Thesis Paper

on

Comparison of Profitability of Listed Pharmaceutical Companies in Bangladesh

Submission Date:

31th October 2020
Dhaka, Bangladesh

Thesis Paper

on

Comparison of Profitability of Listed Pharmaceutical Companies in Bangladesh

Supervised By

SABRINA AKHTER
Assistant Professor
Department of Business Administration
Faculty of Business & Entrepreneurship
DAFFODIL INTERNATIONAL UNIVERSITY

Prepared By

MD. Mostakim Anower
ID: 171-11-1088
Program: B.B.A
Major: Finance
Department of Business Administration
DAFFODIL INTERNATIONAL UNIVERSITY

Submission Date:

31th October 2020
Dhaka,Bangladesh

LETTER OF TRANSMITTAL

Date: 31th October 2020

TO: SABRINA AKHTER
Assistant Professor
Department of Business Administration
Faculty of Business & Entrepreneurship
Daffodil International University.

Subject:- Submission of Thesis Paper

Dear Madam,

With immense pleasure, I am presenting my thesis paper of "**Comparison of profitability of listed pharmaceutical Companies in Bangladesh**" that has been set up as a necessary piece of my degree prerequisite. I am appreciative to you for allowing me the chance to set up this report. I have attempted my dimension best to finish this report with the important data and recommended suggestion that you were give me as your best also.

Thanking you and looking forward to receiving your gracious approval of my submission.

I hope this report will meet your expectation.

Sincerely yours,

Md. Mostakim Anower

ID: 171-11-1088
Program: B.B.A
 Major: Finance
Department of Business Administration
Daffodil International University.

LETTER OF AUTHORIZATION

I, Md. Mostakim Anower, hereby announce that the presented report on **Comparison of Profitability of Listed Pharmaceutical Companies in Bangladesh**.

 I also mention that, the report is prepared only for my academic requirement purpose. I declare that the report is not allowed to use for any purpose without permission.

-----/------------------------

Md. MD. Mostakim Anower
ID: 171-11-1088
Program: B.B.A
Major: Finance
Department of Business Administration
DAFFODIL INTERNATIONAL UNIVERSITY.

LETTER OF ACCEPTANCE

I hereby certify that Md. Mostakim Anower , bearing ID NO :171-11-1088, Batch 46th (Major in Finance), Department of Business Administration, Daffodil International University has successfully completed his Thesis Paper entitled **"Comparison of Profitability of Listed Pharmaceutical Companies in Bangladesh "** His thesis was at Comparison of profitability of listed pharmaceutical Companies of Bangladesh . I'm satisfied to express that, Md. Mostakim Anower as prepared this report and has the capacity to exhibit a decent image of the concerned association.

I wish him every success throughout his life.

SABRINA AKHTER
Assistant Professor
Department of Business Administration
Faculty of Business & Entrepreneurship
Daffodil International University.

ACKNOWLEDGEMENT

All acclaim to be to Allah to whom all Dignity, Honor and Glory are expected, the ruler of the world, The Almighty Omnipotent for His support to me in finishing this thesis report.

I might want to accept the open door to offer my thanks to my thesis supervisor SABRINA AKHTER Assistant Professor, Department of Business Administration, Faculty of Business and Entrepreneurship, Daffodil International University whose bearing, direction and support helped me a considerable measure in composing this report.

Finally, I pass on my genuine because of my companions who rouse in various approaches to finish the report. Additionally, I might want to express my best respects to my cherished guardians, uncle, close relative, sibling and sister for their boundless love and support.

ABSTRACT

This thesis paper is set up as a partial contentment of BBA program of the department of Business Administration of Daffodil International University. This thesis paper will give **a Comparison of profitability of listed pharmaceutical Companies in Bangladesh.** The pharmaceutical market of Bangladesh very much dynamic and competitive and is comparable to those of developed countries. It is a matter of great pleasure that this sector successfully fulfils major portion of local demand of pharmaceutical products and at the same time it is moving forward to explore the international market for chemicals and pharmaceuticals products. The contribution of pharmaceuticals companies in Bangladesh to the national economy is encouraging. The investment in this sector is increasing which speaks about the potentiality in this sector. This sector satisfies the demand of the local market and also goes for export to explore the international market. Presently these industries exporting medicines to more than 50 countries of the world. Hence, the present study is initiated Profitability of Listed Pharmaceuticals Companies: Square Pharmaceuticals Limited, Renata Pharmaceutical Company, Beximco Pharmaceuticals Ltd, Beacon Pharmaceuticals Limited, Advanced Chemical Industries, ACME Laboratories Ltd, Orion Pharma Ltd, Ibn Sina Pharmaceutical in Bangladesh with three (04) years accounting period from 2016-2019. It can be concluded that the profitability of pharmaceutical companies is very much satisfactory as all of the companies according to the standard norms of profitability in terms of investment.

Keywords: Profit; Profitability; Pharmaceuticals industry.

Table of Contents

Chapter – One

1.0: Introduction:

Pharmaceutical sector is one of the vibrant industries in Bangladesh that have huge contribution for the economic development of the country. The Drug Control Act, 1982 is one of the promulgating factors for the rapid growth of this sector. Also the professional knowledge, thoughts and innovative ideas of the pharmacists working in this sector are the key for the prosperity of this industry. At present, there are 231 pharmaceutical companies of which 150 are actively and continuously producing different types of drugs in Bangladesh. Bangladeshi pharmaceutical companies meet the 94 percent of the local demand of medicines. The market size of the local pharmaceutical industries is tk. 76,500 million. Currently, the Bangladeshi pharmaceutical companies are exporting drugs in many developed and developing countries in the rest of the world and earning huge foreign currency for the Bangladeshi exchequer. Profit is the additional income gained from selling an additional good. Owners of a firm usually want the firm to make as much profit as possible; Here the firm is seen as the sole economic decision maker whose goal is to maximize the profits of the owners. Hence, the sustainable profitability of the pharmaceutical industries of Bangladesh is a prime concern to the related parties like the company owners, regulators and the internal customers like the employees is one of the major concerns. Profit in the accounting sense tends to become a long term objective which measures not only the success of a product, but also of the development of the market for it (Nimalathasan, 2009). Profit is an absolute measure of earning capacity, while profitability is relative measure of earning capacity. Banarjee (1976) defined profitability as the profit earning capacity of a product, process, plant or undertaking.

Hence the present study approaches the comparison of profitability of two leading listed pharmaceutical companies in Bangladesh for four years. After the banking industry, the pharmaceutical industry is the second largest white-color job creating industry in Bangladesh.

1.1: Background of the Study:

This thesis paper will compare the profits of the listed pharmaceutical companies in Bangladesh. The pharmaceutical market of Bangladesh very much dynamic and competitive and is comparable to those of developed countries. It is a matter of great pleasure that this sector successfully fulfils major portion of local demand of pharmaceutical products and at the same time it is moving forward to explore the international market for chemicals and pharmaceuticals products. The contribution of pharmaceuticals companies in Bangladesh to the national economy is encouraging. The investment in this sector is increasing which speaks about the potentiality in this sector.

1.2: Objectives of the study:

The main objective of the study is to compare the profits of pharmaceutical companies. To achieve main objective, the following specific objectives are taken for the study effectively.

 1. To visualize the profitability scenario of the selected companies

2. To identify the indicators of profitability of the Pharmeutical companies over the 04 years during 2016- 2019

3. To recognize the profitability.

4. To show a comparison among the companies

5. To identify the factors that affect profitability

1.3: Problem Statement

We don't know the present financial performance and Profitability of Listed Pharmaceutical Companies of Bangladesh.

I Analysis the ratio than evaluation financial performance and Profitability of Listed Pharmaceutical Companies of Banglades

3

1.4: Scope of the study:

This Thesis Paper is all about finding the financial performance of Listed Pharmaceutical Companies in Bangladesh.

1.5: Methodology:

The study mainly based on secondary data which were collected from the Dhaka Stock Exchange, annual reports of the companies. In this research I am using four main financial statement for ratio analysis of pharmaceutical company such as balance sheet, income statement.

Methodology of Performance Evolution of Pharmaceutical Company:

```
┌──────────┐     ┌──────────┐     ┌──────────┐
│Selection │     │ Income   │     │          │        ┌─────────────────────────┐
│Financial │ ──▶ │STatement │ ──▶ │ Ratio    │ ─────▶ │ current ratio           │
│Report    │     │Balanc    │     │ Analysis │        │ Quick ratio             │
│          │     │Sheer     │     │          │        │ Debt ratio              │
│          │     │Cash flow │     │          │        │ Inventory turnover      │
│          │     │statment  │     │          │        │ Average collection      │
└──────────┘     └──────────┘     └──────────┘        │   period                │
                                        │             │ Average collection      │
                                        ▼             │   period                │
┌──────────┐     ┌──────────┐                         │ Total assets turnover   │
│          │     │Comparison│                         │ Times interest earned   │
│ Over all │ ◀── │of among  │                         │   ratio                 │
│ Analysis │     │the       │                         │ Gross profit margin     │
│          │     │Companies │                         │ Return on total assets  │
└──────────┘     └──────────┘                         │   (ROA)                 │
                                                      │ Return on equity (ROE)  │
                                                      │ Net profit margin       │
                                                      └─────────────────────────┘
```

4

1.6: Data Collection:

There are two sources of information is given below.

1. Primary sources.

2. Secondary sources.

1.5.1: Primary sources:

- Practical desk work.
- Conversation with teacher.
- Own calculations and knowledge's.

1.5. 2: Secondary sources:

- Annual Reports of selected Pharmaceutical Companies of Bangladesh.
- Relevant file study as provide by the concerned.
- Different text books and materials.
- Selected Companies websites.
- Different articles and documents in internet.

1.7: Data Analysis:

I have started the analysis with arranging the data by annual report. From that information I have Calculated the income statment and balance sheet.

By using the formula,

current ratio = current asset/current liabilities
Quick (acid-test) ratio = Current assets-Inventory /Current liabilities
Debt ratio= Total liabilities/ Total assets
Inventory turnover=Cost of goods sold /inventories
Average collection period = Accounts receivable /Average sales per day
Average collection period = Accounts payable /Average sales per day

Total assets turnover=Sales/Total assets
Times interest earned ratio=Earnings before interest and taxes /Interest
Gross profit margin = (sales-Cost of goods sold) /sales =Gross profits /Sales
Return on total assets (ROA)=Net Income/Total Assets
Return on equity (ROE)= Net Income/Common equity
Net profit margin =Net Income/sales

1.8: Limitations of the Study:

1. The study covered eight pharmecutal companies, which is listed under CSE in Bangladesh, in order to measure and compare the profitability.

 2. The study has been conducted during the period from 2016 to 2019. Any change made after this period has not been covered in this study.

Chapter -Two

2.0: Literature Review of the Study:

Paul H. Rubin (2012) states that profit maximization mean producing the products earning the highest returns, and producing these products at the lowest possible cost. Lieberman and Hall (2005) mentions that the underperforming managers who deviate from profit maximizing are typically replaced either by current owners or other firms. Profits are the test of efficiency and a measure of control to the owners, a measure of the worth of their investment, to the creditors the margin of safety, to the employees a source of fringe benefits, to the Government a measure of taxable capacity and the basis of legislative action. Nimalathasan, B (2007) states that profit in the accounting sense tends to become a long term objective which measures not only the success of a product, but also of the development of the market for it. Analysis of financial statements is of interest to lenders, security analysts, managers and others (Prasanna, 1995). Salauddin (2001) examined the profitability of the pharmaceutical companies of Bangladesh. By using ratio analysis, mean, standard deviation and co-efficient of variation he found that the profitability of the pharmaceuticals sector was very satisfactory in terms of the standard norms of return on investment. Pharmaceutical companies' profits are an important stimulus to, and source of funding for, research and development (R&D)—which in turn leads to a stream of health-enhancing new products (F.M. Scherer, 2001). Sina (1998) used financial ratios to test the financial strengths and weaknesses of Khulna Newsprint Mills Limited. Very few studies have been performed in the pharmaceutical area. Jahur (1995) used financial ratios to measure operational performance of limited company. He used profitability, liquidity, activity and capital structure to measure operational performance. Kate Barr (2008) in his article "Analyzing Financial Information Using Ratios" says that understanding the financial information is the building block of any financial discussion. Beyond understanding the reports, much can be learned from analysis of the information and interpretation of what it is telling. The basic analysis includes comparing financial reports to a benchmark such as the budget or the financial report from the previous year.) Collier (2004) in his article "An example of the use of financial ratio analysis: the Case of Motorola" mentioned that, The financial ratios indicate that Motorola has a higher cost of sales than the average firm in the semiconductor industry, resulting in a lower gross profit margin, and higher indirect costs, resulting in lower net profit margin performance relative to the semiconductor

industry. Motorola has a better liquidity position, with both the current ratio and the quick ratio being higher than the industry average.

