Report On

Prospect of Pharmaceutical Industry: A comparative analysis.

By

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An internship report submitted to the BRAC Business School in partial fulfillment of the
requirements for the degree of
Bachelors in Business Administration.

BRAC Business School

Brac University
December, 2020

Declaration

It is hereby declared that

1. The internship report submitted is my/our own original work while completing degree at Brac University.

2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.

3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.

4. I/We have acknowledged all main sources of help.

Student's Full Name & Signature:

_____
Sumaiyah Rafiq
16304060

Supervisor's Full Name & Signature:

_____
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Assistant Professor
BRAC Business School

Letter of Transmittal

Suman Paul Chowdhury, Phd

Assistant Professor

BRAC Business School

BRAC University

66 Mohakhali, Dhaka-1212

Subject: Internship Report on Prospect of Pharmaceutical Industry in the upcoming Economy of Bangladesh,

Dear Sir,

This is my pleasure to display my Accounts Intern report on 'Prospect of Pharmaceutical Industry in the upcoming Economy'. I have been selected in IBN SINA Pharmaceutical for this Spring 2020 semester through a phone interview and later on an informal interview procedure at their main branch located in Tanin center3, Mirpur Road 1207, under your supervision. The advice and recommendations you made helped me to successfully complete my report work under your supervision. I thank my Creator for supporting me through the process and a sincerest thanks to all my on-site supervisors and to you for the constant support provided to me in completing the task of this report. I pray and believe that the report will meet your expectations of me.

Sincerely yours,

_____

Sumaiyah Rafiq

16304060

BRAC Business School

BRAC University

Date: Month Day, Year

Non-Disclosure Agreement

This agreement is made and entered into by and between IBN SINA Pharmaceutical and

Sumaiyah Rafiq at BRAC University

Acknowledgement

In the name of Allah, I would like to begin by sending my gratitude towards HIM for helping me to finish this report on time and with proficiency. I have worked for this report since August26, 2020 for 3 months period as intern for IBN SINA Pharmaceutical. I have successfully gathered knowledge during this process and learned a lot from all my on-site supervisors with whom I have worked in this 3 months period.

I would like to send my heart-felt gratitude to my BRAC supervisor Suman Paul Chowdhury for helping me throughout this process and long journey towards my completion of the report work hence my undergrad journey with BRAC University.

I have aimed to finish the report with the necessary data provided by my on-site supervisor's interview, Suman Sir's feedback and the annual report of the company provided to me.

A special thanks to Md.Jasim Uddin, FCA and Md Ramzan Ali (assistant manager) my on-site supervisor of the company, for their guidance and knowledge. They have helped me through the internship period and has given constant support in completing my Intern report.

I would like to quote a verse from holy scripture- Actions are judged by intensions. I believe this whole-heartedly and expect that my work has been a success to me, my University and the company I have worked for.

Executive Summary

The report has been made to measure the condition of pharmaceutical Industries potential in the upcoming economy of Bangladesh. In the research quest I have taken interviews from my onsite supervisors about the prospects of the industry in this current COVID-19 crisis situation. Moreover, annual 2018-2019 report of the company has been used to measure the performance and condition of the current situation of the company. Accounting ratios has been analyzed to come up with the conclusion of the report's topic

Keywords: Covid-19; prospect in the upcoming economy; annual report; interview.

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List of Acronyms

IPO initial public offerings

MPOs medical promotional officers

KPI key performance indicator

Trips trade related aspects if Intellectual property rights

WTO World Trade Organisation

Ldc Less-developed country

Chapter 1

Overview of Internship

1.1 Student Information: I am Sumaiyah Rafiq, ID 16304060, from Bachelors of Business Administration program. I have done my Major in Accounting and Minor in Economics.

1.2 Internship Information

1.2.1 Company: The internship was 3 months long starting from August 26, 2020. I did my interne in The IBN SINA Pharmaceutical Industry Limited. I was assigned to work in the accounts department and had the opportunity to work in costing, receivables, payroll and tax-vat. The office was located in Tanin Centre, 3 Asad Gate, Mirpur Road, Mohammadpur, Dhaka.

1.2.2 Company Supervisor's info: My internship company supervisor is Md.Jasim Uddin FCA who is the Chief Financial Officer (CFO) cfo@ibnsinapharma.com

1.2.3 Job Scope: I started my internship on August 26 and it ended on December 26 2020. During this process I was fortunate enough to work under direct supervision of Md Ramzan Ali, Assistant Manager of the Accounts department of the company. He has been a constant support &provided me with insights about the work I have been assigned. Most of my work is based on the knowledge he provided me during our informal interview sessions. He is apt and has clear knowledge about work in progress and data analysis of different companies. I am very fortunate to have worked under him and be able to use my theoretical knowledge in the practical work setup.

1.2.4 Job Description: My assign work was related to various accounts section such as (Payable, Inventory, Tax-VAT, Reporting). I had to understand the jargons of the work using

my accounting knowledge to ensure that the data inputs were accurate. I also had to coordinate my work to my supervisor and update them with my progress.

Duties and Responsibilities:

1. Accounts Payable:
    a. Party Payment Reconciliation
2. Inventory Management
    a. WIP Reconciliation
    b. Import Data organize in Excel
3. Reporting
    a. Ratio analysis
4. TAX & VAT
    a. Mushak 6.3 Entry In Excel
    b. TDS Entry In Excel
    c. VDS Entry In Excel
    d. Prepared VAT & TAX Payment Voucher
    e. VAT & TAX Challan Reconciliation
    f. TDS & VDS Challan shorting

1.3 Internship Outcomes:

During the period of internship, I have done beginner level data entry, where I helped to put raw data into 2 types of system software of the company. As days passed, I have been assigned with complicated tasks like helping to make journal entries and clearing the balance. These tasks helped me a lot to understand the accounting work that I have learned theoretically earlier. I also learned how to work in oracle as a beginner. Whatever problem I faced, was effectively addressed and corrected for me by the assigned supervisors.

Chapter2 Organization Part: Overview, Operations and a Strategic Audit.

2.1Introduction:

Within the last 37 years of operation (since its establishment in 1983), IBN SINA has made a significant standing as a listed company, which now houses more than 3,000 employees and generates Taka 531crore in sales as per the Annual Revenue of 2019. Their production is

divided into 2 main categories- the Pharmaceutical Manufacturing Plant and the Natural Medicine Manufacturing Plant. Well-equipped Quality Assurance (QA) and Quality Control (QC) ensures that the products don't have any discrepancies. IBN SINA owes its fast growth and success as much to an elaborate corporate structure and consultancy as to its product quality.

IBN SINA takes consultancy from The Dun & Bradstreet Corporation for data analysis and business insights. D&B Hoovers also provides sales leads and sales intelligence data for the company.

