

Report On  
Global Firms' Foreign Exchange Rate Risk Management During  
Crises: The Case of Siemens Healthineers

By

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

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## **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:**

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**Supervisor's Full Name & Signature:**

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**Sang H Lee, PhD**  
Professor & Dean, Brac Business School  
BRAC University

## Letter of Transmittal

Sang H Lee, PhD  
Professor & Dean  
BRAC Business School  
BRAC University  
66 Mohakhali, Dhaka-1212

Subject: Submission of Internship Report.

Dear Sir,

It was certainly a privilege to receive your kind direction and guidance throughout the BUS400 Internship course. As per the requirement of the BBA program of BRAC University, with immense pleasure, I submit herewith my internship report on Siemens Healthineers, Bangladesh. I have constructed this report according to your instructions and this dissertation is the outcome of the knowledge I have gained from the BBA degree at BRAC University. I have tried my level best to finalize this report in accordance with all the required contents, guidelines, and deadlines. Thus, I hope that you would be kind enough to accept my Internship Report & oblige thereby. If you have any explanations that require a clarification from my end, please feel free to contact me.

Sincerely yours,

---

Azwad Bin Karim  
ID - 18204074  
BRAC Business School  
BRAC University  
Date: December 22, 2022

## **Non-Disclosure Agreement**

This agreement is made and entered into by and between Siemens Healthineers, Bangladesh and the undersigned student at BRAC University .....

### **Student's Full Name and Signature**

\_\_\_\_\_

Azwad Bin Karim

## **Acknowledgement**

This report is the result of my sincere contribution and effort and I am delighted to be able to successfully complete this report and the BUS400 course. I am eternally grateful to all the individuals and my respected supervisor for helping me prepare the contents of the report.

To begin with, I want to thank my supervisor, Dr. Sang Hoon Lee, Professor and Dean of Brac Business School. Without his continuous and consistent guidance and direction, the completion of this report wouldn't be possible. He has been very patient, empathetic, and supportive throughout the semester and I am grateful to him.

Secondly, I would like to thank my supervisor, Shovan Krishna Saha (Accounting Team Leader, Finance & Accounts, Siemens Healthineers) for assigning me company-relevant tasks from which I learned a lot. His assignments have helped me refine my skills and, on some occasions, learn new skills. He has been very patient, kind, helpful, and humble while mentoring me throughout my internship period. His support has helped me to a massive extent to successfully complete my internship at Siemens Healthineers, Bangladesh.

Finally, I want to express my gratitude to the Almighty for giving me the patience and strength to adapt with the professional setting and subsequently, complete the internship at Siemens Healthineers, Bangladesh.

## **Executive Summary**

In light of Siemens Healthineers, Bangladesh, this report, from the viewpoint of an intern highlights the contents set by BBA Internship Program Guideline.

This dissertation is divided into three main segments. To begin with, this report gives an overview of the internship along with information and outcomes in regards to the internship. Followed by this, the study elaborately explains the situation and practices of Siemens Healthineers. In this segment, an analysis considering the management practices, marketing strategies, financial performances, accounting practices, industry situation, competitors, and operations management, has been conducted on the company.

Finally, in the third segment, the research aims to understand the exchange rate risk management skill of Siemens Healthineers by determining the impact of abrupt currency movement of Euro with respect to USD on the revenue of Siemens Healthineers. The research simply attempts to determine the impact of exchange rate instabilities during periods like COVID 19, Brexit, Russia-Ukraine conflict, and economic recession on the revenue of Siemens Healthineers, which has been carried out using regression test. Later on, based on the research results, the report recommends some measures that can be adopted to stave off these issues in the future.

**Keywords:** Siemens Healthineers (consolidated, all subsidiary and parent company included); Siemens Healthineers, Germany; Siemens Healthineers, Bangladesh (also known as Siemens Healthcare Limited)

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# **Chapter 1**

## **Overview of Internship**

### **1.1 Student Information**

I am Azwad Bin Karim (Student ID: 18204074). I am an undergraduate student majoring in Finance at BRAC University. My program started in January, 2019 and I hope to graduate in January 2023 once I am done with my internship.

