374233 DPS:0.060234 DPR:0.170 PE_RATIO:20.512 ASSET:1134.523146	MPS:7.520356944 ROE: 21.10% EPS:0.305633017 DPS:0.044618 DPR:0.146 PE_RATIO:24.606 ASSET:1630.585611	MPS:3.581483547 ROE:23.50% EPS: 0.304740658 DPS:0.089236 DPR:0.293 PE_RATIO:11.753 ASSET:179.1634133	MPS:2.45398773 ROE:35.30% EPS:0.111098717 DPS:0.014947 DPR:0.135 PE_RATIO:22.088 ASSET:844.283324
2010 - 2011	MPS:4.969118473 ROE:21.00% EPS:0.196967996 DPS:0.039304 DPR:0.200 PE_RATIO:25.228 ASSET:2778.910724	MPS:9.328467153 ROE:29.50% EPS:0.434811903 DPS:0.067378 DPR:0.155 PE_RATIO:21.454 ASSET:1375.496912	MPS:7.210555867 ROE:15.70% EPS:0.276698484 DPS:0.062886 DPR:0.227 PE_RATIO:26.059 ASSET:1930.758001	MPS:4.251544076 ROE:16.10% EPS:0.23649635 DPS:0.089837 DPR:0.380 PE_RATIO:17.977 ASSET:197.9337451	MPS:3.554407636 ROE:37.40% EPS:0.156092083 DPS:0.028074 DPR:0.180 PE_RATIO:22.771 ASSET:1035.508141
2011 - 2012	MPS:5.592777941 ROE:24.50% EPS:0.251790796 DPS:0.041802 DPR:0.166 PE_RATIO:22.212 ASSET:3233.048769	MPS:10.39446571 ROE:23.80% EPS:0.381316848 DPS:0.062801 DPR:0.165 PE_RATIO:27.259 ASSET:1566.519478	MPS:5.976842312 ROE:16.00% EPS:0.279658522 DPS:0.03925 DPR:0.140 PE_RATIO:21.372 ASSET:1834.913159	MPS:2.592483564 ROE:11.10% EPS:0.154842508 DPS:0.058875 DPR:0.380 PE_RATIO:16.743 ASSET:193.6218232	MPS:2.98341674 ROE:27.40% EPS:0.125012266 DPS:0.029438 DPR:0.235 PE_RATIO:23.865 ASSET:1260.523992
2012 - 2013	MPS:7.543151884 ROE:22.00% EPS:0.265266648 DPS:0.046053 DPR:0.174 PE_RATIO:28.436 ASSET:3791.599889	MPS:11.58791563 ROE:28.50% EPS:0.541401861 DPS:0.073685 DPR:0.136 PE_RATIO:21.404 ASSET:1642.055817	MPS:6.995486783 ROE:18.50% EPS: 0.354425716 DPS:0.036843 DPR:0.104 PE_RATIO:19.738 ASSET:2147.701943	MPS:3.184120844 ROE:16.30% EPS: 0.230634614 DPS:0.082896 DPR:0.359 PE_RATIO:13.806 ASSET:197.5683891	MPS:2.731325412 ROE:23.60% EPS:0.117527862 DPS:0.027632 DPR:0.235 PE_RATIO:23.240 ASSET:1358.423137
2013 -	MPS:9.585557038 ROE:18.80%	MPS:15.60873916 ROE:30.30%	MPS:6.399266177 ROE:14.60%	MPS:3.823382255 ROE:16.60%	MPS:3.423615744 ROE:25.20%

2014	EPS:0.253002001 DPS:0.025017 DPR:0.099 PE_RATIO:37.887 ASSET:4898.398933	EPS:0.683622415 DPS:0.100067 DPR:0.146 PE_RATIO:22.832 ASSET:1702.13475	EPS:0.288358906 DPS:0.033356 DPR:0.116 PE_RATIO:22.192 ASSET:2235.356905	EPS:0.311707805 DPS:0.133422 DPR:0.428 PE_RATIO:12.266 ASSET:190.9106071	EPS:0.130920614 DPS:0.03002 0.229 DPR:0.229 PE_RATIO:26.150 ASSET:1331.971314
2014 - 2015	MPS:16.40076886 ROE:19.50% EPS:0.302418709 DPS:0.048054 DPR:0.159 PE_RATIO:54.232 ASSET:8034.614769	MPS:32.14880666 ROE:29.80% EPS:0.856158898 DPS:0.120135 DPR:0.140 PE_RATIO:37.550 ASSET:2124.13903	MPS:11.39195899 ROE:11.40% EPS: 0.235623899 DPS:0.032036 DPR:0.136 PE_RATIO:48.348 ASSET:2506.343104	MPS:3.261252603 ROE:8.80% EPS: 0.133109082 DPS:0.032036 DPR:0.241 PE_RATIO:24.501 ASSET:187.1856479	MPS:5.572000641 ROE:28.90% EPS:0.180041647 DPS:0.038443 DPR:0.214 PE_RATIO:30.948 ASSET:1463.110684
2015 - 2016	MPS:4.226096144 ROE:14.90% EPS:0.29582673 DPS:0.015093 DPR:0.051 PE_RATIO:14.286 ASSET:8381.299525	MPS:21.88891404 ROE:22.20% EPS:0.761451966 DPS:0.113199 DPR:0.149 PE_RATIO:28.746 ASSET:3414.821523	MPS:7.730737303 ROE:12.30% EPS:0.255527885 DPS:0.030186 DPR:0.118 PE_RATIO:30.254 ASSET:3188.921591	MPS:3.349935854 ROE:11.70% EPS: 0.179609086 DPS:0.030186 DPR:0.168 PE_RATIO:18.651 ASSET:193.751415	MPS:4.783789903 ROE:37.80% EPS:0.224435892 DPS:0.048298 DPR:0.215 PE_RATIO:21.315 ASSET:1592.423213
2016 - 2017	MPS:10.6097749 ROE:20.00% EPS:0.446808511 DPS:0.053962 DPR:0.121 PE_RATIO:23.746 ASSET:9468.115942	MPS:22.27567068 ROE:20.70% EPS:0.874036386 DPS:0.115634 DPR:0.132 PE_RATIO:25.486 ASSET:4102.26642	MPS:9.131976565 ROE:8.40% EPS:0.193031144 DPS:0.030836 DPR:0.160 PE_RATIO:47.308 ASSET:3243.462843	MPS:4.413351835 ROE:-7.00% EPS:0.184397163 DPS:0.046253 DPR:0.251 PE_RATIO:23.934 ASSET:235.368486	MPS:6.833950046 ROE:23.50% EPS:0.224020968 DPS:0.049337 DPR:0.220 PE_RATIO:30.506 ASSET:2346.700586

Year	Firm Specific Data of Indian Pharmaceutical Companies Annual Financial data in millions of US Dollars				
	Glenmark Pharmaceuticals Ltd India	TTK Healthcare India	IPCA Laboratories India	Torrent Pharmaceuticals India	Biocon Ltd. India
2007 - 2008	MPS:12.27363682 ROE57.40%: EPS:0.646323162 DPS:0.017509 DPR:0.027 PE_RATIO:18.9	MPS:1.775887944 ROE:23.10% EPS:0.375937969 DPS:0.075038 DPR:0.200 PE_RATIO:4.72	MPS:3.045022511 ROE:25.50% EPS:0.271635818 DPS:0.04002 DPR:0.147 PE_RATIO:11.2	MPS:1.768384192 ROE:29.30% EPS:0.19909955 DPS:0.043772 DPR:0.220 PE_RATIO:8.88	MPS:1.795147574 ROE:37.20% EPS:0.20010005 DPS:0.012506 DPR:0.062 PE_RATIO:8.97

