Quantifying Profitability through Financial Ratio Analysis: Bangladeshi Pharmaceuticals Industry
Mohammad Fahad Noor and Rejwana Binte Jahir
Independent University, Bangladesh

Abstract
Pharmaceuticals industry in Bangladesh has some divergent features from other countries as it emphasizes very less on research and developments. Mainly companies imports significant amount of raw materials and medicines and export its products to foreign countries. Based on this, profitability of this sector has been measured. Assigning and the application of appropriate financial ratios directly affects the decision making process for the management of the firm, or parties outside the firm. Various literatures have documented an existence of significant relationship between financial ratios and firms profitability through numerous ratio analysis. On this background, the purpose of this study is to observe the relationship between financial ratio analysis and profitability of Pharmaceuticals Industry in the context of Bangladesh for the period of 2004-2013. To find out the relationship between variables, descriptive and multiple regressions analysis has been performed. To generate more income for the company, management should utilize its asset more efficiently. From the theoretical perspective this research has broaden the literature in the field of financial ratio analysis and firm profitability in the context of developing country. The findings of this study will act in the favour of Pharmaceuticals Companies to identify the proper utilization of inventory, debtors’, creditors’ and total assets. The findings of this study might not be generalized for other developing and emerging countries as the study was conducted in Bangladesh only.

Keywords: profitability, pharmaceuticals, ratio analysis, descriptive analysis, multiple regressions, asset turnover.

1. Introduction
Profitability is main concern of any firm. Profitability ratios show a company’s overall performance and efficiency. Financial ratio analysis is used to determine the company’s bottom
line which is one of the most frequently used tool. A process of identifying the financial strengths and weaknesses of the firm by properly establishing relationships between the firm by properly establishing relationships between the items of the balance sheet and the profit and loss account defined by Pandey (2010). According to Nweze (2011) ratio analysis as financial statement analysis uses as a primary tool, ratios, which relate two figures applicable to different categories. Okwuosa (2005) defines ratio analysis is one number expressed in terms of another to show the relationship between them. He enhances that in financial accounting and reporting, it is generally agreed that there are certain relationships between items shown in the profit and loss account and those in the balance sheet as well as between items in these statements. So, as a means of expressing these relationships ratios are used. Ratios are most effectively used in interpretation of financial statement when compared to a standard or norm explained by Ezeamama (2010). Favourable or unfavourable condition itself does not indicate by a single ratio. Before commenting on the ratio it has to be compared with a benchmark or standard. Thukaram Rao (2009) states that based on financial statements ratio analysis is the process of determining and interpreting numerical relationship. To summarize the large quantities of financial data and to make qualitative judgment about the firm’s financial performance ratio analysis help a lot. Chandra (2008), states that financial ratio analysis is a study of ratios between various items or groups of items in financial statements. Analysis is the resolutions or separation of data into their elements or component parts, the tracing of facts to their source with a view to discovering the general principles underlying to individual phenomena stated by Osisioma (1996). He continues that the analysis of financial accounts is therefore, the amplification, interpretation and translation of facts and data contained in the financial statements, the purpose being the picture of relevant conclusions therefore, making inferences as to business operations, financial position and future prospects.

By nature every commercial institution is focused on extracting the highest amount of profit from their business activities. It is because they expect profit out of their investments when investments are made in a business venture, whether by owners or shareholders. However, profit and profitability are two different concepts, although related. Raval (2006) concentrated profitability to its simplest terms by defining it as the ability of a given instrument to earn a profit. It cannot be adequately judged simply by looking at the firm's net profit whether the firm is utilizing resources properly, whether it is generating enough profit from its resources, whether
it is performing better or worse than its competitors in terms of making profit etc. Profitability has to be taken into account instead. Profitability is the ratio of profit to revenue, which gives a clearer picture of the performance of a company rather than just the profit in technical terms.

Emphasizing the relativity aspect of profitability, Nimalathasan (2009) explained profit as an "absolute measure of earning capacity, while profitability is relative measure of earning capacity." Moreover, according to Harvey and Morgenson (2011) profitability as a measure of the difference between the purchase price and the cost of bringing to market i.e the revenue the company derives from its operations, minus all explicit costs. As like other commercial institutions profitability of pharmaceutical industries follows the same general definition. However, Grevlov and Davidson (2005) outlined that they differ on the basis of the measures and determinants used to evaluate profitability, especially in the context of their particularly extensive spending in Research and Development.

