Report on

Post-Audit of Square Pharmaceuticals PLC's Investment in Kenya and Feasibility Analysis of Continued Operation

By
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An internship report submitted to the BRAC Business School in partial fulfilment of the requirements for the degree of Bachelor of Business Administration

BRAC Business School
BRAC University
September, 2025

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:

Toitee Aronee Hazra
21304068

Supervisor's Full Name & Signature:

Mohammad Mujibul Haque, PhD
Professor and Associate Dean, BRAC Business School
BRAC University

Letter of Transmittal

Mohammad Mujibul Haque, PhD
Professor and Associate Dean (Acting Dean)
BRAC Business School
BRAC University
224, Merul Badda, Dhaka-1212

Subject: Submission of internship report on “Post-Auditing Square Pharmaceuticals PLC’s Investment in Kenya”.

Dear Sir,

I am pleased to submit my internship report on “Post Auditing Square Pharmaceuticals PLC’s investment in Kenya” as a part of my internship program in Square Pharmaceuticals PLC. I have worked meticulously to complete this report, maintaining full transparency, accuracy, and comprehensiveness.

I have used my experience and knowledge gathered during my internship period in Square Pharmaceuticals PLC to compile this report in the best possible manner.

I hope this report will meet your expectations.

Sincerely yours,

Toitee Aronee Hazra

21304068

BRAC Business School

BRAC University

Date: September 7, 2025

Non-Disclosure Agreement

I have signed the non-disclosure agreement with Square Pharmaceuticals PLC, adhering to the terms and conditions. The agreement was made on February 16, 2025, between Square Pharmaceuticals PLC (the company) and Toitee Aronee Hazra (the student), 21304068 (the student ID), a student of BRAC University, who entered Square Pharmaceuticals PLC as an intern.

I fully acknowledge that during my internship period, I may be exposed to confidential information of the company. I must acknowledge that confidential information must not be disclosed after the completion of my internship program. I am not liable to share or present any information to anyone but my supervisor without any expressed written permission.

Signed by,

Toitee Aronee Hazra

21304068

BRAC Business School

BRAC University

Date: September 7, 2025

Authorized Representative

Square Pharmaceuticals PLC

Date:

Acknowledgement

To start with, I would like to present my humble gratitude to Mr. Najmul Hasan, Manager of Square Pharmaceuticals PLC, for guiding me throughout the internship period. His directions, knowledge, and assistance helped me throughout the internship journey. Additionally, I would like to thank all the employees of Square Pharmaceuticals PLC who supported me with their valuable insights to help me write this report. The support and encouragement of the Accounts and Finance Department helped me complete my internship report on Post Auditing the company's investment in Kenya.

Secondly, I am grateful to Square Pharmaceuticals PLC for giving me the opportunity to work with them as an intern and share their valuable work culture with me. I have gained immeasurable experience through this program, which will guide me in establishing a career.

Lastly, I would like to express my heartfelt thanks to my academic supervisor and co-supervisor, Mr. Mohammad Mujibul Hoque, PhD, Professor & Acting Dean, and Dr. Abu Saad Md. Masnun Al Mahi, Assistant Professor from BRAC Business School. They have supported me and acknowledged my circumstances, guiding me throughout this internship period and helping me compile this report professionally.

Executive Summary

This report aims to strategically post-analyze the decision to invest in the African market by Square Pharmaceuticals PLC (SPL). The analysis is based on post-auditing using the capital budgeting method to find out the potential of the investment and whether it is on track since its implementation.

The first chapter of this report describes my overall internship experience at Square Pharmaceuticals PLC. The section includes my corporate experience with SPL through different tasks and responsibilities. Finally, the chapter concludes with the challenges I faced and recommendations for future internship programs.

Secondly, the organizational part analyses the company's management practices, marketing strategies, financial performances, accounting practices, and operational techniques. Each segment thoroughly discusses the strategy the company implemented for each department and provides suggestions for better departmental performance.

The third chapter includes a post-auditing report to measure the impact of an FDI by a Bangladeshi company and measure its performance in the African market. Square Pharmaceuticals PLC's manufacturing company in Kenya, therefore, is the main attraction of this report. The report analyzes and evaluates the annual reports and uses different post-auditing methods to create a clear blueprint for the company's potential. Furthermore, the investment also shows the potential to boost the economies of Kenya and Bangladesh. The operational challenges faced by SPL during COVID-19 and how it impacted the whole investment are also portrayed in this study. Both positive and negative outcomes of this environmental catastrophe are highlighted in the report.

Lastly, this paper suggests that Square Pharmaceutical PLC maintain a strong connection with the market by increasing brand recognition and control. This would help them to gain market shares vastly in the African market.

Keywords: Pharmaceutical industry, International Investment, Post-Audit, Square Pharmaceuticals Plc, Square Pharmaceuticals Kenya EPZ Limited.

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List of Acronyms

SPL	Square Pharmaceuticals PLC
SPKEL	Square Pharmaceuticals Kenya EPZ Limited
NPV	Net Present Value
PBP	Pay Back Period
DPBP	Discounted Pay Back Period
IRR	Internal Rate of Return
GMP	Good Manufacturing Practice
SAP	Systems, Applications, and Products
AIT	Advanced Income Tax
FDI	Foreign Direct Investment
EPZ	Export Processing Zone

Chapter 1: Overview of Internship

1.1 Student Information:

Name: Toitee Aronee Hazra

ID: 21304068

Program: Bachelor of Business Administration (BBA)

Major: Finance

Minor: Computer and Information Systems (CIM/MIS)

1.2 Internship Information:

1.2.1 Internship Program Details:

Internship period: 3 months.

Date: 16.02.2025 to 15.05.2025

Company Name: Square Pharmaceuticals PLC

Department: Finance and Accounts

Address: 48 Mohakhali, C/A, Square Center, Dhaka-1212

1.2.2 Company Supervisor Information for Internship:

Supervisor Name: Najmul Hasan

Designation: Manager, Finance and Accounts Department.

1.2.3 Job Scope:

Job Responsibilities/Job Description:

The finance and accounts intern position entails several responsibilities within each section of the department. My supervisor and the HR team had created a comprehensive roadmap for the interns to complete their internship, providing an overall experience of the operations performed by the Finance and Accounts department to ensure a smoother and more efficient workflow. Therefore, following the roadmap, I had to complete the tasks listed below over the three months.

Tax and VAT Record: The company collects VAT from customers nationwide for its products and pays VAT when purchasing other goods. In this section, I need to identify the VAT and collect those amounts for internal and external audits, monthly VAT return calculations, and document the costs for annual reporting to the NBR. As for tax is deducted beforehand while importing, so documenting those is also a part of this job.

Revenue Management: This section mainly records the income generated through cash and accounts receivable. Here, conducting Bank reconciliations, inputting purchase and sales data into SAP, and looking for errors in the process are done by interns for the monthly valuation. Each segment is divided and lastly put together for the final result at the end of each month, and also the data is stored for quarterly evaluation.

Import and Export Management: The primary task here is to determine which products are in customs and verify that they have arrived properly. If everything is completed, the data is entered as per the request of the employee in the sales department, and then the responsible executive clears the payment for export/import. Moreover, import invoice papers are checked for foreign currency rates, bank currency availability, and a proper LC is documented.

Asset Management: Assistance is required to record new assets for the company monthly in our operational software, specifically SAP. Additionally, asset scheduling is a long task handled by the team on a rotating basis.

Miscellaneous works: Along with the main recording and analysis, some other tasks like counting the cheque collection, writing bank deposit slips, making cheque copies, and making purchase forwarding letters are time-to-time duties for this job description.

1.3 Internship Outcome:

1.3.1 My Contribution to the Company:

Square Pharmaceuticals PLC is a company that ensures its interns can learn the most from their coworkers. The period I joined the company was also the time to report the fourth quarter of the Annual Report to the SEC. It was also necessary to record all the tax and VAT rebates for their annual tax and VAT reconciliation. Therefore, as an intern in SPL, I was responsible for recording all the AITs and VATs paid. I ensured that the documentation was flawless and would not hamper the regular operations of the company. Additionally, I was also tasked with bank reconciliation for different banks and SPL monthly. Thus, I was responsible for the proper documentation of different tasks and made sure those were accurate and reliable.

1.3.2 Benefits to the Student:

The internship program of SPL was well organized and comprehensive, which allowed me to strengthen my skills and gave me hands-on experience in the corporate world. In addition to skills, I have attained the corporate culture, business procedures, and communication skills throughout this journey.

To start with, SPL has allowed me to learn how each component of a financial statement works. We had sessions with dedicated co-workers to gather practical knowledge for each task completed by the Accounts and Finance department. This helped me deepen my understanding of a full financial report and helped me understand the reasoning behind each decision-making process. Moreover, working in a pharmaceutical company made me realize the urgency of medical products and the necessity of a financial team in this industry. In here, I had the opportunity to learn about corporate governance, its implementation, tax regulations, and the obligations of a listed company in Bangladesh, which are necessary for all aspects of Finance.

In addition to financial and corporate knowledge extension, SPL has allowed me to participate in interactive sessions with the finance team professionals. During these sessions, I learnt about business etiquette, standards, and work organization skills. This also showed me the importance of teamwork and connectivity. The internship program at SPL would help me grow both as an individual and as a professional.

1.3.3 Problems/Difficulties (Faced During the Internship Period):

As an intern in the Finance and Accounts department, I faced some difficulties that hindered my experience in SPL. First of all, there is only one female worker in the whole Finance and Accounts department. Therefore, there were no facilities available to meet the needs of females. Additionally, there was no female washroom on the department floor, and no way to commute through the stairs from the 13th floor, which was my department. I had to wait a long time for the elevator to arrive and go to the washroom on the 7th floor. Therefore, hygiene became an issue for me as well.

Secondly, interns of the Accounts and Finance department were not given a personal desk, for which I had to work with a computer of another co-worker. The computer I was given was heavily slow and outdated. There was no internet connection on the computer either. This slowed my pace, and work became extremely difficult to complete. Moreover, there were designated desks and computers for the interns of other departments, but none in my department. Therefore, I felt there was a lack of preparation and connectivity within the departments of SPL.

Lastly, the HR department sets the roadmap for the internship program, but some activities could not be conducted due to the limited timeframe.

1.3.4 Recommendations (To the Company on Future Internships):

Despite having the proper roadmap for interns, I think SPL should combine each department supervisor and have a proper plan with them for the program. Moreover, there are some differences in facilities on each floor. Therefore, it is highly recommended for SPL to have proper department monitoring. This would help them maintain a proper working environment without hassle.

The program should also prepare proper desks for interns with working computers. As I mentioned earlier, only the interns in my department did not get a personal desk. Therefore, the organizing team should pay attention to other departments' capacity and prepare accordingly.

Lastly, my suggestion for the Accounts and Finance team would be to hire more female workers and put hygiene as a consideration. Proper washroom facilities are needed for each floor. The accounts department should have an external water filter, a female washroom, and proper sanitization. The SPL administration body should arrange professional training seminars to all of its employees, including interns, to feel included.

Chapter 2: Organizational Part

2.1 Introduction:

The paper would analyze investment activities and their impact on Square Pharmaceuticals PLC (SPL), which is a flagship company of the Square Group. The company is a leading giant in the pharmaceutical industry, having investments and a distribution network all over the world. Square Pharmaceuticals PLC is the largest pharmaceutical company in Bangladesh, which holds the trust of people, providing assured and standardized medicine all over Bangladesh. Square manufactures a variety of medicines ranging from general, antibiotics and insulins. They also have a herbal line and a line for agrovet and pesticides, along with medicines. Square has also invested in foreign countries to expand its manufacturing, and they are exporting to around 45 countries. Therefore, this paper would analyze SPL's organizational structure and operations as a whole which led them to become a giant in the pharmaceutical industry.

2.1.1 Objectives

The main objective of this chapter is to review Square Pharmaceuticals PLC (SPL), the parent company of Square. In this section, different departmental strategies will be discussed and through which the objectives below are to be achieved.

The Objectives:

- ➔ Analyze the operations of Square Pharmaceutical PLC carried out by major departments.
- ➔ Evaluate the decision-making process and the consideration of specific attributes that concern the overall operation of SPL.
- ➔ Investigate the profitability of investments in the financial activities, conducting different methods of analysis.
- ➔ Understand the potential of each operation and the significance of activities that impact the decision-making process.
- ➔ Lastly, the overall significance of foreign investments in the pharmaceutical industry is to be analyzed to find out the position SPL has in the market.

2.1.2 Scope

This part of the paper provides information that can be used to judge the significance of different activities conducted by a pharmaceutical company and how things evolve for a company. The information can also be extended for future research and help to understand the significance of each activity conducted by SPL. The report can be used to do market research and can also be incorporated with other data to find more relevant information. It shows where the company is standing in the market currently and also gives an overview of future occurrences.

SPL can use this information to find out their strengths and weaknesses and incorporate this in their decision-making. This paper is useful for individuals who want to learn more about manufacturing companies and also for the organization itself.

2.1.3 Methodology:

The information for this part of the paper is mostly collected from Square Pharmaceuticals PLC's official website and annual reports. Square Pharmaceuticals PLC is a company that was founded by Mr. Samson H.Chowdhury, hoping to create the perfect company. Therefore, this paper starts with the mission and vision of the company and works through the operations run by the company to achieve the dream of Square.

Firstly, the management practices and their motives are assessed by researching different attributes of the company. Such as their policies, employee benefits, corporate social responsibilities, and their implementation of these. The information for these was collected mostly from their websites and through conversations with the employees of SPL. Secondary data were also collected from online pages and newspapers.

Secondly, the financial data were collected from their annual reports and also from the Dhaka Stock Exchange website. The data collected from these were calculated to find out different ratios, cash flow activities, and the overall performance of the company.

The detailed supply chain process and its implementation were taught and explained in sessions conducted by our peers. Therefore, primary information was collected through conversations, and handouts were given by the authorized person, which were used in the paper to get a thorough understanding of their channels.

Lastly, this paper also provides an overview of the other competitors of SPL in the pharmaceutical industry. For this part, information was gathered from reliable journals, articles, and newspapers, which shows an authentic representation of the industry SPL is performing in.

2.1.3 Limitations

The study has been conducted mostly using secondary sources. Some information was taken through observations and interactive sessions conducted in the 3-month internship program. Due to this short time, only certain information could have been gathered and used in the study. The study does not use any sensitive information and only has information that is publicly available. Moreover, the data collected for financial calculation is up to Fiscal Year 2023-2024. Therefore, changes in financial attributes in the first quarter of 2025 are not reflected in the study.

2.2 Overview of the Company

2.2.1 Company Profile

Square Pharmaceuticals PLC is one of the leading manufacturing companies in the pharmaceutical industry of Bangladesh. Mr. Samson H. Chowdhury, along with his three other friends, established a partnership business to manufacture medicines in 1958. That business has grown to become one of the largest pharmaceutical companies in Bangladesh. Square has established an image of trust and quality among its customers, providing standardized products throughout the years. The company's milestones and integrity led it to become an enterprise having 15 other sister companies and now aiming for foreign investments. Square Pharmaceuticals PLC produces a wide range of products, including tablets, capsules, insulin, herbal, and agrovet products that have been performing well in the consumer market. They are both local and global distributor of their products. Among all of the companies, Square Pharmaceuticals PLC is the only publicly listed company both in the Dhaka Stock Exchange (DSE) and the Chittagong Stock Exchange (CSE). The company’s shares are highly reliable in the stock market, making it an attractive investment for investors. Having a turnover of almost 600 million USD, Square has shown its high-quality presence both in local and international markets.

2.2.1.1 Incorporation

Starting as a partnership business in 1958, Square Pharmaceuticals PLC was turned into a public company in 1991 and was listed on the stock exchange in 1995. Square also changed its name from Square Pharmaceuticals Ltd to Square Pharmaceuticals PLC in 2023 to comply with the Company Act 1994 (second amendment,2020).