	90	4	10	2	1
	ASSET:736.7683 842	ASSET:30.46773 387	ASSET:290.6203 102	ASSET:318.6843 422	ASSET:519.9849 925
2008 - 2009	MPS:3.11796087 7 ROE:12.30% EPS:0.151551077 DPS:0.007904 DPR:0.052 PE_RATIO:20.5 74 ASSET:841.2369 097	MPS:1.88203912 3 ROE:13.18% EPS:0.191859316 DPS:0.059277 DPR:0.309 PE_RATIO:9.80 9 ASSET:27.64671 014	MPS:1.29994072 3 ROE:16.50% EPS:0.158664296 DPS:0.04347 DPR:0.274 PE_RATIO:8.19 3 ASSET:271.6064 019	MPS:1.32444181 ROE:31.80% EPS:0.215372456 DPS:0.039518 DPR:0.183 PE_RATIO:6.15 0 ASSET:329.4803 399	MPS: 0.951788184 ROE:6.21% EPS:0.031811895 DPS:0.019759 DPR:0.621 PE_RATIO:29.9 19 ASSET:502.5884 213
2009 - 2010	MPS:5.93976575 6 ROE:16.40% EPS:0.277523703 DPS:0.008924 DPR:0.032 PE_RATIO:21.4 03 ASSET:1089.525 934	MPS:5.71890686 ROE:14.40% EPS:0.260568879 DPS:0.078081 DPR:0.300 PE_RATIO:21.9 48 ASSET:34.60122 699	MPS:6.01896263 2 ROE:27.50% EPS:0.366759621 DPS:0.062465 DPR:0.170 PE_RATIO:16.4 11 ASSET:360.7808 143	MPS:6.08075850 5 ROE:31.20% EPS:0.304740658 DPS:0.066927 DPR:0.220 PE_RATIO:19.9 54 ASSET:438.4160 625	MPS:2.11444506 4 ROE:17.90% EPS:0.112214166 DPS:0.026102 DPR:0.233 PE_RATIO:18.8 43 ASSET:655.0139 431
2010 - 2011	MPS:6.36945536 2 ROE:20.60% EPS:0.376866929 DPS:0.008984 DPR:0.024 PE_RATIO:16.9 01 ASSET:1144.929 815	MPS:9.07018528 9 ROE:20.96% EPS:0.425828186 DPS:0.089837 DPR:0.211 PE_RATIO:21.3 00 ASSET:43.32172 937	MPS:6.77372262 8 ROE:27.40% EPS:0.470746771 DPS:0.07187 DPR:0.153 PE_RATIO:14.3 89 ASSET:429.3767 546	MPS:6.49477821 4 ROE:29.20% EPS:0.358674902 DPS:0.067378 DPR:0.188 PE_RATIO:18.1 08 ASSET:572.5772 038	MPS:2.57495788 9 ROE:19.39% EPS:0.140595171 DPS:0.033689 DPR:0.240 PE_RATIO:18.3 15 ASSET:805.3003 93
2011 - 2012	MPS:6.03768030 6 ROE:10.70% EPS:0.334216466 DPS:0.03925 DPR:0.117 PE_RATIO:18.0 65 ASSET:1154.626 631	MPS:7.67049357 3 ROE:19.13% EPS:0.39505446 DPS:0.078501 DPR:0.199 PE_RATIO:19.4 16 ASSET:37.75488 176	MPS:6.57442841 7 ROE:24.00% EPS:0.431361005 DPS:0.062801 DPR:0.146 PE_RATIO:15.2 41 ASSET:456.7363 36	MPS:6.16858012 ROE:25.60% EPS:0.329310176 DPS:0.083407 DPR:0.253 PE_RATIO:18.7 32 ASSET:600.4710 038	MPS:1.55725640 3 ROE:15.70% EPS:0.113040918 DPS:0.032774 DPR:0.290 PE_RATIO:13.7 76 ASSET:774.2125 405
2012 - 2013	MPS:8.52077001 ROE:24.00% EPS:0.422031869 DPS:0.036843 DPR:0.087 PE_RATIO:20.1 90 ASSET:1320.991 066	MPS:7.44496638 1 ROE:15.30% EPS:0.336925486 DPS:0.073685 DPR:0.219 PE_RATIO:22.0 97 ASSET:38.56498 112	MPS:9.70065395 6 ROE:23.00% EPS:0.472506217 DPS:0.073685 DPR:0.156 PE_RATIO:20.5 30 ASSET:496.8223 266	MPS:6.40361057 4 ROE:33.10% EPS:0.471032514 DPS:0.119738 DPR:0.254 PE_RATIO:13.5 95 ASSET:697.0433 821	MPS:1.68610113 3 ROE:20.50% EPS:0.159528415 DPS: 0.030764 DPR:0.193 PE_RATIO:10.5 69 ASSET:813.5028 092

2013-2014	MPS:9.437958639 ROE:18.90% EPS:0.333722482 DPS:0.033356 DPR:0.100 PE_RATIO:28.281 ASSET:1439.893262	MPS:8.730820547 ROE:12.60% EPS:0.266010674 DPS:0.066711 DPR:0.251 PE_RATIO:32.821 ASSET:40.01667779	MPS:14.0893929 3 ROE:27.20% EPS:0.632421614 DPS:0.083389 DPR:0.132 PE_RATIO:22.278 ASSET:535.406938	MPS:8.733322215 ROE:39.90% EPS:0.654269513 DPS:0.166778 DPR:0.255 PE_RATIO:13.348 ASSET:845.5303536	MPS:2.357404937 ROE:14.50% EPS:0.11724483 DPS:0.027852 DPR:0.238 PE_RATIO:20.107 ASSET:959.0727151
2014-2015	MPS:12.59010091 ROE:15.90% EPS:0.28063431 DPS:0.032036 DPR:0.114 PE_RATIO:44.863 ASSET:1551.737947	MPS:14.89668429 ROE:14.35% EPS:0.333173154 DPS:0.072081 DPR:0.216 PE_RATIO:44.712 ASSET:44.08137114	MPS:10.22825565 ROE:12.20% EPS:0.322761493 DPS:0.016018 DPR:0.050 PE_RATIO:31.690 ASSET:660.707993	MPS:18.3429441 ROE:33.00% EPS:0.710876181 DPS:0.180202 DPR:0.253 PE_RATIO:25.803 ASSET:1275.684767	MPS:2.506807625 ROE:15.80% EPS:0.132788723 DPS:0.02675 DPR:0.201 PE_RATIO:18.878 ASSET:1014.239949
2015-2016	MPS:11.98852917 ROE:19.30% EPS:0.377480945 DPS:0.030186 DPR:0.080 PE_RATIO:31.759 ASSET:1635.499208	MPS:13.96121047 ROE:17.46% EPS:0.440570523 DPS:0.075466 DPR:0.171 PE_RATIO:31.689 ASSET:45.25092446	MPS:8.750282998 ROE:4.20% EPS:0.11138782 DPS:0 DPR:0.000 PE_RATIO:78.557 ASSET:587.3820844	MPS:20.22036073 ROE:56.50% EPS:1.545845597 DPS:0.301864 DPR:0.195 PE_RATIO:13.080 ASSET:1367.127009	MPS:2.425477322 ROE:15.10% EPS:0.140366765 DPS:0.025206 DPR:0.180 PE_RATIO:17.280 ASSET:1276.597993
2016-2017	MPS:13.22463768 ROE:19.90% EPS:0.500462535 DPS:0.030836 DPR:0.062 PE_RATIO:26.425 ASSET:1882.824545	MPS:12.22247919 ROE:12.52% EPS:0.372032069 DPS:0.077089 DPR:0.207 PE_RATIO:32.853 ASSET:43.92537774	MPS:9.610699969 ROE:8.30% EPS:0.237742831 DPS:0.015418 DPR:0.065 PE_RATIO:40.425 ASSET:610.4687018	MPS:23.88606229 ROE:23.80% EPS:0.850601295 DPS:0.21585 DPR:0.254 PE_RATIO:28.081 ASSET:1495.713845	MPS:5.825316065 ROE:13.80% EPS:0.160191181 DPS:0.015418 DPR:0.096 PE_RATIO:36.365 ASSET:1448.381129

Year	Firm Specific Data of Indian Pharmaceutical Companies Annual Financial data in millions of US Dollars				
	FDC Ltd. India	Dabur India	Ajanta Pharmaceuticals India	NATCO Pharmaceuticals India	JB Chem. And Pharmaceuticals India
2007-2008	MPS:0.714107054 ROE:17.90% EPS:0.082541271 DPS:0.025013	MPS:0.874187094 ROE:60.86% EPS:0.048274137 DPS:0.018759	MPS:0.266883442 ROE:17.50% EPS:0.062281141 DPS:0.008254	MPS:0.423961981 ROE:28.30% EPS:0.072286143 DPS:0.006253	MPS:0.862931466 ROE:10.40% EPS:0.134317159 DPS:0.012506 DPR:0.093 PE_RATIO:6.425