There has been a lack of studies conducted upon it to analyse its profitability and the accompanying determinants although the pharmaceutical sector is one of the leading industries of Bangladesh. To better understand the state of affairs of the industry, its degree of profitability in relation to other industries and scope for improvements it is necessary to carry out such studies. Bashar and Islam (2014) found a significant relationship between financial ratios and firm profitability in the context of Bangladesh.

The aim of this study is to find suitable internal determinants of profitability of the pharmaceutical industry of Bangladesh, and as such examine their relationships with profitability. The main objective of the study is to regulate whether financial ratio analysis have any effect on the profitability of the companies with particular reference to some quoted pharmaceutical companies in Bangladesh for the period of 2004 – 2013.

2. Background of Pharmaceuticals Industry

One of the established sectors that poised to become a major export earning industry in the coming years is the pharmaceutical industry. According to Saad (2012), the pharmaceutical industry of Bangladesh is one of the most significant and technology advanced sectors in the country. In Bangladesh the history of Pharmaceuticals industry has started in 1950s. The industry has gone through some substantial changes over the years. The industry was largely conquered by MNCs, and the country was very much import oriented right after liberation in
1971. A defined guideline for the development of the industry was created in 1982, through the formulation of national drug policy, and drug control ordinance. After the promulgation of the Drug Control Ordinance in 1982, the sector began accelerating at a break neck speed stated by Habib and Alam (2011). Over the years, the pharmaceutical industry became one of the plunge sectors of the country’s economy. In terms of contribution to the government’s revenue it is now the third largest industry of the country. In the last few years there has been substantial growth in the pharmaceutical market. For example, Saad (2012) summaries, pharmaceutical sale in 2007 was worth BDT 4,000 crore, and it almost doubled by 2010 while in 2011 it was over BDT 9,000 crore. Currently in Bangladesh, there are over 250 different licensed pharmaceutical firms, but only around 173 are in operation, as the rest have either closed voluntarily or been suspended due to non-compliance of relevant laws and regulations. Saad (2012) specifies that one of the striking features of the pharmaceutical sector is that it is highly controlled by a group of 20 top companies, who share about 85% of the total revenue of the market.

The pharmaceutical market of the country is quite small compared to the size of the Bangladeshi population. Pharmaceutical spending in this country is one of the lowest in the world indeed. According to Saad (2012) as of 2009, globally healthcare expense relative to GDP is around 10.03% while in Bangladesh the figure is just 3.35%. However, since independence this small figure is still considerable given the almost negligible amount of spending for medicinal purposes by the general population. Due to the development of proper health care infrastructure, greater health awareness amongst the masses, successful penetration of the rural market by the manufacturers, and increasing buying capacity of the people pharmaceutical spending has increased progressively. By supplying medicine at reasonable prices to the common public is where the local pharmaceutical industry has played a crucial role. Similar to the RMG sector of the country its export potential gives it a golden opportunity to establish itself as a high-volume export oriented industry as the pharmaceutical solutions of the country is now widely accredited abroad.

3. Review of Related Literature

To measure profitability of business organizations Mary, Innocent and Matthew (2012), Raval (2006) and Engel (1996) called for the application of profitability ratios, otherwise known as financial ratios. Mary, Innocent and Matthew (2012) branded profitability ratio as "a
benchmark for evaluating the financial position and performance of a firm. "A financial ratio can give a financial analyst an excellent picture of a company's situation and the trends that are developing" by according to Raval (2006). Financial ratios such as Gross Profit Margin, Operating Profit Margin and Net Profit Margin as the main indicators of profitability defined by Engel (1996). By dividing Sales from Gross Profit Gross Profit Margin is obtained. "After the costs of goods sold have been subtracted from net sales what is left is known as Gross Profit." A company's gross margin is "a very important measure of profitability, because it looks at your company's major inflows and outflows of money" described by Engel (1996). The Operating Profit Margin obtained by dividing Sales from Operating Profit is the indicator of the company's earning power from its current operations. Firm's competitiveness can evaluate through this particular ratio. Gross Profit Margin, Net Profit Margin and The Operating Profit Margin has been used as a reliable measures for profitability of pharmaceutical firms by Nimalathasan (2009) in his research on the profitability of listed pharmaceutical companies in Bangladesh. A slightly different approach has been used by Leahy (2012) to measure the profitability of pharmaceutical industries in the United States. Along with Gross Profit Margin and Operating Profit Margin, he also adopted the "Berry Ratio" as a suitable indicator of the profitability of pharmaceutical firms. Osisioma (1996) sees gross profit margin as a measure of the efficiency of a firm's sales operations with respect to the cost of goods sold. By using the gross profit figure, it avoids the distortion that may be caused by non-operating cost and revenue, and thus, limits itself to an evaluation of the trading and manufacturing operations. This ratio is based on the firm's net sales, because a firm's sales are its most important feature. Sales make profit- without sales there can be no profit. A low gross profit margin is an indication that cost of goods is relatively too high.