2.2.1.2 Factories and Establishments (Only for Square Pharmaceuticals)

- ➔ Pabna Plant- Hormone and steroid unit, Liquid unit, penicillin unit
- ➔ Dhaka Plant- Solid Dosage units 1 and 2, Cephalosporin unit, Small Volume Parenteral & Ophthalmic Unit, Insulin Unit, Large Volume Parenteral Unit, MDI unit.
- ➔ Central Headquarters- CHQ

- Kenya EPZ Factory

2.2.1.3 Achievements

Throughout the journey, Square has achieved significant milestones. Some of the greatest achievements and recent highlights include-

- Products of Square Pharmaceuticals are now exported to around 45 countries all over the world.
- Square's factories have international certifications, including UK MHRA (Medicines and Healthcare products Regulatory Agency), WHO GMP, and US FDA approval — a testimony to its world-class manufacturing practices.
- Square has won the Best Corporate Award from ICMAB four times in the years 2016, 2018, 2021, and 2023.
- It has been awarded the 'President's Award for Industrial Development' as a successful large-scale industry enterprise.
- Recently, Square Pharmaceuticals has been awarded the 'Excellence in Investment Award 2025' in the local investment category at the Bangladesh Investment Summit organized by BIDA (Bangladesh Investment Development Authority)
- Square Pharmaceuticals PLC has been recognized as the leading pharmaceutical company in Bangladesh for over three decades.

2.2.1.4 Financial Position

Square Pharmaceuticals PLC is a leading player in the market. In the year 2023-24, they have secured a turnover of around 599 million USD. Square has a market share of 17% and they have given dividends to their shareholders since their listing in 1995. They do not have any long-term bank loans and has a AAA credit rating by Crisl.

2.2.1.5 Future Goals

Square Pharmaceuticals has reached its peak in Bangladesh. Therefore, the company aims to expand its business internationally. Already, SPL is exporting to different countries all over the world, including the USA and the UK. They are the contractual supplier of UNICEF and other foreign companies. Currently, they have established manufacturing facilities in Nairobi, Kenya, and they intend to enter the Philippines market by establishing Samson Pharma Inc. (reported in The Business Standards,2023).

2.2.2 Business Profile

2.2.2.1 Mission

Square Pharmaceuticals' mission is to "*produce and provide quality & innovative healthcare relief for people, maintain stringently ethical standard in business operation also ensuring benefit to the shareholders, stakeholders and the society at large*."

The mission statement symbolizes the founder's dream to create a business that gives assurance and perfection. This signifies maintaining trust, quality, and standard. Square has always aimed to become a platform where equality and code of ethics have the highest value.

2.2.2.2 Vision

"We view business as a means to the material and social wellbeing of the investors, employees and the society at large, leading to accretion of wealth through financial and moral gains as a part of the process of the human civilization".

Square's operations are articulated towards the well-being of society. These business operations are the pathway to achieving excellence that empowers human civilization. In the process, Square makes sure to achieve wealth concretizing the morals and ethics, which leads to the happiness of Square employees, shareholders, and consumers as well.

2.2.2.3 Objective of Square

"Our objectives are to conduct transparent business operation based on market mechanism within the legal & social framework with aims to attain the mission reflected by our vision."

SPL ensures that every legal responsibility is met by its operations. They promise to provide the best quality and standard of medicine. Square aims to become an inspiration to society, which shows integrity and morality. SPL operates in a fully transparent manner, follows every legal framework as a responsible corporation, which assures their objective. They make sure not to compromise quality, as these medicines are the source of cure and relief.

2.2.2.4 Corporate Social Responsibilities (CSR)

According to UNIDO (United Nations Industrial Development Organization), Corporate Social Responsibilities are the obligations that the management of any organization needs to follow for the welfare of society. It is a concept of uplifting society through business, taking care of the environment, and the economy.

2.2.2.4.1 Business Motivation

Square's business motivation is *"Being good by doing Well*." Their work ethic has always been surrounded by their vision and objectives. SQUARE is one of the signatories of UNGC (United Nations Global Compact) and they have aligned their work culture following those principles. SPL considers the labour law and its progressiveness, aiming to become an international company. They have a traditional work culture environment and make sure to associate with the Bengali culture as well.

2.2.2.4.2 Labour Benefits

Square makes sure the employment is true and fair at each step. They encourage diversity and women in the workplace. Square has a no child labour policy and does not encourage women to take night shifts for their safety. Moreover, they have a zero-tolerance policy against corruption. They have updated labour benefits according to the law and provide every kind of compensation for their employees. Moreover, SPL believes that transparency and ethics should be followed in every business process.

Figure 1 Employee Transportation

SPL provides transportation for every employee. They also have regular training sessions conducted by professionals in the market. SQUARE has "Shohoj Kisti Reen Prokalpa" which allows unionized members to take a loan to buy any sort of asset. They ensure to provide employees with recreational facilities as well as fitness facilities so that they can ensure physical and mental welfare.

2.2.2.4.3 Commitment towards the Environment

The 'Social Empowerment Award' category of the "Asia Responsible Entrepreneurship Awards 2014-South Asia" has been given to Square Herbal & Nutraceuticals Ltd. (SHNL). Enterprise Asia organizes the Asia Responsible Entrepreneurship Awards, a regional recognition program, to recognize businesses for exceptional, cutting-edge, and top-notch goods, services, initiatives, and programs. These programs show the Enterprise's leadership, sincerity, and ongoing dedication to integrating ethical and responsible values, legal compliance, health concerns, respect for people, community involvement, and environmental protection into their business operations.

Through the cultivation of medicinal herbs, it improves social values and integrity while also having an impact on the environment.

Figure 2 Factory of Herbal and Nutraceuticals

Figure 3 Sustainability Achievement

2.2.2.4.4 Education Support

Figure 4 Gifting Books to JU's Library

Square Pharmaceuticals PLC donated pharmacy books to Jahangirnagar University’s library in a seminar, hoping to help the students and teachers in the future. Square also sponsored the National Science Festival arranged by DRMC to enrich their science knowledge. They have also arranged a fellowship program *“CGS-SQUARE Fellowship 2015-2017”* jointly with Dhaka University for the meritorious students who studied genocide.

2.2.2.4.5 Women Empowerment

Square has worked for women's empowerment by providing aid to different causes. They have created awareness programs for acid survivors, cervical cancer, and adolescent health and hygiene.

Figure 5 Women empowerment

Square is operating a fuel station in Pabna known as **"Eakub Filling Station"** run by women. Square is also partnering with one of the projects of CARE- “JITA” to ensure that women can buy products at trade price and sell them at the highest retail price. Due to this program 3500 women have their own income in the rural areas.

2.2.2.4.6 Advanced Research and Development Program

Square partnered in the research study for preventing "Post Partum Hemorrhage (PPH)", the primary reason for maternal death in Bangladesh, with ICDDR, B, and Obstetrical & Gynecological Society of Bangladesh (OGSB).

2.2.2.4.7 Social Supports

Figure 6 Awareness Seminar

Through a variety of programs, Square has improved community welfare, education, and health. Free Diabetes Screening & Awareness Program, Vaccination & Breastfeeding Awareness to 3.3 Million Mothers, Operating a 24/7 Free Helpline for Mother and Babies (Supermom), Baby Olympiad 2015, Educating Physicians on the Latest Advances in Medical Science (CME), IT Training Institution (Dishari), Awareness Building Program for Rights of Physically-Challenged People, World Autism Awareness Day Symposium on Autism, Radhuni Kirtimoti Shommanona 2015, Medical Campaign Program for Poor People, Reconstruction of Annada Gobinda Public Library in Pabna, Road Safety Campaign & Road Side Shade, Medical Colleges, Local Community & Underprivileged People, and Grameenphone Health Fair 2017. They made sure that every step reflects a commitment to improving the society.

2.2.2.4.8 Responsibility Towards Government

Square has been the highest taxpayer company for many years. It has also been awarded the highest taxpayer reward. Moreover, the square adequately performs its responsibility of collecting VAT and submitting it to the government. SPL also provides customized medicines to the government according to their requirements.

2.2.2.4.9 Disaster Management

SQUARE Pharmaceuticals PLC. offered essential medicines through the Directorate General of Medicine Service under the Ministry of Defense, Government of the People's Republic of Bangladesh, and personal protective equipment through the Directorate General of Drug Administration under the Ministry of Health & Family Welfare to combat the CORONAVIRUS pandemic and reduce the number of infected doctors and nurses in Bangladesh.

2.3 Management Practices

Square Pharmaceuticals PLC has a democratic management style. SPL encourages employees to interact and participate in the decision-making process. The management body in each department has the authority to make strategic decisions, thereby decentralizing the process. The management team highly preaches integrity, transparency, and corporate responsibility, which helped it gain the image of a socially responsible company.

2.3.1 Company Organogram

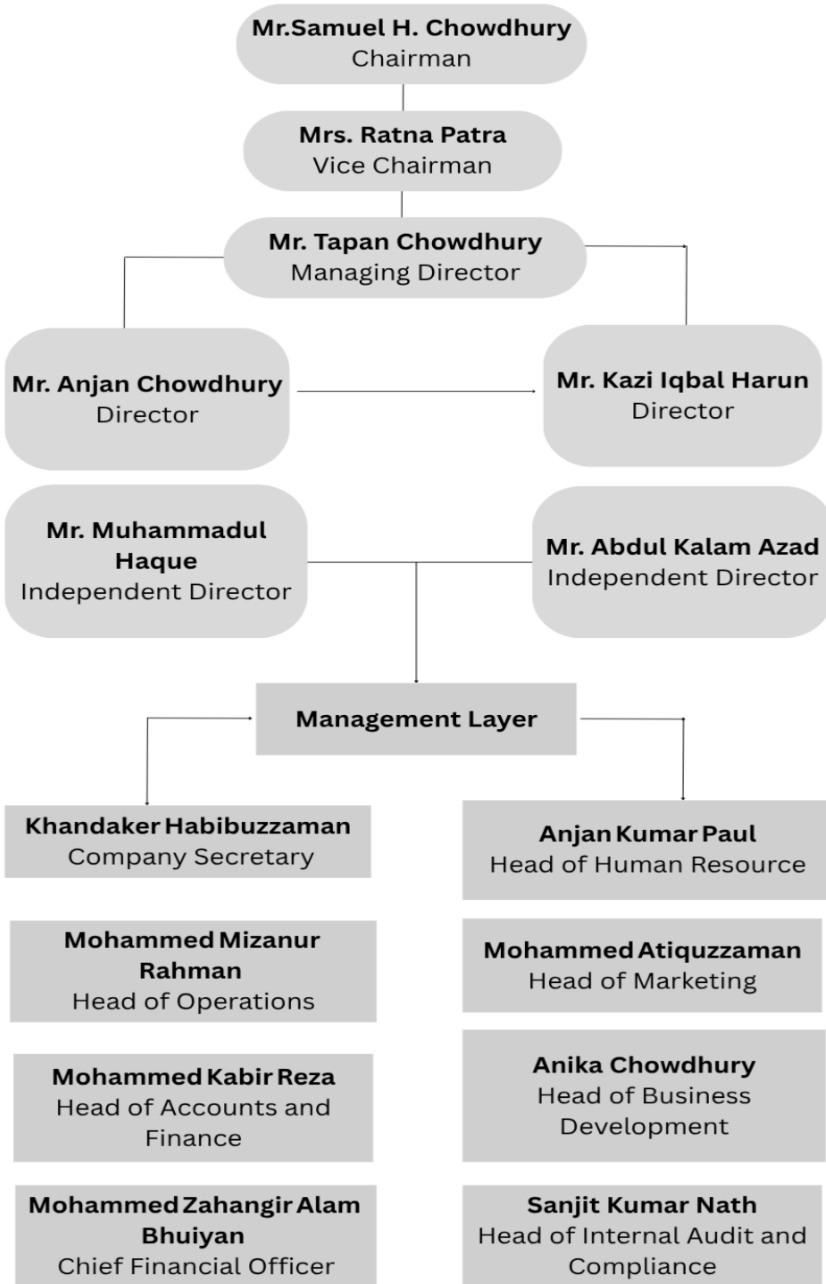

Figure 7 Company Organogram

2.3.2 Leadership Style of SPL

Square encourages democratic leadership within the company. They involve employees to participate in the decision-making process and look for suggestions for improvement. It is highly noticeable that each department has one general manager, one assistant general manager and few managers who ensure the participation of employees in the section where they are best suited.

The mid-level decisions are taken by the floor managers, and strategic decisions are made by the top-level managers of the company. Square arranges work chronologically, having each level of employee included in the work process. The field officers of the SPL have the freedom to work flexibly, but they have to report to their managers about their work. The plants and depots of SPL have several officers to manage the activities and ensure smooth operations. On the other hand, the CHQ office is liable to provide any necessary support to the operating team in those plants. The office in Dhaka (CHQ) monitors all the activities in those plants and mostly focuses on the improvement of business processes. It is also ensured by the CHQ that standards are followed and obligations are properly fulfilled.

SPL’s standard of leadership has shown satisfactory performance in its employment and led to its success. They have a very low employee turnover rate and have employees that has been working with them since the beginning of Square.

2.3.3 Human Resource Planning and Recruitment Process

The human resource department takes care of the recruitment process in an organized manner. They use their website, LinkedIn, and the newspaper to publish the job listings. Both internal and external hiring are considered in SPL, depending on the recruitment type. Moreover, the recruitment examination may take place in the plants or the CHQ, depending on the different levels of the interview. After recruitment, Employees go through several orientation sessions and monthly quizzes for their assessment before they can finally grab a position in Square. SPL looks for people who can abide by the company values and has the potential to thrive in the industry.

2.3.3.1 Departments in Square Pharmaceuticals

With the plants and the CHQ building, there are different departments according to necessity. All these departments have their unique code number and names that keep the operations running smoothly.

1. Medical Services Department (MSD	2. Supply Chain Management	3. Technical Services Department (TSD)
4. Sales Department	5. Information Technology (IT) Department	6. Project Management Department

7. Product Management Department (PMD)	8. Business Development Department	9. Production Department
10. Market Research and Planning Cell	11. Product Development & validation	12. Engineering Department
13. International Marketing Department (IMD)	14. Material Planning & Inventory Control	15. Production Planning
16. Accounts and Finance Department	17. Internal Audit	18. Share & Corporate Affairs
19. Quality Assurance Department	20. Distribution Department	21. Quality Control Department
22. Human Resources Department	23. General Service Department (GSD)	

Table 1 Departments of SPL

2.3.4 Training and Development

Employees go through different types of training based on trends, policies, and requirements. They have scheduled training sessions divided into groups; therefore, daily operations are not hampered in any way. This training includes sessions on leadership, skill management, and software development.

2.3.5 Compensation and Appraisal

Square promises to provide the best compensation for its employees. They provide every necessary benefit for the well-being of employees and also abide by the labour law fully without compromising anything. The employees of SPL have a fixed salary, provident fund, festival bonuses, annual leaves, discount on any Square's product, transportation facilities, contribution and gratuity fund. Moreover, employees are given 10% for as Workers' Profit Participation Fund (WPPF). SPL also provides a car facility for its manager-level employees every year.

Square Pharmaceuticals PLC goes through several assessments and performance analyses before giving appraisals. They use different matrices to judge an employee's performance, take feedback from their seniors and subordinates, consider the educational qualifications, and lastly, their merits and achievements in the company to provide appraisals.

2.3.6 Review of Management Practice

The management practices at Square Pharmaceuticals PLC reflect a well-structured, strategic, and forward-thinking approach to human resources and organizational development. The company emphasizes efficiency, fairness, and adaptability in its operations, making sure that its practices align closely with both business goals and industry standards.

A key strength of their management lies in strategic human resource planning, which helps match workforce capabilities to future business needs. The recruitment process is rigorous and systematic, employing a combination of exams, interviews, and health checks to select the most suitable candidates. Furthermore, training and development programs are tailored to both job roles and individual career paths, reflecting a strong organizational culture of continuous improvement.