	DPR:0.303 PE_RATIO:8.652 ASSET:125.5377689	DPR:0.389 PE_RATIO:18.109 ASSET:370.3851926	DPR:0.133 PE_RATIO:4.285 ASSET:90.02001001	DPR:0.087 PE_RATIO:5.865 ASSET:104.9024512	ASSET:185.4177089
2008-2009	MPS:0.675755779 ROE:21.60% EPS:0.089310413 DPS:0.024699 DPR:0.277 PE_RATIO:7.566 ASSET:108.9112824	MPS:0.975103734 ROE:54.50% EPS:0.044655206 DPS:0.017388 DPR:0.389 PE_RATIO:21.836 ASSET:373.2661529	MPS:0.135348745 ROE:17.40% EPS:0.057300929 DPS:0.00652 DPR:0.114 PE_RATIO:2.362 ASSET:90.7330 5671	MPS:0.19067378 ROE:24.13% EPS:0.062043074 DPS:0.00494 DPR:0.080 PE_RATIO:3.073 ASSET:103.9320292	MPS:0.502074689 ROE:5.60% EPS:0.06026477 DPS:0.019759 DPR:0.328 PE_RATIO:8.331 ASSET:148.844102
2009-2010	MPS:1.795872839 ROE:31.40% EPS:0.178248745 DPS:0.039041 DPR:0.219 PE_RATIO:10.075 ASSET:152.2587842	MPS:1.769102064 ROE:47.60% EPS:0.063134412 DPS:0.022309 DPR:0.353 PE_RATIO:28.021 ASSET:506.1907418	MPS:0.541438929 ROE:19.90% EPS:0.08633575 DPS:0.010485 DPR:0.121 PE_RATIO:6.271 ASSET:110.4517568	MPS:0.598326827 ROE:17.81% EPS:0.077189069 DPS:0.008924 DPR:0.116 PE_RATIO:7.751 ASSET:123.6586726	MPS:1.09180145 ROE:22.90% EPS:0.314110429 DPS:0.044618 DPR:0.142 PE_RATIO:3.476 ASSET:187.8192973
2010-2011	MPS:2.284110051 ROE:26.40% EPS:0.182144862 DPS:0.044919 DPR:0.247 PE_RATIO:12.540 ASSET:172.8691746	MPS:2.157215048 ROE:43.20% EPS:0.073441887 DPS:0.025828 DPR:0.352 PE_RATIO:29.373 ASSET:881.0555867	MPS:0.599887704 ROE:24.50% EPS:0.129814711 DPS:0.015048 DPR:0.116 PE_RATIO:4.621 ASSET:117.2824256	MPS:1.228298709 ROE:16.25% EPS:0.085345312 DPS:0.008984 DPR:0.105 PE_RATIO:14.392 ASSET:158.8545761	MPS:2.061987647 ROE:22.10% EPS:0.370578327 DPS:0.044919 DPR:0.121 PE_RATIO:5.564 ASSET:224.4581696
2011-2012	MPS:1.535668727 ROE:20.40% EPS:0.143263664 DPS:0.03925 DPR:0.274 PE_RATIO:10.719 ASSET:169.3258758	MPS:2.088116966 ROE:41.50% EPS:0.07261309 DPS:0.025513 DPR:0.351 PE_RATIO:28.757 ASSET:824.3155726	MPS:1.193602198 ROE:29.30% EPS:0.172701403 DPS:0.019625 DPR:0.114 PE_RATIO:6.911 ASSET:127.3280345	MPS:1.388480031 ROE:14.43% EPS:0.080659405 DPS:0.011775 DPR:0.146 PE_RATIO:17.214 ASSET:177.6469434	MPS:1.157688156 ROE:81.60% EPS:1.572171524 DPS:0.03925 DPR:0.025 PE_RATIO:0.736 ASSET:235.0701599
2012-2013	MPS:1.697522336 ROE:21.00% EPS:0.156765221	MPS:2.524638482 ROE:40.00% EPS:0.080685272	MPS:3.160541586 ROE:32.40% EPS:0.235055724	MPS:1.580731325 ROE:14.27% EPS:0.084737957	MPS:1.308096159 ROE:8.00% EPS:0.172791747 DPS:0.055264 DPR:0.320

	DPS:0.041448 DPR:0.264 PE_RATIO:10.828 ASSET:178.0049737	DPS:0.027632 DPR:0.342 PE_RATIO:31.290 ASSET:867.3666759	DPS:0.115133 DPR:0.490 PE_RATIO:13.446 ASSET:132.3017408	DPS:0.014737 DPR:0.174 PE_RATIO:18.654 ASSET:199.0236714	PE_RATIO:7.570 ASSET:239.5136778
2013-2014	MPS:2.100567045 ROE:16.60% EPS:0.12658439 DPS:0.037525 DPR:0.296 PE_RATIO:16.594 ASSET:176.6511007	MPS:2.994496331 ROE:38.51% EPS:0.087391594 DPS:0.029186 DPR:0.334 PE_RATIO:34.265 ASSET:885.9239493	MPS:6.681954636 ROE:47.40% EPS:0.443962642 DPS:0.066711 DPR:0.150 PE_RATIO:15.051 ASSET:158.3388926	MPS:2.658438959 ROE:16.30% EPS:0.107231859 DPS:0.016678 DPR:0.156 PE_RATIO:24.790 ASSET:199.4162775	MPS:2.066711141 ROE:6.00%EPS:0.12108072 DPS:0.050033 DPR:0.413 PE_RATIO:17.069 ASSET:225.3168779
2014-2015	MPS:2.429120615 ROE:16.00% EPS:0.133429441 DPS:0.03604 DPR:0.270 PE_RATIO:18.205 ASSET:187.7462758	MPS:4.251962198 ROE:35.70% EPS:0.097389076 DPS:0.032036 DPR:0.329 PE_RATIO:43.660 ASSET:950.5846548	MPS:19.62918469 ROE:41.40% EPS:0.564472209 DPS:0.096108 DPR:0.170 PE_RATIO:34.774 ASSET:183.149127	MPS:6.759730899 ROE:17.14% EPS:0.130225853 DPS:0.016018 DPR:0.123 PE_RATIO51.908: ASSET:221.399968	MPS:3.094666026 ROE:8.90% EPS:0.189652411 DPS:0.064072 DPR:0.338 PE_RATIO:16.318 ASSET:249.463399
2015-2016	MPS:2.796015395 ROE:16.10% EPS:0.143083541 DPS:0.03396 DPR:0.237 PE_RATIO:19.541 ASSET:191.0497321	MPS:3.760470908 ROE:33.40% EPS:0.107463588 DPS:0.03396 DPR:0.316 PE_RATIO:34.993 ASSET:1046.305939	MPS:21.28895932 ROE:39.70% EPS:0.71285186 DPS:0.120746 DPR:0.169 PE_RATIO:29.864 ASSET:224.5868236	MPS:6.219153271 ROE:14.67% EPS:0.137348125 DPS:0.018867 DPR:0.137 PE_RATIO:45.280 ASSET:274.9528337	MPS:3.764244208 ROE:13.50% EPS: 0.288129198 DPS: 0.075466 DPR: 0.262 PE_RATIO: 13.064 ASSET: 248.6906649
2016-2017	MPS:3.146777675 ROE:16.00% EPS:0.163428924 DPS:0.0346 DPR:0.212 PE_RATIO:19.255 ASSET:226.3182239	MPS:4.273049645 ROE:28.30% EPS:0.111779217 DPS:0.03469 DPR:0.310 PE_RATIO:38.228 ASSET:1191.951896	MPS:27.13999383 ROE:36.70% EPS:0.887912427 DPS:0.200432 DPR:0.226 PE_RATIO:30.566 ASSET:284.8751156	MPS:13.05889608 ROE:33.00 EPS:0.430003084 DPS:0.1040 DPR:0.242 PE_RATIO:30.369 ASSET:357.3234659	MPS: 5.349984582 ROE: 14.50% EPS: 0.334566759 DPS: 0.015418 DPR: 0.046 PE_RATIO: 15.991 ASSET: 258.0943571