### **1.2 Internship Information**

#### **1.2.1 Period, Organization Name, Department & Address**

I was selected as a Finance Intern at Siemens Healthineers, Bangladesh (also called Siemens Healthcare Limited) in the last week of September and I started working from October 3, 2022. Siemens Healthineers, Bangladesh is a subsidiary of the parent company Siemens Healthineers and it is located in Gulshan 1, Laila Tower (Level-6). The duration of my internship is three months and my internship will conclude on December 31, 2022.

#### **1.2.2 Internship Organization Supervisor's Information**

I worked in the Finance and Accounts department at Siemens Healthineers, Bangladesh under the supervision of Mr. Shovan Krishna Saha. He is the Accounting Team Leader of the Finance and Accounts unit.

### **1.2.3 Job Scope**

I had to work five days a week—Sunday through Thursday and my work hours were from 9 AM to 5 PM. In the first few weeks of my internship, I was given the opportunity to get acclimatized with the company culture. My supervisor helped in this regard. As time passed on, I was assigned projects from the Finance unit. My assignments were usually long-term, and I worked on them on a regular basis, making them my regular responsibilities. They have been enumerated below:

#### **Responsibilities:**

- Recording daily bills into the Bill Copy.
- Understanding and analysing the data and information from Bill of Entry and Clearing and Forwarding bills.
- Reconciliation of costs in different books.

#### **Assignments Completed:**

- Analysis of the Clearing and Forwarding Costs on Imports and determination of methods to save costs by conducting an Opportunity Cost Analysis.
- Analysis of Siemens Healthineers' Car Costs and coming up with ways to save costs on vehicles.
- Interpretation of the LC margin issue with the bank(s), formulation of a tracking system, and accordingly expedition of shipments and subsequent payment to get rid of the margin.

## **1.3 Internship Outcomes**

### **1.3.1 Student's Contribution to the Organization**

My most significant contribution were when I worked on different projects for the Finance unit. I was mostly inundated with tasks that required me to think and come up with ways to save costs. Firstly, I was given the task to analyze and find ways to save the Clearing and Forwarding costs of Siemens Healthineers, Bangladesh. Siemens Healthineers, Bangladesh imports Medical Equipment, Spare parts, and diagnostic reagents. The diagnostic reagents arrive in Bangladesh in multiple shipments instead of one single shipment, which invariably increases the import costs. A single shipment import can significantly reduce the costs and make more funds available, which can be put to use for more exigent issues. I was told to conduct a cost analysis of a particular LC of reagents which contained 19 shipments. I concluded that had the reagents arrived in one single shipment instead of separate 19 shipments, nearly 200000 BDT could have been saved. The top management of the company had no idea how much money they were paying extra simply because of this multiple-shipment issue. After I was done with my project, I presented my findings to the CFO of Siemens Healthineers and he got a clear picture and later on, he decided to share the issue with their exporters to solve it. Likewise, Siemens Healthineers were spending too much on renting cars. The cars were sitting idle and they kept on paying the rent and the other fixed costs. I was assigned a project on this and I was told to portray a savings maximization model so that they could understand the issue and stop renting cars that sit idle. Additionally, I also completed a project on LC margin. Usually, banks nowadays require importers to store a certain amount of funds, also called margin with their account for opening LCs. This margin can't be cleared until the payment is complete. Siemens Healthineers, Bangladesh didn't have a track on these margins and as such, their margin was being held despite clearing payments. I collected data from the supply chain

unit and Accounts team, and came up with a system, which easily tracked the margin status, making their funds available for other purposes.

My contribution on these tasks helped Siemens Healthineers understand their additional and unnecessary costs. By saving more, they can make more funds available and use these funds on issues that need immediate attention.