IBN SINA manufactures a wide range of pharmaceutical finished goods such as- Tablets, Capsules, Liquids, Pediatric Drops, Powder for suspension, Cream, Ointments, Gel &Injections etc. - collectively known as APIs, Active Pharmaceutical Ingredients. Their Pharmaceutical Manufacturing Plant produces about 400 products and their Natural Medicine Manufacturing Plant produces about 100 products, making an array of about 500 above manufactured products in total. Their issued shares surpass about 22,00,000+ in the Stock market. They have been listed in the DSE since 1990 and in the CSE since 1996. Their market category is 'A' and their electronic share is 'Y', with a face value of Taka 10 (ten), as of the fiscal year 2018-2019. As of 2018-2019, their authorized capital amounts to Taka 500,000,000 and the number of securities share surpass approximately 31,000,000. Their first declared dividend was in 1993 after IPO.

IBN SINA Pharma is one of the top 20 Pharmaceutical in Bangladesh and is ever expanding its operations with its continuous exports to 10 countries. The certified company is also expanding its operations across the country and aims to "serve the mankind in an ethical manner that is both socially and ecologically responsible in a sustainable manner".

2.2 Overview of Company:

IBN SINA Pharma is a public limited company that signed a Memorandum and Articles of Association by the sponsors in 19 Dec 1983. It received its certificate of Incorporation as Private Limited Company in 22 Dec 1983. They started their commercial production on May 1996. Since then, their expansion and growth has been ever growing. On 1989, within only 6 years of its operations, it was converted into Public Limited Company. Subscription opened on IPO (initial public offerings) and closed within July to September of the same year. Their accounting and audit year is July To June. All analysis for the company in this report is therefore done based on the 2018-2019 fiscal year.

2.3 Management Practices: Product management department, PMD, is an organizational lifecycle function that deals with planning, forecasting, production and marketing of products at all stages of its lifecycle. PMD professionals play a crucial role in enriching the product line of the company by launching new and innovative products. They play a significant role for setting a product vision, specifying a product strategy and developing a roadmap meeting both company goals and customers demand. Their fundamental target is to create a robustproduct pipeline consisting of established brands in growing therapeutic segments for steady business generation and growth of the organization. PMD team captures new ideas and suggestions as part of their product database. This helps them to come up with timely and innovative product development, marketing strategies and promotional activities. In a nutshell the diverseness of PMD team helps to maximize sales revenues, market share and profit margins of the company.

2.4 Marketing Practices:

The Pharmaceutical industry follows a unique marketing strategy, albeit a tricky one, that is concentrated around and dependent upon trained proficient MPOs (medical promotional officers) who can ensure the achievement of sales goals. In this somewhat B2B marketing practice, designated MPOs directly approach doctors with their product's promotional activities. They inform doctors about their products' features, uses and side-effects if any. If a doctor is convinced of the importance of the product he/she will prescribe it to the patients. Next time a patient visits the chemist, if prescribed, that specific product will be demanded of the chemists. 90% of the times, patients put in more effort to buy the exact medicine as prescribed by the doctor, shying away from alternative medicines often offered by the chemist.

IBN SINA Pharmaceuticals has about 2000 MPOs working under their wing, all of whom act as a small yet significant subunit integral to their Taka 600,000,000 additional revenue within the 2018-2019 fiscal year.

2.5Financial Performance and Accounting Practices

Key performance indicators (KPIs) for the Pharmaceutical industry measures the performance, cost, quality and efficiency of every aspect of a Pharmaceutical Company, ranging from research to sales and including distribution operations. The fundamental KPIs that are used to measure this company's performance are as follows:

1. Takt Time (The ideal time taken to produce a single unit based on the total work time and consumer demand);[KPI for Productivity]

2. Prescriptions Filled per Pharmacy; [KPI for Organizational Operations]

3. Number of New Drugs Developed (over a given period); [KPI for Volume]

4. Non-Prescription Sales (as a Percentage of Total Sales); [KPI for Revenue]

The general accounting principles, which are undertaken by the Pharmacy Benefit Management (PBMs) of a Pharmaceuticals company, are those adhering to GAAP (Generally Accepted Accounting Principles) and those that better suits the specific model of that individual Pharmaceuticals Company.

2.6 Operations Management and Information Systems: IBN SINA has introduced an ERP system where Procurement, Inventory, Production, Costing, HR, Admin, Accounts, Marketing, Sales, Survey and Distribution module systems are incorporated. The IT department is evolving and using the system efficiently to address timely data entry and database maintenance thus ensuring an effective working process that aims to meet and or complement the company goals. Individual departments are now being able to keep track of their data that can later be used to generate reports and assessment of the processes. The system is also being supervised by an external management of the company to make it more modernized.

Chapter 3Prospects of Pharmaceuticals Industry: a comparative analysis

3.1Prospects of Pharmaceuticals Industry in the upcoming economy of Bangladesh

According to experts, the pharmaceutical industry in Bangladesh is a miracle for such an underdeveloped country. This industry ranks right after the ready-made garments sector, as the second most significant government exchequer. Filled with white-collar experts and professional talents, working round the clock, this industry is ever expanding and now has exports ranging across some 77 countries. According to Banglapedia, there is about 252 licensed pharmaceutical companies in the country, including both national and MNC owned enterprises. 75% of the national drug needs are met by the national enterprises, even though the top pharmaceutical positions are dominated by 4 MNC owned enterprises – namely *Sanofi*, *Novo Nordisk*, *Novartis* and *GSK [GlaxoSmithKline]*. This report endeavors to explore the prospects of the Pharmaceuticals Industry in the economy of Bangladesh in the years to come.

3.1.1 History of pharma:

According to the journal 'Emergence of Pharmaceutical science and industry', the world's pharmaceutical industry developed from two sources:the apothecaries (that produced wholesale drugs like morphine, quinine and strychnine) and lab-chemical and dye companies (that established research labs and discovered medical applications of their products around the 1840s). At the end of 19th century these two types of industry merged and pharmacology became a field of scientific study. The industry emerged as a field of scientific knowledge and expertise, testing the usefulness of synthetic drugs on pathological diseases. Pharmaceutical firms in Germany, the U.S. and England made cooperative relations to create academic labs to exchange research knowledge and test the effectiveness of dyes, immune antibodies and psychologically active agents that would fight disease-causing microbes.

In the early 19th century, traditional plant-based medications were in use that gave rise to present day treatments like Ayurveda as we know it.In 1906 Paul Ehrlich used more than a decade of research on *'the concept that synthetic chemicals could selectively kill or immobilize parasites, bacteria, and other invasive disease-causing microbes'* to eventually design and drive a massive industrial research program on synthetic drugs, that has continued to the present day. The combination of both traditional plant-based remedies and synthetic drug trials built the backbone of the Pharmaceuticals industry as we now know. Many regulatory drug ordinances came into place over the years making production, trial& testing of drugs a basic part of the industry. Local Regulatory boards and the World Health

Organization made rules to establish a tech-based industry that serves the global need for medication.