Nweze (2011) says that inventory turnover is computed by dividing the cost of goods sold by the average inventory. An average inventory is determined by adding the beginning and ending inventories and dividing by two. The decline in the inventory turnover indicates the stocking of more goods. An attempt should be made to determine whether specific inventory categories are not selling well and the reason for this. Inventory turnover, or the number of times inventory is sold over a given period, affects profitability. Emekewue (2005) argues that stock turnover ratio seeks to identify the length of time that stock is held as inventory before it is converted to cash. In organizations where stocks are perishable, holding of large stock is very
costly to the business. However, if stock is not the perishable type, delays in disposing stock might be profitable during inflationary period. It must be appreciated that sales will be valued at cost; this is because the stock will be valued at cost. If the sales were not valued at cost, then we shall be over stating the ratio. Moreover, one will be comparing two incomparable i.e. the sales figures and the cost of stock. Furthermore, the inventory turnover measures the average number of days for which stock is held. It helps to assess the efficiency of stock utilization. Various factors affect the stock level help by the organization such as product, production-seasonal or otherwise, demand pattern, competition, funds availability etc. Thus, proper inventory management is vital to maximizing operational efficiency and profitability.

By taking account receivable variable Debtors’ Turnover ratio determine the company’s credit function on profitability. Leahy (2012) sees debtors’ turnover ratio as accounts receivable variable that measures the impact of a company’s credit function on profitability. This impact includes the risk associated with extending credit. He adds that the higher the ratio of accounts receivable to sales, the greater the manufacturer’s profitability. Otherwise, there would be no reason for the company to provide this function. According to Nweze (2011) debtor’s ratio consist of collection period and debtor’s turnover ratio. By dividing the net credit sales by the average number of debtors the turnover is calculated. Debtor’s turnover ratio explains how many times sundry debtor’s turnover during the financial year was explained by Chandra (2008).

Okwuosa (2005) says that creditors’ velocity means creditors’ turnover. This indicates the average number of times creditors’ turnover is paid within a year. High creditors’ turnover ratio indicates that the company is not taking advantage of credit facility and this may result in loss of profit as a result of interest on borrowed funds or bank overdraft needed to meet up. On the other hand low creditors’ turnover ratio indicates that the company is not taking advantage of any discount associated with prompt payment and this may lead to increase in their cost of sales and consequently decrease in their profit. Therefore, a company should ensure that its creditors’ turnover ratio is neither too high nor too low. The creditors’ turnover is calculated by dividing Credit purchases by Average creditors. Leahy (2012) argues that creditors’ velocity is designed to capture the effect of borrowing on the profitability of a company. It also measures the manufacturer’s ability to negotiate the term of purchases. The impact of this variable on profitability depends upon how the business in financed. If the manufacturer has to borrow to make up for accounts payable, then the higher the ratio of accounts payable to cost of goods
sold, the lower the expected profitability. If, on the other hand, the business is financed through retained earnings, then the higher the ratio of accounts payable to cost of goods sold, the higher the expected profitability if the cost of using retained earnings is less than the cost of borrowing. We cannot tell in advance which of these forces is more important.

Ezeamama (2010) defines total assets turnover as ratio that expresses the number of times the value of assets utilized by the firm has been generated into sales. According to Pandey (2010) total assets’ turnover ratio shows the firm’s ability in generating sales from all financial resources committed to total assets. Nweze (2011) says total assets turnover measures the level of capital investment relative to sales volume. It tells the firm how well it manages its overall assets. Profit margin is not considered in the asset turnover ratio formula. Turning over assets at different rates can have different impacts on profit margin. It should be noted that the asset turnover ratio formula does not look at how well a company is earning profits relative to assets. The asset turnover ratio formula only looks at revenues and not profits.