### **1.3.2 Benefits to the student**

Siemens Healthineers is a reputed multinational company across the globe and I believe the opportunity to intern at Siemens Healthineers, Bangladesh will help me build my career and add immense value to my professional dimension. At Siemens Healthineers, I got to work with different units at different times and that I think is the most important benefit to me. For instance, when I worked for my team—Finance Team—I got the opportunity to get versed in Bill of Entry, Import Duties, Letter of Credits, Reconciliations, and Clearing and Forwarding. These data are crucial to understand any import-based businesses and if I get the chance to work at any import-based company or multi-national business, I will have an upper hand in advance. Besides, at times, I worked with the Supply Chain team, and from them, I got to know how to prepare and apply for and amend LCs. Additionally, I worked with the Sales team and understood the process of Government Tender preparation and application. In my opinion, the fact that I worked with different units from time to time is the biggest benefit I have received at Siemens Healthineers.

### **1.3.3 Problems/Difficulties**

The biggest challenge I had to overcome was the fact that I had to solve a lot of the issues which arose from the projects on my own. Siemens Healthineers, Bangladesh has few employees and large volumes of work and normally, it's a little difficult to sit with and talk at length to any full-fledged employees to clarify the jargons. I had to google a lot to solve these issues. Besides, I was occasionally assigned tasks from other units as well, which was a little challenging for me given the large volumes of work I had already been assigned from the Finance unit. Apart from that, since I didn't have any course that teaches import processes or import-based businesses, at the beginning, I struggled a bit to understand all the technical terms. Additionally, since this was my first ever internship, it was a little challenging for me to adapt with the professional culture and all the concomitant aspects.

### **1.3.4 Recommendations**

Through my internship at Siemens Healthineers, Bangladesh I garnered immense knowledge. However, I feel I could learn more and contribute more to the advancement of the company if I were given the opportunity to deal with more realistic and exigent issues of the company. At times, I was inundated with tedious tasks including scanning, typing and printing, which in my opinion, doesn't add any value to my career. Siemens Healthineers, Bangladesh can assign tasks which call for the skill of the interns. By using intellect and skill, the interns can come up with solutions to the problems and can contribute to the company.

Moreover, Finance interns can be given the opportunity to get versed in software like SAP, which can add massive value to the intern's resume later on. Besides, I faced some difficulties while completing this report as my supervisor wasn't allowed to share company data and hence,

a flexible approach towards sharing company data with the interns would help them complete their internship reports.

## **Chapter 2**

### **Organization Part**

#### **2.1 Introduction**

##### **2.1.1 Objective**

In order to portray the complete picture of Siemens Healthineers I will first delineate the current and the last few years' performance of Siemens Healthineers. Along with the most recent performance, I intend to work on a project in the third chapter which deals with exchange rate fluctuations and the net profit of Siemens Healthineers. In the completion of my objectives, I have used both qualitative and quantitative data.

##### **2.1.2 Methodology**

In completing this report, I had to use both qualitative and quantitative data. Furthermore, I had to take assistance from primary data. In order to get a complete idea regarding the company, I had to interview employees from different units and the data gathered from conducting these interviews fall under primary data.

Since Siemens Healthineers, Bangladesh is a private limited company, it is not obligated to make its annual report public. Therefore, to do the financial analysis and conduct the research, I have used data from Siemens Healthineers (consolidated), which is the inclusion of all subsidiaries and the parent company.

### **2.1.3 Scope**

This essay contains detailed information about the marketing practice, management practice, accounting standards, information systems, operations management, and financial performance of Siemens Healthineers. The reader will obtain a clear picture about Siemens Healthineers and its impact on the healthcare industry and the economy of Bangladesh.

### **2.1.4 Limitation**

The restriction on the sharing of company information is the major challenge I had to deal with while writing this report. Besides, as I used the data from the Siemens Healthineers (consolidated) the accuracy of the data in the light of Bangladeshi market and conditions is questionable.