The Pharmaceutical industry was grossly neglected during the Pakistan regime, before Bangladesh gained her independence. After the 1971 liberation war, Bangladesh inherited a broken Pharmaceuticals infrastructure. The post-war government couldn't increase the budget for the Pharmaceuticals sector and the development in this sector was consequently poor. All the prescription drugs produced required imports of raw materials; the increasing import expenditures initially put a dire foreign exchange strain on the post-war economy. Since the Drug Control Ordinance has been enacted in 1982, the expansion of this high-tech sector has accelerated towards self-sufficiency, meeting a staggering 98% of the demand in the domestic economy (as of the fiscal year 2018-2019). Pharmacists and their intellectual contribution has been tremendous and – as a result – the industry now requires much less foreign currency investment in importing pharmaceutical raw materials and a few lifesaving finished drugs which are not produced in the country yet. The efficient use of the imported raw materials, together with expert help, has brought the industry to its current position. About 19,830 brands of medicines under 1081 generics are being manufactured in Bangladesh in different dosage forms. The prospect of this industry is tremendous and the industry is still on the verge of expansion and growth.

3.1.2 Regulatory Bodies:

1. *Directorate General of Drug Administration* under *the Ministry of Health and Family-Welfare* is Bangladesh's national drug regulatory authority. The DGDA regulates all activities related to import and export of raw materials, packaging materials, production, sale, pricing, licensing, registration, distribution and administration of all kinds of medicine including those of Ayurveda, Unani, Herbal and Homeopathy system, according to Wikipedia

2. Under the *Pharmacy Ordinance Act of 1976*, the PCB (*Pharmacy Council of Bangladesh*) was established. This organization aims to control the pharmacy practices in Bangladesh. The *Bangladesh Pharmaceuticals Society* has affiliations with the *International Pharmaceutical Federation* and the *Commonwealth Pharmaceutical Association*.

3. *The National Drug Policy (2005)* states that the *World Health Organization*'s current *Good Manufacturing Practices* (GMP) should be strictly followed in pharmaceuticals production and that all manufacturing units will be regularly inspected by the DDA. Other key regulation features are restrictions on imported drugs, a ban on the local production of around 1,700 drugs that are considered non-essential or harmful and strict price controls on some 117 principal medicines, according to Wikipedia.

3.1.3 Prospects

The rate of expansion of this sector is so huge that Bangladesh is on the fast-track to becoming a pharmaceutically independent country – only 6% of the domestic pharmaceutical demand needs to be met by imports, which includes novel medicines like hormones, cancer drugs, vaccines for viral diseases etc. Anti-infectives are the largest therapeutic class of locally produced medicinal products in Bangladesh, distantly followed by antacids and anti-ulcerants.

The *Drug Act of 1940* acts as the base for drug legislations in the country. Unani, Ayurveda, Homeopathic and Biochemical medicines are included under this act as well. Many citizens from the lower economic groups and ethnic groups rely on these categories of medicine for ailment, and hence the act is quite appropriate in ensuring medi-care even for the grass-root rural and underprivileged people. This sector of Pharmaceuticals alone produces medicine worth Taka 2 billion. A 'medications for all' approach means that this industry will be expanding even further in the near future.

In recent times, the pharmaceutical industry has also made a significant progress in increasing the production of the base chemicals required for production. Through inter-enterprise collaborations and joint ventures, most of the companies are now invested in bulk drug production. As Banglapedia puts it: "At least 21 companies are producing about 41 active pharmaceutical ingredients (API)". Pharmaceutical companies like *Square*, *Beximco*, *Opsonin*, *ACI Pharmaceuticals* and many others have embraced this modus operandi for more efficient production. The creation of Active Pharmaceutical Ingredient (API) is one of the most significant achievements of the pharmaceutical industry as a whole. API regulation has helped Bangladeshi Pharmaceuticals companies to avoid fatal side-effects on patients that may arise due to taking multiple drugs simultaneously. Tracing APIs of a drug is another significant prospect for the Bangladeshi Pharmaceuticals sector, since it literally influences

the drug composition itself. What this implies is that product quality of this industry will reach and may even surpass international standards soon.

The Bangladeshi pharmaceutical industry is fast-expanding and is exporting more and more to the international market. Its compliance to *Good Manufacturing Practice Standards* set by *World Health Organization* and its overall compliance to domestic quality control guidelines is helping the industry compete better in European and other international markets. Bangladesh is rapidly gaining the stance in the pharmaceutical sector to compete with, and even possibly outmaneuver, India, China and Brazil. The prospects are apparently as great as, if not bigger than, the challenges.

3.1.4 Challenges:

The advancement of this sector, however, is being impeded by a number of factors. According to the legislation of TRIPS, set by the WTO, 48 LDC's were exempted from tariffs on imports, and were allowed to export if the drug was not under any product-patent protection. Bangladesh, being one of the LDC's mentioned above, benefits from patent-free production rights domestically. However, this ruling will expire on 2033. This means that Bangladesh will be bound to include twenty years product patent protection laws for pharmaceutical products in their domestic legislation. The obstacles that lay ahead are therefore critical, and the governing bodies of the pharmaceutical institutions must take timely actions, complementing the new ruling, in order to maintain their growth in the future.

There are increasing complications in raw material procurement as well. Bangladesh produces finished pharmaceutical products and imports most of the raw materials, which are otherwise known as API's. With the corona crisis crippling the world, there has been a significant shortage of raw materials, causing the price of these materials tosky-rocket. A good number of sellers are also profiteering off of this crisis. As imports become more expensive, production costs are bound to increase drastically as well.

The Directorate General of Drug Administration (DGDA), on the other hand, is not being able to play a substantial role in addressing the upcoming challenges. As mentioned earlier, the DGDA regulates all the activities related to the import and export of raw materials, packaging materials, production, sales, pricing and licensing. Despite being a credible

regulatory body, they haven't been able to add much value to the industry in recent years, due to a lack of manpower and effective training programs.

Due to a lack of well-equipped drug testing laboratory, the DGDA cannot monitor the quality of drugs (manufactured by different pharmaceutical companies in Bangladesh) as stringently as necessary. As a result, foreign buyers and regulatory authorities sometimes raise questions about the quality of the drug. Although recently an NCL (National Control Laboratory) has been established and equipped with many modern instruments, there are very few personnel who are properly trained to operate these. The problem persists.

3.2 Comparative analysis of the IBN SINA's market position:

In this section we are going to explore the current position of IBN SINA with respect to its rival companies using parameters of the liquidity, solvency, activity and performance ratios. In doing so we can make a simple conclusion about the industry and the position of the companies. Here, the companies are selected on the basis of size of the market share, extent of export, market position and regulatory compliance. The analogy is done based on secondary analysis of quantitative data. The analysis will also help the company to document significant events in their financial statements that have a major influence on a change in trends.

The aim of this analogy is to create a refined understanding of the financial position of IBN SINA in the market. It will also help us to find the potential of the market as well.

Analysis:

LIQUIDITY

It is a financial metrics that shows a debtor's ability to pay short-term obligations without raising any external capital. Simply putting, it refers to the ease of converting assets into cash quickly and cheaply without affecting its market price.