2.1: Sampling design

The samples have been selected purposively so that these can represent the industry. A total of 8 pharmaceutical companies have been selected and these companies have sufficient credential for being the representative of this industry in terms on investment, technology, sales, contribution to the government, value addition, and employment.

2.2 : Sample Companies and their activities

A short description is presented here.

2.2.1: Square Pharmaceuticals Limited: Square Pharmaceuticals Ltd. is a pharmaceutical company in Bangladesh. It was founded in 1958 by Samson H. Chowdhury along with three of his friends as a private firm. It went public in 1991 and is listed on the Dhaka Stock Exchange and on the Chittagong Stock Exchange (ID of SPL: 13002) Square Pharmaceutical started to export different antibiotics and medicine across the world from 1987. Now it exports its medicine to 36 countries of the world. In 2008 and 2009 it had the highest market share in the pharmaceutical industry of Bangladesh.

2.2.2: Renata Pharmaceutical Company: Renata Limited (formerly Pfizer Laboratories (Bangladesh) Limited), also known as Renata, is one of the top ten (in terms of revenue) pharmaceutical manufacturers in Bangladesh. Renata is engaged in the manufacture and marketing of human pharmaceutical and animal health products. The company also manufactures animal therapeutics and nutrition products. Renata currently employs about 2300 people in its head office in Mirpur, Dhaka and its two production facilities in Mirpur, Dhaka and Rajendrapur, Dhaka.

9

2.2.3: Beximco Pharmaceuticals Ltd: Beximco Pharmaceuticals Ltd also known as Beximco Pharma, is a pharmaceutical company in Bangladesh. It is part of the Beximco Group of Companies. Beximco Pharma was founded in 1976 and started operations in 1980, manufacturing products under the licenses of Bayer AG of Germany and Upjohn Inc. of United States.[Today Beximco Pharma manufactures and markets its own branded generics for several diseases including AIDS, cancer, asthma, hypertension, and diabetes for both national and international markets. It was the first drug company from Bangladesh to sell its products in the US. In May 2020, the company introduced world's first generic Remdesivirn for Covid-19 treatment.

2.2.4: Beacon Pharmaceuticals Limited: Beacon Pharmaceuticals Limited is a Bangladeshi pharmaceutical company that develops generic version of medications. Beacon manufactures more than 200 generic drugs and 65 oncology products. Beacon is the first company in Bangladesh to start export of cancer drugs. The company is exporting its products to Asia, Africa, Europe and Latin America. Beacon is public limited company listed in Dhaka & Chittagong stock exchange. About 2000 people are working in this company. Beacon has introduced a number of global first generics.

2.2.5 :Advanced Chemical Industries: ACI or Advanced Chemical Industries (DSE : ACI) is one of the largest Bangladeshi conglomerates. The company operates through three reportable segments: Pharmaceuticals, Consumer Brands and Agribusiness. ACI established as the subsidiary of Imperial Chemical Industries (ICI) in 1968. It has been incorporated as ICI Bangladesh Manufacturers Limited on 24 January 1973. The company was renamed as Advanced Chemical Industries Limited (ACI Limited) on 5 May 1992. The company sold its insect control, air care and toilet care brands to SC Johnson & Son in 2015.

2.2.6: ACME Laboratories Ltd : The ACME Laboratories Ltd is a pharmaceutical company based in Bangladesh. It is part of the ACME Group of Companies. Mizanur Rahman Sinha is the Managing Director and largest shareholder of the company and Nagina Afzal Sinha is the Chairperson. 1954 Year of Establishment (Initially as a Partnership)1976 The firm was converted into a private Limited company.1983 Commercial operation at the modernized plant equipped with sophisticated and advanced facilities.995 Company reaches Golden Jubilee

2.2.7: Orion Pharma Ltd: Orion Pharma is a pharmaceuticals company in Bangladesh. It is part of the Orion group. It was founded in 1965. Before January 2011 Orion Pharmacy was called Orion laboratories. In 2013 Orion Pharma went public by floating its shares in the Dhaka Stock Exchange. It had submitted its IPO prospectus in 2011 to regulators. From 2016 Orion started to offer 20 medical scholarship as part of its corporate social responsibility In February 2017 it borrowed 34 million dollar from the German BHF-Bank to finance expansion.

2.2.8: Ibn Sina Pharmaceutical: Ibn sina pharmaceutical is located in Dhaka, Bangladesh and is part of the Pharmaceutical Manufacturing Industry. Ibn sina pharmaceutical has 3227 employees across all of its locations. There are companies in the Ibn sina pharmaceutical. corporate family. Dun & Bradstreet provides data on over 120 million companies like Ibn sina pharmaceutical. around the world, including contacts, financials, and competitor information. To witness the full depth and breadth of our data and for industry leading sales intelligence tools, take D&B Hoovers for a test drive today.

Chapter - Three

3.1:Current Ratio

Current Ratio: The current ratio is a liquidity ratio that measures whether a firm has enough resources to meet its short-term obligations. The current ratio is a liquidity and efficiency ratio that measures a firm's ability to pay off its short-term liabilities with its current assets.

Company	2019	2018	2017	2016	mean	SD	CV
Square Pharmaceuticals Limited	12.928	12.925	9.814	6.34	10.50175	3.138577	29.88623
Renata Pharmaceutical Company	2.553	2.12	1.696	1.33	1.92475	0.528796	27.47348
Beximco Pharmaceuticals Ltd	1.04	1.25	2.68	2.85	1.955	0.941789	48.17335
Beacon Pharmaceuticals Limited	2.025	1.8	2.13	2.13	2.02125	0.155584	7.697394
Advanced Chemical Industries	0.793	0.867	0.871	0.912	0.86075	0.049534	5.754709
ACME Laboratories Ltd	0.933	1.1	1.25	1.35	1.15825	0.181949	15.70899
Orion Pharma Ltd	3	2.23	1.83	2.14	2.3	0.497125	21.61413
Ibn Sina Pharmaceutical	0.842	0.809	0.885	0.772	0.827	0.04809	5.815017

Table-1: Current Ratio
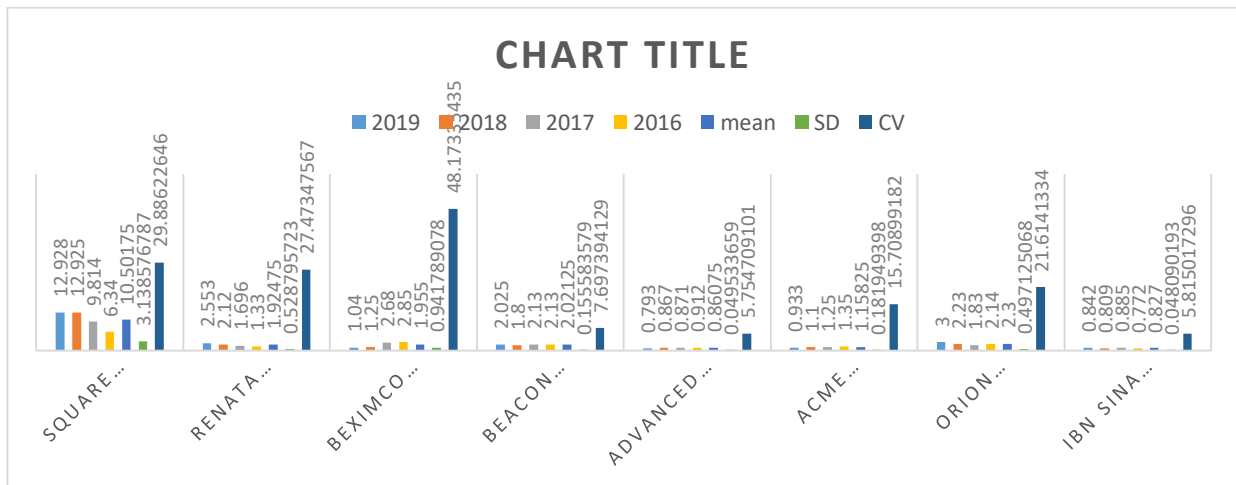
Column-1: Current ratio

3.1.1: Square Pharmaceuticals Limited: Table-1 and Column-1 show that Square pharmaceuticals Limited current ratio is too high. it may indicate that the company is not efficiently using its current assets or its short-term financing facilities and average current ratio is 10.50175, standard deviation in 3.138577, and coefficient variation is 29.88623.

3.1.2: Renata Pharmaceutical Company: Table-1 and Column-1 show that Renata Pharmaceutical company have good A good current ratio. There averages current ratio is 1.908, standard deviation in .0.527869, and coefficient variation is27.47348.

3.1.3: Beximco Pharmaceuticals Ltd: Table-1 and Column-1 show that Beximco Pharmaceuticals Ltd have also good current ratio. A good current ratio is between 1.2 to 2, which means that the business has 2 times more current assets than liabilities to covers its debts. There averages current ratio is1.955, standard deviation in .0.94179, and coefficient variation is 48.1734. beacon pharmaceutical has little been high current ratio. There averages current ratio is 2.021, standard deviation is 0.155584, and coefficient variation is7.6973.

3.1.4: Beacon Pharmaceuticals Limited: Table-1 and Column-1 show that Beacon Pharmaceuticals Limited have good A good current ratio. There averages current ratio is 2.02125, standard deviation in 0.155584, and coefficient variation is 7.697394.

3.1.5: Advanced Chemical Industries: Table-1 and Column-1 show that A advanced Chemical (have below 1 current ratio. current ratio of less than 1 indicates that the company may have problems meeting its short-term obligations There averages current ratio is 0.86075, standard deviation is 0.049534, and coefficient variation is 5.7547.

3.1.6: ACME Laboratories Ltd: Table-1 and Column-1 show that ACME Laboratories Ltd current ratio is not so bad. But 2019 Their current ratio was very low. Their averages current ratio is 1.158, standard deviation is 0.18195, and coefficient variation is 15.709.

3.1.7: Orion Pharma Ltd: Table-1 and Column-1 show that Orion Pharma Ltd current ratio is Little Be high. Their averages current ratio is 2.3, standard deviation is 0.497125, and coefficient variation is 21.61413.

3.1.8: Ibn Sina Pharmaceutical: Table-1 and Column-1 show that ibn sina pharmaceutical have below 1 current ratio. A current ratio below 1 means that the company doesn't have enough liquid assets to cover its short-term liabilities. There averages current ratio is 0.827, standard deviation is 0.04809, and coefficient variation is 5.815017.

3.2: Quick ratio

Quick ratio: The quick ratio sometimes called the quick assets ratio or the acid-test—serves as an indicator of a company's short-term liquidity, or its ability to meet its short-term obligations. In other words, it tests how much the company has in assets to pay off all of its liabilities. Assets include cash, accounts receivable, short-term investments, and inventory. The quick ratio offers a more stringent test of a company's liquidity than the current ratio.