Year	Firm Specific Data of Indian Pharmaceutical Companies Annual Financial data in millions of US Dollars				
	Nectar Life Sciences India	Indoco Remedies India	RPG Life Sciences India	Albert David India	Aarti Drugs India
2007-2008	MPS:0.50150075 ROE:29.60% EPS:0.124312156 DPS:0.010005 DPR:0.080 PE_RATIO:4.034 ASSET:237.2436218	MPS:0.957228614 ROE:11.84% EPS:0.081790895 DPS:0.016758 DPR:0.205 PE_RATIO:11.703 ASSET:87.16858429	MPS:0.837918959 ROE:12.09% EPS:0.104802401 DPS:0.030015 DPR:0.286 PE_RATIO:7.995 ASSET:43.87693847	MPS:1.895947974 ROE:15.04% EPS:0.32166083 DPS:0.075038 DPR:0.233 PE_RATIO:5.894 ASSET:37.42871436	MPS:0.656078039 ROE:13.10% EPS:0.146823412 DPS:0.022511 DPR:0.153 PE_RATIO:4.468 ASSET:104.2021011
2008-2009	MPS:0.222288085 ROE:18.00% EPS:0.068563525 DPS:0.001976 DPR:0.029 PE_RATIO:3.242 ASSET:254.0209445	MPS:0.361391029 ROE:11.80% EPS:0.06737798 DPS:0.013831 DPR:0.205 PE_RATIO:5.364 ASSET:73.99723375	MPS:0.455443588 ROE:12.70% EPS:0.090891128 DPS:0.023711 DPR0.261 PE_RATIO:5.011 ASSET:33.18118949	MPS:0.920766647 ROE:14.15% EPS:0.260620431 DPS:0.069156 DPR:0.265 PE_RATIO:3.533 ASSET:31.88697886	MPS:0.375419877 ROE:13.70% EPS:0.134755977 DPS:0.029638 DPR:0.220 PE_RATIO:2.786 ASSET:79.66804979
2009-2010	MPS:0.807585053 ROE:20.00% EPS:0.128276631 DPS:0.005577 DPR:0.043 PE_RATIO:6.296 ASSET:330.2844395	MPS:1.188176241 ROE:14.30% EPS:0.101952036 DPS:0.020747 DPR:0.203 PE_RATIO:11.654 ASSET:107.1500279	MPS:1.633017289 ROE:18.10% EPS:0.167540435 DPS:0.032125 DPR:0.192 PE_RATIO:9.747 ASSET:37.49023982	MPS:2.660345789 ROE:17.28% EPS:0.401561629 DPS:0.10039 DPR:0.250 PE_RATIO:6.625 ASSET:41.2693809	MPS1.139542666: ROE:20.90% EPS:0.266369214 DPS:0.055772 DPR:0.209 PE_RATIO:4.278 ASSET:93.49693252
2010-2011	MPS:0.536777092 ROE:15.50% EPS:0.10443571 DPS:0.002246 DPR:0.022 PE_RATIO:5.140 ASSET:407.0971364	MPS:1.332959012 ROE:15.50% EPS:0.124649074 DPS:0.024031 DPR:0.193 PE_RATIO:10.694 ASSET:126.4907355	MPS:1.703537339 ROE:18.30% EPS:0.180572712 DPS:0.035935 DPR:0.199 PE_RATIO:9.434 ASSET:42.5289163	MPS:2.618753509 ROE:16.19% EPS:0.426726558 DPS:0.101067 DPR:0.237 PE_RATIO:6.137 ASSET:44.24031443	MPS:1.437394722 ROE:14.80% EPS:0.208422235 DPS:0.056148 DPR:0.269 PE_RATIO:6.897 ASSET:115.867490
2011-2012	MPS:0.471985085 ROE:9.70% EPS:0.06397802 DPS:0.001963 DPR:0.031 PE_RATIO:7.377 ASSET:416.2300	MPS:1.061721126 ROE:12.60% EPS:0.098714552 DPS:0.021588 DPR:0.219 PE_RATIO:10.755 ASSET:128.8195467	MPS:1.254047689 ROE:1.10% EPS:0.010008831 DPS:0.0157 DPR1.569 PE_RATIO:125.294 ASSET:35.82180	MPS:1.638700814 ROE:10.42% EPS:0.262388382 DPS:0.088313 DPR:0.337 PE_RATIO:6.245 ASSET:39.80571092	MPS:0.999313119 ROE:13.50% EPS:0.181925228 DPS:0.049063 DPR:0.270 PE_RATIO:5.493 ASSET:120.2237

	069		355		268
2012 - 2013	MPS:0.288293267 ROE:10.40% EPS:0.070369347 DPS:0.001842 DPR:0.026 PE_RATIO:4.097 ASSET:418.9002487	MPS:1.065671917 ROE:10.70% EPS:0.085474809 DPS:0.020263 DPR:0.237 PE_RATIO:12.468 ASSET:127.4569402	MPS:1.142120291 ROE:5.90% EPS:0.049184858 DPS:0.022106 DPR:0.449 PE_RATIO:23.221 ASSET:37.90365663	MPS:1.660679746 ROE:10.93% EPS:0.276319425 DPS:0.082896 DPR:0.300 PE_RATIO:6.010 ASSET:38.60919223	MPS:1.319333149 ROE:23.54% EPS:0.344109791 DPS:0.092106 DPR:0.268 PE_RATIO:3.834 ASSET:132.578060
2013 - 2014	MPS:0.403602402 ROE:6.90% EPS:0.046197465 DPS:0.001668 DPR:0.036 PE_RATIO:8.736 ASSET:399.2828552	MPS:2.355737158 ROE:13.30% EPS:0.104903269 DPS:0.023349 DPR:0.223 PE_RATIO:22.456 ASSET:121.6477652	MPS:1.002334891 ROE:52.90% EPS:0.538525684 DPS:0.020013 DPR:0.037 PE_RATIO:1.861 ASSET:32.70013342	MPS:1.934623082 ROE:14.66% EPS:0.367411608 DPS:0.083389 DPR:0.227 PE_RATIO:5.266 ASSET:33.02201468	MPS:2.19646431 ROE:26.90% EPS:0.424949967 DPS:0.10840 DPR:0.255 PE_RATIO:5.169 ASSET:141.711140
2014 - 2015	MPS:0.591061989 ROE:7.20% EPS:0.047252923 DPS:0.001602 DPR:0.034 PE_RATIO:12.508 ASSET:389.1878904	MPS:5.816114048 ROE:16.80% EPS:0.14400128 DPS:0.025629 DPR:0.178 PE_RATIO:40.389 ASSET:131.3951626	MPS:2.649367291 ROE:0.80% EPS:0.009610764 DPS:0.012814 DPR:1.333 PE_RATIO:275.667 ASSET:31.5409258	MPS:4.403331732 ROE:15.00% EPS:0.384590742 DPS:0.088099 DPR:0.229 PE_RATIO:11.449 ASSET:30.98670511	MPS:10.43969246 ROE:27.60% EPS:0.510972289 DPS:0.128144 DPR:0.251 PE_RATIO:20.431 ASSET:160.483741
2015 - 2016	MPS:0.573541628 ROE:5.80% EPS:0.036525545 DPS:0.001509 DPR:0.041 PE_RATIO:15.702 ASSET:385.8274847	MPS:4.345332428 ROE:14.80% EPS:0.134178553 DPS:0.024149 DPR:0.180 PE_RATIO:32.385 ASSET:141.966644	MPS:3.356727794 ROE:9.20% EPS:0.1061052 DPS:0.02414 DPR:0.228 PE_RATIO:31.636 ASSET:31.41196891	MPS:4.509848313 ROE:41.80% EPS:1.269338163 DPS:0.083013 DPR:0.065 PE_RATIO:3.553 ASSET:33.78462003	MPS:6.859859633 ROE:21.00% EPS:0.428345031 DPS:0.101879 DPR:0.238 PE_RATIO:16.015 ASSET:168.3948381
2016 - 2017	MPS:0.54270737 ROE:5.60% EPS:0.038082023 DPS:0.000771 DPR:0.020 PE_RATIO:14.251 ASSET:397.9185939	MPS:3.85368486 ROE:12.60% EPS:0.128893 DPS:0.024669 DPR:0.191 PE_RATIO:29.898 ASSET:184.5050879	MPS:6.934936787 ROE:15.35% EPS:0.195806352 DPS:0.04317 DPR:0.220 PE_RATIO:35.417 ASSET:38.06506321	MPS:4.9128893 ROE:9.98% EPS0.431082331: DPS:0.084798 DPR:0.197 PE_RATIO:11.397 ASSET:43.86833179	MPS:8.87372803 ROE:21.90% EPS:0.514955288 DPS:0.015418 DPR:0.030 PE_RATIO:17.232 ASSET:183.626272