Liquidity can be analyzed in two ways:

1. Internal- It involves using multiple accounting periods that are reported using the same accounting methods. This helps analysts to compare changes over the accounting periods and thus keep track of changes in the business. In general, a higher liquidity ratio shows a company is more liquid and has better coverage of outstanding debts.

2. External- It involves comparing the liquidity ratios of one company to another or an entire industry. This information is useful to compare the company's strategic positioning in relation to its competitors when establishing benchmark goals.

Here, external analysis of liquidity is being carried out. The ratios that will be used are:

Current ratio: $\frac{current\ asset}{current\ liability}$

This ratio allows investors and analysts to observe how a company is maximizing its current assets to satisfy current debts and other payables. A current ratio that is in line with the industry average or slightly higher is generally considered acceptable. A current ratio that is lower than the industry average may indicate a higher risk of distress or default

The table below is the exact amount of these indicators taken from individual company's annual report as of 2018-2019:

	IBN SINA	Square	Beximco	Renata	Acme	Orion
Current Asset	964,225,217	3,829,154,4874	13,264,161,542	12,337,381,043	12,135,978,847	7,242,106,413
Current Liability	114,311,664	2,961,270,978	12,745,832,154	4,612,633,641	13,000,187,421	1,722,385,991

Now if we calculate the ratio value we get:

	IBN SINA	Square	Beximco	Renata	Acme	Orion
Current ratio	0.84	12.93	1.04	2.67	0.93	4.20

The values calculated ranges from 0.84 to 12.93. IBN SINA has the lowest value 0.84. All the values (except that of Square's) are within industry standard and indicates that the current assets available can effectively cover the short-term debts occurring for an entire year. The

reason behind Square having 12.93 ratio is due to its market size relative to the other companies rather than the common misconception of inefficient use of assets

IBN SINA having the lowest ratio of 0.84 shows that they can effectively pay off debts by 0.84 or 1time They are making efficient use of their short-term assets.

Quick ratio: $\dfrac{current\ asset - inventory}{current\ liability}$

|	IBN SINA	Square	Beximco	Renata	Acme	Orion
Quick Asset	442,039,863	33,695,032,201	7,690,612,371	12,337,381,043	8,,563,594,631	6,971,519,162
Current Liability	114,311,664	2,961,270,978	12,745,832,154	4,612,633,641	13,000,187,421	1,722,385,991

This ratio measures the ability of a company to pay its debts without needing to sell its inventory (the least liquid asset)or get additional financing. The higher the ratio result, the better a company's liquidity and financial health and vice-versa. Here,Liquid assets are those that can be quickly converted into cash with minimal impact on the price received in the open market, while current liabilities are a company's debts or obligations that are due to be paid to creditors within one year.

Quick ratio	0.39	11.38	0.60	2.67	0.66	4.05

A result of 1 is considered to be the normal quick ratio. It indicates that the company is fully equipped with exactly enough assets to be instantly liquidated to pay off its current liabilities.

The values range from 0.368 to 11.38. IBN SINA have a ratio of 0.386, indicating that it can pay off debts without depending on the realization of its stock by 0.368times.

The ratio value can be small if IBN SINA have a large amount of money as accounts receivable, and if the payment from the customer is delayed due to unavoidable circumstances, or if the payment has a due date that is a long period out, such as 120 days based on terms of sale, the company may not be able to meet its short-term liabilities.

Liquidity (Current ratio and Quick ratio for IBN SINA, Square, Beximco, Renata, Acme, Orion)
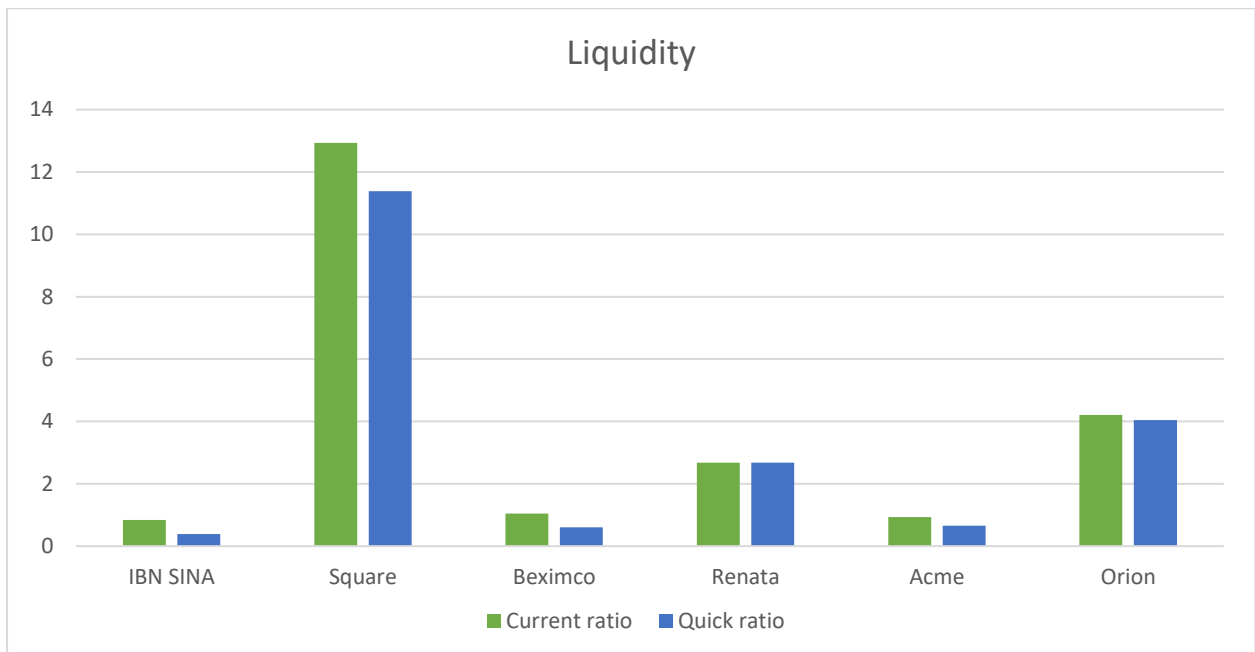
Overview: IBN SINA is the smallest company in comparison to the rest of the rivals. Therefore, the ratio value is also small. However, the ratio value falls within the range of industry standard of 1.5to3%. IBN SINA has healthy short-term liquidity and can cover its short-term debts effectively. Another point to be noted is that it still stands at a point where it can compete with its rivals or adapt quickly despite the size or the pressure created by the large companies. Its liquidity is relatively good. IBN SINA can try to cut its overhead expenses, get rid of useless assets to name a few to, to improve its overall ratio.

SOLVENCY

In business solvency refers to the ability of a company to meet its long-term fixed expenses and to accomplish long-term expansion and growth. It also shows the extent of current assets over current liability.