Company	2019	2018	2017	2016	mean	SD	CV
Square Pharmaceuticals Limited	11.381	10.911	8.234	4.967	8.87325	2.950066	33.24673
Renata Pharmaceutical Company	1.637	1.268	0.943	0.642	1.1225	0.427778	38.10936
Beximco Pharmaceuticals Ltd	0.518	0.623	1.475	1.724	1.085	0.60425	55.69124
Beacon Pharmaceuticals Limited	1.263	1.034	1.174	1.194	1.16625	0.096057	8.236385
Advanced Chemical Industries	0.494	0.531	0.515	0.533	0.51825	0.018062	3.485266
ACME Laboratories Ltd	0.443	0.515	0.636	0.706	0.575	0.118189	20.55463
Orion Pharma Ltd	2.726	1.983	1.649	1.975	2.08325	0.455876	21.88292
Ibn Sina Pharmaceutical	0.386	0.371	0.522	0.457	0.434	0.069632	16.04432

Table-2: Quick ratio
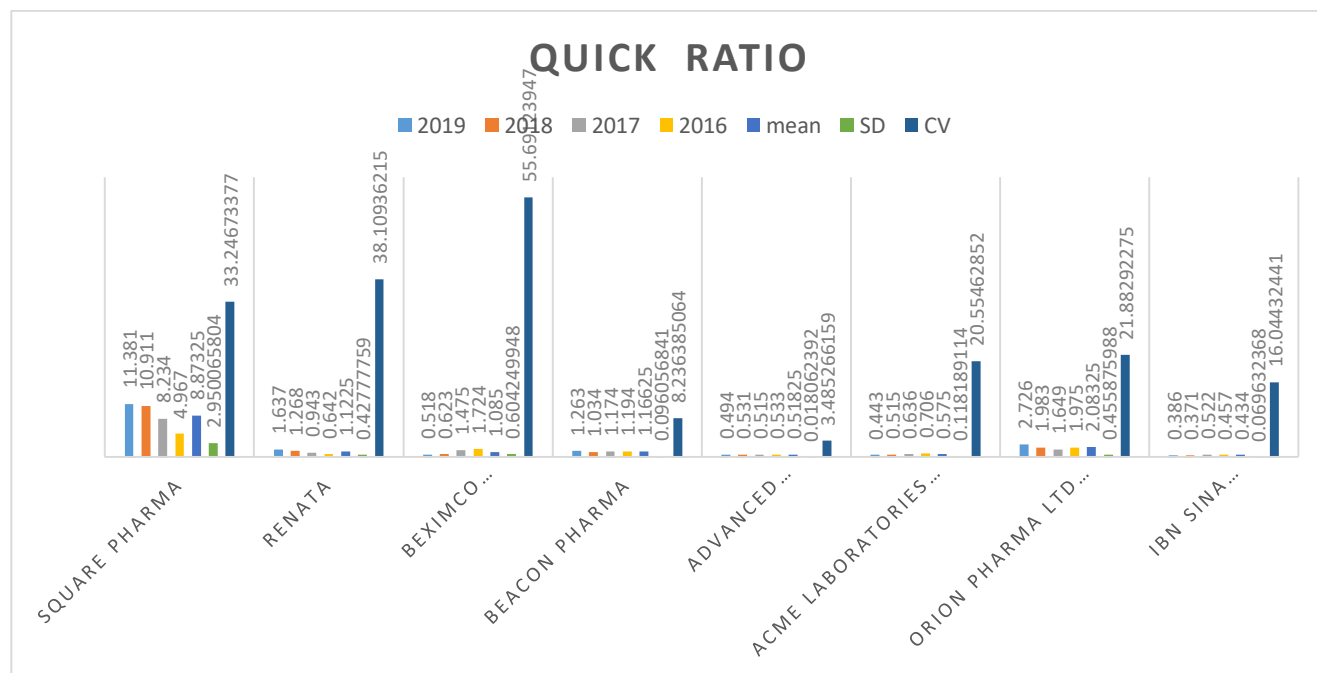
Column-2: Quick ratio

16

3.2.1: Square Pharmaceuticals Limited: Table-2 and Column-2 show that Square Pharmaceuticals Limited Quick ratio is too high. that means they comfortable to meet current liabilities but short term funds not utilized efficiently as fund are either idle or are locked up in receivables Their Average Quick ratio is 8.87325 standard deviation is 2.950and coefficient variation is 33.24673377.

3.2.2: Renata Pharmaceutical Company: Table-2 and Column-2 show that Renata pharmaceutical company Quick ratio is more than but not too much more so it is a ideal Quick ratio that's means the Renata pharmaceutical company can easily meet its current liabilities in very short term   Their average Quick ratio is 1.1225 standard deviation is 0.42777759 and coefficient variation is 38.10936215.

3.2.3: Beximco Pharmaceuticals Ltd: Table-2 and Column-2 show that in 2016 and 2017 they have an ideal Quick Ratio but in 2018 and 2019 their Quick ratio in less than 1 that means Quick asset < current liabilities Their average Quick ratio is 1.085, standard deviation is 0.604249948 and coefficient variation is 55.69123947.

3.2.4: Beacon Pharmaceuticals Limited: Table-2 and Column-1 show that BEACON Pharma have a Ideal Quick ratio so they Can easily meet its current obligations in a very short period of time. Their average Quick ratio is is 1.16625, standard deviation is 0.096056841, and coefficient variation is 8.236385064.

3.2.5: Advanced Chemical Industries: Table-2 and Column-2 show that Advanced Chemical (acl) Quick ratio in less than 1 that means Quick asset in less than current liabilities and high liquidity risk. Their average Quick ratio 0.51825, standard deviation is 0.018062392, and coefficient variation is 3.485266159.

3.2.6: ACME Laboratories Ltd: Table-2 and Column-2 show that ACME Laboratories Ltd (ACMR) Quick ratio in less than 1 its show that current liabilities. In more than Quick asset. It is a Short-term problem for the organization and it is high liquidity risk. Their average Quick ratio is 0.575 standard deviation is 0.118189114and coefficient variation is 20.55462852.

3.2.7: Orion Pharma Ltd: Table-2 and Column-2 show that Orion Pharma Ltd (ORIO) have a ldeal Quick ratio that's means the they Can easily meet its current obligations in a very short period of time Their average Quick ratio is 2.08325standard deviation is 0.455875988 and coefficient variation is 21.88292275.

3.2.8: Ibn Sina Pharmaceutical: Table-2 and Column-2 show that Ibn sina pharmaceutical don't have ideal Quick ratio. table I show ibn sina pharmaceutical Quick ratio < 1 that's means short term trouble for ibn sina pharmaceutical   and it is high liquidity risk. Their average Quick ratio is 0. 434.standard deviation is 0.069632368 .and coefficient variation is 16.04432441.

3.3: Debt ratio

Debt ratio: The debt ratio is a financial ratio that measures the extent of a company's leverage. The debt ratio is defined as the ratio of total debt to total assets, expressed as a decimal or percentage. It can be interpreted as the proportion of a company's assets that are financed by debt. The debt ratio measures the amount of leverage used by a company in terms of total debt to total assets.

Company	2019	2018	2017	2016	mean	SD	CV
Square Pharmaceuticals Limited	5.91%	5.64%	6.66%	8.45%	6.67%	0.012658	18.99205
Renata Pharmaceutical Company	24.63%	27.39%	30.85%	36.86%	29.93%	0.05273	17.61623
Beximco Pharmaceuticals Ltd	39.87%	38.08%	26.43%	25.97%	32.59%	0.074141	22.75149
Beacon Pharmaceuticals Limited	38.83%	38.86%	41.41%	40.13%	39.81%	0.012282	3.085297
Advanced Chemical Industries	85.30%	80.01%	77.48%	73.08%	78.97%	0.051011	6.459705
ACME Laboratories Ltd	48.93%	45.91%	43.37%	43.35%	45.39%	0.026485	5.835033
Orion Pharma Ltd	43.22%	44.47%	41.04%	39.09%	41.96%	0.023784	5.669021
Ibn Sina Pharmaceutical	47.73%	49.74%	48.72%	49.77%	48.99%	0.009715	1.983045

Table-3: Debt ratio
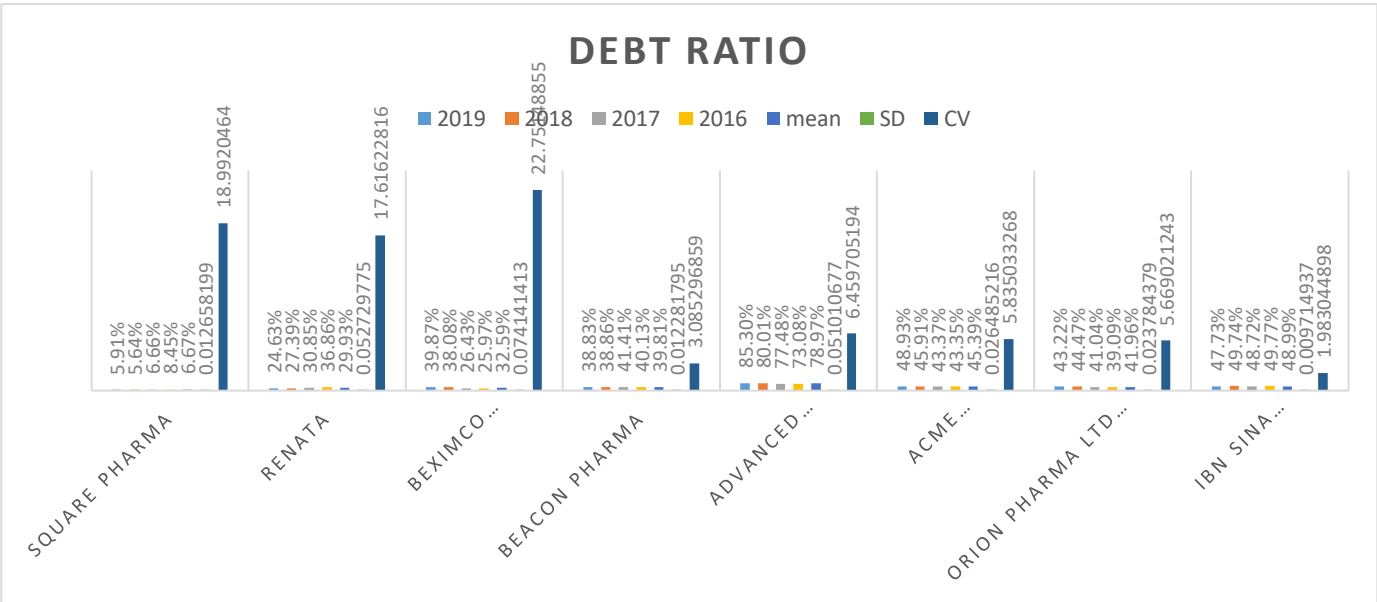
Column-3: Debt ratio

19

3.3.1: Square Pharmaceuticals Limited: Table-3 and Column-3 show that Square pharmaceuticals have ideal Debt ratio .so they have low financial risk .Their average Debt ratio is 6.67% standard deviation is 0.012658199 and coefficient variation is 18.9920464.

3.3.2: Renata pharmaceutical company: Table-3 and Column-3 show that Renata pharmaceutical company have also ideal Debt ratio. Bur its more than Square Pharmaceuticals Their average Debt ratio is 29.93% standard deviation is 0.052729775and coefficient variation is 17.61622816.

3.3.3: Beximco Pharmaceuticals Ltd: Table-3 and Column-3 show that Their Average Debt ratio is 32.59% and its less than 50% so it is good but less debt ratio is barter than high standard deviation is 0.074141413 and coefficient variation is 22.75148855.

3.3.4: Beacon Pharmaceuticals Limited: Table-3 and Column-3 show that Their Average Debt ratio is 39.81% is also less than 50% but BEACON Pharma need to reduces in more Standard deviation is 0.012281795 and coefficient variation is 3.085296859.

3.3.5: Advanced Chemical Industries: Table-3 and Column-3 show that Advanced Chemical(acl) debt ratio in in greater than 50% and its said that of the company's assets are financed through debt. Companies with high debt/asset ratios are said to be highly leveraged. Their average Debt ratio is 78.97%. Standard deviation is 0.051010677 and coefficient variation is 6.459705194.

3.3.6: ACME Laboratories Ltd: Table-3 and Column-3 show that Their average Debt ratio is 45.39% which is greater than 50% and said that indicates that a company has more assets than debt. Standard deviation is 0.026485216vand coefficient variation is 5.835033268.

3.3.7:   Orion Pharma Ltd: Table-3 and Column-3 show that Their average Debt ratio is 41.96% its said that Orion Pharma Ltd (ORIO) ratio is less than 0.5, most of the company's assets are financed through equity. Standard deviation is 0.023784379and coefficient variation is 5.669021243.

3.3.8: Ibn Sina Pharmaceutical: Table-3 and Column-3 show that Their average Debt ratio is 48.99% it is less than 50% but is not good for ibn sina pharmaceutical   . any time its will be more than 50% Standard deviation is 0.009714937 and coefficient variation is 1.983044898.

3.4: Inventory turnover

Inventory turnover: Inventory turnover is a ratio showing how many times a company has sold and replaced inventory during a given period. A company can then divide the days in the period by the inventory turnover formula to calculate the days it takes to sell the inventory on hand. Calculating inventory turnover can help businesses make better decisions on pricing, manufacturing, marketing and purchasing new inventory. Once you have your inventory turnover ratio, you will be able to see how your business is performing. Dig deeper, and you can find where your business is successful and where it may need some work.