Year	Firm Specific Data of US and European Pharmaceutical Companies Annual Financial data in millions of US Dollars				
	Pfizer INC (USA)	Merck & Co. INC (USA)	Eli Lily & Company (USA)	Bristol-Myers Squibb Company (USA)	Abbott Laboratories (USA)
2008	MPS:17.71 ROE:13.22% EPS:1.2 DPS:1.28 DPR:1.067 PE_RATIO:14.758 ASSET:111148	MPS:30.4 ROE:42.30% EPS:3.65 DPS:1.52 DPR:0.416 PE_RATIO:8.329 ASSET:47196	MPS40.27: ROE:-20.50% EPS:-1.89 DPS:1.9 DPR:-1.005 PE_RATIO:-21.307 ASSET;29123	MPS:23.25 ROE:54.57% EPS:2.56 DPS:1.24 DPR:0.484 PE_RATIO:9.082 ASSET:29486	MPS:25.54 ROE:27.68% EPS:3.16 DPS:1.44 DPR:0.456 PE_RATIO:8.082 ASSET:42419
2009	MPS:18.19 ROE:11.70% EPS:1.23 DPS:0.8 DPR:0.650 PE_RATIO:14.789 ASSET:212949	MPS:36.54 ROE:33.20% EPS:5.67 DPS:1.52 DPR:0.268 PE_RATIO:6.444 ASSET:112314	MPS:35.71 ROE:53.20% EPS:3.94 DPS:1.96 DPR:0.497 PE_RATIO:9.063 ASSET:27461	MPS:25.25 ROE:78.05% EPS:5.35 DPS:1.25 DPR:0.234 PE_RATIO:4.720 ASSET:31008	MPS:25.83 ROE:28.30% EPS:3.71 DPS:1.6 DPR:0.431 PE_RATIO:6.962 ASSET:52582
2010	MPS:17.15 ROE:9.28% EPS:1.03 DPS:0.72 DPR:0.699 PE_RATIO:16.650 ASSET:195014	MPS:36.04 ROE:1.50% EPS:0.28 DPS:1.52 DPR:5.429 PE_RATIO:128.71 ASSET:105781	MPS:35.04 ROE:46.20% EPS:4.58 DPS:1.96 DPR:0.428 PE_RATIO:7.651 ASSET:31001	MPS:26.48 ROE:20.30% EPS:1.8 DPS:1.29 DPR:0.717 PE_RATIO:14.711 ASSET:31076	MPS:22.92 ROE:20.20% EPS:2.99 DPS:1.76 DPR:0.589 PE_RATIO:7.666 ASSET:60574
2011	MPS:21.64 ROE:11.77% EPS:1.28 DPS:0.8 DPR:0.625 PE_RATIO:16.906 ASSET:188002	MPS:37.7 ROE:11.50% EPS:2.04 DPS:1.52 DPR:0.745 PE_RATIO:18.480 ASSET:105128	MPS:41.56 ROE:33.50% EPS:3.9 DPS:1.96 DPR:0.503 PE_RATIO:10.656 ASSET:33660	MPS:35.24 ROE:23.40% EPS:2.18 DPS:1.33 DPR:0.610 PE_RATIO:16.165 ASSET:32970	MPS:26.9 ROE:20.06% EPS:3.04 DPS:1.92 DPR:0.632 PE_RATIO:8.849 ASSET60277:
2012	MPS:25.08 ROE:12.24% EPS:1.96 DPS:0.88 DPR:0.449 PE_RATIO:12.796 ASSET:185798	MPS:40.94 ROE:11.50% EPS:2.03 DPS:1.68 DPR:0.828 PE_RATIO:20.167 ASSET:106132	MPS:49.32 ROE:28.90% EPS:3.67 DPS:1.96 DPR:0.534 PE_RATIO:13.439 ASSET:34399	MPS:32.59 ROE13.30%: EPS:1.17 DPS:1.37 DPR:1.171 PE_RATIO:27.855 ASSET:35897	MPS:31.34 ROE:23.31% EPS:3.79 DPS:2.01 DPR:0.530 PE_RATIO:8.269 ASSET:67235
2013	MPS:30.63 ROE:27.92% EPS:3.23 DPS:0.96 DPR:0.297 PE_RATIO:9.483	MPS:50.05 ROE:8.60% EPS:1.49 DPS:1.72 DPR:1.154 PE_RATIO:33.591	MPS:51 ROE:28.90% EPS:4.33 DPS:1.96 DPR:0.453 PE_RATIO:11.778	MPS:53.15 ROE:17.80% EPS:1.56 DPS:1.4 DPR:0.897 PE_RATIO:34.071 ASSET:38592	MPS:38.33 ROE:9.92% EPS:1.65 DPS:0.56 DPR:0.339 PE_RATIO:23.230

	ASSET:172101	ASSET:105645	ASSET:35249		ASSET:42935
2014	MPS:31.15 ROE:12.37% EPS:1.44 DPS:1.04 DPR:0.722 PE_RATIO:21.632 ASSET:167566	MPS:56.79 ROE:24.20% EPS:4.12 DPS:1.76 DPR:0.427 PE_RATIO:13.784 ASSET:98335	MPS:68.99 ROE:14.50% EPS:2.23 DPS:1.96 DPR:0.879 PE_RATIO:30.937 ASSET:36308	MPS:59.03 ROE:13.40% EPS:1.21 DPS:1.44 DPR:1.190 PE_RATIO:48.785 ASSET:33749	MPS:45.02 ROE:9.78% EPS:1.51 DPS:0.9 DPR:0.596 PE_RATIO:29.815 ASSET:41207
2015	MPS:32.28 ROE:10.23% EPS:1.13 DPS:1.12 DPR:0.991 PE_RATIO:28.566 ASSET:167381	MPS:52.82 ROE:9.50% EPS:1.58 DPS:1.8 DPR:1.139 PE_RATIO:33.430 ASSET:101677	MPS:84.26 ROE:16.10% EPS:2.27 DPS:2 DPR:0.881 PE_RATIO:37.119 ASSET:35569	MPS:68.79 ROE:10.70% EPS:0.94 DPS:1.48 DPR:1.574 PE_RATIO:73.181 ASSET:31748	MPS:44.91 ROE:20.69% EPS:2.96 DPS:0.96 DPR:0.324 PE_RATIO:15.172 ASSET:41247
2016	MPS:32.48 ROE:11.61% EPS:1.18 DPS:1.2 DPR:1.017 PE_RATIO:27.525 ASSET:171615	MPS:58.87 ROE:9.20% EPS:1.42 DPS:1.84 DPR:1.296 PE_RATIO:41.458 ASSET:95377	MPS:73.55 ROE:19.20% EPS:2.59 DPS:2.04 DPR:0.788 PE_RATIO:28.398 ASSET:38806	MPS:58.44 ROE:29.30% EPS:2.67 DPS:1.52 DPR:0.569 PE_RATIO:21.888 ASSET:33707	MPS38.41: ROE:6.70% EPS:0.95 DPS:1.04 DPR:1.095 PE_RATIO:40.432 ASSET:52666
2017	MPS:36.22 ROE:32.56% EPS:3.57 DPS:1.28 DPR:0.359 PE_RATIO:10.146 ASSET:171797	MPS:56.27 ROE:6.43% EPS:0.88 DPS:1.88 DPR:2.136 PE_RATIO:63.943 ASSET:87872	MPS:84.46 ROE:-1.59% EPS:-0.19 DPS:2.08 DPR:-10.947 PE_RATIO:-444.526 ASSET:44981	MPS:61.28 ROE:7.21% EPS:0.61 DPS:1.56 DPR:2.557 PE_RATIO:100.459 ASSET:33551	MPS:57.07 ROE:1.85% EPS:0.27 DPS:1.06 DPR:3.926 PE_RATIO:211.370 ASSET:76250

Year	Firm Specific Data of US and European Pharmaceutical Companies Annual Financial data in millions of US Dollars				
	Akorn INC (USA)	OPKO Health (USA)	Biogen INC (USA)	AMAG Pharmaceuticals (USA)	BioMarin Pharmaceutical (USA)
2008	MPS:2.3 ROE:-12.60% EPS:-0.09 DPS:0 DPR:0.000 PE_RATIO:-25.556 ASSET:82.3	MPS:1.62 ROE:-464.70% EPS:-0.21 DPS:0 DPR:0.000 PE_RATIO:-7.714 ASSET:21.8	MPS:47.63 ROE:13.80% EPS:2.67 DPS:0 DPR:0.000 PE_RATIO:17.839 ASSET:8479	MPS:35.85 ROE-28.70%: EPS:-4.22 DPS:0 DPR:0.000 PE_RATIO:-8.495 ASSET:232	MPS:17.8 ROE:13.27% EPS:0.31 DPS:0 DPR:0.000 PE_RATIO:57.419 ASSET:906.7
2009	MPS:1.79 ROE:-50.60%	MPS:1.83 ROE:-103.70%	MPS:53.5 ROE:16.10%	MPS:38.03 ROE:-52.40%	MPS:18.81 ROE:-0.16%