Solvency ratios measures a firm's actual cash flow and other non-cash expenses to assess a company's capacity to stay afloat. It measures this cash flow capacity in relation to all liabilities, rather than only short-term debt. This way, a solvency ratio assesses a company's

long-term health by evaluating its repayment ability for its long-term debt and the interest on that debt.

Debt Equity: $\frac{debt}{equity}$

	IBN SINA	Square	Beximco	Renata	Acme	Orion
Equity	1,478,296,395	60,806,054,977	29,864,323,837	18,284,763,241	18,343,391,846	12,469,096,711
Debt	2,828,471,852	4,255,617,851	19,349,768,520	5,916,473,272	17,578,207,540	19,282,890,130

The ratio is used to evaluate a company's financial leverage. It measures the portion of shareholder's equity that finances the firm's assets, in other words the utility of the borrowed money. This ratio helps investors to identify the number of returns of a borrowed fund like debt. Higher the ratio, multiple times is the return of that debt in acquiring the correspondent asset.

	IBN SINA	Square	Beximco	Renata	Acme	Orion
Debt equity	1.91	0.07	0.65	0.32	0.96	1.55

Here, the value ranges from 0.1 to 1.9 well under the standard value-2. IBN SINA has a value of 1.9. They are making very effective use of their shareholder's money and is in good position to pay off its creditors.

Capital Employed to net worth ratio: $\frac{Capital\ employed}{Net\ worth}$

	IBN SINA	Square	Beximco	Renata	Acme	Orion
Net worth	1,684,160,188	62,100,401,850	45,711,904,308	43,297,619,088	6,623,028,973	16,638,709,259
Capital Employed	1,684,160,188	62,100,401,850	36,468,260,206	19,588,602,872	22,921,411,968	17,560,504,143

This ratio measures creditor's and owner's monetary contribution against owner's capital contribution. Capital employed refers to the amount of capital or assets a company uses to generate profits and net worth is the is actual worth of a company after liabilities are taken out. This ratio therefore technically allows investors to compare how much funds are being contributed by the creditors and owners for each rupee of the owners' contribution.

Capital Employed to net worth	1	1	0.80	0.45	3.46	1.06

Here, the values range from 0.45 to 1.06 indicating the position of total equity and debt capital to total equity of the firm. All the firms in the industry has a value less than 2 indicating that share of equity capital is more than that of debt capital, hence has good solvency.

Proprietary: $\frac{Net\ worth}{Total\ Assets}$

|	IBN SINA	Square	Beximco	Renata	Acme	Orion
Total Assets	2,828,471,852	65,061,672,828	49,214,092,360	24,201,236,513	35,921,599,389	19,282,890,134
Net worth	1,684,160,188	62,100,401,850	45,711,904,308	43,297,619,088	6,623,028,973	16,638,709,259

This is a comparison between the proprietor's fund and the total assets. It helps investors to identify the proportion of total assets of a company which are financed by proprietors' funds thus helps to determine the financial strength of the company.

Proprietary	0.50	0.10	0.10	1.79	0.18	0.86

The values range from 0.18to1.7, indicating a reasonable solvency of the companies. IBN SINA's ratio values at 0.18 at the margin of the ideal range.
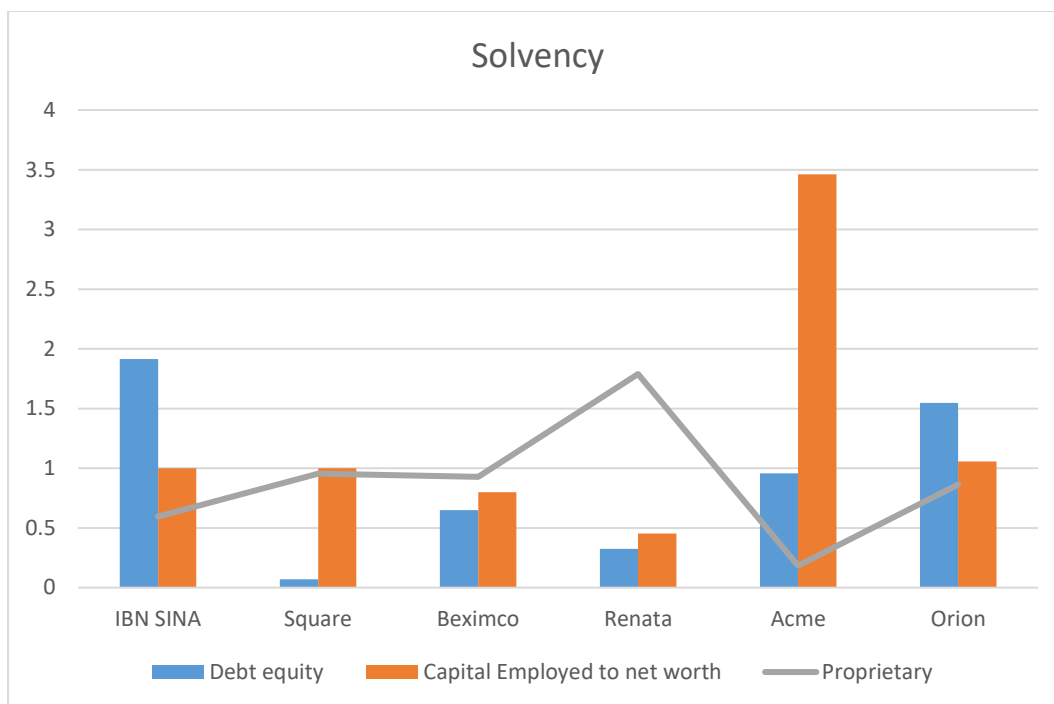
Solvency

Overview: Solvency by definition refers to the ability of a company to meet its long-term debts and other financial obligations. The above indicators help us to determine IBN SINA's position amongst the rest. All the ratio values lies within and below the industry standard, showing the healthy financial position of the company IBN SINA. Talking about the rivals taken under consideration, the values lie below the standards or elsewhere.

IBN SINA has the ability to pay off its long-term loans and interest.

ACTIVITY

This ratio measures a firm's efficiency in utilizing its Working Capital. It allows analysts to measure how efficiently a company uses its assets to generate revenues and cash. Activity ratios helps to compare two different businesses within the same sector, or to monitor a single company's fiscal health over time. The ratios and numbers can be mapped to present a forward-looking picture of a company's prospective performance.

Capital Turnover: $\dfrac{Sales}{Total\ Capital\ Employed}$

	IBN SINA	SQUARE	BEXIMCO	RENATA	ACME	ORION
Capital Employed	1,684,160,188	62,100,401,850	36,468,260,206	19,588,602,872	22,921,411,968	17,560,504,143
Sales	5,263,963,344	38,685,655,814	22,816,629,795	22,220,887,119	16,308,627,037	2,222,541,814

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The ratio measures how efficiently a company is using its working capital (current assets minus current liabilities) to support a given level of sales. It shows the relationship between the funds used to finance a company's operations and the revenues a company generates as a result.

Higher the value of the turnover the better the position of the company in the industry. It also indicates the efficiency with which capital is being utilized.