Compensation and appraisal practices at Square are designed to be equitable and performance-oriented. The salaries, incentives, and benefits are competitive and reflect industry trends. The performance appraisal process is participatory and multilevel, allowing employees to reflect on their achievements and future goals alongside their supervisors.

Overall, the company's management practices foster a positive workplace culture, empower employees to grow, and align individual goals with the organization's mission. This systematic approach to human resources and policy implementation underscores the company's ongoing success in a highly competitive industry.

2.4 Marketing Practices

According to the code of pharmaceutical marketing practices by the Ministry of Health and Family Welfare, pharmaceutical companies cannot make public communication in order to promote their drugs as safe. They need authorized personnel to do promotions and reach the market. Therefore, due to marketing restrictions on drugs by the government, Square cannot directly promote its medicine like other companies. Hence, the company uses an aggressive direct marketing strategy to professionals (such as doctors) for its products.

2.4.1 Products

Square classifies its products into three categories. Generic Pharma Products, Herbal and nutraceutical Products, and Agrovet Products.

2.4.1.1 Pharma Products:

There are different types of medicine that SPL manufactures. Different plants and units produce different types of medicines. Such as solid medicines are produced in the Dhaka unit. Here, different products are listed as a sample.

Category	Examples (Square Brands)
Tablets	Ace, Comet, Comet XR, Siglimet, Angilock, Amodis, Moxacil, Alatrol, Adryl, Secrin
Capsules	Cef-3, Fluclox, Gabapent, Pregabel, Doxicap, Flucon
Insulin (Injectable)	Ansulin (Regular, NPH, Mixtard)
Antibiotics (General)	Amodis (Metronidazole), Moxacil (Amoxicillin), Cef-3 (Cefixime)
Liquid/Syrups/Suspensions	Ace Suspension, Comet Susp, Alatrol Susp, Fluclox Susp, Amodis Susp, Cef-3 Susp
Injectable (Non-Insulin)	Cef-3 Inj (Ceftriaxone), Fluclox Inj, Metron Inj, Amikacin Inj, Gentamicin Inj

Table 2 List of Medicines

2.4.1.2 Herbal and Nutraceutical Products:

Adovas is one of the famous products of Square, which is a cough syrup for children made with herbal products. Some of the products in the Herbal category are listed below.

1. Adovas
2. Antiscar
3. Ocubil

4. Gintex
5. Enerton
6. Ispergul
7. Toco Soft
8. Torel
9. Colmint
10. Dubarel

2.4.1.3 Agrovet Products:

For Animals:

1. Ace-Vet Bolus – Paracetamol for pain relief
2. Almex-Vet Bolus – Albendazole deworming bolus
3. Amodis-Vet Bolus – Metronidazole antiparasitic
4. Ampicin-Vet Injection – Ampicillin sodium antibiotic
5. Antihista-Vet Injection – Pheniramine maleate for allergies
6. Ciprocin-Vet Injection/Solution – Ciprofloxacin antibiotic
7. Cotrim-Vet Bolus/Suspension – Sulphamethoxazole + Trimethoprim combo
8. Stiagen-Vet Powder – Tiamulin hydrogen fumarate antibiotic
9. Stomaplex-Vet Powder – Appetite and digestive stimulant
10. Sulprim-Vet Suspension – Sulphadiazine + Trimethoprim antibiotic
11. Sumid-Vet Powder – Sulphanilamide antibiotic
12. Enrise Syrup – Natural stimulant & vitalizer
13. Es-ADE® Injection/Solution – Vitamins A, D_3 & E supplementation

Crop Care / Agricultural Products

1. Agrizeb 80 WP – Mancozeb fungicide
2. Copper Blue 50 WG – Copper oxychloride fungicide
3. Stromin 75 WG – Tebuconazole + Trifloxystrobin fungicide
4. Ticozeb 80 WP – Mancozeb fungicide
5. Thimid 35 SC – Imidacloprid + Thiram insecticide
6. Pychlorex 20 EC – Chlorpyrifos insecticide
7. Torunil 33 EC – Pendimethalin herbicide
8. Toximite 1.8 EC – Abamectin miticide
9. Zero Herb 20 SL – Paraquat herbicide
10. Zeal Chelated – Chelated zinc micronutrient
11. Zeal Mono/Hepta – Zinc sulphate micronutrients
12. Aster PGR – 4-Chlorophenoxy acetic acid plant growth regulator

2.4.2 Market Segmentation

The users of Square Pharmaceutical products are not their customers. Square customers are segmented into two groups. Firstly, the buyers like different medical shops, pharmacies, organizations, and hospitals. Secondly, the consumers are the end users. Square does not sell directly to its end consumers. The doctors who prescribe Square's medicines are a medium of promotion for their products.

Market Segmentation: Markets can be segmented considering the necessities and demands of a certain group of consumers. Square Pharmaceuticals focuses on disease cure, health consciousness, better lifestyle, etc. Therefore, they have segmented their products widely for all kinds of needs.

- ➔ **Geographic Segmentation:** Square aims to deliver its products all over Bangladesh and now has a target to expand internationally. They want their products to reach in every corner of the world where it is needed.
- ➔ **Demographic Segmentation:** Medicines are segmented according to gender and age for humans, plants, and animals. In the healthcare sector, it is essential to acknowledge the physical differences between various species.
- ➔ **Psychological Segmentation:** Square also ensures that its products address the concerns of health-conscious people. Therefore, they offer a line of vitamins, fish oils, and baby products to support that journey.
- ➔ **Behavioral Segmentation:** Square has already set up a brand image, ensuring quality and standard. Though they do not highly focus on this segment, it is fulfilled by their work ethic.

2.4.3 Marketing Methods

The Pharmaceutical Industry is such an industry that keeps on facing challenges, for which they need to have adaptive marketing policies (Ankush, 2015). Square tries to use their own platforms and resources for its promotion. Along with general promotion, they use the 4P strategy for their product.

2.4.3.1 Product

Square has a total of 920 products manufactured in Bangladesh. They added 39 new products and discarded 12 products for better alternatives. Square continues to ensure that every product is regulated and up-to-date. Products of Square are highly appreciated in the market with positive feedback. They focus mostly on quality control and highly effective products, which keeps the trust of its customers and users.

2.4.3.2 Price

Square makes sure that its products reach every household. That is why they aim to set a price with the least amount of profit to benefit society. They give special discounts to their customers when necessary. Pharmacists are also given bundle pricing offers, and they also get the products at a 16% discount, ensuring the industry standard. Though customers need to pay in cash or cash equivalents, as Square has a cash-based business model.

2.4.3.3 Place

The products and services of Square are distributed through their distribution channel. They have field workers who are part of this distribution process. They have 29 depots from where products are disbursed according to order from their customers.

2.4.3.4 Promotion

Square uses trusted doctors and pharmacists to promote their products. They have sales representatives and a direct marketing strategy to promote their products in the market.

2.4.4 Market Position

Square has positioned itself as the leading brand for healthcare products and drugs. They have high-quality products with a regulated price that ensures everyone can support healthcare.

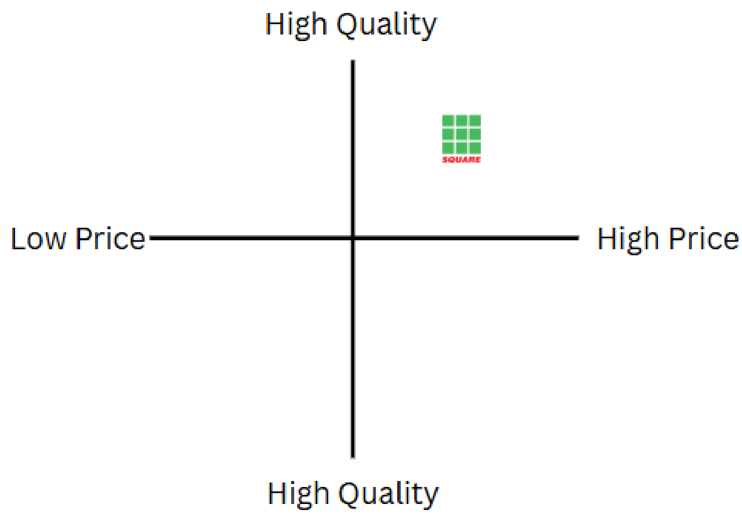

Figure 8 Company Position (SPL)

2.4.5 Marketing Limitations

A company in the pharmaceutical industry needs to maintain different kinds of regulations and standards. Therefore, some promotion methods do not apply to the company. This limits the scope for creativity. The limitations Square has in marketing are:

- ➔ Strict rules limit certain promotions. E.g., Drug Act, Marketing codes, GMP, quality control.
- ➔ Limited communication with the end user for prescribed drugs.

- ➔ Poor infrastructure and limited pharmacies limit the distribution scope.

2.4.6 Review of Marketing Practices

SPL marketing practice reflects quality control, transparency, strong communication navigating the strict industry rules and regulations. They have created a strong competitive advantage in the Bangladesh market, obeying standards and quality. The company also has diversified its products, having more than 900 products in different segments. This shows their ability to diversify and reduce risks. SPL marketing strategy revolves surrounding the high volatility of the market. Therefore, Square Pharmaceuticals PLC's marketing strategy has future potential.

2.5 Financial Performance and Accounting Practices

Square Pharmaceuticals PLC rigorously keeps its accounts up to date and continuously challenges its financial achievements to thrive more in the existing market. The data used for their financial performance analysis is taken from the annual report and calculated to represent their performance. Data is taken from the FY 2019-2020 to 2023-2024 to show the changes, trends, and reasoning behind the financial decisions.

2.5.1 Financial Performance

2.5.1.1 Ratio Analysis

Ratio Analysis has always been a logical tool to determine a company's performance, its management efficiency, and industry comparison (Jena Nataf, 1957). The ratios were calculated using historical data from the annual reports of SPL. Some ratios were used to compare and explain the position and effects of different financial decisions.

2.5.1.1.1 Liquidity Ratio

The liquidity ratio expresses a management's ability to pay short-term obligations and run operations smoothly over a short period (Durrah et al., 2016).

- **Current Ratio**

The current ratio has been steadily increasing since 2019-2020 despite COVID-19. The Pandemic hampered production, but revenue generation was steady for SPL due to high sales of medicine in that year. Though we can see a heavy decline in the current ratio in the FY2023- 24. The reason behind this drastic change is that SPL has transferred 97 of its high-revenue-generating medicines to Square Lifesciences. Therefore, the standalone of SPL changed without changing the actual performance of Square Group.

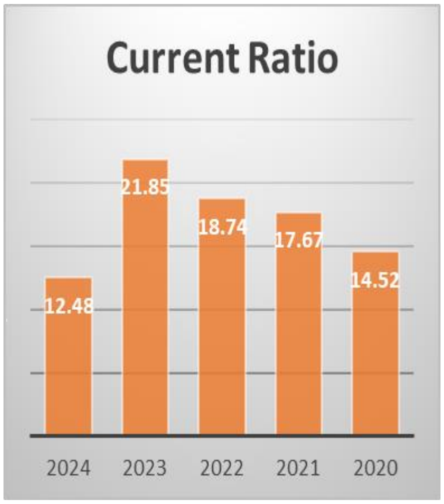

Figure 9 Current Ratio

❖ Quick Ratio

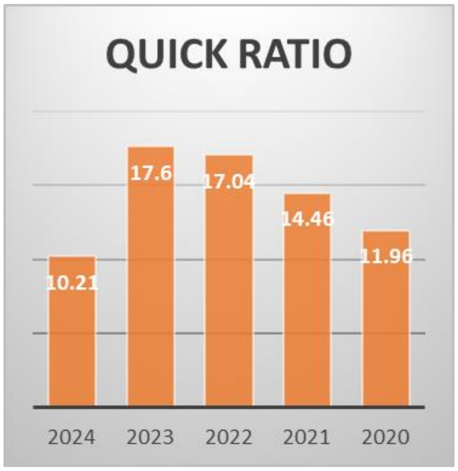

Figure 10 Quick Ratio

If we compare the quick ratio with the current ratio, we can identify that SPL only has a small amount of assets that cannot be quickly converted. This state represents that they have less inventory in their storage and have an efficient operating and production system. Therefore, they have optimized their production. Additionally, they have also changed their margin ratio from above 15 to nearly 10 by transferring goods to Life Sciences. Hence, in the future, the ratio would be similar to the 2024 ratio.

❖ Cash Ratio

From the cash ratio of SPL, it is highly noticeable that SPL holds 90% cash and cash equivalents in the company than any other current asset. Their accounts receivables are very low because SPL has a cash-based business. Thus, without any special circumstances, the company does not sell on credit. The small amount of credit sales they have is from the exports of their medicines. Therefore, SPL is a highly liquid company.

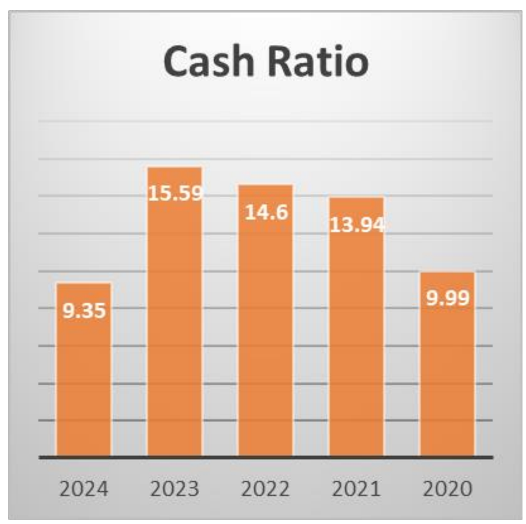

Figure 11 Cash Ratio

2.5.1.1.2 Efficiency Ratio

Efficiency Ratio	2024	2023	2022	2021	2020
Asset Turnover Ratio	0.55	0.57	0.6	0.61	0.66
Inventory Turnover Ratio	3.13	3.33	3.62	3.83	4.38

Table 3 Efficiency Ratio of SPL

- **Asset Turnover Ratio:** The ratio has shown a decreasing trend for the last five years. This indicates that the company is not efficiently utilizing its assets to produce products. The reason SPL's asset turnover decreased is that they have bought plenty of non-current assets, which include land. These assets are yet to be utilized in producing products for SPL. On the contrary, SPL still manages to use 55% efficiency of its assets for production.

- **Inventory Turnover Ratio:** The above table indicates that SPL used to sell its inventory faster in the previous years than in recent years. The fact that COVID-19 had its effects in 2020 and 2021 indicates the high sales of inventory. Therefore, over time, the turnover ratio is decreasing, indicating that the demand for medicines is also declining.

2.5.1.1.3 Profitability Ratio

DuPont Analysis				
Years	Net Profit Margin	Asset Turnover	Equity Multiplier	ROE
2020	28.97%	0.66	1.07	20.4%
2021	29.98%	0.61	1.06	19.4%
2022	29.42%	0.60	1.05	18.5%
2023	28.19%	0.57	1.05	16.8%
2024	26.07%	0.55	1.05	15.1%

Table 4 DuPont Analysis for SPL

The DuPont Analysis is a method to examine the different factors affecting the profitability of a business.

- ❖ **Net Profit Margin:** In the year 2020, the net profit margin for SPL was 28.97%. This remained between 28% 29% in the last four years, except in 2024. In the year 2024, the margin went down by 2% for SPL.

- ❖ **Asset Turnover Ratio:** The assets were 66% utilized 5 years before, which gradually decreased by 10% in 2024, resulting in a 0.55 asset turnover ratio.

- ❖ **Equity Multiplier:** Equity multiplier is nearly 1 for SPL. This means the company has very low debt to finance its assets and mostly depends on equity. Over time, SPL has also reduced its reliance on debt reliance they have which shows the reduced equity multiplier.