	EPS:-0.28 DPS:0 DPR:0.000 PE_RATIO:-6.393 ASSET:68.8	EPS:-0.15 DPS:0 DPR:0.00 PE_RATIO:-12.200 ASSET:87.4	EPS:3.37 DPS:0 DPR:0.000 PE_RATIO:15.875 ASSET:8552	EPS:-5.46 DPS:0 DPR:0.000 PE_RATIO:-6.965 ASSET:184.6	EPS:0 DPS:0 DPR:#DIV/0! PE_RATIO:#DIV/0! ASSET:917.2
2010	MPS:6.07 ROE:34.80% EPS:0.24 DPS:0 DPR:0.000 PE_RATIO:25.292 ASSET:111.1	MPS:3.67 ROE:-35.66% EPS:-0.08 DPS:0 DPR:0.00 PE_RATIO:-45.875 ASSET:77.8	MPS:67.05 ROE:17.30% EPS:3.98 DPS:0 DPR:0.000 PE_RATIO:16.847 ASSET:8092	MPS:18.1 ROE:-41.80% EPS:-3.9 DPS:0 DPR:0.000 PE_RATIO:-4.641 ASSET:336.1	MPS:26.93 ROE:39.57% EPS:2 DPS:0 DPR:0.000 PE_RATIO:13.465 ASSET:1262.6
2011	MPS:11.12 ROE:35.10% EPS:0.45 DPS:0 DPR:0.000 PE_RATIO:24.711 ASSET:307.1	MPS:4.9 ROE:-1.11% EPS:-0.01 DPS:0 DPR:0.000 PE_RATIO:-490.000 ASSET:229.5	MPS:110.05 ROE:20.90% EPS:5.09 DPS:0 DPR:0.000 PE_RATIO:21.621 ASSET:9050	MPS:18.91 ROE:-36.20% EPS:-3.64 DPS:0 DPR:0.000 PE_RATIO:-5.195 ASSET:267.2	MPS:34.38 ROE:-7.22% EPS:-0.48 DPS:0 DPR:0.000 PE_RATIO:-71.625 ASSET:1305.7
2012	MPS:13.36 ROE:19.70% EPS:0.37 DPS:0 DPR:0.000 PE_RATIO:36.108 ASSET:369.6	MPS:4.81 ROE:-14.87% EPS:-0.11 DPS:0 DPR:0.000 PE_RATIO:-43.727 ASSET:289.8	MPS:146.37 ROE:20.60% EPS:5.8 DPS:0 DPR:0.000 PE_RATIO:25.236 ASSET:10130	MPS:14.71 ROE:-9.50% EPS:-0.78 DPS:0 DPR:0.000 PE_RATIO:-18.859 ASSET:258.1	MPS:49.2 ROE:-12.78% EPS:-0.95 DPS:N/A DPR:#VALUE! PE_RATIO:-51.789 ASSET:1568.3
2013	MPS:24.62 ROE:22.70% EPS:0.54 DPS:0 DPR:0.000 PE_RATIO:45.593 ASSET:431.8	MPS:8.44 ROE:-21.20% EPS:-0.32 DPS:0 DPR:0.000 PE_RATIO:-26.375 ASSET:1391.5	MPS:279.57 ROE:23.90% EPS:7.86 DPS:N/A DPR:#VALUE! PE_RATIO:35.569 ASSET:11863	MPS:24.28 ROE:-5.60% EPS:-0.44 DPS:N/A DPR:#VALUE! PE_RATIO:-55.182 ASSET:265.5	MPS:70.35 ROE:-14.97% EPS:-1.28 DPS:N/A DPR:#VALUE! PE_RATIO:-54.961 ASSET:2244.1
2014	MPS:36.2 ROE:4.70% EPS:0.13 DPS:0 DPR:0.000 PE_RATIO:278.462 ASSET:1893.9	MPS:9.99 ROE:-20.00% EPS:-0.41 DPS:0 DPR:0.000 PE_RATIO:-24.366 ASSET:-24.366	MPS:339.45 ROE:30.20% EPS:12.42 DPS:N/A DPR:#VALUE! PE_RATIO:27.331 ASSET:14315	MPS:42.62 ROE:42.97% EPS:6.06 DPS:N/A DPR:#VALUE! PE_RATIO:7.033 ASSET:1388.9	MPS:90.4 ROE:-9.30% EPS:-0.92 DPS:N/A DPR:#VALUE! PE_RATIO:-98.261 ASSET:2475.4
2015	MPS:37.31 ROE:30.80% EPS:1.29 DPS:0 DPR:0.000 PE_RATIO:28.922	MPS:10.05 ROE:-2.10% EPS:-0.06 DPS:0 DPR:0.000 PE_RATIO:-167.500	MPS:306.35 ROE:35.20% EPS:15.37 DPS:0 DPR:0.000 PE_RATIO:19.932	MPS:30.19 ROE:4.71% EPS:1.04 DPS:N/A DPR:#VALUE! PE_RATIO:29.029	MPS:104.76 ROE:-8.70% EPS:-1.07 DPS:N/A DPR:#VALUE! PE_RATIO:-97.907

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	ASSET:2042.5	ASSET:2799.2	ASSET:19505	ASSET:2476.2	ASSET:3729.4
2016	MPS:21.83 ROE:25.60% EPS:1.5 DPS:N/A DPR:#VALUE! PE_RATIO:14.5 53 ASSET:1973.7	MPS:9.3 ROE:-2.40% EPS:-0.09 DPS:N/A DPR:#VALUE! PE_RATIO:#VAL UE! ASSET:2766.6	MPS:283.58 ROE:34.40% EPS:16.95 DPS:0 DPR:0.000 PE_RATIO:16. 730 ASSET:22877	MPS:34.8 ROE:0.26% EPS:-0.07 DPS:N/A DPR:#VALUE! PE_RATIO:- 497.143 ASSET:2478.4	MPS:82.84 ROE:-24.40% EPS:-3.8 DPS:N/A DPR:#VALUE! PE_RATIO:- 21.800 ASSET:-21.800
2017	MPS:32.23 ROE:-2.97% EPS:-0.2 DPS:N/A DPR:#VALUE! PE_RATIO:- 161.150 ASSET:1909.5	MPS:4.9 ROE:-15.50% EPS:-0.55 DPS:N/A DPR:#VALUE! PE_RATIO:-8.909 ASSET:2590	MPS:318.57 ROE:20.51% EPS:11.94 DPS:N/A DPR:#VALUE! PE_RATIO:26. 681 ASSET:23653	MPS:13.25 ROE:-23.10% EPS:-5.71 DPS:N/A DPR:#VALUE! PE_RATIO:- 2.320 ASSET:1900.4	MPS:89.17 ROE:-4.19% EPS:-0.67 DPS:N/A DPR:#VALUE! PE_RATIO:- 133.090 ASSET:4633.1

Year	Firm Specific Data of US and European Pharmaceutical Companies Annual Financial data in millions of US Dollars				
	Sanofi SA (France)	Roche Holdings (Switzerland)	IPSEN SA (France)	Bayer AG (Germany)	NICOX SA (France)
2008	MPS:32.66076 ROE:8.61% EPS:2.115036 DPS:1.58268 DPR:0.748 PE_RATIO:15.4 42 ASSET:51787.44 78	MPS:179.51367 ROE:19.90% EPS:11.098563 DPS:5.3205 DPR:0.479 PE_RATIO:0.47 9 ASSET:80966.30 49	MPS:20.136006 ROE:17.41% EPS:1.25895 DPS:0.50358 DPR:0.400 PE_RATIO:15.994 ASSET:1125.4293 6	MPS:39.617358 ROE:10.41% EPS:1.589874 DPS:0.992772 DPR:0.624 PE_RATIO:24.9 19 ASSET:37776.41 34	MPS:24.078318 ROE:-54.50% EPS:-4.841562 DPS:0 DPR:0.000 PE_RATIO:- 4.973 ASSET:88.9178 4
2009	MPS:38.37682 ROE:11.30% EPS:2.80891 DPS:1.6728 DPR:0.596 PE_RATIO:13.6 63 ASSET:55934.94 7	MPS:187.0816 ROE:30.00% EPS:9.374752 DPS:6.2016 DPR:0.662 PE_RATIO:19.9 56 ASSET:77070.38 4	MPS:27.01572 ROE:16.76% EPS:1.29642 DPS:0.52275 DPR:0.403 PE_RATIO:20.839 ASSET:1099.0993	MPS:39.08776 ROE:7.70% EPS:1.16399 DPS:0.96186 DPR:0.826 PE_RATIO:33.5 81 ASSET:35576.27 4	MPS:0.30361 ROE:-49.30% EPS:-4.18897 DPS:0 DPR:0.000 PE_RATIO:- 4.847 ASSET:109.707 8
2010	MPS:35.66739 ROE:10.80% EPS:3.123226 DPS:1.8635	MPS:133.10388 ROE:103.00% EPS:9.451494 DPS:6.15186	MPS:17.024936 ROE:9.25% EPS:0.842302 DPS:0.59632	MPS:41.22062 ROE:6.90% EPS:1.15537 DPS:1.103192	MPS:8.1994 ROE:-36.10% EPS:-2.258562 DPS:0