Capital turnover	3.13	0.62	0.63	1.13	0.71	0.12

The values range from 0.12 to 3.12 IBN SINA has the highest value,3.12, showing large profits from sales. Hence, a better activity.

Net working capital turnover: $\dfrac{NetSales}{WorkingCapital}$

	IBN SINA	SQUARE	BEXIMCO	RENATA	ACME	ORION
Sales	5,263,963,344	38,685,655,814	22,816,629,795	22,220,887,119	16,308,627,037	2,222,541,814
working capital	442,039,863	35,330,273,896	518,329,388	7,724,747,402	8,563,594,631	5,519,720,422

Net working capital turnover	11.91	1.09	44.02	2.88	1.90	0.40

This ratio shows the managerial efficiency of a firm to generate sales per taka of working capital. The values range from 0.4 to 44. IBN SINA has a value of 11.9, meaning that it earns 11.9 taka in sales for every taka of the working capital used. This indicates that they have fairly good managerial efficiency relative to the bigger companies in the analogy. Beximco being the largest firm in the comparison earns 44 taka against its working capital used.

Stock Turnover: $\dfrac{Cost\ of\ goods\ sold}{Average\ Inventory.}$

|						
COGS	3,102,151,141	19,711,065,988	12,196,286,770	11,065,965,907	9,882,879,199	986,119,636
Average Inventory	6,281,562,281	894,546,758	6,929,569,175	2,074,639,705	1,081,662,067	4,340,736,000

The utility of the inventory is measured here. It is calculated to see if a business has an excessive inventory in comparison to its sales level.

The financial efficiency ratio, helps to assess the amount of money tied up in inventory. The sooner inventory is converted into finished product the more efficient and effective is its inventory management

An increasing inventory turnover figure or one which is much larger than the "average" for an industry may indicate poor inventory management. It is a measure of the number of times inventory is sold or used in a time period such as a year.

Stock turnover	4.55	22.03	1.76	5.33	9.14	0.23

The value ranges from 0.2to 22. IBN SINA has a ratio of 4.55, meaning it takes 4.55 times to turn inventory to get sold. The value in comparison to the rivals is a fairly strong one which shows a good speed of inventory conversion cycle.
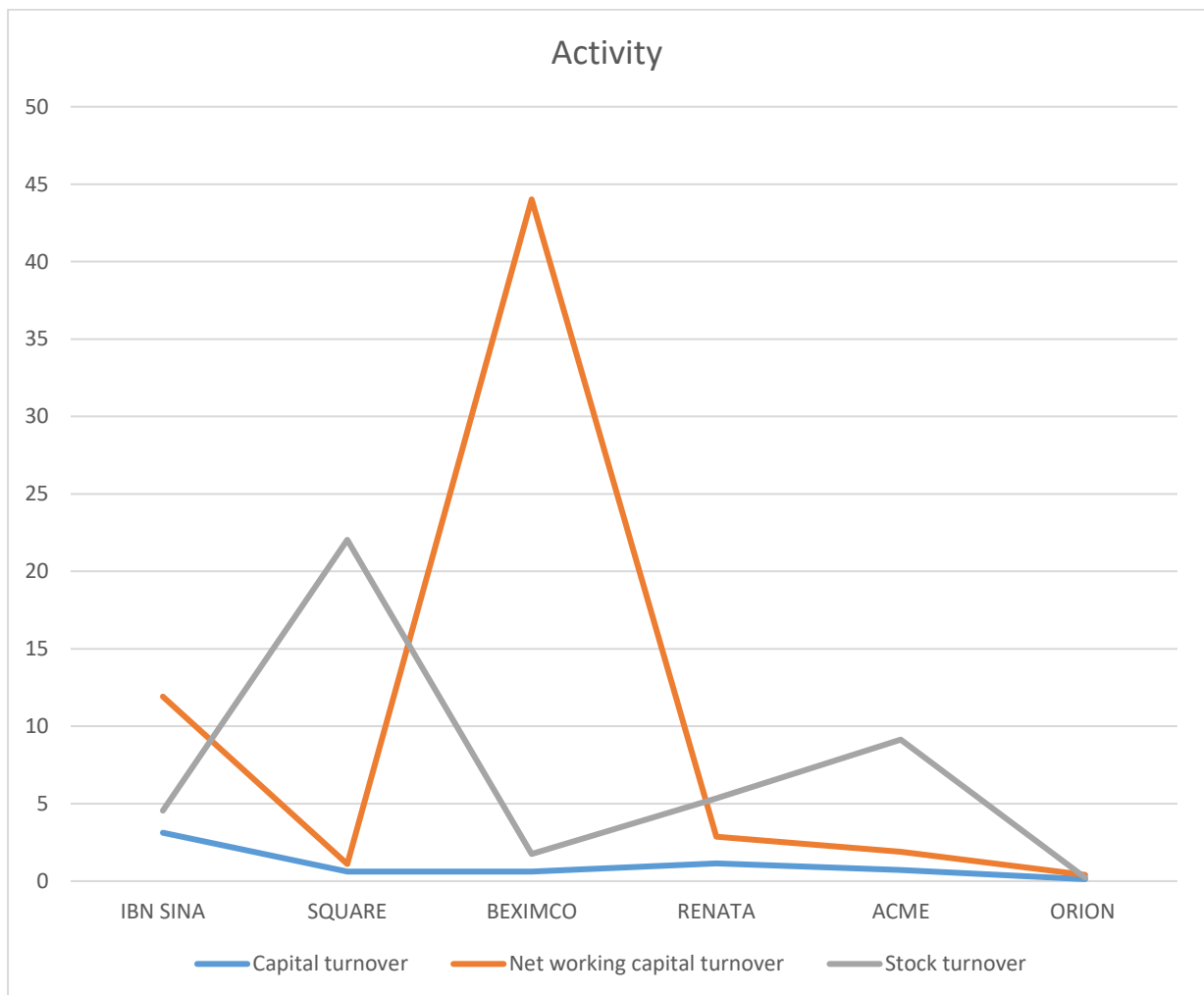
Overview: Activity measures how effectively business resources are being utilized, in other words performance of the business. Here, IBN SINA has a fast inventory cycle that leads to sales effectively, a managerial efficiency that generate sales per taka of working capital and a strong profit outcome from its capital.

PERFORMANCE

This refers to the rigorous assessment of business process management to ensure that the goals set for the company each fiscal year are achieved. It helps the business to keep track of activities and find out new solutions to problems or even generate a better more innovative way of addressing problems.

ROA: $\frac{Net\ Income}{Total\ Assets}$

Net Income	452,141,557	13,965,288,785	3,910,365,117	5,213,777,207	1,953,341,460	269,339,528
Total Assets	2,828,471,852	65,061,672,828	4,921,409,360	24,201,236,513	35,921,599,389	19,282,890,134

This profitability indicator measures the amount of earnings a firm generate from each taka of assets it controls.