- **ROE:** The DuPont Analysis, therefore, measures the ROE (Return on Equity) by combining the three ratios. From this framework, it is visible that SPL provides a 15%-20% return. Though the returns gradually decreased over time. The cause of this can be pointed out from this table, which shows a lower net profit margin and less utilization of assets. Therefore, SPL should focus on utilizing its assets more efficiently.

2.5.1.1.4 Solvency Ratio

Leverage Ratio	2024	2023	2022	2021	2020
Debt to Asset	0.05	0.04	0.05	0.05	0.06
Debt to Equity	0.06	0.04	0.05	0.05	0.06

Figure 12 Leverage Ratios

The two methods of measuring the leverage ratio are quite similar to each other. For this measurement, **Debt to Asset** and **Debt to Equity** Ratios were used to find out the debt level of SPL. Firstly, SPL has no long-term liabilities. Therefore, they have high solvency. Secondly, it is noticeable that they are not dependent on debts. Thus, this shows that they primarily depend on equity financing. SPL has a 0.05:1 ratio of debt to its assets, which is very low for a manufacturing company. Lastly, even though they have declining profitability, their leverage ratio remained the same for four years.

2.5.1.2 Annual Report Study and Industry Comparison

Figures in tk '000

Particulars	SQUARE	RENATA	BEXIMCO	BEACON	ORION
Market Capitalization (in million)	186,952.52	88,327.77	52,685.84	35,527.80	16,169.40
Financial Performance:					
Revenue (Net)	58,419,085.00	32,864,697.00	32,991,855.00	8,509,948.00	3,056,556.00
Gross Profit	28,034,308.00	12,678,918.00	14,520,438.00	4,288,951.00	1,677,248.00
Gross Profit Margin	48%	39%	44%	50%	55%
Net Profit (Before Tax)	21,097,122.00	2,475,863.00	5,897,332.00	679,072.00	429,082.00
Net Profit Margin (Before Tax)	36%	8%	18%	8%	14%
Net Profit (After Tax)	16,470,228.00	2,317,958.00	4,588,009.00	509,840.00	291,142.00
Net Profit Margin (After Tax)	28%	7%	14%	6%	10%
Financial Position:					
Shares Outstanding (actual)	886,451,010.00	114,696,490.00	446,112,089.00	231,000,000.00	234,000,000.00
Shareholders' Equity	100,516,964.00	30,534,613.00	43,341,239.00	5,942,042.00	14,040,683.00
Total Assets	104,755,128.00	48,729,163.00	62,593,798.00	14,642,107.00	36,596,207.00
Total Liabilities	4,238,164.00	18,194,550.00	19,252,559.00	8,700,083.00	22,555,524.00
Current Assets	70,169,515.00	17,059,280.00	17,913,546.00	8,982,145.00	11,606,480.00
Current Liabilities	3,212,078.00	13,602,983.00	11,414,662.00	7,814,168.00	2,086,581.00
Current Ratio	0.05	0.80	0.64	0.87	0.18
Debt Ratio	0.04	0.37	0.31	0.59	0.62
Equity Ratio	0.96	0.63	0.69	0.41	0.38
Debt to Equity Ratio	0.04	0.60	0.44	1.46	1.61
Cash Flow:					
Net Cash Generated from Operating Activiti	8,130,573.00	2,035,310.00	5,782,185.00	621,177.00	514,856.00
Net Cash Used in Investing Activities	1,254,555.00	(4,809,026.00)	(2,191,527.00)	(3,964,751.00)	(5,202,446.00)
Net Cash Used in Financing Activities	(8,835,148.00)	3,886,582.00	(3,527,801.00)	3,257,265.00	4,622,004.00
Market Share (in %)	17.32	5.12	9.57	1.45	0.68

Table 5 Industry Competitors Comparison

The above table shows that among all these competitors, SPL has a monopoly in the healthcare industry. This indicates that SPL has been the top competitor and is determined to maintain its legacy. We can understand from this comparison that SPL is around 15 times ahead in the market than its competitors. Despite having similar revenue generation among the three competitors, the profit gap is exceptionally high among the companies. This indicates that SPL has effectively reduced costs in its operations without compromising its quality. Again, SPL has insignificant liabilities compared to its competitors, and its assets are 3 times higher than those of other companies in the charts. This shows the incredible financial strength of SPL.

2.5.2 Accounting Practices

Square Pharmaceuticals PLC has to abide by the standards and regulations provided by the Bangladesh Financial Reporting Standards (BFRS) and Bangladesh Accounting Standards (BAS), maintaining transparency and accountability.

2.5.2.1 Bookkeeping Methods

SPL follows an accrual-based bookkeeping method where transactions are recorded when they occur. The Fiscal year for SPL is July-June. SPL publishes its unaudited quarterly reports end of per quarter and annual reports on its website and also submits them to the authorized personnel. Moreover, the company uses an ERP system to decentralize transactions and real-time reporting. SPL has SAP, Excel, and Oracle to help with recording every transaction.

2.5.2.2 Depreciation Methods

Square uses the Straight-Line Method to record its depreciation. It has its own chart to calculate yearly depreciation. According to BFRS, only land does not depreciate. Square does not reevaluate its assets but keeps them at their cost price for valuation. The depreciation chart is given below.

Asset Category	Rate
Building and Other Constructions	10%
Boundary Wall	10%
Plant & Machinery	15%
Laboratory Equipment	10%
Office Equipment	10%
Furniture & Fixture	10%
Motor Vehicle	20%

Asset Category	Rate
Electrical Installation	15%
Gas Line Installation	15%
Books and Periodicals	30%
Electro-Mechanical Equipment	15%
Software	20%-50%
Computer and VSAT	10%
Motor Cycle	20%

Figure 13 Depreciation Chart

These are the asset categories that are depreciated under SLM in Square.

2.5.2.3 Accounting cycle

SPL fully maintains with the rules and regulations of IFRS, BFRS, and BAS. They ensure that the full accounting cycle is systematic, controlled, and complies with the Company Act 1994. The accounting cycle for SPL-

- ➔ Transaction Recording
- ➔ Journal Entries
- ➔ Ledger Posting
- ➔ Trial Balancing
- ➔ Bank Reconciliation
- ➔ Adjusting Entries
- ➔ Preparing Financial Statements
- ➔ In-house Auditing

- ➔ External Auditing and Finalization

2.5.2.4 Report Maintenance and Disclosures

A listed public company must go through auditing before it submits its annual report. There are thousands of steps a company must follow in order to comply with the regulations. Hence, SPL adequately publishes its annual and quarterly reports. In their reports, every financial decision is clearly explained with logic. The annual reports have an auditor’s report, a disclosure statement, and notes for each financial component. SPL also ensures to back up evidence for each transaction in their software. They have teams to work on each segment that ensure the financial report builds shareholders’ trust. This report also helps other investors to make financial decisions for Square.

2.5.3 Review of Financial Performance and Accounting Practices

Square Pharmaceuticals PLC has a praiseworthy accounting system. They have exceptional financial stability to run their business. Through the decades, they have built their accounting processing system depending on their needs. They are continuously trying to improve their system, adhering to the newest technology. Moreover, in their financial performance, there is a significant change that occurred due to the transfer of products to their sister concern. This decision affects SPL but does not change the results of the overall company performance. Additionally, they have very high liquidity, which indicates lower investments than their capability. Therefore, they can increase their investments in foreign markets as well as in the local market.

2.6 Operations Management and Information System Practices

Square Pharmaceuticals rigorously manages its operations and supply chain. Operations and the supply chain need to be controlled by a pharmaceutical company to ensure the quality of medicine, reduce the misuse of drugs, and ensure timely provision of medication to patients (Shojib MD et al, 2020).

2.6.1 Quality Assurance Process

Square ensures quality through every process of manufacturing. First of all, SPL has built the Dhaka Unit for oral solid dosage and other facilities, adhering to the requirements of **cGMP CFR21**. This plant has been audited twice by UNICEF and was enlisted for their global supply. Additionally, this plant is recognized to fulfill the requirements of the **MHRA (United Kingdom Medicines and Healthcare Products Regulatory Agency)**.

Square ensures in preservation and maintenance of the quality of its goods as "life-science Biology". In order to do so, SPL's operations team follows the **WHO GMP and ISO 9001** standards in manufacturing and packaging. Moreover, they are keen to withdraw expired medicines from the market with regular monitoring. They have high-grade laboratories, advanced technology and machinery, and workers to keep their standards up to the mark. During the year 2023-2024, of Tk. 51.17 million was invested in improving its laboratory facilities in line with new inventions of process/production.

2.6.2 Distribution Network and Revenue Generation

Square has its own distribution network and revenue generation system to run the operations smoothly and integrate. The distribution process and revenue generation are connected with each other. SPL generates around 30 crores from their local goods in a day. Therefore, the company's distribution network needs to be strong and sufficient.

Distribution Process: Square has 29 depots all around Bangladesh to ensure proper distribution of their goods to the customers. Square has its own vehicles and storage facilities to keep the product quality intact. The company distributes their products after getting a purchasing order from their customers. After confirming the purchasing order products are disposed to their distribution center with proper documentation, and then those products are transported to the customers with the help of their field officers. At this stage, the customers pay in cash to the field officers and receive their products.

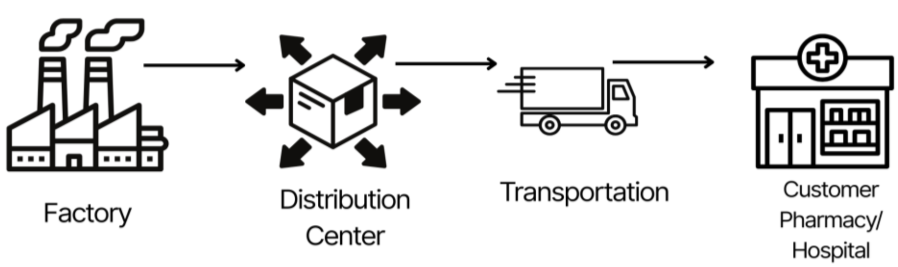

Figure 14 Distribution Network of SPL

2.6.3 Information System Practices

SPL uses information technology to store and process data. The data are transferred from the factories to the headquarters in bulk paper or as a scanned copy. These data are then collected manually using Excel, Oracle, SAP, etc. All the employees and board members have access to this data, making it a decentralized process.

Furthermore, SPL uses its own sister company named Square Informatix Ltd., for information and communication assistance. Their whole operations are managed and monitored by the company. The company helps SPL to customize their own plans into different software and programs so that they can be used effectively. Square Pharmaceuticals also makes sure that all data is secured and processed professionally and delicately. Thus, the company has a smooth information flow among departments and plants.

2.6.4 Review of Operation Management and Information Process System

Square Pharmaceuticals PLC has a well-organized and balanced operation and supply chain management system. They have professional personnel to monitor each step of the operations. Medicines are highly sensitive products; thus, they need proper care and protection. Hence, SPL adheres to every legal and regulatory obligation. They revise their standards and protocols annually and make adjustments as necessary.

The distribution and revenue generation processes are well-managed by SPL. The revenue system is designed in such a way that no one can misuse it, and the system will detect any anomalies in the process. The staff who are associated with the distribution process are well-equipped and professionally trained. Therefore, apart from any market risks, SPL has established an efficient internal operation and distribution process, enabling its management to succeed.

2.7 Industrial Competitive Analysis

2.7.1 Porter's Five Forces

According to Michael Porter (1979), these five forces help to understand the industry's competitiveness and allow for exploration of the economic value of an industry.

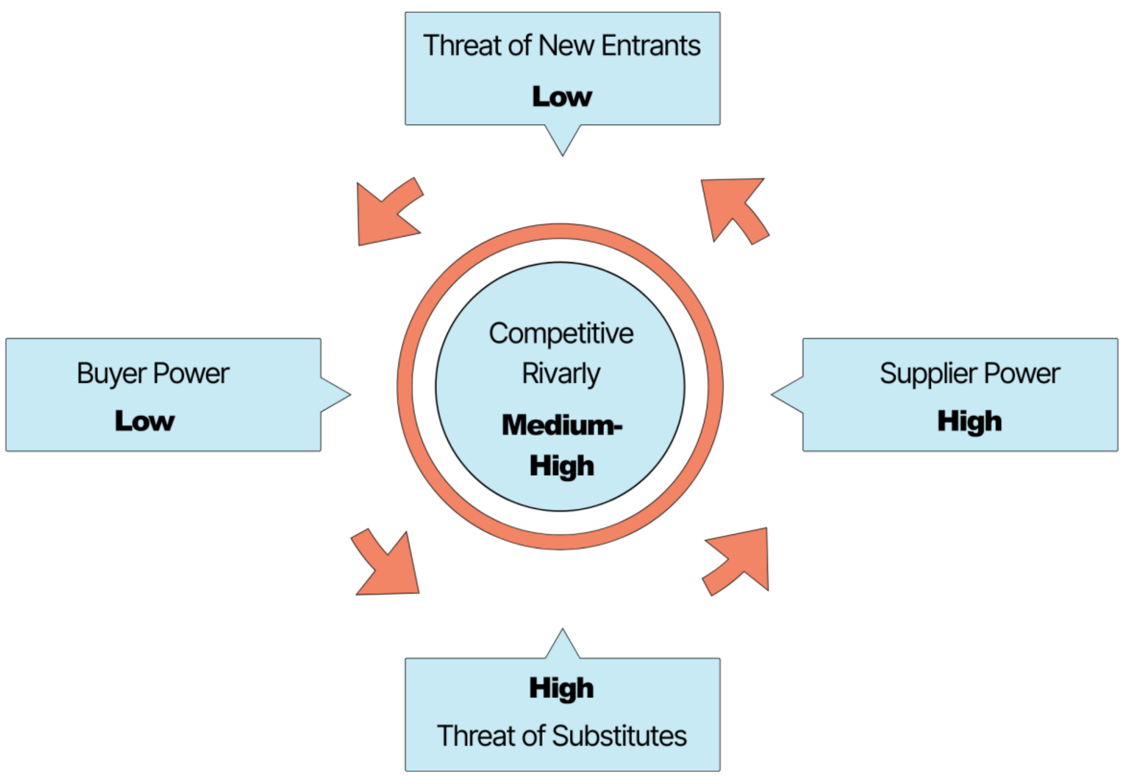

Figure 15 Porter's Five Forces Diagram

The Porter's Five Forces analysis for the pharmaceutical industry.

- **Threat of New Entrants (Low):** Entering the pharmaceutical industry requires huge investments, proper machinery, factories, a distribution network, and certifications. The business also needs prominent workers and a research and development team to produce medicines. Therefore, the threat of new entries in this business is minimal.
- **Threat of Substitutes (High):** There are similar products with different names in the market. Buyers buy medicine in an emergency or when needed. If there is a short supply of a certain medicine by a company, then the buyers would immediately purchase the next best alternative. Hence, replacement is easy in this market.
- **Buyer's Power:** The buyers of a healthcare product do not have much bargaining power. They are highly dependent on the prescription provided by the doctor and do not have knowledge of the ingredients of the medicine. Also, the prices are regulated by the government, which gives less scope to differentiate among the same type of medicines from different companies.
- **Supplier Power:** The suppliers of the raw materials for medicines have higher bargaining power. Most of the raw materials are imported from different countries into Bangladesh. For instance, 90% of the raw materials of SPL are imported. Therefore, this gives the suppliers an advantage.
- **Competitive Rivalry:** The companies continually strive to capture market share. They have the same products under different names and are fighting to dominate the market.

2.7.2 SWOT Analysis

A SWOT analysis helps a company evaluate its internal and external market position. Their internal strength and weaknesses, and external opportunities and threats are measured to plan strategies necessary for a business to succeed.