	DPR:0.597 PE_RATIO:11.4 20 ASSET:63555.78 56	DPR:0.651 PE_RATIO:14.0 83 ASSET:56876.74 2	DPR:0.708 PE_RATIO:20.212 ASSET:1250.9302 8	DPR:0.955 PE_RATIO:35.6 77 ASSET:38392.57 24	DPR:0.000 PE_RATIO:- 3.630 ASSET:84.1556 6
2011	MPS:43.862075 ROE:10.40% EPS:3.331199 DPS:2.048185 DPR:0.615 PE_RATIO:13.1 67 ASSET:77806.29 72	MPS:156.62066 ROE:86.60% EPS:10.3411 DPS:6.39268 DPR:0.618 PE_RATIO:15.1 45 ASSET:57891.35 8	MPS:18.742825 ROE:0.04% EPS:0.007729 DPS:0.61832 DPR:80.000 PE_RATIO:2425.0 00 ASSET:1263.4596 3	MPS:38.18126 ROE:13.00% EPS:2.272326 DPS:1.252098 DPR:0.551 PE_RATIO:16.8 03 ASSET:40767.38 34	MPS:3.9224675 ROE:-18.00% EPS:-0.881106 DPS:0 DPR:0.000 PE_RATIO:- 4.452 ASSET:74.0438 2
2012	MPS:54.149315 ROE:8.60% EPS:2.85196 DPS:2.101045 DPR:0.737 PE_RATIO:18.9 87 ASSET:76160.22 65	MPS:171.16302 ROE:70.80% EPS:10.183696 DPS:6.73113 DPR:0.661 PE_RATIO:16.8 08 ASSET:59351.16 64	MPS:17.271045 ROE:-2.93% EPS:-0.25789 DPS:0.6068 DPR:-2.353 PE_RATIO:- 66.971 ASSET:1184.7011 5	MPS:54.528565 ROE:12.80% EPS:2.1693 DPS:1.418395 DPR:0.654 PE_RATIO:25.1 36 ASSET:38924.70	MPS:8.836525 ROE:-12.90% EPS:-0.53095 DPS:0 DPR:0.000 PE_RATIO:- 16.643 ASSET:63.7898
2013	MPS:56.012256 ROE:6.50% EPS:2.040903 DPS:2.03364 DPR:0.996 PE_RATIO:27.4 45 ASSET:69764.74 65	MPS:220.45814 ROE:66.00% EPS:11.735787 DPS:6.95058 DPR:0.592 PE_RATIO:18.7 85 ASSET:55397.01 37	MPS:24.962931 ROE:16.27% EPS1.336392: DPS:0.58104 DPR:0.435 PE_RATIO:18.679 ASSET:1136.8773 9	MPS:74.046285 ROE:16.30% EPS:2.75994 DPS:1.503441 DPR:0.545 PE_RATIO:26.8 29 ASSET:37271.53 71	MPS:8.7192315 ROE:-26.69% EPS:-0.900612 DPS:0 DPR:0.000 PE_RATIO:- 9.681 ASSET:52.4388 6
2014	MPS:54.89133 ROE:7.76% EPS:2.42317 DPS:2.067675 DPR:0.853 PE_RATIO:22.6 53 ASSET:70657.89 6	MPS:264.8583 ROE:48.00% EPS:10.871308 DPS:7.9136 DPR:0.728 PE_RATIO:24.3 63 ASSET:74724.16 8	MPS:31.1965 ROE:15.07% EPS:1.356685 DPS:0.616675 DPR:0.455 PE_RATIO:22.995 ASSET:1242.9991 5	MPS:81.9815 ROE:16.30% EPS:2.96004 DPS:1.603355 DPR:0.542 PE_RATIO:27.6 96 ASSET:50954.76 7	MPS:6.7580325 ROE:-29.31% EPS:-1.037465 DPS:0 DPR:0.000 PE_RATIO:- 6.514 ASSET:108.825
2015	MPS:72.16266 ROE:7.50% EPS:3.011368 DPS:2.690033 DPR:0.893 PE_RATIO:23.9 63	MPS:275.006475 ROE:43.70% EPS:10.344417 DPS:8.04897 DPR:0.778 PE_RATIO:26.5 85	MPS:56.0041 ROE:16.59% EPS:2.120811 DPS:0.780385 DPR:0.368 PE_RATIO:26.407	MPS:106.31598 ROE:18.52% EPS:4.489509 DPS:2.258526 DPR:0.503 PE_RATIO:23.6 81	MPS:8.3767444 ROE:-28.22% EPS:-1.147625 DPS:0 DPR:0.000 PE_RATIO:-

ASSET:93940.9101	ASSET:75285.6931	ASSET:1779.2778	ASSET:67863.1977	7.299 ASSET:149.92573
2016 MPS:72.8243 ROE:8.14% EPS:3.46602 DPS:2.80312 DPR:0.809 PE_RATIO:21.011 ASSET:99131.013	MPS:242.2364 ROE:42.70% EPS:11.440072 DPS:8.34596 DPR:0.730 PE_RATIO:21.174 ASSET:78186.3782	MPS:65.0589 ROE:17.50% EPS:2.59478 DPS:0.80495 DPR:0.310 PE_RATIO:25.073 ASSET:2295.0545	MPS:92.37985 ROE:16.59% EPS:5.07592 DPS:2.51902 DPR:0.496 PE_RATIO:18.200 ASSET:77879.38	MPS:8.078857 ROE:-18.48% EPS:-0.7576 DPS:0.000 DPR:0.000 PE_RATIO: -10.664 ASSET:140.8189
2017 MPS:59.93727 ROE:14.55% EPS:5.58914 DPS:2.527626 DPR:0.452 PE_RATIO:10.724 ASSET:83264.0046	MPS:240.1681 ROE:34.29% EPS:9.8720 DPS:8.09665 DPR:0.820 PE_RATIO:24.328 ASSET:74797.438	MPS:83.061294 ROE:18.75% EPS:2.75286 DPS:0.8342 DPR:0.303 PE_RATIO:30.173 ASSET:2562.6624	MPS:85.38037 ROE:21.85% EPS:6.915518 DPS:2.302392 DPR:0.333 PE_RATIO:12.346 ASSET:62637.5754	MPS:8.458788 ROE:-3.12% EPS:-0.100104 DPS:0 DPR:0.000 PE_RATIO:-84.500 ASSET:125.79736

Year	Firm Specific Data of US and European Pharmaceutical Companies Annual Financial data in millions of US Dollars				
	Alliance Pharmaceuticals (UK)	**Virbac SA (France)**	**Vifor AG (Switzerland)**	**Novartis AG (Switzerland)**	**Astra Zenica PLC (UK)**
2008	MPS:1.8209 ROE:31.25% EPS:0.0139 DPS:0 DPR:0.000 PE_RATIO:131.000 ASSET:33.916	MPS:41.682036 ROE:18.63% EPS:2.956734 DPS:0.86328 DPR0.292: PE_RATIO:14.097 ASSET:296.89638	MPS:36.530553 ROE:35.10% EPS:3.096531 DPS:0.74487 DPR:0.241 PE_RATIO:11.797 ASSET:2236.31256	MPS:56.07807 ROE:16.47% EPS:4.0978491 DPS:2.138841 DPR:0.522 PE_RATIO:13.685 ASSET:88650.31572	MPS:1909.86 ROE:39.80% EPS:2.02245 DPS:0.9869 DPR:0.488 PE_RATIO:944.330 ASSET:22678.02375
2009	MPS:16.4035 ROE:32.30% EPS:0.01238 DPS:0 DPR:0.000 PE_RATIO:1325.000 ASSET:35.1592	MPS:50.69281 ROE:17.96% EPS:3.12256 DPS:0.92004 DPR:0.295 PE_RATIO:16.234 ASSET:302.8465	MPS:38.76 ROE:31.20% EPS:3.338528 DPS:0.7752 DPR:0.232 PE_RATIO:11.610 ASSET:3003.95168	MPS:58.34672 ROE:15.60% EPS:3.948352 DPS:2.149888 DPR:0.545 PE_RATIO:14.777 ASSET:101971.5289	MPS:1796.0285 ROE:41.10% EPS:1.98699 DPS:0.87898 DPR:0.442 PE_RATIO:903.894 ASSET: 21043.20212

2010	MPS:19.778 ROE:34.00% EPS:0.02552 DPS:0.00638 DPR:0.250 PE_RATIO:775.0 00 ASSET:49.3812	MPS:96.902 ROE:23.74% EPS:5.456328 DPS:1.1181 DPR:0.205 PE_RATIO:17.7 60 ASSET:397.8945 2	MPS:52.66365 ROE:27.40% EPS:3.290313 DPS:0.74568 DPR:0.227 PE_RATIO:16. 006 ASSET:2805.06 174	MPS:51.218895 ROE:16.20% EPS:3.709758 DPS:2.041299 DPR:0.550 PE_RATIO:13.8 07 ASSET:107139.9 549	MPS:1864.236 ROE:36.70% EPS:2.27766 DPS:1.03356 DPR:0.454 PE_RATIO:818.4 87 ASSET:22846.158 59
2011	MPS:19.94202 ROE:21.50% EPS:0.02584 DPS:0.00646 DPR:0.250 PE_RATIO:771.7 50 ASSET:53.1658	MPS:92.67071 ROE:19.47% EPS:5.278907 DPS:1.352575 DPR:0.256 PE_RATIO:17.5 55 ASSET:454.9289 4	MPS:51.658495 ROE:21.80% EPS:3.252746 DPS:0.84609 DPR:0.260 PE_RATIO:15. 882 ASSET:2930.76 175	MPS:50.48337 ROE:14.10% EPS:3.38436 DPS:2.105824 DPR:0.622 PE_RATIO:14.9 17 ASSET:103841.5 47	MPS:1921.85 ROE:42.70% EPS:3.0362 DPS:1.1628 DPR:0.383 PE_RATIO:632.9 79 ASSET:22046.804 28
2012	MPS:19.6215 ROE:18.10% EPS:0.02472 DPS:0.00618 DPR:0.250 PE_RATIO:793.7 50 ASSET:62.1708	MPS:113.661225 ROE:20.24% EPS:5.999735 DPS:1.44115 DPR:0.240 PE_RATIO:18.9 44 ASSET:627.8104 5	MPS:48.58319 ROE:21.00% EPS:3.608252 DPS:1.00738 DPR:0.279 PE_RATIO:13. 464 ASSET:2886.96 792	MPS:52.61271 ROE:13.70% EPS:3.2053 DPS:2.10634 DPR:0.657 PE_RATIO:16.4 14 ASSET:104157.6 979	MPS:1798.071 ROE:26.60% EPS:1.8849 DPS:1.7922 DPR:0.951 PE_RATIO:953.9 34 ASSET:20445.919 42
2013	MPS:24.5025 ROE:16.55% EPS:0.0242 DPS:0.00605 DPR:0.250 PE_RATIO:1012. 500 ASSET:64.6745	MPS:112.79439 ROE:17.13% EPS:5.214834 DPS:1.37997 DPR:0.265 PE_RATIO:21.6 30 ASSET:650.9100 6	MPS:80.02078 ROE:21.10% EPS:4.072327 DPS:1.24754 DPR:0.306 PE_RATIO:19. 650 ASSET:2735.14 234	MPS:63.44632 ROE:12.80% EPS:2.985185 DPS:2.183195 DPR:0.731 PE_RATIO:21.2 54 ASSET:100253.1 431	MPS:2162.5725 ROE:10.90% EPS:0.74415 DPS:1.02245 DPR:1.374 PE_RATIO:2906. 098 ASSET:20460.431 48
2014	MPS:23.3965 ROE:12.35% EPS:0.01923 DPS:0.00641 DPR:0.333 PE_RATIO:1216. 667 ASSET:69.1639	MPS:126.45465 ROE:16.06% EPS:5.47027 DPS:1.37845 DPR:0.252 PE_RATIO:23.1 17 ASSET:961.8679	MPS:78.34464 ROE:17.68% EPS:4.342588 DPS:1.4838 DPR:0.342 PE_RATIO:18. 041 ASSET:3173.65 036	MPS: 91.35262 ROE:14.07% EPS:4.115072 DPS:2.562028 DPR:0.623 PE_RATIO:22.2 00 ASSET:122693.2 655	MPS:2911.7425 ROE:5.80% EPS:0.402548 DPS:1.14739 DPR:2.850 PE_RATIO:7233. 280 ASSET:24075.572