Company	2019	2018	2017	2016	mean	SD	CV
Square Pharmaceuticals Limited	4.7	4.22	4.67	4.58	4.5425	0.220964	4.864365
Renata Pharmaceutical Company	2.707	2.497	2.5	4.251	2.98875	0.847221	28.34702
Beximco Pharmaceuticals Ltd	1.69	1.47	1.82	2.82	1.95	0.597718	30.6522
Beacon Pharmaceuticals Limited	2.37	1.91	1.2	1.08	1.64	0.609098	37.1401
Advanced Chemical Industries	3.31	3.42	3.19	2.69	3.1525	0.322322	10.22434
ACME Laboratories Ltd	2.06	2.16	2.15	2.33	2.175	0.112694	5.181346
Orion Pharma Ltd	5.53	5.89	6.34	9.48	6.81	1.81058	26.58708
Ibn Sina Pharmaceutical	6.02	6.04	9.15	11.45	8.165	2.638061	32.30938

Table-4: Inventory turnover
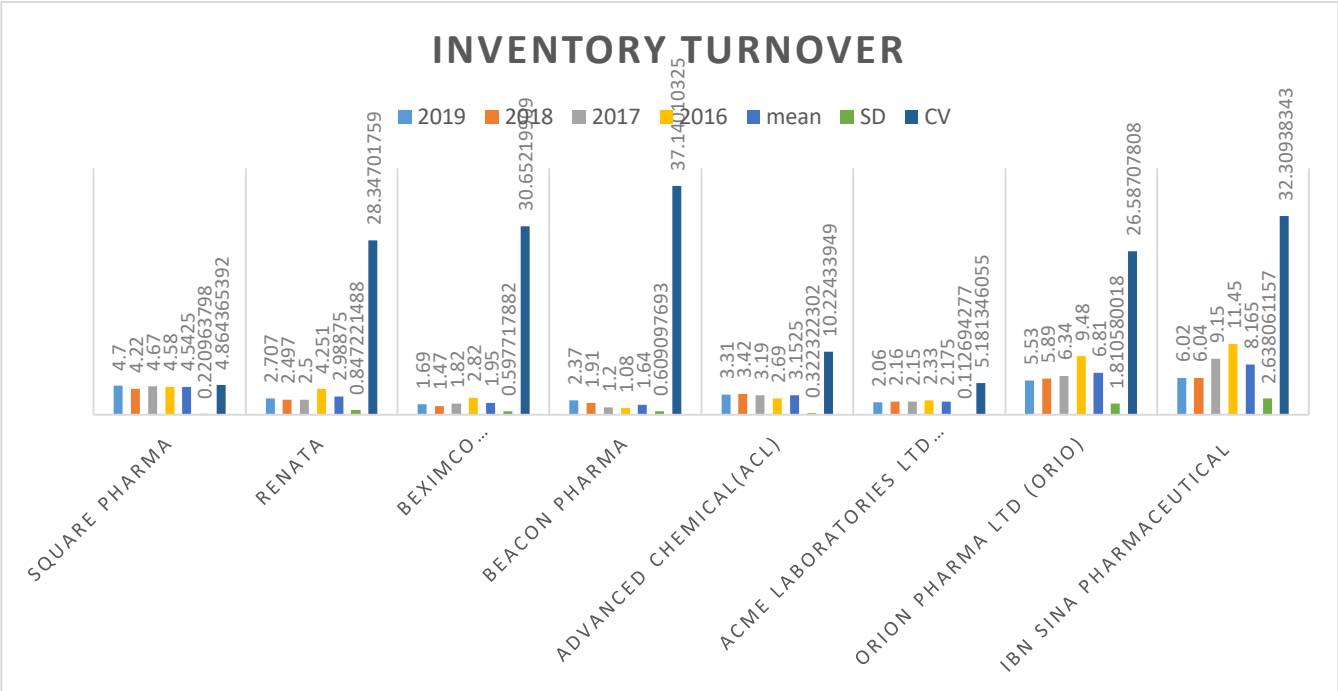
Column-4 : Inventory turnover

22

3.4.1: Square Pharmaceuticals Limited: Table-4 and Column-4 show that Their average Inventory turnover is 4.5425 it is less than 5 but if they try they will make a stander Inventory turnover radio. their standard deviation is 0.220963798 and coefficient variation is 4.864365392.

3.4.2: Renata Pharmaceutical Company: Table-4 and Column-4 show that Their average Inventory turnover is 2.98875 it is a not dial inventory turnover standard deviation is 0.847221488 and coefficient variation is 28.34701759.

3.4.3: Beximco Pharmaceuticals Ltd: Table-4 and Column-4 show that Their average Inventory turnover is 1.95 it is less than 5 an it is a not good inventory turnover standard deviation is 0.597717882 and coefficient variation is 30.65219909.

3.4.4: Beacon Pharmaceuticals Limited: Table-4 and Column-4 show that Their average Inventory turnover is 1.64 which is less than 5 and it's not good for any company. Their standard deviation is 0.609097693and coefficient variation is 37.14010325.

3.4.5: Advanced Chemical Industries: Table-4 and Column-4 show that Their average Inventory turnover is 3.1525 and thay have all to less than 5 Inventory turnover standard deviation is 0.322322302 and coefficient variation is 10.22433949.

3.4.6: ACME Laboratories Ltd: Table-4 and Column-4 show that Their average Inventory turnover is 2.175 in a less than and also last 3 years that inventory turnover in greater than 2.20. Their standard deviation is 0.112694277 and coefficient variation is 5.181346055.

3.4.7: Orion Pharma Ltd: Table-4 and Column-4 show that They have a ideal Inventory turnover ratio is between 5 and 10. This ratio indicates you sell and restock your inventory every 1-2 months. Their average Inventory turnover is 6.81 standard deviation is 1.810580018and coefficient variation is 26.58707808.

3.4.8: Ibn Sina Pharmaceutical: Table-4 and Column-4 show that They have more than 5 and less than 10 Inventory turnover ratio. this is a ideal Inventory turnover ratio,it is indicates you sell and restock your inventory every 1-2 months Their average Inventory turnover is 8.165 standard deviation is 2.638061157 and coefficient variation is 32.30938343.

3.5: Average collection period

Average collection period: The average collection period is calculated by dividing the average balance of accounts receivable by total net credit sales for the period and multiplying the quotient by the number of days in the period.

Company	2019	2018	2017	2016	mean	SD	CV
Square Pharmaceuticals Limited	47.9	51.02	27.5	45.7	43.03	10.58091	24.58961
Renata Pharmaceutical Company	47.1	54.2	54.2	30.6	46.525	11.13175	23.92638
Beximco Pharmaceuticals Ltd	55.9	59.7	51.4	30.9	49.475	12.83962	25.95173
Beacon Pharmaceuticals Limited	56.08	42.9	37.2	53.1	47.32	8.795772	18.58785
Advanced Chemical Industries	83.5	0.21	73.4	74.5	57.9025	38.72685	66.88286
ACME Laboratories Ltd	51.4	51.2	50.4	36.8	47.45	7.113133	14.9908
Orion Pharma Ltd	421.6	341.3	300.3	251.8	328.75	71.90116	21.87107
Ibn Sina Pharmaceutical	2	1.9	1.8	1.4	1.775	0.262996	14.81665

Table-5: Average collection period
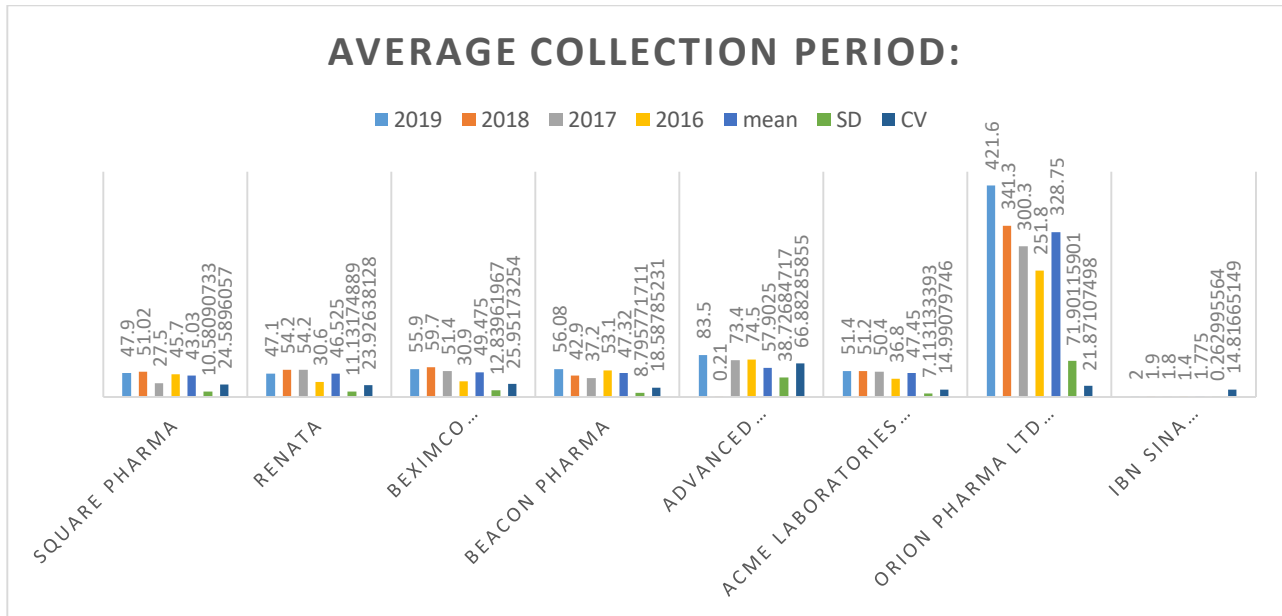
Column-5: Average collection period

3.5.1: Square Pharmaceuticals Limited: Table-5 and Column-5 show that Square pharmaceuticals average, takes the firm 43.03 days to collect an account receivable. Their standard deviation is 10.58090733 and coefficient variation is 24.5896057.

3.5.2: Renata Pharmaceutical Company: Table-5 and Column-5 show that Their Average collection period mean 46.525 days to collect an account receivable. standard deviation is 11.13174889 and coefficient variation is 23.92638128.

3.5.3: Beximco Pharmaceuticals Ltd: Table-5 and Column-5 show that Their Average collection period mean49.475 days to collect an account receivable. standard deviation is 12.83961967and coefficient variation is 25.95173254.

3.5.4: Beacon Pharmaceuticals Limited: Table-5 and Column-5 show that Their Average collection period mean47.32 days to collect an account receivable. standard deviation is 8.795771711 and coefficient variation is 18.58785231.

3.5.5: Advanced Chemical Industries: Table-5 and Column-5 show that Their Average collection period mean 57.9025 days to collect an account receivable. standard deviation is 38.72684717and coefficient variation is 66.88285855.

3.5.6: ACME Laboratories Ltd: Table-5 and Column-5 show that Their Average collection period mean 47.45 days to collect an account receivable. standard deviation is 7.113133393 and coefficient variation is 14.99079746.

3.5.7: Orion Pharma Ltd: Table-5 and Column-5 show that The Average collection period of Orion Parma Ltd (ORIO) mean328.75 days to collect an account receivable. standard deviation is 71.90115901 and coefficient variation is21.87107498.

3.5.8: Ibn Sina Pharmaceutical: Table-5 and Column-5 show that Their Average collection period mean 1.775 days to collect an account receivable. standard deviation is 0.262995564 and coefficient variation is 14.81665149.

3.6: Average payment period

Average payment period: The average payment period (APP) is defined as the number of days a company takes to pay off credit purchases. It is calculated as accounts payable / (total annual purchases / 360). As the average payment period increases, cash should increase as well, but working capital remains the same. The average collection period is the amount of time it takes for a business to receive payments owed by its clients. Companies calculate the average collection period to ensure they have enough cash on hand to meet their financial obligations. Low average collection periods indicates organizations collect payments faster.