Square's SWOT analysis-

- **S- Strengths:**
  - Square has immense assets and cash to support its operations both locally and internationally without taking on any loans.
  - They have modern technology, globally certified facilities, and a high-class research and development team to support their business
  - The company has built its own distribution network that is highly efficient and complementary.
  - Square's reputation in the market has high positivity, which helps their products reach the market smoothly.
  - Their integrity, truthfulness, and compliance have led them to gain the trust of the regulatory personnel as well as the local and international markets.
- **Weaknesses:**
  - Square Pharmaceuticals PLC has a lengthy decision-making process that needs to cross different stages of approval.
  - Square does not have departmental HRs that can support the employees of departments individually. Therefore, the facilities are not provided equally.

- Square Pharmaceuticals is exposed to international currency risk, as most of its raw materials are from abroad
- The scope for innovation is very less in SPL. Their research and development team only focuses on the proper care of manufacturing products rather than developing new molecules for any disease.

- **Opportunities:**
  - Benefits from the government and subsidies for achieving great milestones
  - Square Pharmaceuticals has huge opportunities to increase its export market.
  - They have the resources to manufacture internationally, like in Kenya and the Philippines.
  - Square has immense liquidity to support small and big investments in new industries.
- **Threats:**
  - SPL has tough competition with its rivals, making the products similar to one another.
  - Failure in maintaining stringent rules and regulations can cause SPL to lose its market share and permissions to produce goods.
  - Natural disasters that cause fire or, earthquake can create huge production failures. E.g., A fire broke out in the LVP unit at Kaliakair, Gazipur factory of SPL, that suffered a loss of about 500m BDT (The Financial Express,2022)
  - Political disturbance and instability can also hamper the workflow of the company, leading to huge losses.

2.8 Summary and Conclusion

From this study, we can recognize the potential and promises that have made SPL the topmost pharmaceutical company of Bangladesh. Square Pharmaceuticals PLC has represented a skyline performance since the start of its journey. The core values of Square- Quality, Integrity, and Compliance shaped their management system. In the whole management process, SPL has maintained a systematic structure that would help them run their business smoothly.

Over the years, Square has adapted to the changes in its surroundings by making itself technologically advanced, exposing itself to the international market, rigorously updating its accounting facilities, and shaping the management structure to create positive growth for the business. Square has gained people’s trust and created accountability that would help it to grow even stronger.

2.9 Recommendations

Studying the overall organizational practices of SPL, there are some suggestions that would bring some changes and improvements for SPL.

First of all, the management practices should change their recruitment process to a paperless system, which would help the sustainability of the environment. They should also change their compensation ranges that be competitive with the recent market. The SPL management team should have a departmental care system incorporated and make updates to their recruitment system on a digital platform so that it becomes less time-consuming.

Secondly, SPL is highly dependent on its reputational marketing. Therefore, they should try to have less dependency on one kind of strategy. Also, they should expand their product line rather than only producing one segment of the product.

Lastly, SPL should concentrate on changing its accounts recording process to a decentralized single software rather than using multiple platforms. They should have a convertible file system to record and distribute the transaction documents. SPL has shown incredible financial performance; therefore, it has a lot of investment scope.

Chapter 3: Post-Audit and Forecasted Analysis on SPKEL with Capital Budgeting Model

3.1 Background and Problem Statement

Square Pharmaceuticals PLC has built a manufacturing plant in Kenya, inspecting the African pharmacy market's growth potential. Square Pharmaceuticals Kenya EPZ was incorporated in 2017, and operations started in 2022. In Bangladesh, Square Pharmaceuticals PLC is the first company to expand its business as a pharma manufacturing company in the international market. Since Square Pharmaceuticals Kenya EPZ incorporation, the world has gone through drastic economic changes. Therefore, this report aims to reevaluate the investment decision of Square and find out whether the company needs to make necessary changes to the investment and how the decision would affect the parent company (SPL).

3.1.2 Objectives

The report aims to evaluate the potential outcome of the investment of SPL in Kenya, known as Square Pharmaceuticals Kenya EPZ Ltd. The objectives of this chapter are

- ❖ To analyze and compare the investment decision, three years of data from the annual reports and 5 years of data would be estimated in consideration of the gathered data.

- To evaluate the results, financial methods of capital budgeting would be used to find the company's performance and compare it with and without the investment decision.
- The objective of the report is to determine the investment in a foreign country through mapping the cash flows from the investment and determining whether the decision would be rewarding for SPL.
- The study would also compare its overall performance with its business objectives and find out the significant changes it brought to Square Pharmaceuticals PLC and in Bangladesh Pharmaceutical Industry.

3.1.3 Significance

The study has great significance for the companies that want to invest in the African pharmaceutical market. The report shows the current opportunities lying for international investment. This also provides a futuristic outlook for SPL's investment that would reflect their investment decisions. The financial studies in this report would help an investor analyze whether an international investment can boost Bangladesh's economy.

Moreover, the research can also be used by SPL to determine the success of their investment decision and make certain changes reviewing their investment. The study also suggests some recommendations that may help SPL rectify their decisions. The comparison would help them to analyze certain elements that affect foreign investments.

Lastly, this study can help understand the pharmaceutical industry's competition. The Pharmaceutical industry can have inspirations from SPL to invest in international platforms, and also identify the gap among themselves. The study helps to detect the investment results of SPL that can inspire other investors to go for international ventures themselves. This would also help the economy of Bangladesh to rise in foreign relations.

3.1.4 Scope of Study

The study has actual data from 2022-2024 and forecasted data from 2025 to 2029. This will help to understand the performance of SPKEL and also measure the risks associated with the company. The report consists of capital budgeting metrics and qualitative risk analysis that would show an overview of the investment decision.

3.2 Literature Review

Post Audit is the process of analyzing an event that has already occurred. Post audit initially measures the effectiveness of a decision and measures the benefits from an investment (Kovárník et al.,2022). It is a composed part of the capital budgeting process that is performed to evaluate the company. This also highlights the capabilities of the company strategist. Post auditing works as feedback, and often companies skip this part. According to Lefley (2016), post-auditing's main objective is to provide feedback as a method of controlling investments. Kovárník et al. (2022) state that this method helps a company to learn, control, evaluate, and modify a decision. This also gets rid of the bias toward one decision and can give closure on investments. It is also mentioned that a post-audit can identify the future opportunities of a project. According to Ma'aji, Muhammad & Barnett, Casey (2019), the most effective way to analyze capital budgeting performance for manufacturing companies is through **NPV, IRR, Pay Back Period, etc.** The study can use WACC to determine the post-tax cost. Furthermore, measuring the interest risks, business cycle risks is important to analyze an investment decision. They also suggest that for long-term investments, NPV measurements are quite effective. Therefore, to post audit the most effective and applicable methods are used to determine the decision of SPL in this study.

3.3 Methodology

The study focuses on judging the investment decision of Square Pharmaceuticals PLC in the Kenyan market. The methodology for this post-audit evaluation follows a mixed-method approach, combining quantitative financial analysis with qualitative market assessments. The data used in this study were taken from 2021 to 2024 for the calculation of different post auditing methods. The qualitative approach used some data from 2017 to 2020 to compare and contrast the investment decision timeline itself.

The primary source of data for this post-audit assessment will be observations and analyses of a comparable manufacturing facility in Dhaka that runs in comparable circumstances. This facility will provide insights into production challenges, market adaptability, and operational efficiency. To assess whether the anticipated results correspond with the actual performance, key managers who were involved in the initial investment decision were also interviewed. Their viewpoints were useful in answering important questions about market entry difficulties, strategic planning, and financial projections. By integrating insights from individuals directly involved in the investment decision with real-world operational data, this method guarantees a comprehensive analysis.

The collection of secondary data comes from government regulations, industry analyses, competitor benchmarks, and company financial reports. To determine how to compare actual performance with projections, the financial analysis will evaluate important metrics like Net Present Value (NPV), Internal Rate of Return (IRR), profitability, and risks. The impact of competitive dynamics, regulatory changes, and economic fluctuations on the investment will be evaluated through risk and sensitivity analysis. Additionally, Square Pharmaceuticals' market share, customer perception, pricing strategies, and distribution efficiency are all examined in order to assess market performance. Financial performance, market penetration, regulatory flexibility, and strategic suggestions for upcoming decision-making is the main evaluation criteria.

3.4 Findings and Analysis of SPKEL

Square Pharmaceuticals Kenya EPZ Ltd is one of the largest investments of SPL. This investment was their initial step to enter the international market as investors. SPKEL is a fully subsidized company of Square Pharmaceuticals PLC. The company was established in 2017, and the process started to build a manufacturing company in Nairobi, Kenya.

3.4.1 Investment Type

SPL has engaged in Foreign Direct Investment (FDI) through entering the market of Kenya. According to Alfaro and Chauvin (2017), an FDI is a type of investment that requires a company to build its operations from the start and expand the economy of the host country. Foreign direct investments are riskier than other types of foreign investments. SPL holds the full ownership of SPKEL and has established a manufacturing facility in Nairobi. SPL is targeting a long term physical presence and market expansion through this investment. The plan is within the EPZ arena and aims to cover the East African zone by suppling goods from there.

3.4.1.1 Company Overview

SPKEL is a manufacturing company established by Square Pharmaceuticals PLC. The company has a USD 17 million as initial investment and 4 million as working capital. Among this initial investment, 8 million USD was from equity, and 9 million USD was invested taking loans. The construction of the manufacturing facility started in 2019, and production started in January 2022. The project transferred technological facilities from Bangladesh to Kenya. In an interview, the CFO of SPL stated that the investment would create a positive attitude towards Bangladesh in the multinational market (Habib,2022).

Figure 16 SPKEL Factory in Kenya

- **Entity Name:** Square Pharmaceuticals Kenya EPZ Ltd.
- **Year of Incorporation:** 2017
- **Commercial Operation Started:** 2022
- **Investment Size:** Approximately USD 20 million
- **Facility Type:** WHO-GMP standard manufacturing plant
- **Capacity:** 2 billion tablets and 60 million capsules annually

3.4.1.1.1 Objectives of SPKEL

The CEO of SPL, Mr. Tapan Chowdhury, explained in an interview with KBC Business (2021) that the objectives that the company wants to achieve through this project are

- ➔ To establish a strong foothold in the East African market by directly manufacturing in that region.
- ➔ To reduce the dependency on imported medicines in those areas and ensure a medicine supply in those underdeveloped areas.
- ➔ Cost reduction through local production and reducing dependency on the export market.
- ➔ To create a strong global presence and boost the economy of Bangladesh by entering the international market.

3.4.1.1.2 Significance of SPKEL

The project aims to distribute its products in Kenya and other EAC countries, including Tanzania, Rwanda, Burundi, Uganda, and South Sudan. This would reduce their dependency on foreign healthcare products. The project also creates large employment opportunities. As of now, the company has created 100 jobs and 700 youths of Kenya are working with SPKEL. Moreover, the project reduces the cost of healthcare, making sure to support the underprivileged countries of Africa. SPKEL also helps SPL to expand its market and earn foreign exchange, optimizing the cost of export.

3.4.1.1.3 Principle of Business Activities

The Company's core business activities are the manufacturing, marketing, and distribution of generic pharmaceutical products in Kenya and the majority of the East African Community (EAC).

3.4.1.2 Industry Outlook

The African pharmaceutical market has great potential that remains largely unexplored. According to the annual report of SPL, 61% of the demanded medicines are imported into Africa. This indicates a significant chance for regional investment and manufacturing. The pharmaceutical market on the continent is expected to grow at a compound annual growth rate (CAGR) of 7.07% from 2024 to 2032, reaching a value of US$4.1 billion. The industry is experiencing rapid growth, with a predicted revenue of $765 million in 2024. It is also analyzed that the development will increase at a 6.6% rate until the year 2032. Notably, the oncology therapeutics market in Kenya is expected to grow at a compound annual growth rate (CAGR) of 9.5% from 2022 to $263 million by 2030. Rising healthcare expenses, the burden of disease, the expiration of branded drug patents, and robust government support for reasonably priced generics are the main causes of this growth, according to the Ministry of Health, Kenya (2020). The Kenyan government is encouraging the use of generic medicine through public awareness, improvement of the healthcare system, and regulatory reforms. Furthermore, by promoting investment in domestic pharmaceutical production, including drugs, vaccines, diagnostic kits, and other critical healthcare products, the African Continental Free Trade Area (AfCFTA) has the potential to revolutionize the sector, promoting greater self-sufficiency and regional healthcare resilience.

3.4.2 Financial Post-Audit of the Investment

SPKEL is an international investment by SPL. The financial performance of the company directly affects the performance of SPL. Therefore, a post-review of this capital investment is necessary to find out the potential of this project.

3.4.2.1 Investment Timeline and Process

Square Pharmaceuticals Kenya EPZ Limited was incorporated in 2017. The initial investment was determined to be approximately $ 20 million USD. The $ 8 million was taken from equity, and $ 9 million was from loans. The share money was deposited step by step, authorized by the Bangladesh Bank, and the same procedure was followed for loan finances. SPKEL was scheduled to start production by 2020, but due to COVID-19, production was put on hold. This led to a two-year delay in operations, with their journey commencing at the end of December 2022. From 2022 onwards, production has been ongoing, generating revenue for SPKEL.

3.4.2.2 Net Present Value (Actual)

NPV Calculation (Actual)						
Year	CF in KES	KES= USD	CF in USD	USD=BDT	Cash Flow in BDT	NPV
2017			$ 20,000,000.00	79.85	(1,597,000,000)	
2018	227,616,325	0.0099	2,253,402	82.75	186,468,984	
2019	97,888,667	0.0096	939,731	83.50	78,467,555	
2020	427,414,094	0.0093	3,974,951	83.95	333,697,143	
2021	7,260,995	0.009	65,349	83.95	5,486,045	
2022	27,365,340	0.0085	232,605	92.50	21,515,999	
2023	1,765,970	0.0068	12,009	107.05	1,285,520	
2024	(153,138,854)	0.0077	-1,179,169	117.00	(137,962,794)	(1,161,965,786)

Table 6 NPV Calculation

In this calculation, the initial income of SPKEL was in Kenyan Shillings (KES). The cash outflow, on the contrary, was in USD, permitted by the Bangladesh Bank. Thus, the cash outflow of 20 million USD was converted to BDT (1,597,000,000), and the cash inflow was converted from KES to USD and then into BDT for the ease of calculation. The conversion rate is given in the chart following the conversion rates given in the annual reports of SPL. The cash outflow was in 2017, and since then the company has faced a loss in its operating cash flow (OCF) as there was no production or sell. In late 2022, production started which started generating a positive cash inflow for the company. From 2024, the analysis goes further into the future to predict the nature of cash flow for upcoming years and see the company's potential. The cash flows from 2025 were predicted using the historical data of SPKEL (Figure 20).

The Weighted Average Cost of Capital was calculated using the cost of debt of SPKEL, which had a floating interest rate of 5.25%, and the equity cost of SPL, as determined by the CAPM method (Figure 22). The WACC turned to 9.5% which is used as the discount rate to calculate the present value for the forecasted cash flows only (figure)

Lastly, the Net Present Value (NPV) for SPKEL shows a negative value in the year 2024. Some factors could be noticeable that the returns would turn positive only if the exchange rate of USD to BDT increases. The initial cash flow in 2023 was negative, but the company had utilized its resources to increase its sales drastically the next year. Thus, the company has high potential in the long run for generating revenue.

3.4.2.3 Modified Internal Rate of Return (MIRR)

MIRR(Actual)	
2017	(1,597,000,000)
2018	186,468,984
2019	78,467,555
2020	333,697,143
2021	5,486,045
2022	21,515,999
2023	1,285,520
2024	(137,962,794)
MIRR	-8%

Table 7 MIRR (Actual) Calculation

The internal rate of return from SPKEL is -8%. Internal rate of return allows investors to measure a company's profitability and compare whether it can earn more than the required rate of return. The modified internal rate of return is used in this scenario for multiple negative cashflows. For SPKEL, the required rate of return is its WACC, which is 9.5%. This is the amount of return SPKEL must ensure to operate its fixed costs. As of 2024, SPKEL could not ensure a profitable return and the performance was lower than expected from this investment.