4. Theoretical Framework

Studies on capital structure and profitability of the firms listed on Nigerian stock Exchange has been performed by Dave (2012). They detected negative relationship between long term debt and profitability and suggested that top management should take interest in capital structure to improve profitability. He enhances that the relationship between working capital management and profitability of 131 companies listed in the Athens Stock Exchange for the period shows that inventories, account receivables and account payables had negative relationship with profitability. However, the relationship of inventory with profitability was not statistically significant while the relationship of accounts receivables and account payables with the profitability was highly significant, which suggesting that account receivable and account payables are the areas to be focused to improve the profitability of the firm.

management such as ratio analysis, profitability measures and break-even analysis. The determinants of profitability for a segment of the U.S. pharmaceutical industry have been performed by Leahy (2012). Profitability is related to functions performed and risks assumed by a company were his proposition. Those studies identified that, the results vary according to the measure of profitability employed, i.e, the significance of the independent variables may depend on the profitability measure employed. The obvious who found that the results did not vary systematically according to estimation method and suggests that the results vary with the industry examined. The relationship between working capital and the profitability has been an interesting debate in financial analysis termed by Chary, Kasturi and Kumar (2011). Working capital decision affects both profitability and liquidity. Too much investment in working capital may result in poor liquidity. Management need to trade-off between liquidity and profitability to maximize shareholders wealth. Statistical measures such as correlation and regression models can be used to understand the impact of working capital on profitability. Because of the above mentioned literature review, the researcher concludes that they are expressively effects between the independent variables and dependent variable of this study. The financial ratio analysis will also help in acquisition, planning, allocation and control of financial resources of an organization in order to achieve the goal(s) of the organization with minimum financial distress, and maximum benefit. For better profitability inventory turnover ratio and debtors, turnover ratio are to be maintained at higher levels, creditors may be kept at higher levels for shortening the length of net trade cycle. Furthermore, this inverse relationship between return on assets and net trade cycle was found different across industries depending on the type of industry.

5. Conceptual Framework

The meaning of profitability is the ability to make profit from all the business activities of an organization, company, firm or an enterprise. It shows by using all the resources available in the market how efficiently the management can make profit. Profitability is also known as the ability of a given investment to earn a return from its use. However, the term “efficiency” cannot be used as a synonymous to profitability. Profitability is regarded as a measure of efficiency and management guide to greater efficiency also as an index of efficiency. The extent of profitability cannot be taken as a final proof of efficiency although, profitability is an important yard stick for measuring the efficiency. Sometimes a proper degree of efficiency can be accompanied by an
absence of profit on the contrary, satisfactory profits can mark inefficiency. Satisfactory balances between the values receive and value given simply revealed by the net profit figure. One of the factors on which profitability of an enterprise largely depend is the change in operational efficiency. Moreover there are many other factors as well beside efficiency, which affect the profitability. Sometimes, the terms “Profitability” and “Profit” are used interchangeably but in reality, there is a difference between the two. Profitability is a relative concept whereas profit is an absolute term. However, they are mutually interdependent and closely related, having distinct roles in business. Profitability refers to the operating efficiency of the enterprise while profit refers to the total income earned by the enterprise during the specified period of time.

6. Hypotheses
The following hypotheses were developed:
H1: There is no relationship between inventory turnover ratio and gross profit margin.
H2: There is no relationship between debtors’ turnover ratio and gross profit margin.
H3: There is no relationship between creditors’ velocity and gross profit margin.
H4: There is no relationship between total assets turnover ratio and gross profit margin.

7. Methodology
Since the purpose of this research is to identify the effects of various independent variables on the dependent variables and gain a better insight into the profitability of pharmaceutical industry. To obtain necessary data for the study a descriptive research was adopted. In this study our dependent variable is profitability proxy by Gross profit margin (GPM) and financial ratio analysis measured by ITR, DTR, CRSV and TATR are our independent variables. According to Van-Horne and Wachowicz (2005) GPM is a measure of the overall effectiveness of the firm in generating profit with available assets.

7.1 Method of Data Collection
In conducting this research paper, secondary source of data has been used. For this research purpose eight (8) companies have been chosen.
Following are the selected companies:
1. Square Pharmaceuticals Ltd.
2. GSK Bangladesh Ltd.
3. Renata Ltd.
4. ACI Pharmaceuticals Ltd.
5. Beximco Pharma Ltd.
6. IbnSina
7. Orion Pharma Ltd.
8. Ambee Pharma Ltd.