Company	2019	2018	2017	2016	mean	SD	CV
Square Pharmaceuticals Limited	6.07	4.9	8.5	7.7	6.7925	1.616857	23.80356
Renata Pharmaceutical Company	9.2	4.6	4.4	3.7	5.475	2.513132	45.90196
Beximco Pharmaceuticals Ltd	9.1	12.7	9.1	2.6	8.375	4.207434	50.23802
Beacon Pharmaceuticals Limited	3.2	4.9	9.2	-5.8	2.875	6.310507	219.4959
Advanced Chemical Industries	25	0.04	17.9	19	15.485	10.75904	69.48039
ACME Laboratories Ltd	7.1	5.1	5.6	11.2	7.25	2.767068	38.16646
Orion Pharma Ltd	83.6	114.9	90.8	19.6	77.225	40.68156	52.67926
Ibn Sina Pharmaceutical	13.9	13.4	12.8	18.8	14.725	2.753634	18.7004

Table-6: Average payment period
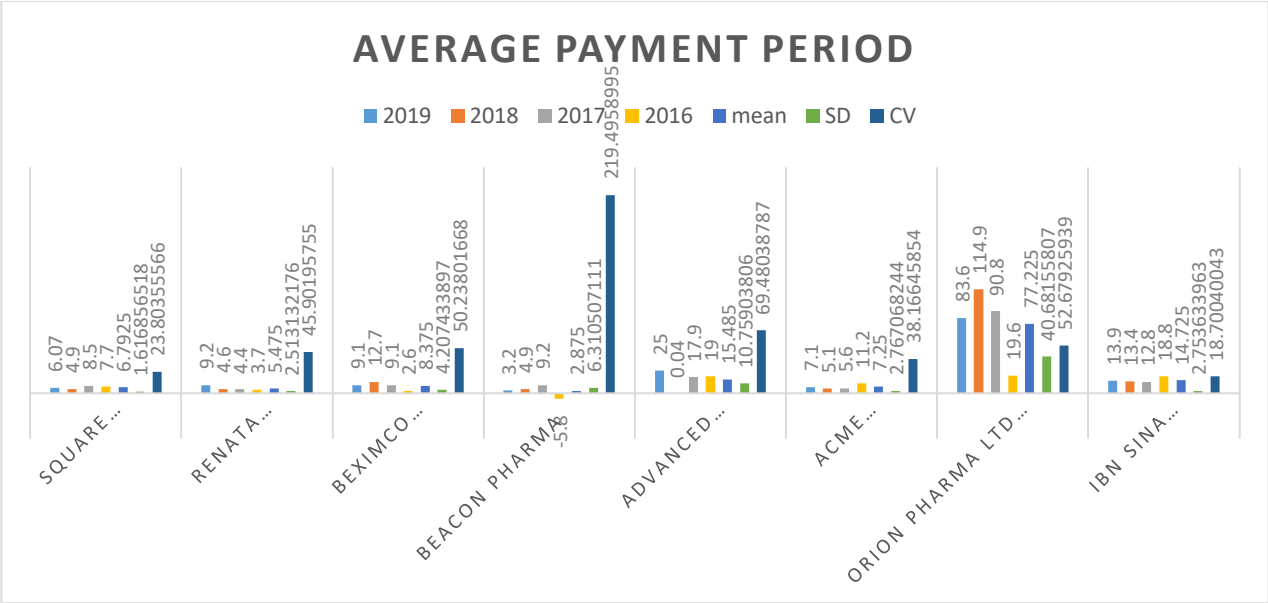
Column-6: Average payment period

27

3.6.1: Square Pharmaceuticals Limited: Considering most companies collect within 30 days. so Table-6 and Column-6 show that Square pharmaceuticals Average payment period mean 6.7925 which is bad figure. Standard deviation is 1.616856518   and coefficient variation is 23.80355566.

3.6.2: Renata Pharmaceutical Company: Table-6 and Column-6 show that Renata pharmaceutical company have Average payment period mean is 5.475 so it is not a stander figure. Their standard deviation is 2.513132176 and coefficient variation is 45.90195755.

3.6.3: Beximco Pharmaceuticals Ltd: Most businesses require invoices to be paid in about 30 days, so Table-6 and Column-6 show that Beximco Pharmaceuticals average mean of 8.375 it is not a ideal Average payment period. Their standard deviation is 4.207433897 and coefficient variation is 50.23801668.

3.6.4: Beacon Pharmaceuticals Limited: Table-6 and Column-6 show that The Average payment period mean of BEACON Pharma is 2.875 which is so not stander figure. Their standard deviation is 6.310507111 and coefficient variation is 219.4958995.

3.6.5: Advanced Chemical Industries: Table-6 and Column-6 show that Advanced Chemical Average payment period is A lower average Their Average payment period mean 15.48 standard deviation is 10.75903806 and coefficient variation is 69.48038787.

3.6.6: ACME Laboratories Ltd: Considering most companies collect within 30 days. so Table-6 and Column-6 show that ACME Laboratories Ltd (ACMR) Average payment period mean 7.25 which is bad figure. Their standard deviation is 2.767068244 and coefficient variation is 38.16645854.

3.6.7: Orion Pharma Ltd: Table-6 and Column-6 show that Orion Pharma Ltd (ORIO) Average payment period mean 77.225 which is so not stander figure. standard deviation is 40.68155807 and coefficient variation is 52.67925939.

3.6.8: Ibn Sina Pharmaceutical: Most businesses require invoices to be paid in about 30 days, so Table-6 and Column-6 show that ibn sina pharmaceutical average mean of 14.725it is not a ideal Average their standard deviation is 2.753633963 and coefficient variation is 18.70040043.

3.7: Total assets turnover

Total assets turnover: The total asset turnover ratio compares the sales of a company to its asset base. The ratio measures the ability of an organization to efficiently produce sales, and is typically used by third parties to evaluate the operations of a business. Ideally, a company with a high total asset turnover ratio can operate with fewer assets than a less efficient competitor, and so requires less debt and equity to operate. The result should be a comparatively greater return to its shareholders. The total asset turnover ratio compares the sales of a company to its asset base. The ratio measures the ability of an organization to efficiently produce sales, and is typically used by third parties to evaluate the operations of a business. Ideally, a company with a high total asset turnover ratio can operate with fewer assets than a less efficient competitor, and so requires less debt and equity to operate. The result should be a comparatively greater return to its shareholders.

Company	2019	2018	2017	2016	mean	SD	CV
Square Pharmaceuticals Limited	0.596	0.633	0.682	0.734	0.66125	0.059941	9.064793
Renata Pharmaceutical Company	0.924	0.891	0.889	1.705	1.10225	0.402154	36.4848
Beximco Pharmaceuticals Ltd	0.463	0.405	0.455	0.643	0.4915	0.10421	21.20239
Beacon Pharmaceuticals Limited	1	0.766	0.577	0.493	0.709	0.2251	31.74894
Advanced Chemical Industries	0.99	1.01	1.01	0.91	0.98	0.04761	4.858115
ACME Laboratories Ltd	0.454	0.454	0.453	0.437	0.4495	0.008347	1.856876
Orion Pharma Ltd	0.282	0.339	0.338	0.366	0.33125	0.035302	10.65729
Ibn Sina Pharmaceutical	1.86	1.9	1.86	2.01	1.9075	0.070887	3.716238

Table-7: Total assets turnover
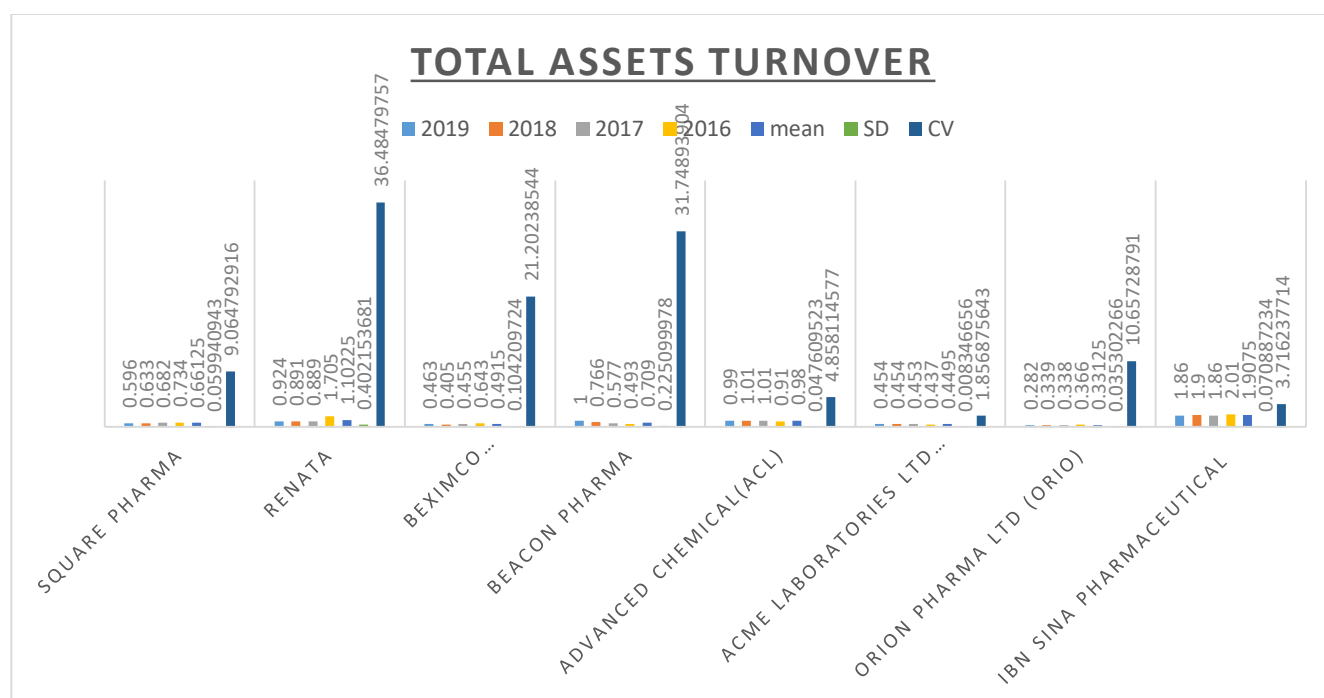
Column-7: Total assets turnover:

30

3.7.1: Square Pharmaceuticals Limited: Table-7 and Column-7 show that The average Total assets turnover of Square pharmaceuticals is 0.66125. which means that the company turns over its assets 0.66125 times per year. Their standard deviation is 0.059940943 and coefficient variation is 9.064792916.

3.7.2: Renata Pharmaceutical Company: Table-7 and Column-7 show that Renata Pharmaceutical Company average Total assets turnover is 1.10225 This means that Company assets generate 1.10225 of net sales, relative to their value. Their standard deviation is 0.402153681 and coefficient variation is 36.48479757.

3.7.3: Beximco Pharmaceuticals Ltd: Table-7 and Column-7 show that The average Total assets turnover of Beximco Pharmaceuticals is 0.4915.its mince every 1 in assets generates is 0.4915 in net sales revenue. Their standard deviation is 0.104209724 and coefficient variation is 21.20238544.

3.7.4: Beacon Pharmaceuticals Limited: Table-7 and Column-7 show that Beacon Pharmaceuticals Limited Total assets turnover ratio is 0.709. . which means that the company turns over its assets 0.709 times per year. Their standard standard deviation is 0.225099978 and coefficient variation is 31.74893904.

3.7.5: Advanced Chemical Industries: Table-7 and Column-7 show that The average Total assets turnover ratio of Advanced Chemical(acl) is 0.98. This means that Company assets generate 0.98 net sales, relative to their value. Their standard deviation is 0.047609523 and coefficient variation is 4.858114577.

3.7.6: ACME Laboratories Ltd: Table-7 and Column-7 show that ACME Laboratories Ltd average Total assets turnover ratio is 0.4495 its mince every 1 in assets generates is 0.4495in net sales revenue. Their standard deviation is 0.008346656 and coefficient variation is 1.856875643.

3.7.7: Orion Pharma Ltd: Table-7 and Column-7 show that The average Total assets turnover ratio of Orion Pharma Ltd (ORIO) is 0. 33125.which is the lowest Total assets turnover ratio in the 8 pharmaceutical company. the company turns over its assets 0.33125 times per year. Their standard deviation is 0.035302266, and coefficient variation is 10.65728791.

3.7.8: Ibn Sina Pharmaceutical: Table-7 and Column-7 show that Ibn sina pharmaceutical average Total assets turnover ratio is 1.9075 which is the high Total assets turnover ratio in the 8 pharmaceutical company. that Company assets generate 1.9075 of net sales, relative to their value. Their standard deviation is 0.070887234 and coefficient variation is 3.716237714.

3.8: Times interest earned ratio:

Times interest earned ratio: The times interest earned (TIE) ratio is a measure of a company's ability to meet its debt obligations based on its current income. The formula for a company's TIE number is earnings before interest and taxes (EBIT) divided by the total interest payable on bonds and other debt**.** A company's TIE indicates its ability to pay its debts. A better TIE number means a company has enough cash after paying its debts to continue to invest in the business. The formula for TIE is calculated as earnings before interest and taxes divided by total interest payable on debt.