3.4.2.4 Return of Investment

3.4.2.4.1 Pay Back Period (Actual):

PAY BACK PERIOD (Actual)		
Year	**Cash Flow in BDT**	**Cumulative Cash Flow**
2017	(1,597,000,000)	(1,597,000,000)
2018	186,468,984	(1,410,531,016)
2019	78,467,555	(1,332,063,461)
2020	333,697,143	(998,366,318)
2021	5,486,045	(992,880,273)
2022	21,515,999	(971,364,275)
2023	1,285,520	(970,078,754)
2024	(137,962,794)	(1,108,041,548)

Table 8 Pay Back Period Calculation

The payback period indicates the time it takes for the investment to recover its original cost to the investor. The Payback Period does not consider the time value of money. The table shows that the original investment is still not repaid in years. The forecasted payback period before investment had shown that the return of investment would be by the end of 2023. Unfortunately, due to COVID-19, the operations were delayed, which led the company to miss the benchmark of 2023.

3.4.3 Post Audit Result Summary

The post-audit analysis was conducted to see the actual performance of SPKEL. The results did not match the expectations of Square Pharmaceuticals PLC.

In this post audit, the NPV calculated turned out negative, as well as the MIRR. The reasons behind the negative impact on NPV and MIRR were the delay in operations, the pandemic, and the fixed cost of the factory per year. However, the cash flows were positive due to financing and hedging the dollars against the economy. Moreover, the company showed huge growth in the year 2024 in terms of its sales. This shows high potential for the company in the near future.

Lastly, the payback period also showed that the cash flows were significantly lower than expected. It also showed a negative balance in the year 2024. Thus, the post audit was not satisfactory for SPKEL.

3.5 Forecast Analysis of Investment for Future Decisions

To make decisions on behalf of SPKEL about the investment, another 5 years from today was forecasted. The consideration of this forecast was taken by analyzing the potential growth of the cash generation of around 1200% from 2023 to 2024 through operations. Thus, another capital budgeting decision was taken through historical forecast from 2025 to 2029.

3.5.1 Net Present Value (Forecast)

NPV Calculation (Forecast)						
Year	CF in KES	KES= USD	CF in USD	USD=BDT	Cash Flow in BDT	NPV
					(1,108,041,548)	
2025	(22,913,445)	0.0077	-176,434	122.00	(21,524,890)	
2026	159,585,056	0.0076	1,212,846	123.00	149,180,110	
2027	428,685,187	0.0076	3,258,007	124.00	403,992,920	
2028	625,879,988	0.0076	4,756,688	125.00	594,585,989	
2029	970,055,746	0.0076	7,372,424	126.00	928,925,382	308,079,461

Table 9 NPV (forecast) Calculation

The remaining investment is highlighted in the blue row of the table, was considered to calculate the NPV. The NPV in the next 5 years calculation is positive and indicates great potential for SPKEL. The mentioned above WACC was considered to discount the forecasted cash flow. Therefore, in the next five years, the company can become highly profitable.

3.5.2 Modified Internal Rate of Return (Forecast)

MIRR(Forecast)	
	(1,108,041,548)
2025	(21,524,890)
2026	149,180,110
2027	403,992,920
2028	594,585,989
2029	928,925,382
MIRR	**15%**

Table 10 MIRR (Forecast) Calculation

The MIRR for the forecast shows a positive comeback in the next five years with the investment. The MIRR is 15%. This means that the company would give a return of 15% and would be able to cover the 9.5% WACC. The project will, in the future, generate a higher return than the minimum required return. This also indicates financial stability for SPKEL. The project has a safe return margin covering the cost of capital and can become attractive in the future.

3.5.3 Pay Back Period (Forecast)

PAY BACK PERIOD(Forecast)		
Year	**Cash Flow in BDT**	**Cumulative Cash flow**
0	(1,108,041,548)	(1,108,041,548)
2025	(21,524,890)	(1,129,566,438)
2026	149,180,110	(980,386,328)
2027	403,992,920	(576,393,408)
2028	594,585,989	18,192,581
2029	928,925,382	947,117,963
	PBP	**3.97**

Table 11 PBP (Forecast) Calculation

The forecasted PBP calculation shows that in 3.97years or 3 years and 11 months approximately, the remaining investment would be back to SPL or could be reused for operations. Afterwards, SPKEL can operate independently using its own retained earnings and would also be able to expand the business in the African continent as planned.

3.5.4 Discounted Pay Back Period (Forecast)

DISCOUNTED PAY BACK PERIOD (Forecast)			
Year	Cash Flow in BDT	Present Value of Cash Flow	Cumulative Cash Flow
	(1,108,041,548)		(1,108,041,548)
2025	(21,524,890)	(19,657,433.68)	(1,127,698,982)
2026	149,180,110	124,417,847.80	(1,003,281,134)
2027	403,992,920	307,702,763.63	(695,578,370)
2028	594,585,989	413,578,729.03	(281,999,641)
2029	928,925,382	590,079,101.89	308,079,461
		DPBP	4.48

Table 12 DPBP (Forecast) Calculation

The discounted payback period is calculated for the forecasted cash flows. In the actual post-audit, there is no discounted payback period as the returns are of the present. However, to know the potential of the company in the present timeline and considering the time value of money, calculating the cash flow is important. Therefore, from the calculation, we can see that the actual return would be in 4.48 years or 4 years and 5 months approximately. There is only about a 5 to 6 months difference for the investment to actually return, considering the cost of capital as the discount rate.

3.6 Associated risks of the investment

An international investment comes with various kinds of risks. Risks are the uncertainties that a company needs to consider before investing.

3.6.1 Economic Risks

Exchange Rate Risk:

SPKEL is highly exposed to exchange rate risk. The capital expenditure is mainly from Bangladesh, and raw materials for the manufacturing of SPKEL products are exported. Therefore, the company is at a high stake in fighting the exchange rate risk.

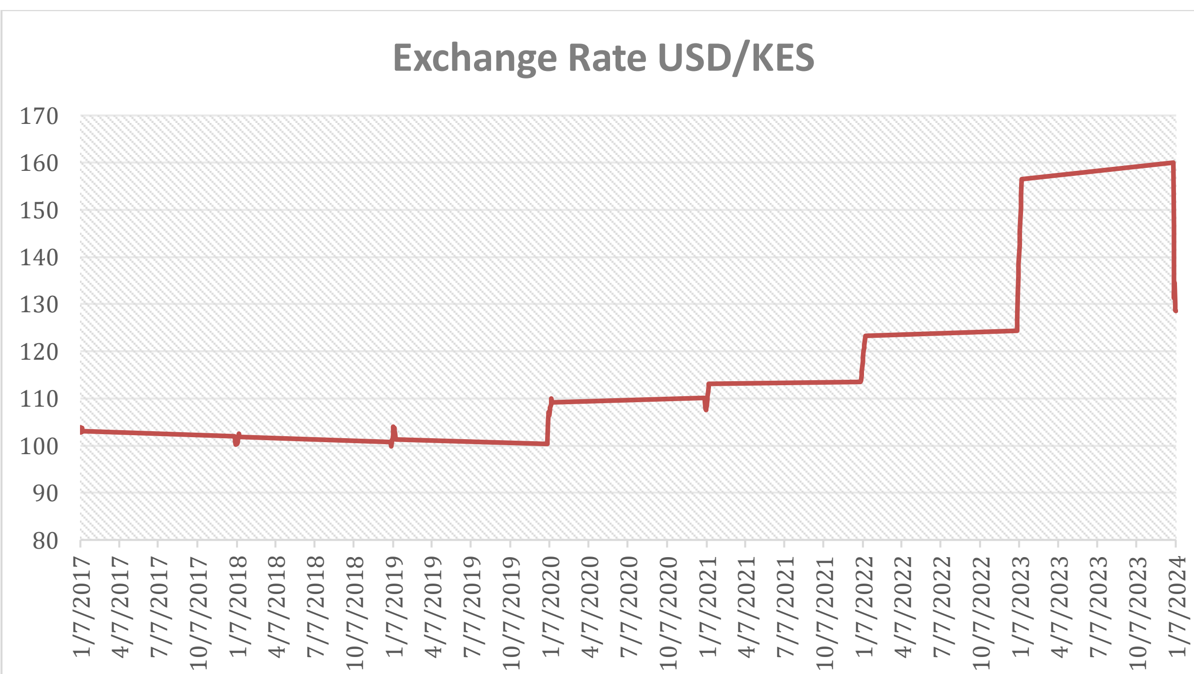

Figure 17 Exchange Rate Fluctuation between USD/KES

The above chart shows the exchange rate of Kenyan Shillings against USD. In the timeline of initial investment, the exchange rate between USD and KES was approximately 1 USD = 102 KES. The line chart illustrates a steady decline in the value of KES from 2019 to 2020. From 2021-2024, the value for money in Kenya decreased significantly at the end of 2023 with a rise in the exchange rate. Again in 2024, the exchange rate nearly dropped by 30KES. Still now it is in the same volatility. In 2017, when the initial corporation was registered, 20million USD could have been earned with less KES than it would take now.

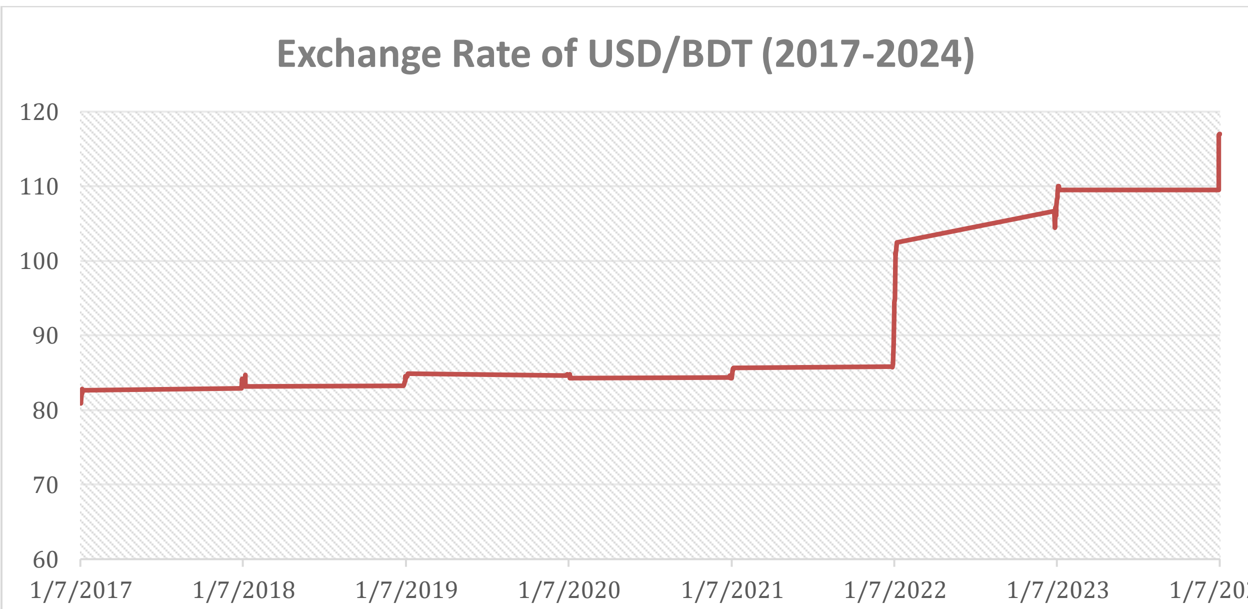

Figure 18 Exchange rate fluctuation between USD and BDT

On the other hand, if we notice the exchange rate between USD and BDT, the difference is rising steeply. Therefore, the cost of investing is also increasing. The exchange rate for BDT was at a stable growth from 2017 to 22. But at the end of 2022, the price of USD jumped, exceeding 100 BDT, and remained in that position with an increasing slope. Therefore, the value of BDT decreased against USD. The exchange rate fluctuation has also affected the costs and income of SPL. Thus, this is a high concern for Square Pharmaceuticals PLC.

The volatility of the exchange rate is quite high for both countries. Hence, this poses a great risk for the investment.

Inflation:

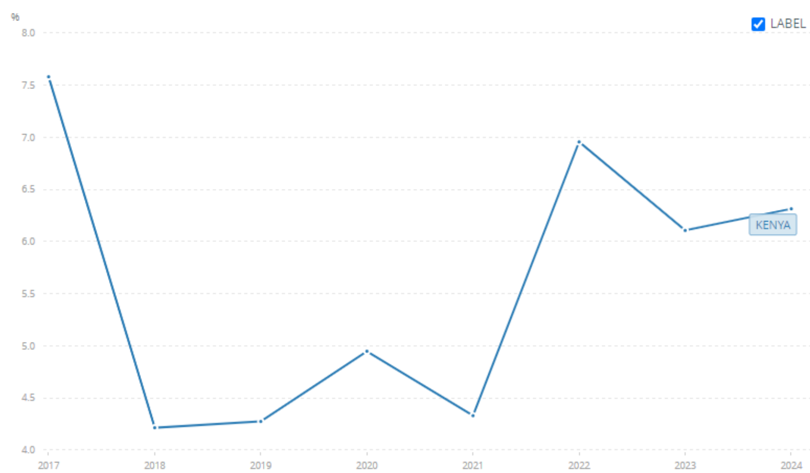

Figure 19 Inflation rates of Kenya by World Bank

The inflation rate can change the future projections of an investment. High volatility in the inflation rate can make an investment riskier. Low volatility indicates an investment is less risky. The graph shows that the inflation in Kenya was above 7.5% in the year 2017. Then this was reduced by around 5%-6% in the year 2024. The graph shows some high peaks during the last 8 years, and recently, the inflation rate has been steady at around 6%. This shows that the price of goods is steady in the Kenyan market. But earlier it was higher than expected. Therefore, the graph indicates the Kenyan market is highly volatile for purchasing goods. Therefore, the inflation rate is also considered to be a high risk for SPKEL.

3.6.2 Operational Risks

Operational Risks are a kind of risk that is related to the operations of a company. If a company cannot function in its regular activities, that is a part of the operational risks. Operational risks can be business functions, logistics, or infrastructure. According to The Business Standards, SPL mentioned that they had a target to start their operations in 2020. But due to the COVID-19 pandemic, they could not finish building the factory for SPKEL. Therefore, the production got delayed by two years and started in 2022. The infrastructure, building, communication, transportation, etc., were closed off. The uncertainty of the pandemic stopped SPKEL operations and posed a high risk at that time. Moreover, the company being dependent on SPL can have trouble with logistics, dependency on imported raw materials, port clearance, and local and international staff management can pose a minor risk to SPKEL.

3.6.3 Regulatory and Political Risks

Some regulatory and political troubles may hinge on the operations of SPKEL. It is sometimes difficult to manage the quality without the right inspection and control. Moreover, there are differences in the laws and regulations of Bangladesh and Kenya.

To start with, Kenya has strong environmental waste control regulations, labor standards and follows the GMP regulations to produce medicines. Therefore, if SPL fails to comply with these standards, the company may face international criticism. Secondly, there are tariffs, international business rules, transfer pricing systems, and other factors that are crucial to maintain so that SPL does not fall under any violation of the system of Kenya. Additionally, Bangladesh is a country with unstable politics.

Hence, communicating business with this country often becomes difficult, and decisions are delayed. This can cause huge loss for SPKEL as the directorial administrative body resides in the country and can face difficulty conducting business due to political mishaps. Lastly, the corruption level in both countries is high. Therefore, this leaves opportunities for misusing the investment if there is no proper control.