According to Saad (2012) 32.4% of the total pharmaceuticals market of the country is occupied by Square, Beximco and Renata.

7.2 Method of Data Analysis

7.2.1 Descriptive Analysis

To describe relevant aspects of financial management (both mobilization of funds and deployment of funds) and provide detailed information about each relevant variable Descriptive analysis is used. Lots of research has been conducted in this area of study. Excel regression has been used for analysis of the different variables in this study.

7.2.2 Quantitative Analysis

Researcher applied two methods in quantitative analysis. First, a correlation model has been used to measure the degree of association between different variables under consideration. Second, to examine the relationship of independent variables with dependent variable and to know the effect of independent variables on the dependent variable researchers used regression analysis. Researchers will be able to identify the significant of each explanatory variable to the model and also the significance of the overall model by using this method.

For analysis of hypotheses stated in a multiple form the researcher has used Ordinary Least Squares (OLS) method. For this purpose of analysis the MS Excel Software was used to analyze financial data and to run the regression and ANOVA.

The following table represents all the variables chosen and their methods used for calculation.
Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Method used for Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Profit Margin (GPM)</td>
<td>Gross Profit /Sales</td>
</tr>
<tr>
<td>Inventory turnover ratio (ITR)</td>
<td>Inventory /Sales</td>
</tr>
<tr>
<td>Debtors’ turnover ratio (ITR)</td>
<td>Trade debtors/Sales</td>
</tr>
<tr>
<td>Creditors’ Velocity (CRSV)</td>
<td>Trade creditors/Cost of sales</td>
</tr>
<tr>
<td>Total Assets turnover ratio (TATR)</td>
<td>Total Assets/Sales</td>
</tr>
</tbody>
</table>

Table 1: Definition of variables

7.2.3 Model Specification

Selecting OLS (Ordinary Least Squares) method for this paper is guided by the fact that its computational procedure is simple and the estimates obtained from this procedure has optimal properties which includes linearity, unbiasedness, minivariance and mean squared error estimation (Koutsoyianis, 2003).

To execute the research I have used the formula for regression which was developed in the Journal. The formula is:

\[(GPM) y = b0 + b1(ITR) + b2(DTR) + b3(CRSV) + b4(TATR) + C\]

\(b0=\) Intercept,
\(b1…b5=\) coefficients that describe the size of the effect the independent variables are having on your dependent variable.

8. Results and Discussion of Findings

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory Turnover</td>
<td>0.256375</td>
<td>0.123524147</td>
<td>80</td>
</tr>
<tr>
<td>Debtors’ Turnover</td>
<td>0.111594</td>
<td>0.078579217</td>
<td>80</td>
</tr>
<tr>
<td>Creditors’ Turnover</td>
<td>0.088322</td>
<td>0.075452565</td>
<td>80</td>
</tr>
<tr>
<td>Total Asset Turnover</td>
<td>1.309393</td>
<td>0.850448439</td>
<td>80</td>
</tr>
<tr>
<td>Gross Profit</td>
<td>0.402845</td>
<td>0.093065501</td>
<td>80</td>
</tr>
</tbody>
</table>

Table 2: Descriptive statistics

From the above table the descriptive statistics shows that over the period of 2004-2013, the financial ratios measured by inventory turnover, debtors’ turnover, creditors’ velocity, and
total asset turnover ratio have a positive mean value which ranges from 0.088322 to 1.309393. It can be seen that 8 companies have a mean of 0.4028 which means that their products have a mark-up of more than 100%. Creditors’ turnover ratio and total asset turnover ratio represents the highest and lowest value respectively. On the other hand, total asset turnover denotes highest standard deviation and creditors’ turnover ratio denotes lowest standard deviation. In addition, standard deviation value 0.0930 of gross profit which is below 25% signifies that each of the firms enjoys a healthy gross profit margin.