Company	2019	2018	2017	2016	mean	SD	CV
Square Pharmaceuticals Limited	0.31	0.312	0.325		0.315667	0.008145	2.580104
Renata Pharmaceutical Company	37.25	42.46	28.17	10.52	29.6	14.02371	47.3774
Beximco Pharmaceuticals Ltd	5.39	8.47	7.35	4.78	6.4975	1.712102	26.35016
Beacon Pharmaceuticals Limited	2.03	1.88	1.77	1.34	1.755	0.296479	16.89341
Advanced Chemical Industries	1.04	1	0	1.98	1.005	0.808682	80.46588
ACME Laboratories Ltd	2.25	2.69	2.9	2.22	2.515	0.334714	13.3087
Orion Pharma Ltd	2.86	2.2	2.38	-	2.48	1.270905	51.24618
Ibn Sina Pharmaceutical	31.33	10.18	13.29	29.55	21.0875	10.89797	51.67976

Table-8: Times interest earned ratio
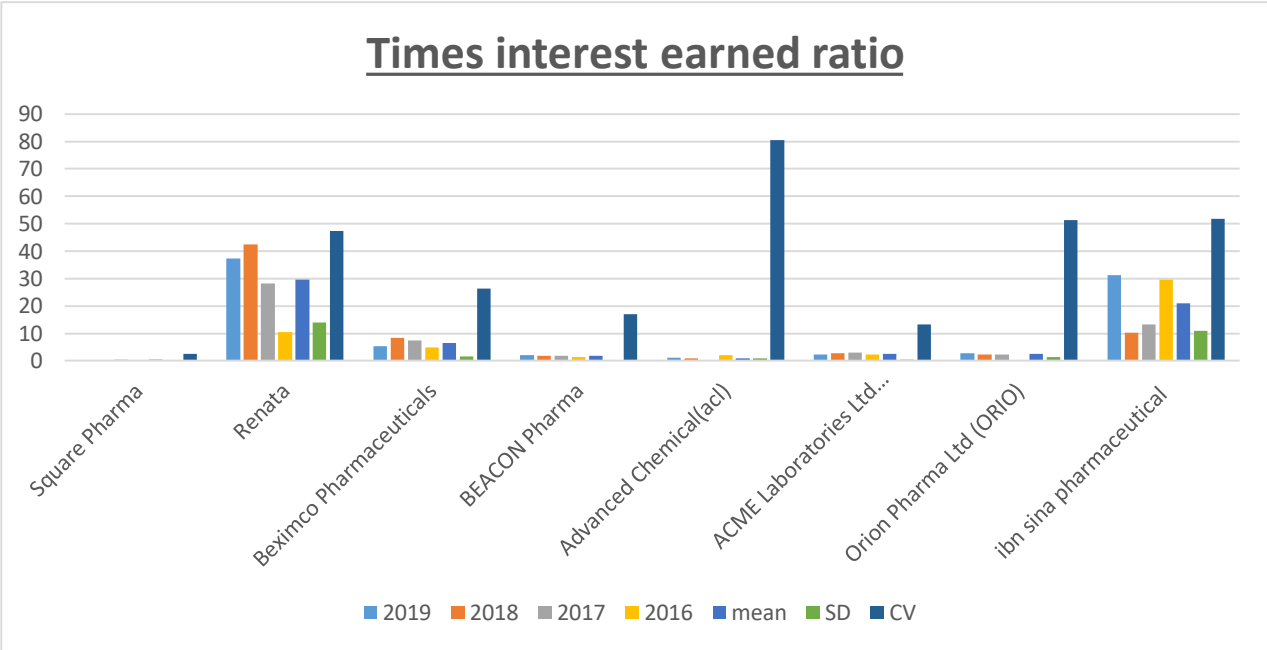
Column-8: Times interest earned ratio

3.8.1: Square Pharmaceuticals Limited: Table-8 and Column-8 show that Square pharmaceuticals average Times interest earned ratio is 0.315666667. The result is a number that shows 0.315666667times a company could cover its interest charges with its pretax earnings. Their standard deviation is 0.008144528 and coefficient variation is 2.580103849.

3.8.2: Renata Pharmaceutical Company: Table-8 and Column-8 show that The average Times interest earned ratio is 29.6. it is too much higher than Square pharmaceuticals . its means 29.6 times can a company cover its interest charge with its pretax earnings. Their standard deviation is 14.02371087 and coefficient variation is 47.3774016.

3.8.3: Beximco Pharmaceuticals Ltd: Table-8 and Column-8 show that The average Times interest earned ratio of Beximco Pharmaceuticals is 6.4975.ans this is higher than Square pharmaceuticals bur lower than Renata pharmaceutical company their standard deviation is 1.712101535 and coefficient variation is 26.35015829.

3.8.4: Beacon Pharmaceuticals Limited: Table-8 and Column-8 show that The average Times interest earned ratio of Beacon Pharmaceuticals Limited is 1.755. This means that 1.755 times the average annual interest expense of BEACON Pharma. Their standard deviation is 0.296479342 and coefficient variation is 16.89340978.

3.8.5: Advanced Chemical Industries: Table-8 and Column-8 show that Advanced Chemical Industries average Times interest earned ratio is 1.005. The result is a number that shows 1.005 times a company could cover its interest charges with its pretax earnings. Their standard deviation is 0.808682055 and coefficient variation is 80.46587616.

3.8.6: ACME Laboratories Ltd : Table-8 and Column-8 show that The average Times interest earned ratio of ACME Laboratories Ltd is 2.515.its means 2.515 times can a company cover its interest charge with its pretax earnings. Their standard deviation is 0.334713808 and coefficient variation is 13.30870012.

3.8.7: Orion Pharma Ltd: Table-8 and Column-8 show that Orion Pharma Ltd average Times interest earned ratio is 2.48   This means that 2.48 times the average annual interest expense of Orion Pharma Ltd (ORIO) Their standard deviation is 1.270905189   and coefficient variation is 51.24617698.

3.8.8: Ibn Sina Pharmaceutical: Table-8 and Column-8 show that The average Times interest earned ratio of ibn sina pharmaceutical is 21.0875. The result is a number that shows 21.0875 times a company could cover its interest charges with its pretax earnings. Their standard deviation is 10.89797038 and coefficient variation is 51.67976468.

3.9: Gross profit margin

Gross profit margin: Gross profit margin is a metric analysts use to assess a company's financial health by calculating the amount of money left over from product sales after subtracting the cost of goods sold (COGS). Sometimes referred to as the gross margin ratio, gross profit margin is frequently expressed as a percentage of sales. Gross profit margin is an analytical metric expressed as a company's net sales minus the cost of goods sold (COGS). Gross profit margin is often shown as the gross profit as a percentage of net sales. The gross profit margin shows the amount of profit made before deducting selling, general, and administrative costs, which is the firm's net profit margin.

Company	2019	2018	2017	2016	mean	SD	CV
Square Pharmaceuticals Limited	46.40%	46.01%	46.70%	45.30%	46.10%	0.00605	1.312293
Renata Pharmaceutical Company	47.76%	47.75%	48.62%	48.53%	48.17%	0.004749	0.98592
Beximco Pharmaceuticals Ltd	46.18%	46.37%	46.28%	0%	34.71%	0.231385	66.66704
Beacon Pharmaceuticals Limited	48.76%	47.83%	48.54%	46.91%	48.01%	0.008338	1.736777
Advanced Chemical Industries	28.77%	27.97%	29.27%	31.08%	29.27%	0.013186	4.504551
ACME Laboratories Ltd	37.95%	38.26%	39.24%	37.12%	38.14%	0.008758	2.296026
Orion Pharma Ltd	29.17%	22.73%	24.81%	25.85%	25.64%	0.026871	10.48023
Ibn Sina Pharmaceutical	0%	39.66%	39.73%	39.61%	30%	0.198334	66.66687

Table-9: Gross profit margin
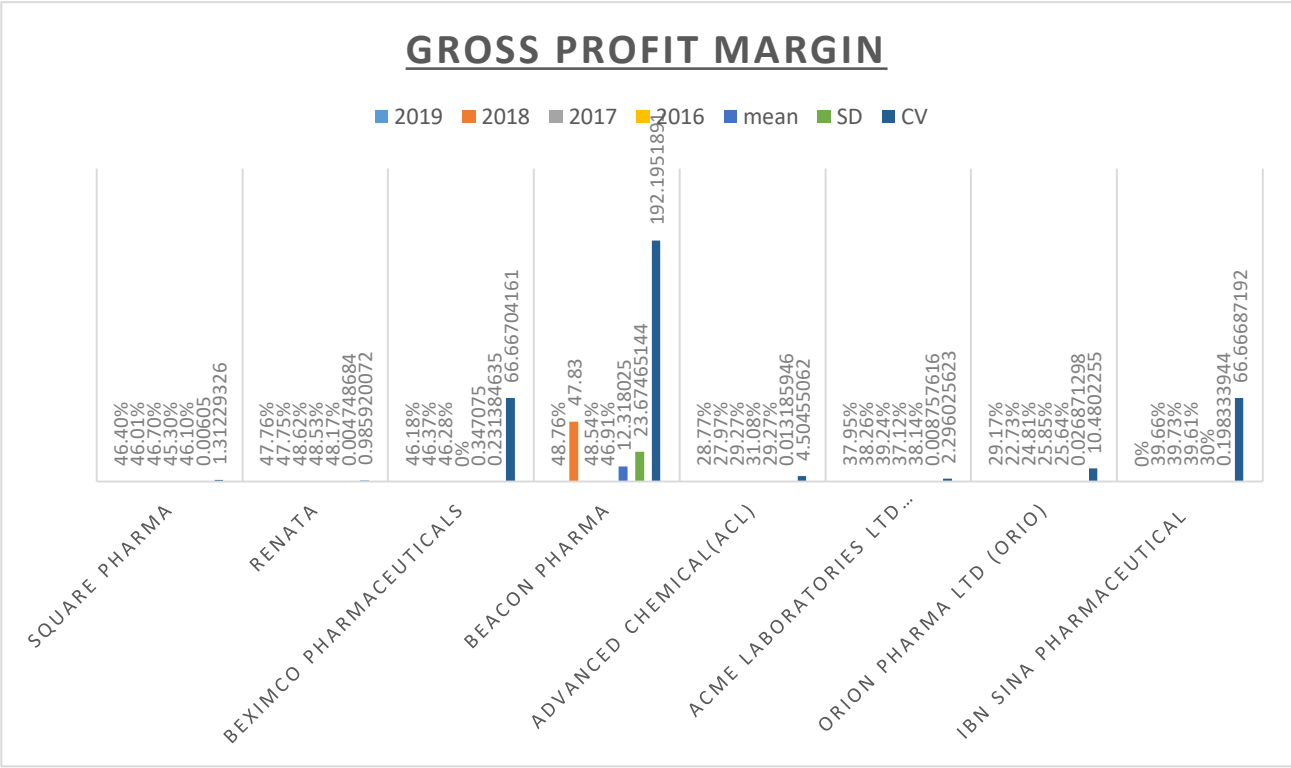
Column-9: Gross profit margin

3.9.1: Square Pharmaceuticals Limited: Table-9 and Column-9 show that According to NYU Stern School of Business. A good gross profit margin for online retail is around 45.25%, The average Gross profit margin of Square pharmaceuticals is 46.10%. so it is a good profit margin. Their standard deviation is 0.00605 and coefficient variation is 1.31229326.

3.9.2: Renata Pharmaceutical Company: Table-9 and Column-9 show that Renata pharmaceutical company average Gross profit margin is 48.17% which is the best Gross profit margin in the 8 pharmaceutical company. Their standard deviation is 0.004748684 and coefficient variation is 0.985920072.

3.9.3: Beximco Pharmaceuticals Ltd: Table-9 and Column-9 show that The average Gross profit margin of Beximco Pharmaceuticals is 34.71% which is ok bur it's not good for nay company. standard deviation is 0.231384635 and coefficient variation is 66.66704161.

3.9.4: Beacon Pharmaceuticals Limited: Table-9 and Column-9 show that BEACON Pharma average Gross profit margin is 48.01% Which is better than Square pharmaceuticals .and they have a good Gross profit margin their standard deviation is 23.67465144.and coefficient variation is 192.1951891.

3.9.5: Advanced Chemical Industries: Table-9 and Column-9 show that The Average Gross profit margin of Advanced Chemical(acl) is 29.27%. which is not so good they need to increases their Gross profit margin their standard deviation is 0.013185946 and coefficient variation is 4.50455062.

3.9.6: ACME Laboratories Ltd: Table-9 and Column-9 show that The Average Gross profit margin of ACME Laboratories Ltd (ACMR) is 38.14% this is also not a stander Gross profit margin their standard deviation is 0.008757616. and coefficient variation is 2.296025623.

3.9.7: Orion Pharma Ltd: Table-9 and Column-9 show that Their average Gross profit margin is 25.64%. which is the lowest Gross profit margin in the 8 pharmaceutical company which is not a good sin of any company their standard deviation is 0.026871298 and coefficient variation is 10.4802255.

3.9.8: Ibn Sina Pharmaceutical: Table-9 and Column-9 show that Ibn sina pharmaceutical average Gross profit margin is 30% and this is not a batter Gross profit margin. They need to increases their sales. their standard deviation is 0.198333944 and coefficient variation is 66.66687192.