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2015	MPS:29.025 ROE:10.85% EPS:0.03375 DPS:0.00675 DPR:0.200 PE_RATIO:860.000 ASSET:190.755	MPS:201.79838 ROE:2.16% EPS:1.028272 DPS:0 DPR:0.000 PE_RATIO:196.250 ASSET:1313.43386	MPS:156.40838 ROE:16.80% EPS:4.620705 DPS:1.78866 DPR:0.387 PE_RATIO:33.84 ASSET:3617.068	MPS:86.25316 ROE:24.06% EPS:7.303695 DPS:2.663116 DPR:0.365 PE_RATIO:11.810 ASSET:129903.608	MPS:3116.1375 ROE:14.80% EPS:1.0125 DPS:1.27575 DPR:1.260 PE_RATIO:3077.667 ASSET:27363.015
2016	MPS:38.51181 ROE:10.60% EPS:0.03252 DPS:0.00813 DPR:0.250 PE_RATIO:1184.250 ASSET:260.7291	MPS:158.3384 ROE:7.58% EPS:3.89217 DPS:0 DPR:0.000 PE_RATIO:40.681 ASSET:1342.0884	MPS:116.94522 ROE:11.68% EPS:3.725148 DPS:2.0356 DPR:0.546 PE_RATIO:31.393 ASSET:5523.70238	MPS:75.41898 ROE:8.80% EPS:2.890552 DPS:2.788772 DPR:0.965 PE_RATIO:26.092 ASSET:134691.6826	MPS:3607.6875 ROE:21.00% EPS:1.82925 DPS:1.78047 DPR:0.973 PE_RATIO:1972.222 ASSET:41327.747
2017	MPS:49.6688 ROE:15.10% EPS:0.0444 DPS:0.0074 DPR:0.167 PE_RATIO:1118.667 ASSET:249.01	MPS:103.0237 ROE:-0.57% EPS:-0.258602 DPS:0 DPR:0.000 PE_RATIO:-398.387 ASSET:1065.52366	MPS:121.83995 ROE:44.20% EPS:17.26635 DPS:1.951 DPR:0.113 PE_RATIO:7.056 ASSET:4024.81545	MPS:80.3812 ROE:10.33% EPS:3.111845 DPS:2.721645 DPR:0.875 PE_RATIO:25.831 ASSET:126638.0053	MPS:3789.54 ROE:15.99% EPS:1.295 DPS:1.4948 DPR:1.154 PE_RATIO:2926.286 ASSET:34692.6504

GDP Growth Rate (Year)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
India	3.9%	8.5%	10.3%	6.6%	5.5 %	6.4%	7.4%	8.2%	7.1%	6.7%
USA	-0.3%	-2.8%	2.5%	1.6%	2.2%	1.7%	2.6%	2.9%	1.5%	2.3%
U K	-0.5%	-4.2%	1.7%	1.5%	1.5%	2.1%	3.1%	2.3%	1.9%	1.8%
Germany	0.8%	-5.6%	3.9%	3.7%	0.7%	0.6%	1.9%	1.5%	1.9%	2.5%
France	0.2%	-2.9%	2.0%	2.1%	0.2%	0.6%	0.9%	1.1%	1.2%	1.8%
Switzerland	2.1%	-2.2%	2.9%	1.8%	1.00%	1.9%	2.5%	1.2%	1.4%	1.1%

Key Macroeconomic Data of Selected Countries (GDP)

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Inflation (Year)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
India	9.1%	11.0%	9.5%	9.5%	10.0%	9.4%	5.8%	4.9%	4.5%	3.6%
USA	3.8%	-0.3%	1.6%	3.1%	2.1%	1.5%	1.6%	0.1%	1.3%	2.1%
U K	3.6%	2.2%	3.3%	4.5%	2.8%	2.6%	1.5%	0.0%	0.7%	2.7%
Germany	2.7%	0.2%	1.2%	2.5%	2.1%	1.6%	0.8%	0.1%	0.4%	1.7%
France	3.2%	0.1%	1.7%	2.3%	2.2%	1.0%	0.6%	0.1%	0.3%	1.2%
Switzerland	2.4%	-0.5%	0.7%	0.2%	-0.7%	-0.2%	0.0%	-1.1%	-0.4%	0.5%

Key Macroeconomic Data of Selected Countries (Inflation)

Interest Rate (Year)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
India	7.33 %	5.25%	5.62 %	7.53%	8.00%	7.55%	8.00%	7.31%	6.37%	6.00 %
USA	1.79 %	0.25%	0.25 %	0.25%	0.25%	0.25%	0.25%	0.375 %	0.625 %	1.12 %
U K	3.95 %	1.00%	0.5%	0.5%	0.5%	0.50%	0.50%	0.50%	0.37%	0.50 %
Germany	3.16 %	1.43%	1.00 %	1.25%	0.875 %	0.375 %	0.10%	0.05%	0.025 %	0.00 %
France	3.16 %	1.43%	1.00 %	1.25%	0.87%	0.5%	0.15%	0.05%	0.025 %	0.00 %
Switzerland	1.56 %	0.375 %	0.25 %	0.125 %	0.00%	0.00%	-0.125 %	-0.75%	-0.75%	-0.75 %

Key Macroeconomic Data of Selected Countries (Interest Rate)

Corporate Tax (Year)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
India	33.99 %	33.99 %	33.99 %	32.44 %	32.45 %	33.99 %	33.99 %	34.61 %	34.61 %	34.61 %
USA	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
U K	30%	28%	28%	26%	24%	23%	21%	20%	20%	19%
Germany	29.5%	29.4%	29.4%	29.4%	29.5%	29.6%	29.6%	29.65 %	29.72 %	29.79 %
France	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Switzerland	19.20 %	18.96 %	18.75 %	18.31 %	18.06 %	18.01 %	17.92 %	17.92 %	17.92 %	17.77 %

Key Macroeconomic Data of Selected Countries (Corporate Tax)

Country	Year (April-March)									
	Indian Rupee exchange rate against one $ USD									
INDIA	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
	39.94	45.90	47.35	45.53	47.90	54.38	60.45	61.13	65.17	67.03

Key Macroeconomic Data of Selected Countries (Exchange Rate)
https://www.poundsterlinglive.com

Country	Year (January –December) Exchange rate against one $ USD									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
USA	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
United Kingdom	0.695	0.619	0.638	0.646	0.618	0.605	0.641	0.675	0.813	0.74
Germany	0.7194	0.697	0.7454	0.7729	0.7585	0.7263	0.7255	0.9181	0.947	0.8342
France	0.7194	0.697	0.7454	0.7729	0.7585	0.7263	0.7255	0.9181	0.947	0.8342
Switzerland	1.0641	1.0336	0.9321	0.9401	0.9158	0.8911	0.9892	0.9937	1.0178	0.9755

Key Macroeconomic Data of Selected Countries (Exchange Rate)
https://www.poundsterlinglive.com