	IBN SINA	Square	Beximco	Renata	Acme	Orion
ROA	0.159	0.21	0.079	0.21	0.05	0.013

Here, the value ranges from 0.07 to 0.2. All the companies have good ROA value all within the range. IBN SINA's ROA is 0.15. If compared with Square and Renata, whose ROA is 0.2, IBN SINA is at a lower position. However, that is not a fair comparison given that Square is almost 3 times the size of IBN SINA.

If compared with the other rivals the ROA generated is the highest indicating that the company is profitable.

ROA
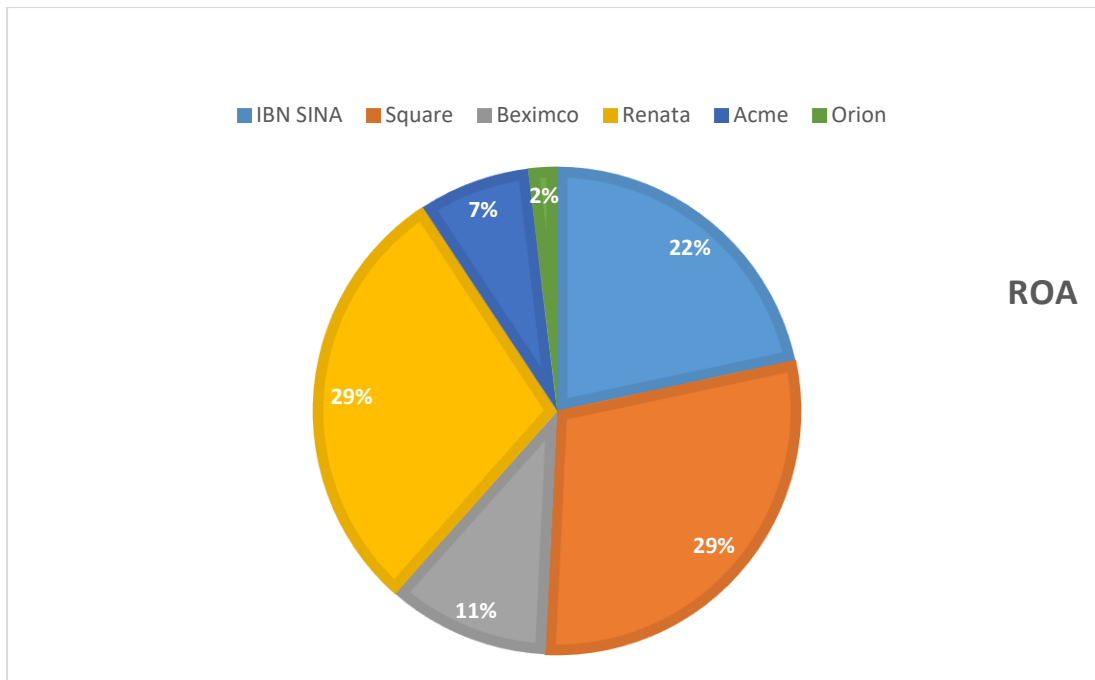
ROE: $\dfrac{Net\ Income}{Shareholder's\ Equity}$

Net Income	452,141,557	13,965,288,785	3,910,365,117	5,213,777,207	1,953,341,460	269,339,528
Equity	1478296395	60,806,054,977	29,864,323,837	18,284,763,241	18,343,391,846	12,469,096,711

It measures the earnings generated from net assets of a company.

ROE	0.305	0.229	0.130	0.285	0.106	0.0216

The value ranges from 0.02to 0.31. IBN SINA has the highest ROE value amongst the industry players. This means that their management team are effectively and efficiently managing the company assets to create revenue.

ROE
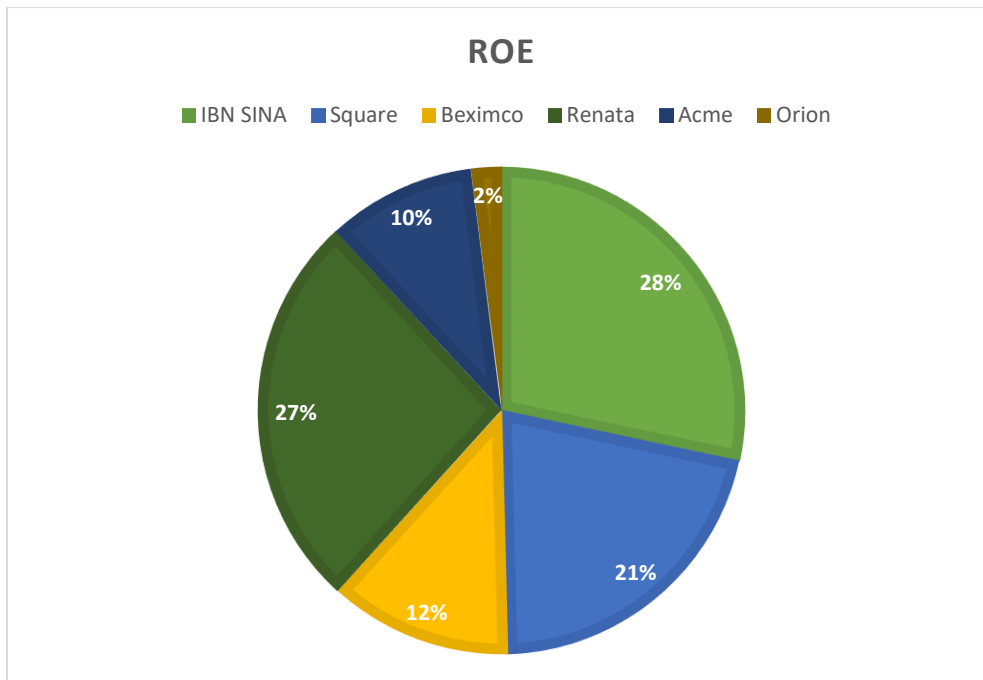
EPS: $\dfrac{Total\ Earnings}{Outstanding\ Shares}$

EPS	10.76	13.39	7.48	47.47	6.81	0.91

It shows how much a company earns for each share. Square earns 13.39 and IBN SINA earns 10.76 showing that despite being small in size(to square) their share earnings is relatively substantial.

P/E: $\dfrac{SHARE\ PRICE}{EPS}$

Share Price	264.1	264.3	22.4	1198.4	77	33.2
EPS	10.76	13.39	7.48	47.47	6.81	0.91

It measures the value of the company in the share market and to conclude whether the company is over-valued or under-valued. This help investors to make better decision.