3.10: Return on total assets (ROA)

Return on total assets (ROA): Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets. ROA gives a manager, investor, or analyst an idea as to how efficient a company's management is at using its assets to generate earnings. Return on assets is displayed as a percentage.Return on Assets (ROA) is an indicator of how well a company utilizes its assets, by determining how profitable a company is relative to its total assets.ROA is best used when comparing similar companies or comparing a company to its previous performance.ROA takes into account a company's debt, unlike other metrics, such as Return on Equity (ROE).

Company	2019	2018	2017	2016	mean	SD	CV
Square Pharmaceuticals Limited	17.50%	18.92%	20.24%	20.76%	19.36%	0.014592	7.538964
Renata Pharmaceutical Company	15.22%	15.54%	14.28%	26.21%	17.81%	0.056238	31.57229
Beximco Pharmaceuticals Ltd	6.16%	5.80%	6.53%	9.46%	6.99%	0.016751	23.97223
Beacon Pharmaceuticals Limited	2.42%	2.56%	2.03%	1.20%	2.05%	0.00611	29.76741
Advanced Chemical Industries	-1.16%	0.93%	2.26%	8.57%	2.65%	0.041899	158.0801
ACME Laboratories Ltd	4.00%	4.37%	4.66%	3.81%	4.21%	0.003796	9.015704
Orion Pharma Ltd	2.84%	2.61%	2.81%	3.23%	2.87%	0.002593	9.026209
Ibn Sina Pharmaceutical	11.88%	18.50%	10.85%	11.72%	13.24%	0.035374	26.7226

Table-10: Return on total assets (ROA)
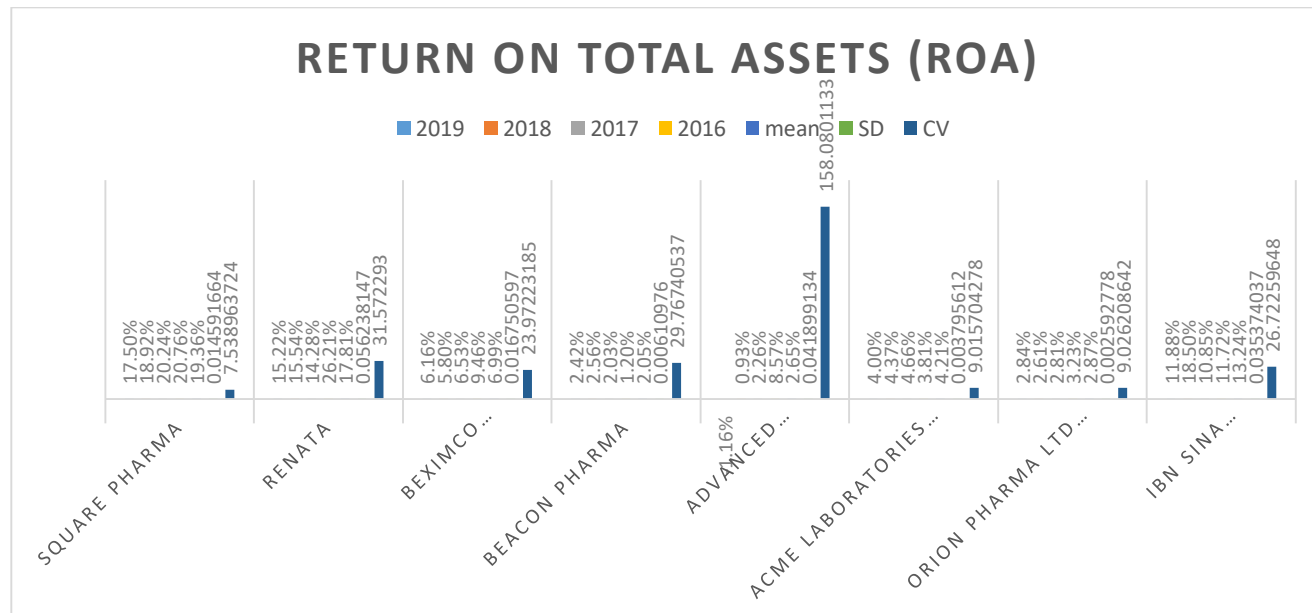
Column-10: Return on total assets (ROA)

39

3.10.1: Square Pharmaceuticals Limited: Table-10 and Column-10 show that Square pharmaceuticals average Return on total assets (ROA) is 19.36%. that's mean they have a batter ROA. they utilize its asset better. Their standard deviation is 0.014591664 and coefficient variation is 7.538963724.

3.10.2: Renata Pharmaceutical Company: Table-10 and Column-10 show that Renata pharmaceutical company average Return on total assets (ROA) is 17.81%. they have also good ROA but in less than Square pharmaceuticals. Their standard deviation is 0.056238147 and coefficient variation is 31.572293.

3.10.3: Beximco Pharmaceuticals Ltd : Table-10 and Column-10 show that Beximco Pharmaceuticals average Return on total assets (ROA) is 6.99%. they have low ROA and they need to utilize its asset .and also they need to batter pricing. their standard deviation is 0.016750597 and coefficient variation is 23.97223185.

3.10.4: Beacon Pharmaceuticals Limited: Table-10 and Column-10 show that The lowest ROA of the 8 company is BEACON Pharma Their average Return on total assets (ROA) is 2.05%. so they need to incring their net income on also decreasing their asset to   grow up their ROA. Their standard deviation is 0.00610976 and coefficient variation is 29.76740537.

3.10.5: Advanced Chemical Industries: Table-10 and Column-10 show that Advanced Chemical(acl) average Return on total assets (ROA) is 2.65%. which is little better high BEACON Pharma. They also need to utilize its asset better. their standard deviation is 0.041899134 and coefficient variation is 158.0801133.

3.10.6: ACME Laboratories Ltd: Table-10 and Column-10 show that ACME Laboratories Ltd (ACMR) average Return on total assets (ROA) is 4.21%. which is not better ROA. they need

©Daffodil International University

to provide lower cost with better efficiency and productivity and high asset utilization**.** Their standard deviation is 0.003795612 and coefficient variation is 9.015704278.

3.10.7: Orion Pharma Ltd: Table-10 and Column-10 show that The Average Return on total assets (ROA) of Orion Pharma Ltd (ORIO) is 2.87% which is very low. Their ROA can increasing net income and also decreasing assets. Their standard deviation is 0.002592778 and coefficient variation is 9.026208642.

3.10.8: Ibn Sina Pharmaceutical: Table-10 and Column-10 show that The average Return on total assets (ROA) of ibn sina pharmaceutical   is 13.24%. which is better than ORIO,ACMR,ACI, BEACON AND Beximco BUT it's less than Square and Renata . to create a better ROA they need to more utilize its asset. their standard deviation is 0.035374037 and coefficient variation is 26.72259648.

3.11: Return on equity (ROE):

Return on equity (ROE): Return on equity (ROE) is a measure of financial performance calculated by dividing net income by shareholders' equity. Because shareholders' equity is equal to a company's assets minus its debt, ROE is considered the return on net assets. ROE is considered a measure of how effectively management is using a company's assets to create profits. Return on equity (ROE) measures how effectively management is using a company's assets to create profits. Whether an ROE is considered satisfactory will depend on what is normal for the industry or company peers.

41

©Daffodil International University

Company	2019	2018	2017	2016	mean	SD	CV
Square Pharmaceuticals Limited	19.25%	20.75%	22.07%	22.86%	21.23%	0.015825	7.453373
Renata Pharmaceutical Company	2.24%	20.08%	20.73%	41.69%	21.19%	0.161327	76.15172
Beximco Pharmaceuticals Ltd	10.25%	9.36%	8.88%	12.78%	10.32%	0.01737	16.83563
Beacon Pharmaceuticals Limited	3.69%	4.20%	3.48%	2.03%	3.35%	0.009305	27.77563
Advanced Chemical Industries	-7.56%	4.66%	10.07%	31.87%	9.76%	0.164817	168.87
ACME Laboratories Ltd	7.92%	8.17%	8.33%	6.79%	7.80%	0.006958	8.917231
Orion Pharma Ltd	5.01%	4.70%	4.78%	5.30%	4.95%	0.002692	5.441996
Ibn Sina Pharmaceutical	22.79%	36.95%	21.25%	23.46%	26.11%	0.07284	27.8947

Table-11: Return on equity (ROE)
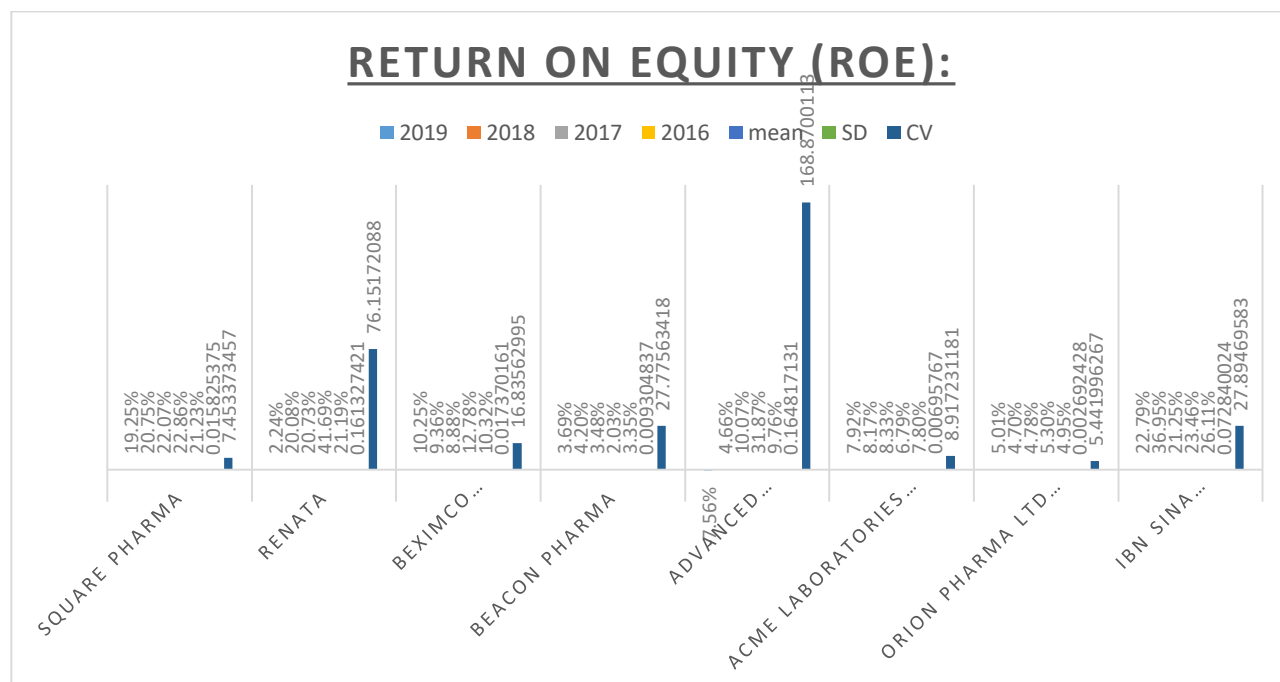
Column-11: Return on equity (ROE):

3.11.1: Square Pharmaceuticals Limited: Calculated ROE of 21.23 percent indicates that during average 2016 to 2019 earned 21.13 cents on each $1.00 of common stock equity. Their standard deviation is 0.015825375 and coefficient variation is 7.453373457.

3.11.2: Renata Pharmaceutical Company: Table-11 and Column-11 show that Their average Return on equity (ROE) is 21.19%. That's mean investor get 21.19 of Return equity. standard deviation is 0.161327421 and coefficient variation is 76.15172088.

3.11.3: Beximco Pharmaceuticals Ltd: Table-11 and Column-11 show that Beximco Pharmaceuticals average Return on equity (ROE) is 10.32% which is lower than Square pharmaceuticals And Renata pharmaceutical company that means they cannot earning more. their standard deviation is 0.017370161and coefficient variation is 16.83562995.

3.11.4: Beacon Pharmaceuticals Limited: Table-11 and Column-11 show that The average Return on equity (ROE) of BEACON Pharma Is 3.35% which is very low. they need to utilise their profit . standard deviation is 0.009304837 and coefficient variation is 27.77563418.

3.11.5: Advanced Chemical Industries: Table-11 and Column-11 show that The average Return on equity (ROE of Advanced Chemical(acl)) is 9.76%. but 2019 their net income in -742 ,which is so bad for any company that's means in 2019 they loss in 742 that's why in 2019 their Roe is -7.65% . company stay in loss. and their standard deviation is 0.164817131 and coefficient variation is 168.8700113.

3.11.6: ACME Laboratories Ltd: Table-11 and Column-11 show that The average Return on equity (ROE) is 7.80% of ACME Laboratories Ltd (ACMR which is batter than BEACON Pharma But lower than Square pharmaceuticals And Renata pharmaceutical company . their standard deviation is 0.00695767 and coefficient variation is 8.917231181.