<table>
<thead>
<tr>
<th></th>
<th>IT</th>
<th>DT</th>
<th>CVT</th>
<th>TATR</th>
<th>GP</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT</td>
<td>1.000000</td>
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<td></td>
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<tr>
<td>DT</td>
<td>0.557012</td>
<td>1.000000</td>
<td></td>
<td></td>
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<tr>
<td>CVT</td>
<td>0.198550</td>
<td>0.161347</td>
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<tr>
<td>TATR</td>
<td>0.483766</td>
<td>0.255403</td>
<td>0.136670</td>
<td>1.000000</td>
<td></td>
</tr>
<tr>
<td>GP</td>
<td>0.272920</td>
<td>0.081353</td>
<td>-0.278947</td>
<td>0.331154</td>
<td>1.000000</td>
</tr>
</tbody>
</table>

Table 3: Correlation matrix

From the above table, the correlation matrix shows the strength of linear association between variables. The correlation matrix shows that, inventory turnover, debtors’ turnover and total asset turnover have a positive relationship with gross profit. In contrast, creditors’ velocity ratio is negatively related with gross profit. Among the positive relationship between variables total asset turnover has the highest value of 0.3311 which means that profitability of the firms is impacted by the changes of total asset turnover ratio. The negative value of -0.2789 depicts that gross profit margin will decrease as creditors’ velocity ratio increases.

Regression Statistics

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<table>
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<tr>
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<tr>
<td>Multiple R</td>
<td>0.502923663</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>R Square</td>
<td>0.252932211</td>
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<tr>
<td>Adjusted R Square</td>
<td>0.213088595</td>
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<tr>
<td>Standard Error</td>
<td>0.082556569</td>
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<td></td>
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<tr>
<td>Observations</td>
<td>80</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Table 4: Regression statistics

From the regression statistics, R square denotes the percentage of variation in the dependent variable that can be explained by independent variable. The value of R square is 0.2529 which means that, collectively inventory turnover, debtors’ turnover, creditors’ velocity
turnover and total asset turnover ratio explains gross profit margin ratio by 25.29%. The rest 74.71% were affected by other variables outside the independent variables. A more conservative way of looking at the coefficient of determination is the adjusted R-square, which is also less than 50%. In this case, 0.213 or 21.3% of the variations in the dependent variable is not explained by the independent variable. So, for the selected pharmaceutical companies this indicates that inventory turnover ratio, debtors’ turnover ratio, creditors’ velocity and total assets turnover ratio are not the major determining factor of gross profit margin.

<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
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</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.363079</td>
<td>0.023325</td>
<td>15.566278</td>
<td>0.000000</td>
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<tr>
<td>IT</td>
<td>0.187229</td>
<td>0.100543</td>
<td>1.862166</td>
<td>0.066497</td>
</tr>
<tr>
<td>DT</td>
<td>-0.083722</td>
<td>0.142641</td>
<td>-0.586941</td>
<td>0.559006</td>
</tr>
<tr>
<td>CVT</td>
<td>-0.437628</td>
<td>0.125997</td>
<td>-3.473335</td>
<td>0.000857</td>
</tr>
<tr>
<td>TATR</td>
<td>0.030365</td>
<td>0.012496</td>
<td>2.429933</td>
<td>0.017494</td>
</tr>
</tbody>
</table>

Table 5: ANOVA table

From the above table we can explains the coefficients values of the variables. Coefficient values explain that, one unit change in independent variable leads to a change in dependent variable by the amount of coefficient value. Among the variables inventory turnover has the highest coefficient value of 0.18722 which means that one unit increase in inventory turnover leads to an increase in gross profit by 0.18722. In addition, creditors’ velocity turnover ratio has a negative value of -0.4376 which means that one unit increase in creditors’ velocity will leads to a decrease in gross profit by -0.4376.

9. Conclusion

The pharmaceutical companies of this study have a mean Gross Profit Margin (GPM) of 40.28%, which reflects strong profitability. The standard deviation value is below 25%, so it means similar GPM is enjoyed by all of the firms. In developing the final model, the variables having minor relationship with the dependent variable has been excluded. For this model, the adjusted R square is 25.29%, which means that 25.29% of the changes in the dependent variable GPM can be explained through the independent variables of the study, for the pharmaceutical firms under observation in the context of Bangladesh. Only 74.71% of the variations of GPM are owed to factors outside these two independent variables used in the model. To identify the
internal determinants of profitability of pharmaceutical companies in Bangladesh this study lays
the foundation for more detailed studies. by incorporating other internal factors as well as
external determinants of profitability and examine their relationship with multiple measures of
profitability of pharmaceutical companies further research may consider extending the proposed
model.

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