P/EPS	24.54	19.738	2.994	25.245	11.306	36.483

The value ranges from 1198.4to 22.4. IBN SINA has a value of 264.1, meaning that the investors are paying this much amount per taka of earnings. This is a relatively large number. However, this indicates that the company might have implemented a new technology or working on a new project that will help earn higher future revenues.
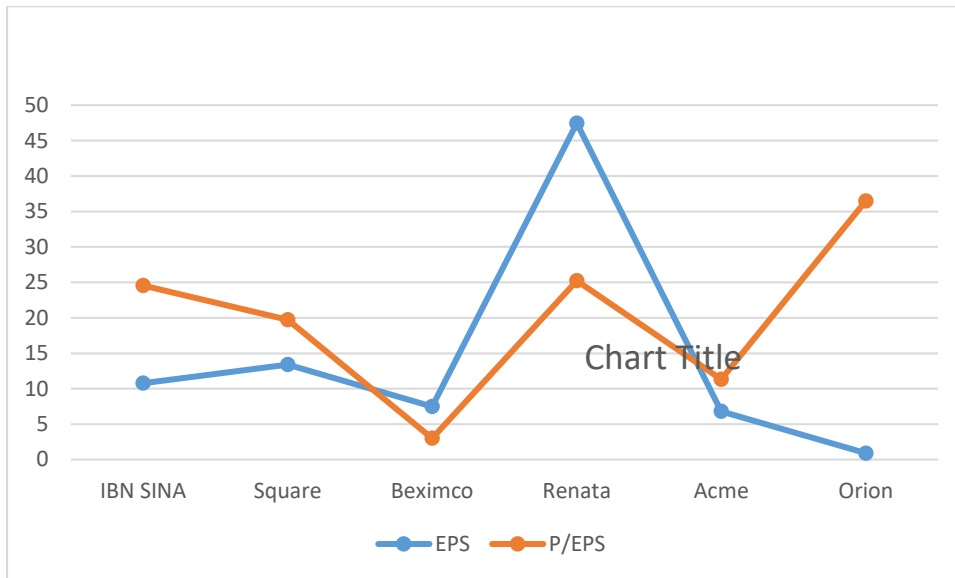
Overview: In terms of performance IBN SINA is doing relatively better than the players of the industry. All the ratios suggest that the assets are being used efficiently and the revenue generated are significantly high within their capacity or size. Their market shares are also lucrative for investors given that they have a good P/E.

Conclusion

In order to assess the financial position and managerial capacity of IBN SINA a simple ratio analysis has been conducted. Five companies- Square, Beximco, Renata, ACME, Orion has been selected based on a purposive sampling method with the criteria of convenience in annual reports availability.

The quantitative analysis helps us to show how well the company is performing in the market, its solvency, activity and overall ability to pay off the debts. All the calculations suggest that their position lies within the industry standard range. Upon further analysis it can be seen that the company is relatively smaller with few resources at its disposal during debt recovery. Yet it maintains a consistent profit and can run smoothly. They have sufficient

disposable money hence a strong liquidity to pay of its short-term debts. They have sufficient average assets to cover its long-term liabilities. Their good inventory cycle and market share price makes them a lucrative company to invest in

Appendix

Particulars		IBN SINA	SQUARE	BEXIMCO	RENATA	ACME	ORION Pharma
Sales		5,263,963,344	38,685,655,814	22,816,629,795	22,220,887,119	16,308,627,037	2,222,541,814
Gross Profit		2,161,812,203	18,974,589,826	10,620,343,025	11,154,921,212	6,425,747,838	1,236,422,177
Operating profit		488,896,972	11,225,280,377	5,066,173,567	5,350,426,939		377,825,087
Net Profit		476,534,864	10,536,436,123	3,040,402,954	3,822,734,610	1,953,341,460	212,611,542
COGS		3,102,151,141	19,711,065,988	12,196,286,770	11,065,965,907	9,882,879,199	986,119,636
Operating expenses		1,672,915,230	7,749,309,449	5,554,169,458	nill	nill	858,597,090
Average Inventory		681,562,281	894,546,758	6,929,569,175	2,074,639,705	1,081,662,067	4,340,736,000
Net Fixed Assets		1,684,778,351	2,027,716,414	34,056,667,212	10,227,887,020	5,319,635,386	5,246,736,287
Total Assets		2,828,471,852	65,061,672,828	49,214,092,360	24,201,236,513	35,921,599,389	19,282,890,134
Net worth		1,684,160,188	62,100,401,850	45,711,904,308	43,297,619,088	6,623,028,973	16,638,709,259
Capital Employed		1,684,160,188	62,100,401,850	36,468,260,206	19,588,602,872	22,921,411,968	17,560,504,143
Equity		1,478,296,395	60,806,054,977	29,864,323,837	18,284,763,241	18,343,391,846	12,469,096,711
Debt		2,828,471,852	4,255,617,851	19,349,768,520	5,916,473,272	17,578,207,540	19,282,890,130
Current Asset		964,225,217	38,291,544,874	13,264,161,542	12,337,381,043	12,135,978,847	7,242,106,413
Current liability		1,144,311,664	2,961,270,978	12,745,832,154	4,612,633,641	13,000,187,421	1,722,385,991
Quick Asset		442,039,863	33,695,032,201	7,690,612,371	12,337,381,043	8,563,594,631	6,971,519,162
working capital		442,039,863	35,330,273,896	518,329,388	7,724,747,402	8,563,594,631	5,519,720,422
Net Income		452,141,557	13,965,288,785	3,910,365,117	5,213,777,207	1,953,341,460	269,339,528
Share Price		264.1	264.3	22.4	1198.4	77	33.2
EPS		10.76	13.39	7.48	47.47	6.81	0.91
inventory		522,185,354	4,596,512,673	5,573,549,171		3,572,384,216	270,587,251
Classification of ratios							
Liquidity	Current ratio	0.84	12.93	1.04	2.67	0.93	4.20
	Quick ratio	0.39	11.38	0.60	2.67	0.66	4.05
	Debt equity	1.91	0.07	0.65	0.32	0.96	1.55
Solvency	Capital Employed to net worth	1.00	1.00	0.80	0.45	3.46	1.06
	Proprietary	0.60	0.95	0.93	1.79	0.18	0.86
	Capital turnover	3.13	0.62	0.63	1.13	0.71	0.13
Activity	Net working capital turnover	11.91	1.09	44.02	2.88	1.90	0.40
	Stock turnover	4.55	22.03	1.76	5.33	9.14	0.23
	ROA	0.16	0.21	0.08	0.22	0.05	0.01
Performance	ROE	0.31	0.23	0.13	0.29	0.11	0.02
	EPS	10.76	13.39	7.48	47.47	6.81	0.91
	P/EPS	24.54	19.74	2.99	25.25	11.31	36.48

References.

Top Pharmaceuticals: Introduction: EMERGENCE OF PHARMACEUTICAL SCIENCE AND INDUSTRY: 1870-1930. (2005, June 20). Chemical and Engineering News.

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McLean RA, Garis RI. Accounting principles, revenue recognition, and the profitability of pharmacy benefit managers. Res Social Adm Pharm. 2005 Mar;1(1):118-25. doi: 10.1016/j.sapharm.2004.12.006. PMID: 17138469.

Shaikh rezanul Haque (Manik). (2018, January 26). Good Prospect for Pharmaceutical Sector. Daily Sun.

Rokon, F. (2014, May 9). Problems and Prospect of Pharmaceutical Industries in Bangladesh.