3.11.7: Orion Pharma Ltd: Table-11 and Column-11 show that Orion Pharma Ltd (ORIO) average Return on equity (ROE) is 4.95% that means they cannot earn standard equity. Their standard deviation is 0.002692428 and coefficient variation is 5.441996267.

3.11.8: Ibn Sina Pharmaceutical: Table-11 and Column-11 show that The average Return on equity (ROE) of ibn sina pharmaceutical : is 26.11% which is the height ROR of previous pharmaceutical company. They utilizing their profit .their standard deviation is 0.072840024 and coefficient variation is 27.89469583.

3.12: Net profit margin

Net profit margin: The net profit margin is equal to how much net income or profit is generated as a percentage of revenue. Net profit margin is the ratio of net profits to revenues for a company or business segment. Net profit margin is typically expressed as a percentage but can also be represented in decimal form. The net profit margin illustrates how much of each dollar in revenue collected by a company translates into profit.Net profit margin is equal to how much net income is generated as a percentage of revenue.Net profit margin helps investors assess if a company's management is generating enough profit from its sales and whether operating costs and overhead costs are being contained.Net profit margin is one of the most important indicators of a company's financial health.

Company	2019	2018	2017	2016	mean	SD	CV
Square Pharmaceuticals Limited	29.36%	29.86%	29.68%	28.25%	29.29%	0.007219	2.464918
Renata Pharmaceutical Company	16.46%	16.30%	16.06%	15.36%	16.05%	0.004854	3.024943
Beximco Pharmaceuticals Ltd	13.29%	14.31%	14.35%	14.71%	14.17%	0.006104	4.309474
Beacon Pharmaceuticals Limited	2.53%	3.35%	3.52%	2.44%	2.96%	0.005541	18.71878
Advanced Chemical Industries	-1.17%	0.92%	2.23%	9.42%	2.85%	0.045984	161.3458
ACME Laboratories Ltd	8.82%	9.63%	10.29%	8.70%	9.36%	0.00745	7.959222
Orion Pharma Ltd	10.07%	7.69%	8.32%	8.80%	8.72%	0.010083	11.56268
Ibn Sina Pharmaceutical	6.38%	9.70%	5.83%	5.81%	6.93%	0.018655	26.91859

Table-12: Net profit margin
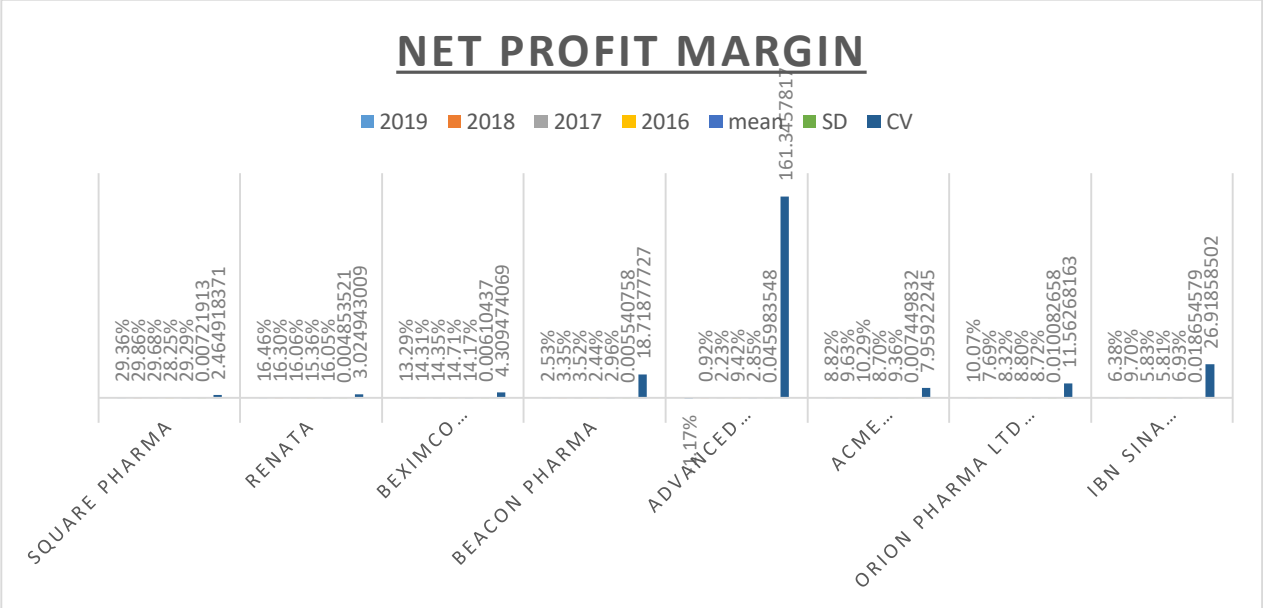
Column-12: Net profit margin

45

3.12.1: Square Pharmaceuticals Limited: Table-12 and Column-12 show that Square pharmaceuticals average Net profit margin is 29.29%The net profit margin of Square shows an upward trend, this is because of increasing operating and non-operating incomes. and their standard deviation is 0.00721913 and also coefficient variation is 2.464918371.

3.12.2: Renata pharmaceutical company: Table-12 and Column-12 show that Renata pharmaceutical company have average Net profit margin is 16.05% In case of Renata pharmaceutical company , net profit margin is not fluctuating though. But it is not A standard net profit margin Their standard deviation is 0.004853521 and coefficient variation is 3.024943009.

3.12.3: Beximco Pharmaceuticals Ltd: Table-12 and Column-12 show that In case of Beximco, net profit margin is not fluctuating though it is higher than that of Square. That's why its standard deviation is greater than that of Square. Their average Net profit margin is 14.17%. standard deviation is 0.00610437 and coefficient variation is 4.309474069.

3.12.4: Beacon Pharmaceuticals Limited: Table-12 and Column-12 show that In case of BEACON Pharma net profit margin is fluctuating though Their average Net profit margin is 2.96% and this margin is low. Their standard deviation is 0.005540758 and coefficient variation is 18.71877727.

3.12.5: Advanced Chemical Industries: Table-12 and Column-12 show that Advanced Chemical(acl) have average Net profit margin is 2.85% which is low their standard deviation is 0.045983548 and coefficient variation is 161.3457817.

3.12.6: ACME Laboratories Ltd: Table-12 and Column-12 show that ACME Laboratories Ltd (ACMR) have average Net profit margin is 9.36%. which is not a stander net profit margin. Their standard deviation is 0.007449832 and coefficient variation is 7.95922245.

3.12.7: Orion Pharma Ltd: Table-12 and Column-12 show tha Orion Pharma Ltd (ORIO) have average Net profit margin is 8.72%   standard deviation is 0.010082658 and coefficient variation is 11.56268163.

3.12.8: Ibn Sina Pharmaceutical: Table-12 and Column-12 show tha Ibn sina pharmaceutical have average Net profit margin is 6.93%. but A standard net profit margin varies from 4% to 6%. So comparison to all pharmaceutical company ibn sina pharmaceutical have a good position in net profit margin. their standard deviation is   0.018654579 and coefficient variation is 26.91858502.

Chapter-Four

4.0: Findings:

After analyzing the Comparison of profitability of the selected Pharmaceutical Companies of Bangladesh I have observed following findings.

I. All the selected Pharmaceutical Companies of Bangladesh have average positive profitability.

II. But in 2019 Advanced Chemical Industries their profitability was negative

III. Comparison of selective Pharmaceutical Companies of Bangladesh,

IV. Square Pharmaceuticals Limited have a go position in Bangladesh

V. Renata Pharmaceutical Company and Beximco Pharmaceuticals Ltd is also make a good position in Pharmaceuticals Industries of Bangladesh.

VI. Beacon Pharmaceuticals Limited and Advanced Chemical Industries minimum average profitability

4.0: Recommendation:

In this thesis report all selected Pharmaceutical Companies of Bangladesh. As a student from my little knowledge it's quite hard to give proper recommendations for those commercial banks. However, some recommendations are given below:

I. A higher level of innovation management, coupled with strategic manufacturing and aggressive marketing will determine Bangladesh Pharma Industry's future

II. Make public all results, including negative or unfavorable ones, in a timely fashion while avoiding redundancy.

III. Improve understanding and disclosure of authors' potential conflicts of interest.

IV. Higher Import leads to Higher Foreign Exchange Risk

V. Improve Research & Development Setup

VI. Players need to proactively manage their brand portfolio

4.2: Conclusion: This analysis attempts to show a comparative profitability analysis between eight leading pharmaceutical companies and tries to find the way out to identify the areas where the profitability can improve. From the discussion, it can be concluded that the profitability performance of pharmaceutical companies is not so bad but they need to take some desertion to more improvement which discussed here. The Pharmaceuticals should regularly make use of ratio analysis and measures should be taken to improve undesirable ratios at least to the point of industry's average.

REFEREBCES

1/file:///C:/Users/USER/Desktop/Gitman,%20Lawrence%20J._%20Zutter,%20Chad%20J.%20-%20Principles%20of%20Managerial%20Finance-Pearson%20(2014).pdf

2/ https://www.squarepharma.com.bd/investors.php

3/ https://renata-ltd.com/

4/ https://beximcopharma.com/investor.html

5/ https://www.beaconpharma.com.bd/investors-diary/SS

6/ https://www.aci-bd.com/financial-calendar/

7/ http://www.acmeglobal.com/investors/

8/ http://www.opsonin-pharma.com/

9/ http://www.ibnsinapharma.com/investors/regulatory-news/

10/ https://www.investing.com/stock-screener/?sp=country::5|sector::a|industry::a|equityType::a%3Ceq_market_cap;1

Plagiarism Result and details:

171-11-1088

ORIGINALITY REPORT

30%	28%	9%	23%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	en.wikipedia.org Internet Source	4%
2	Submitted to Daffodil International University Student Paper	4%
3	www.investopedia.com Internet Source	3%
4	Md. Shahidul Islam, Muhammad Saifuddin Khan. "The Determinants of Profitability of the Pharmaceutical Industry of Bangladesh: A Random Effect Analysis", International Journal of Financial Research, 2019 Publication	2%
5	www.studymode.com Internet Source	2%
6	www.coursehero.com Internet Source	1%
7	www.slideshare.net Internet Source	1%

Submitted to University of Sussex

| 8 | Student Paper | 1% |

| 9 | **Submitted to Grand Canyon University**
Student Paper | 1% |

| 10 | **Submitted to Southern New Hampshire University - Continuing Education**
Student Paper | 1% |

| 11 | **Submitted to Southampton Solent University**
Student Paper | 1% |

| 12 | **www.thebalancesmb.com**
Internet Source | 1% |

| 13 | **Submitted to University of New York in Tirana**
Student Paper | 1% |

| 14 | **epdf.pub**
Internet Source | 1% |

| 15 | **ir.lib.seu.ac.lk**
Internet Source | 1% |

| 16 | **dspace.daffodilvarsity.edu.bd:8080**
Internet Source | <1% |

| 17 | **Submitted to University of Wales Institute, Cardiff**
Student Paper | <1% |

| 18 | **www.iiste.org**
Internet Source | <1% |

19	creativecommons.org Internet Source	<1%
20	www.publishingindia.com Internet Source	<1%
21	Submitted to Colorado Technical University Online Student Paper	<1%
22	Submitted to School of Business and Management ITB Student Paper	<1%
23	Submitted to Colorado State University, Global Campus Student Paper	<1%
24	www.researchgate.net Internet Source	<1%
25	etheses.saurashtrauniversity.edu Internet Source	<1%
26	es.scribd.com Internet Source	<1%
27	Submitted to Australian Catholic University Student Paper	<1%
28	Submitted to London School of Commerce Student Paper	<1%
29	www.skubana.com	

55

©Daffodil International University

41	Submitted to University of Maryland, University College Student Paper	<1%
42	Submitted to University of South Australia Student Paper	<1%
43	archive.org Internet Source	<1%
44	Submitted to North South University Student Paper	<1%
45	docshare.tips Internet Source	<1%
46	Submitted to The University of Manchester Student Paper	<1%
47	Submitted to birkenheadsixthformcollege Student Paper	<1%
48	Submitted to Segi University College Student Paper	<1%
49	Submitted to nsbm Student Paper	<1%
50	scholar.mzumbe.ac.tz Internet Source	<1%
51	hdl.handle.net Internet Source	<1%

©Daffodil International University

52	www.shopify.com Internet Source	<1%
53	codemint.net Internet Source	<1%

Exclude quotes	On	Exclude matches	< 10 words
Exclude bibliography	On		

58