3.7 Impact of Investment in Bangladesh

Square Pharmaceuticals PLC is the first pharmaceutical company to invest in the international market. They have shown their interest in conducting business as a multinational company. They are the first to have a landmark in the EPZ area of Nairobi, Kenya. SPL has set a benchmark for all the other pharmaceutical companies in Bangladesh to venture into the international market. Square has always been extraordinary with its performance, and its growth has led to the output to grab the international market. The capital venture indicates the stronghold of Bangladesh in the pharmaceutical industry and creates a positive effect for the businesses in Bangladesh. Square Pharmaceuticals PLC ensures a profitable long-term foreign currency inflow in Bangladesh with a large one-time outflow. The company is recognized for having excellence in investment, creating employment opportunities, sustainability, economic growth, and development.

3.8 Summary and Conclusion

The post audit aims to acknowledge the investment potential of Square Pharmaceuticals PLC in SPKEL. After using some capital budgeting tools to gather the performance spectrums of SPKEL, it is noticed that the performance potential of the investment is satisfactory. Although some factors can be altered and monitored to make this investment a success.

Firstly, the positive side of this investment is that this is a profitable company and has a long-term sustainability promise. The tools acknowledged the existing performance of SPKEL and aligned those with future expectations. The pre-capital budgeting was conducted before the investment in the time span of 2016-2018. At that time, the expectations from SPKEL were different from what it is now. The COVID-19 pandemic was not considered in the pre-analysis of SPKEL's potential. This study examined the changes of COVID-19 and measured the numbers accordingly. The post-audit performance measurement still has a positive outcome for SPKEL. The NPV has a greater positive value, and it can earn up to 21% considering the cost of capital by SPL. The cost of capital is nearly 10% for Square, which surely is covered by its operations. According to Habib (2024), the Kenya unit of SPL increased its profit from almost 2crore to 6crore, shifting from the first quarter of 2024-2025 to the second quarter. The operation cost has also decreased along with the increase in demand for medicines.

Additionally, the pandemic created a positive awareness among the world of medicine and hygiene. Therefore, locally manufactured medicines are now highly recommended for their availability and low cost. SPL has targeted the African market as they highly depend on imported medicines, and rural areas or underdeveloped areas do not have access to packaged medicines. SPKEL targets those areas and maintains an affordable price with international-standard medicine. Therefore, the company can easily become profitable with the right strategies.

On the contradictory, SPKEL was incorporated in 2017 and had an initial plan to start its production in 2020. But the COVID-19 pandemic hampered the initial plan. Therefore, SPKEL could start generating actual revenue from 2023. This delayed the comeback of investment by three years. From the risk analysis, we can also see that the cost of products and services increased in Kenya due to inflation, and also in BD. On the other hand, the exchange rate value dropped for both countries. This indicates slower revenue generation than anticipated in the initial investment plan. Thus, the overall investment will take another 3-4 years to recover the initial investment cost. But overall, the investment can bring long-term sustainable growth and can boost the economy for both Kenya and Bangladesh.

3.9 Recommendation

Square Pharmaceuticals PLC has several subsidiaries, including the Kenya EPZ. It is SPL's first international investment in a global manufacturing company. Square Pharmaceuticals PLC should thoroughly review and enhance its marketing strategy to gain a larger market share in Kenya. SPL should have its achievements highlighted to create a positive image for the brand. Organizing campaigns, maintaining huge supplies of products, and providing proper maintenance can attract customers to SPKEL. Proper brand management, regulation maintenance, and CSR activities should help SPKEL to thrive in the Kenyan market.

Secondly, SPL should consider the high risks of inflation and exchange rates. This can reduce their operational value when converted into the home currency. Regular price monitoring and early forecasting of price hikes can help SPL take proper measures (hedging foreign currency) to ensure profitability.

To conclude, the post audit visualized the impacts of systematic risks for SPKEL that delayed their operations and changed the results of their forecast by great measure. However, the potential of the company is still held by capturing the African market. Lowering manufacturing costs, low financing costs, government subsidies for foreign investment, and utilizing the assets to mass produce can help SPKEL to generate higher profits in the future.

References

UNIDO. (n.d.). *What is CSR?* United Nations Industrial Development Organization. https://www.unido.org/our-focus-advancing-economic-competitiveness-competitive-trade-capacities-and-corporate-responsibility-corporate-social-responsibility-market-integration/what-csr

Directorate General of Drug Administration. (n.d.). *Code of pharmaceutical marketing practices*. http://www.dgdagov.info/index.php/information-center/forms/code-of-pharamaceutical-marketion-practices/145-code-of-pharamaceutical-marketion-practices/file

Rahman, M. S., Islam, M. M., & Hossain, M. M. (2022). *Marketing strategies for pharmaceutical industry – A review*. ResearchGate. https://www.researchgate.net/publication/366529934_Marketing_Strategies_For_Pharmaceutical_Industry_-_A_Review

Hossain, M. M. (2023). *Financial ratio analysis: A theoretical study*. ResearchGate. https://www.researchgate.net/publication/376043402_Financial_Ratio_Analysis_A_Theoretical_Study

Hossain, M. M., & Sarker, M. A. (2020). *Pharmaceutical supply chain management: An empirical study on Bangladesh perspective*. ResearchGate. https://www.researchgate.net/publication/343712497_PHARMACEUTICAL_SUPPLY_CHAIN_MANAGEMENT_AN_EMPIRICAL_STUDY_ON_BANGLADESH_PERSPECTIVE

Harvard Business School. (n.d.). *The five forces*. Institute for Strategy and Competitiveness. https://www.isc.hbs.edu/strategy/business-strategy/Pages/the-five-forces.aspx

The Financial Express. (2022, May 25). *Tk 500m revenue loss due to fire at Square Pharma*. https://today.thefinancialexpress.com.bd/stock-corporate/tk-500m-revenue-loss-due-to-fire-at-square-pharma-1653499909?amp=true

Kovárník, J., Hamplová, E., & Lefley, F. (2022). Theory and practice of the post-audit of capital projects: Evidence from the Czech Republic. *International Journal of Applied Logistics, 12*(1), 1–19. https://doi.org/10.4018/IJAL.286161

Ma'aji, M., & Barnett, C. (2019). Determinants of capital budgeting practices and risks adjustment among Cambodian companies. *Archives of Business Research, 7*(3), 171–182. https://doi.org/10.14738/abr.73.6351

The Daily Star. (2022, June 5). *Square Pharma gets go-ahead to start manufacturing in Kenyan factory*. https://www.thedailystar.net/business/news/square-pharma-gets-go-ahead-start-manufacturing-kenyan-factory-3036186

Pharmaceuticals & Healthcare BD. (2021, May 30). *Square Pharmaceuticals Kenya factory news* [Video].YouTube.:https://www.youtube.com/watch?v=0lUD1DNPzM8

International Finance Corporation. (2020). *Kenya pharmaceutical sector: Diagnostic report*. https://www.ifc.org/content/dam/ifc/doc/mgrt/2020-kenya-pharmaceutical-sector-diagnostic-report.pdf

The Business Standard. (2021, May 29). *Square to start drug production in Kenya in August*. https://www.tbsnews.net/companies/pharma/square-start-drug-production-kenya-august-242125

The Daily Star. (2024, January 7). *Square Pharma's Kenya unit logs higher revenue*. https://www.thedailystar.net/business/economy/news/square-pharmas-kenya-unit-logs-higher-revenue-3534

Appendixes

Appendix A:

Forecasting of the Cash Flow Statement of SPKEL

Cash Flow Statement	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Cash Flows from Operating Activities													
Receipts from Customers							20,839,235	281,073,960	449,718,336	719,549,338	1,151,278,940	1,842,046,304	2,947,274,087
growth%								1249%	60%	60%	60%	60%	60%
Payments to Suppliers		-6,150,108	-44,200,406	-167,410,535	124,608,280	48,835,876	-152,293,380	-83,078,235	(120,836,095)	(181,254,142)	(308,132,042)	(585,450,879)	(1,287,991,934)
growth%			619%	279%	-174%	-61%	-412%	-45%	50%	70%	90%	120%	150%
Payments for Manufacturing and Operating Expenses								-168,938,460	(202,726,152)	(243,271,382)	(291,925,659)	(350,310,791)	(420,372,949)
Cash Generated from Operations		**(6,150,108)**	**(44,200,406)**	**(167,410,535)**	**124,608,280**	**48,835,876**	**(131,454,145)**	**29,057,265**	**126,156,089**	**295,023,813**	**551,221,240**	**906,284,635**	**1,238,909,204**
Interest Paid								-150,479,256	(142,955,293)	(135,807,529)	(129,017,152)	(122,566,295)	(116,437,980)
Bank Charges Paid		-9,818	-12,587	-3,776,485	-120,199	-46,438	-26,779,627	-	-	-	-	-	-
Net Cash from Operating Activities		**(6,159,926)**	**(44,212,993)**	**(171,187,020)**	**124,488,081**	**48,789,438**	**(158,233,772)**	**(121,421,991)**	**(16,799,204)**	**159,216,285**	**422,204,088**	**783,718,340**	**1,122,471,224**
Cash Flows from Investing Activities													
Purchase of Property, Plant and Equipment		-24,253,229	-86,495,916	-282,554,073	-898,176,306	-270,246,888	-106,895,736	-51,316,307	33,237,647	33,902,400	34,580,448	35,272,057	35,977,499
growth%			-72%	-69%	-69%	232%	153%	108%	-165%	2%	2%	2%	2%
Net Cash from/(Used in) Investing Activities		**(24,253,229)**	**(86,495,916)**	**(282,554,073)**	**(898,176,306)**	**(270,246,888)**	**(106,895,736)**	**(51,316,307)**	**(33,237,647)**	**(33,902,400)**	**(34,580,448)**	**(35,272,057)**	**(35,977,499)**
Cash Flows from Financing Activities													
Proceeds from Share money deposit		260,558,900	-	781,265,500	210,203,930	-	-	-	-	-	-	-	-
Proceeds from Term Loan and Bank Overdraft					131,859,465	240,178,537	237,797,249	170,078,700	170,078,700	170,078,700	170,078,700		-
growth%													
Net Cash Used in Financing Activities		**260,558,900**	**-**	**781,265,500**	**342,063,395**	**240,178,537**	**237,797,249**	**170,078,700**	**170,078,700**	**170,078,700**	**170,078,700**	**-**	**-**
Other Cash Flow Items													
Net Cash Flow at 30 June		**230,145,745**	**(130,708,909)**	**327,524,407**	**(431,624,830)**	**18,721,087**	**(27,332,259)**	**(2,659,598)**	**120,041,849**	**295,392,584**	**557,702,339**	**748,446,283**	**1,086,493,726**
Cash and Cash Equivalents at 01 July			**227,616,325**	**97,888,667**	**427,414,094**	**7,260,995**	**27,365,340**	**1,765,970**	**8,196,617**	**120,239,050**	**423,951,026**	**979,550,564**	**1,730,915,399**
Effect of Exchange Rate Fluctuations on Cash and Equivalents		-2,529,420	981,251	2,001,020	11,471,731	1,383,258	1,732,889	9,090,245	(7,999,416)	8,319,392	(2,102,802)	2,918,553	737,691
			-139%	104%	473%	-88%	25%	425%	-88%	-104%	-25%	-139%	25%
Cash and Cash Equivalents at 30 June		**227,616,325**	**97,888,667**	**427,414,094**	**7,260,995**	**27,365,340**	**1,765,970**	**8,196,617**	**120,239,050**	**423,951,026**	**979,550,564**	**1,730,915,399**	**2,818,146,815**
Interest Paid		-	-	-	-	-	-	(150,479,256)	(142,955,293)	(135,807,529)	(129,017,152)	(122,566,295)	(116,437,980)
Cash Flow without interest cost		**227,616,325**	**97,888,667**	**427,414,094**	**7,260,995**	**27,365,340**	**1,765,970**	**(153,138,854)**	**(22,913,445)**	**159,585,056**	**428,685,187**	**625,879,988**	**970,055,746**

Figure 20 Cash Flow Statement for SPKEL

Appendix B:

Forecasting of Income Statement and Balance for performance Analysis

Income Statement	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Revenue							56,889,532	273,847,943	328,617,532	394,341,038	473,209,246	567,851,095	681,421,314
growth(%)								381%	120%	120%	120%	120%	120%
Cost of Goods Sold							-132,874,356	-339,225,054	(203,535,032)	(122,121,019)	(73,272,612)	(43,963,567)	(26,378,140)
growth(%)								155%	60%	60%	60%	60%	60%
Gross Profit		-	-	-	-	-	**(75,984,824)**	**(65,377,111)**	**125,082,499**	**272,220,018**	**399,936,634**	**523,887,528**	**655,043,173**
Administrative Expenses		(7,275,990)	-5,025,878	-8,156,266	-5,116,826	-13,123,448	-22,547,807	-17,786,888	(24,012,299)	(32,416,603)	(43,762,415)	(59,079,260)	(79,757,001)
growth(%)			-31%	62%	-37%	156%	72%	-21%	35%	35%	35%	35%	35%
Operating Profit		**(7,275,990)**	**(5,025,878)**	**(8,156,266)**	**(5,116,826)**	**(13,123,448)**	**(98,532,631)**	**(83,163,999)**	**101,070,200**	**239,803,415**	**356,174,219**	**464,808,268**	**575,286,173**
growth(%)													
Finance Cost		-9,818	-12,587			-337	-26,779,627	-150,479,256	-135,431,330	-136,936,123	-136,785,644	-136,800,692	-136,799,187
growth(%)													
Exchange loss on term loan						-24,633,643	-96,690,322	-21,172,243	-19,055,019	-19,266,741	-19,245,569	-19,247,686	-19,247,474
Net foreign exchane(loss/Gain)		-2,529,420	981,251	2,001,020	11,471,731	1,383,258	1,732,889	9,090,245	9,091,111	9,094,790	9,094,791	9,094,792	9,094,792
Profit Before Tax		**(9,815,228)**	**(4,057,214)**	**(6,155,246)**	**6,354,905**	**(36,374,170)**	**(220,269,691)**	**(245,725,253)**	**(44,325,037)**	**92,695,341**	**209,237,797**	**317,854,683**	**428,334,304**
Tax		-											
Profit After tax		**(9,815,228)**	**(4,057,214)**	**(6,155,246)**	**6,354,905**	**(36,374,170)**	**(220,269,691)**	**(245,725,253)**	**(44,325,037)**	**92,695,341**	**209,237,797**	**317,854,683**	**428,334,304**

Figure 21 Income Statement for SPKEL

Balance Sheet	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
ASSETS													
Non-Current Assets		**26,704,358**	**113,200,274**	**395,754,347**	**1,293,930,653**	**1,564,177,541**	**1,629,296,445**	**1,661,882,374**	**1,695,120,021**	**1,729,022,422**	**1,763,602,870**	**1,798,874,928**	**1,834,852,426**
Property, Plant and Equipment		26,704,358	113,200,274	395,754,347	1,293,930,653	1,564,177,541	1,629,296,445	1,661,882,374	1,695,120,021	1,729,022,422	1,763,602,870	1,798,874,928	1,834,852,426
Current Assets		**229,557,661**	**145,369,681**	**643,411,523**	**97,507,914**	**66,427,322**	**119,212,144**	**134,297,963**	**255,762,744**	**569,737,783**	**1,136,521,889**	**1,900,081,560**	**3,000,615,607**
Inventories						37,704,376	71,963,808	79,160,189	87,076,208	95,783,828	105,362,211	115,898,432	127,488,276
Trade and Other Receivables							36,050,296	37,131,805	38,245,759	39,393,132	40,574,926	41,792,174	43,045,939
Advances, Deposits and Prepayments		1,941,336	47,481,014	215,997,429	90,246,919	1,357,606	9,432,070	9,809,353	10,201,727	10,609,796	11,034,188	11,475,555	11,934,578
Cash and Cash Equivalents		227,616,325	97,888,667	427,414,094	7,260,995	27,365,340	1,765,970	8,196,617	120,239,050	423,951,026	979,550,564	1,730,915,399	2,818,146,815
TOTAL ASSETS		**256,262,019**	**258,569,955**	**1,039,165,870**	**1,391,438,567**	**1,630,604,863**	**1,748,508,590**	**1,796,180,337**	**1,950,882,765**	**2,298,760,204**	**2,900,124,759**	**3,698,956,488**	**4,835,468,034**
| **EQUITY AND LIABILITIES**													
| **EQUITY**													
| Share Capital				400,000,000	400,000,000	400,000,000	400,000,000	400,000,000	400,000,000	400,000,000	400,000,000	400,000,000	400,000,000
| Share Money Deposits		260,558,900	260,558,900	641,824,400	852,028,330	852,028,330	852,028,330	852,028,330	852,028,330	852,028,330	852,028,330	852,028,330	852,028,330
| Retained Earnings		(9,815,228)	-13,872,442	-20,027,688	-13,672,783	-50,046,954	-270,316,645	8,196,617	120,239,050	423,951,026	979,550,564	1,730,915,399	2,818,146,815
| **TOTAL EQUITY**		**250,743,672**	**246,686,458**	**1,021,796,712**	**1,238,355,547**	**1,201,981,376**	**981,711,685**	**1,260,224,947**	**1,372,267,380**	**1,675,979,356**	**2,231,578,894**	**2,982,943,729**	**4,070,175,145**
| **LIABILITIES**													
Non-Current Liabilities		-	-	-	**131,859,465**	**395,790,300**	**478,050,335**	**239,025,168**	**119,512,584**	**59,756,292**	**29,878,146**	**14,939,073**	**7,469,536**
| Term Loan					131,859,465	395,790,300	478,050,335	239,025,168	119,512,584	59,756,292	29,878,146	14,939,073	7,469,536
| **Current Liabilities**		**5,518,347**	**11,883,497**	**17,369,158**	**21,223,555**	**32,833,187**	**288,746,571**	**296,930,223**	**459,102,801**	**563,024,556**	**638,667,719**	**701,073,686**	**757,823,352**
| Term Loan							153,930,324	169,323,356	186,255,692	204,881,261	225,369,387	247,906,326	272,696,959
| Bank Overdraft						881,346	99,178,559	114,055,343	131,163,644	150,838,191	173,463,920	199,483,507	229,406,034
| Trade & Other Payables		5,498,347	9,811,974	16,421,237	19,553,815	31,759,613	34,334,343	12,248,179	140,380,120	206,001,759	238,531,067	252,380,507	254,417,015
| Accrued Expenses		20,000	2,071,523	947,921	1,669,740	192,228	1,303,345	1,303,345	1,303,345	1,303,345	1,303,345	1,303,345	1,303,345
| **TOTAL LIABILITIES**		**5,518,347**	**11,883,497**	**17,369,158**	**153,083,020**	**428,623,487**	**766,796,906**	**535,955,390**	**578,615,385**	**622,780,848**	**668,545,865**	**716,012,759**	**765,292,889**
| **TOTAL EQUITY AND LIABILITIES**		**256,262,019**	**258,569,955**	**1,039,165,870**	**1,391,438,567**	**1,630,604,863**	**1,748,508,590**	**1,796,180,337**	**1,950,882,765**	**2,298,760,204**	**2,900,124,759**	**3,698,956,488**	**4,835,468,034**

Figure 22 Balance Sheet for SPKEL

Appendix C:

Beta Calculation data for SPL and DSEX.

SPL DSEX

Date	Price	return	Date	Price	Return
01-03-21	237.8		01-03-21	5,618.95	
01-04-21	231.6	-0.02607233	01-04-21	5,652.32	0.005938832
01-05-21	223.4	-0.02607233	01-05-21	5,609.70	-0.007540267
01-06-21	224.4	-0.02607233	01-06-21	5,640.19	0.005435228
01-07-21	223	-0.02607233	01-07-21	5,621.76	-0.00326762
01-10-21	220.5	-0.02607233	01-10-21	5,634.04	0.002184369
01-11-21	228.5	-0.02607233	01-11-21	5,718.75	0.015035392

01-12-21	234.4	-0.02607233	01-12-21	5,861.02	0.024877814
01/13/2021	234.8	-0.02607233	01/13/2021	5,770.00	-0.01552972
01/14/2021	238.3	-0.02607233	01/14/2021	5,909.30	0.024142114
01/17/2021	230.2	-0.02607233	01/17/2021	5,850.43	-0.009962263
01/18/2021	229.7	-0.02607233	01/18/2021	5,801.72	-0.008325884
01/19/2021	227.8	-0.02607233	01/19/2021	5,820.80	0.00328868
01/20/2021	226	-0.02607233	01/20/2021	5,827.56	0.001161352
01/21/2021	229.7	-0.02607233	01/21/2021	5,836.18	0.001479178
01/24/2021	230.3	-0.02607233	01/24/2021	5,815.54	-0.00353656
01/25/2021	239.8	-0.02607233	01/25/2021	5,789.92	-0.004405438
01/26/2021	237	-0.02607233	01/26/2021	5,695.37	-0.016330105
01/27/2021	234.5	-0.02607233	01/27/2021	5,714.74	0.003401008
01/28/2021	236.2	-0.02607233	01/28/2021	5,724.35	0.001681616
01/31/2021	231.1	-0.02607233	01/31/2021	5,649.86	-0.013012831
02-01-21	227.5	-0.02607233	02-01-21	5,599.80	-0.008860397
02-02-21	224.9	-0.02607233	02-02-21	5,564.69	-0.006269867
02-03-21	225.5	-0.02607233	02-03-21	5,581.86	0.003085527
02-04-21	229.6	-0.02607233	02-04-21	5,647.67	0.011789977

02-07-21	224.8	-0.02607233	02-07-21	5,504.78	-0.025300699
02-08-21	226.9	-0.02607233	02-08-21	5,376.45	-0.023312467
02-09-21	226.5	-0.02607233	02-09-21	5,498.54	0.022708293
02-10-21	227.6	-0.02607233	02-10-21	5,509.40	0.00197507
02-11-21	225.9	-0.02607233	02-11-21	5,485.01	-0.004426979
02/14/2021	226.2	-0.02607233	02/14/2021	5,447.64	-0.006813114
02/15/2021	226.6	-0.02607233	02/15/2021	5,545.09	0.01788848
02/16/2021	223.9	-0.02607233	02/16/2021	5,527.39	-0.003192013
02/17/2021	224.2	-0.02607233	02/17/2021	5,503.67	-0.004291356
02/18/2021	223.5	-0.02607233	02/18/2021	5,475.98	-0.005031188
02/22/2021	217.7	-0.02607233	02/22/2021	5,385.21	-0.016576028
02/23/2021	212.2	-0.02607233	02/23/2021	5,317.71	-0.01253433
02/24/2021	214.1	-0.02607233	02/24/2021	5,385.64	0.012774296
02/25/2021	214.8	-0.02607233	02/25/2021	5,416.39	0.005709628
02/28/2021	216.4	-0.02607233	02/28/2021	5,404.79	-0.002141648
03-01-21	216.3	-0.02607233	03-01-21	5,426.82	0.004076014
03-02-21	217.6	-0.02607233	03-02-21	5,508.26	0.015006947
03-03-21	217.5	-0.02607233	03-03-21	5,488.07	-0.003665404
03-04-21	218.4	-0.02607233	03-04-21	5,515.78	0.005049134

03/23/2021	207	-0.02607233	03/23/2021	5,413.73	0.000284543
03/24/2021	203.6	-0.02607233	03/24/2021	5,330.12	-0.015444065
03/25/2021	200.4	-0.02607233	03/25/2021	5,327.21	-0.000545954
03/28/2021	200.1	-0.02607233	03/28/2021	5,343.94	0.003140481
03/29/2021	199	-0.02607233	03/29/2021	5,373.12	0.005460391
03/31/2021	196.6	-0.02607233	03/31/2021	5,278.16	-0.017673158
04-01-21	196.4	-0.02607233	04-01-21	5,270.53	-0.00144558
04-04-21	192.9	-0.02607233	04-04-21	5,088.98	-0.034446251
04-05-21	193	-0.02607233	04-05-21	5,177.48	0.017390518
04-06-21	198.3	-0.02607233	04-06-21	5,281.37	0.020065746
04-07-21	200.1	-0.02607233	04-07-21	5,337.33	0.010595736
06/20/2021	213.8	-0.02607233	06/20/2021	6,069.40	0.002750816
06/21/2021	214	-0.02607233	06/21/2021	6,125.41	0.00922826
06/22/2021	213.7	-0.02607233	06/22/2021	6,105.73	-0.003212846
06/23/2021	213.1	-0.02607233	06/23/2021	6,035.84	-0.011446625
06/24/2021	213.1	-0.02607233	06/24/2021	6,092.83	0.009441934
06/27/2021	213.1	-0.02607233	06/27/2021	5,992.73	-0.016429147
06/28/2021	213.8	-0.02607233	06/28/2021	6,026.64	0.005658523
06/29/2021	213.8	-0.02607233	06/29/2021	6,042.49	0.00262999

06/30/2021	215.5	-0.02607233	06/30/2021	6,150.48	0.017871771
07-04-21	215.5	-0.02607233	07-04-21	6,150.48	0
07-05-21	219.4	-0.02607233	07-05-21	6,219.94	0.011293428
07-06-21	217.9	-0.02607233	07-06-21	6,196.57	-0.003757271
07-07-21	214.8	-0.02607233	07-07-21	6,177.21	-0.003124309
07-08-21	217.5	-0.02607233	07-08-21	6,212.76	0.005755025
07-12-21	216.3	-0.02607233	07-12-21	6,208.39	-0.000703391
07/13/2021	216.1	-0.02607233	07/13/2021	6,266.01	0.009280989
07/14/2021	217.1	-0.02607233	07/14/2021	6,273.33	0.001168208
07/15/2021	217.6	-0.02607233	07/15/2021	6,307.35	0.005422957
07/18/2021	223.7	-0.02607233	07/18/2021	6,346.52	0.006210215
07/19/2021	224	-0.02607233	07/19/2021	6,405.04	0.009220801
07/25/2021	224	-0.02607233	07/25/2021	6,424.21	0.002992956
07/26/2021	223.4	-0.02607233	07/26/2021	6,404.03	-0.003141242
07/27/2021	222.7	-0.02607233	07/27/2021	6,379.67	-0.003803855
07/28/2021	222.8	-0.02607233	07/28/2021	6,417.19	0.005881182
07/29/2021	222	-0.02607233	07/29/2021	6,425.25	0.001256001
08-02-21	221.1	-0.02607233	08-02-21	6,481.56	0.008763861
08-03-21	222.9	-0.02607233	08-03-21	6,535.87	0.008379156

08-05-21	226.8	-0.02607233	08-05-21	6,596.07	0.00921071
08-09-21	231.9	-0.02607233	08-09-21	6,628.14	0.004861986
08-10-21	230.7	-0.02607233	08-10-21	6,617.83	-0.001555489
08-11-21	231.3	-0.02607233	08-11-21	6,623.31	0.000828066
08-12-21	231	-0.02607233	08-12-21	6,699.39	0.011486704
08/16/2021	232.4	-0.02607233	08/16/2021	6,748.92	0.00739321
08/17/2021	230.7	-0.02607233	08/17/2021	6,787.16	0.005666092
08/18/2021	229.8	-0.02607233	08/18/2021	6,771.84	-0.002257203
08/19/2021	227	-0.02607233	08/19/2021	6,760.61	-0.001658338
08/22/2021	229.2	-0.02607233	08/22/2021	6,842.23	0.012072875
08/23/2021	229.3	-0.02607233	08/23/2021	6,862.41	0.002949331
08/24/2021	230	-0.02607233	08/24/2021	6,884.67	0.003243758
08/25/2021	229.3	-0.02607233	08/25/2021	6,878.75	-0.000859881
08/26/2021	229.3	-0.02607233	08/26/2021	6,851.32	-0.003987643
08/29/2021	228.7	-0.02607233	08/29/2021	6,823.60	-0.004045936
08/31/2021	226.6	-0.02607233	08/31/2021	6,869.24	0.006688551
09-01-21	229.1	-0.02607233	09-01-21	6,916.38	0.006862477
09-02-21	229.4	-0.02607233	09-02-21	6,981.05	0.009350267
09-05-21	231.6	-0.02607233	09-05-21	7,052.82	0.010280688

09-06-21	233.3	-0.02607233	09-06-21	7,075.49	0.003214317
09-07-21	235.5	-0.02607233	09-07-21	7,140.87	0.009240349
09-08-21	243	-0.02607233	09-08-21	7,196.32	0.00776516
09-09-21	248.1	-0.02607233	09-09-21	7,258.74	0.008673878
09-12-21	244.3	-0.02607233	09-12-21	7,202.09	-0.007804385
09/13/2021	243.3	-0.02607233	09/13/2021	7,218.05	0.002216023
09/14/2021	241.9	-0.02607233	09/14/2021	7,140.50	-0.010743899
09/15/2021	242.3	-0.02607233	09/15/2021	7,196.55	0.00784959
09/16/2021	244.4	-0.02607233	09/16/2021	7,228.31	0.004413226
09/19/2021	243.4	-0.02607233	09/19/2021	7,191.80	-0.005050973
09/20/2021	241.9	-0.02607233	09/20/2021	7,205.82	0.001949442
09/21/2021	243.8	-0.02607233	09/21/2021	7,258.57	0.007320472
09/22/2021	244.9	-0.02607233	09/22/2021	7,241.84	-0.002304862
09/23/2021	244.5	-0.02607233	09/23/2021	7,250.60	0.001209637
09/26/2021	243	-0.02607233	09/26/2021	7,237.14	-0.001856398
09/27/2021	243.9	-0.02607233	09/27/2021	7,251.71	0.002013226
09/28/2021	243.8	-0.02607233	09/28/2021	7,297.24	0.006278519
09/29/2021	243.5	-0.02607233	09/29/2021	7,302.85	0.000768784
09/30/2021	242.2	-0.02607233	09/30/2021	7,329.03	0.003584902

10-03-21	240.2	-0.02607233	10-03-21	7,356.04	0.003685344
10-04-21	239.2	-0.02607233	10-04-21	7,327.54	-0.003874367
10-05-21	238.1	-0.02607233	10-05-21	7,331.39	0.000525415
10-06-21	240.7	-0.02607233	10-06-21	7,351.04	0.002680256
10-07-21	239.7	-0.02607233	10-07-21	7,342.96	-0.001099164
10-10-21	239.1	-0.02607233	10-10-21	7,367.99	0.003408707
10-11-21	240.6	-0.02607233	10-11-21	7,345.57	-0.003042892
10-12-21	240.7	-0.02607233	10-12-21	7,313.98	-0.004300551
10/13/2021	237.7	-0.02607233	10/13/2021	7,248.44	-0.008960921
10/14/2021	235.3	-0.02607233	10/14/2021	7,243.26	-0.000714637
10/17/2021	235.4	-0.02607233	10/17/2021	7,186.46	-0.007841773
10/18/2021	230.9	-0.02607233	10/18/2021	7,097.27	-0.012410839
10/19/2021	231.2	-0.02607233	10/19/2021	7,020.61	-0.010801336
12/24/2024	217.9	-0.02607233	12/24/2024	5,169.32	-0.000284289
12/26/2024	216.6	-0.02607233	12/26/2024	5,184.45	0.002926884
12/30/2024	217.7	-0.02607233	12/30/2024	5,216.44	0.006170375

Table 13 Return for SPL Share

Appendix D:

Annual return	-0.52%		
b	-2.63999E-32		
CAPM	13.00%	**cost of equity**	rf+b(rm-rf)
	5.25%	**cost of debt**	int* (1- Tax)
WACC	9.5%		

Figure 23 WACC Calculation

WACC Calculation: The WACC was calculated using the equity cost for SPL and the debt cost of SPKEL. The tax rate for the next 10 years of SPKEL is null.