### **2.1.5 Significance**

This report contains all the detailed information of Siemens Healthineers, Bangladesh. The information includes marketing practice, management practice, accounting standards, and financial performance. Through the report, I have come to understand how all the units separately play impactful roles to accomplish the overall company goals. The report will offer the reader to learn about Siemens Healthineers and at times, the employees can use this information to become well-versed in the practices of different departments.



## **2.2 Overview of the Company**

### **2.2.1 Company Background**

Siemens Healthineers, Bangladesh is a subsidiary of the company Siemens Healthineers, AG which again is a subsidiary of the company, Siemens Group. Siemens Group as of 2022 owns nearly 75% of shares of Siemens Healthineers, AG. Siemens Healthineers is headquartered in Germany. Siemens Healthineers has operations in 70 countries across the globe. Siemens AG was founded by Werner Von Siemens in 1847. Siemens Healthineers started operating in Bangladesh in 1956.

Siemens Healthineers, Bangladesh mainly import healthcare equipment, spare parts of equipment, and diagnostic reagents from Siemens Healthineers that manufacture these equipment in other countries. The major manufacturing sites of Siemens Healthineers is in China, Germany, and the USA. The healthcare equipment includes CT Scan Machine, MRI Machine, X-ray Machine, and so on. After importing these equipment and other reagents, Siemens Healthineers Bangladesh sell them to different hospitals and medical colleges. This is basically the business model of Siemens Healthineers, Bangladesh.

Siemens Healthineers' primary vision is – “For everyone. Everywhere.” They intend to assist the healthcare professionals so that they can play pivotal roles in diagnosing and treating patients and saving lives. Siemens Healthineers aims to be disruptive in the healthcare sector and all their innovation revolve around the patients. Siemens Healthineers aspire to create the best experience for the patients.

Siemens Healthineers is adept at patient twinning, precision therapy along with data and AI, and these are the strengths that set them apart and enable them to be disruptive in the healthcare sector. They are committed to improving these strengths to help their patients fight the most threatening diseases – cancer, cardiovascular, and neurovascular diseases.

### **2.2.2 Products and Services**

The healthcare equipment imported and sold by Siemens Healthineers, Bangladesh have been listed below:

- Linear Accelerator
- MRI Machine
- Ultrasonogram
- Colour Doppler
- Mammography Systems
- C-Arm Machine
- Mobile X-ray System
- X-ray System
- Gamma Camera
- ESWL Machine
- Angiogram Machine
- CT Scan Machine
- Diagnostic Reagents

### **2.2.3 Major Customers and Clients**

Siemens Healthineers, Bangladesh supply healthcare equipment to three types of customers - Government hospitals, private hospitals, and hospitals that are supervised by the Army and Defence of Bangladesh. The regular clients of Siemens Healthineers have been listed below:

**Government Hospitals:**

- Central Medical Stores Depot (CMSD)
- Bangabandhu Sheikh Mujib Medical University Hospital (BSMMU)
- National Institute of Cardiovascular Diseases (NICVD)
- Combined Military Hospital (CMH)
- National Institute of Traumatology and Orthopaedic Rehabilitation (NITOR)
- Institute of Child and Mother Health (ICMH)
- Atomic Energy Centre (AEC)
- Cancer Hospital, Dhaka

**Private Hospitals:**

- Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders (BIRDEM)
- Square Hospital, Dhaka
- Evercare Hospital, Dhaka
- United Hospital, Dhaka
- LABAID Specialized Hospital, Dhaka
- Ibn Sina Trust, Dhaka

## 2.2.4 Competitors

The competitors of Siemens Healthineers have been listed below:

- General Electric (GE)
- Philips
- Hitachi
- Toshiba
- Simadzu
- Neosoft
- Medison
- Fukuda
- Aloka
- Listem

## 2.2.5 Business Model

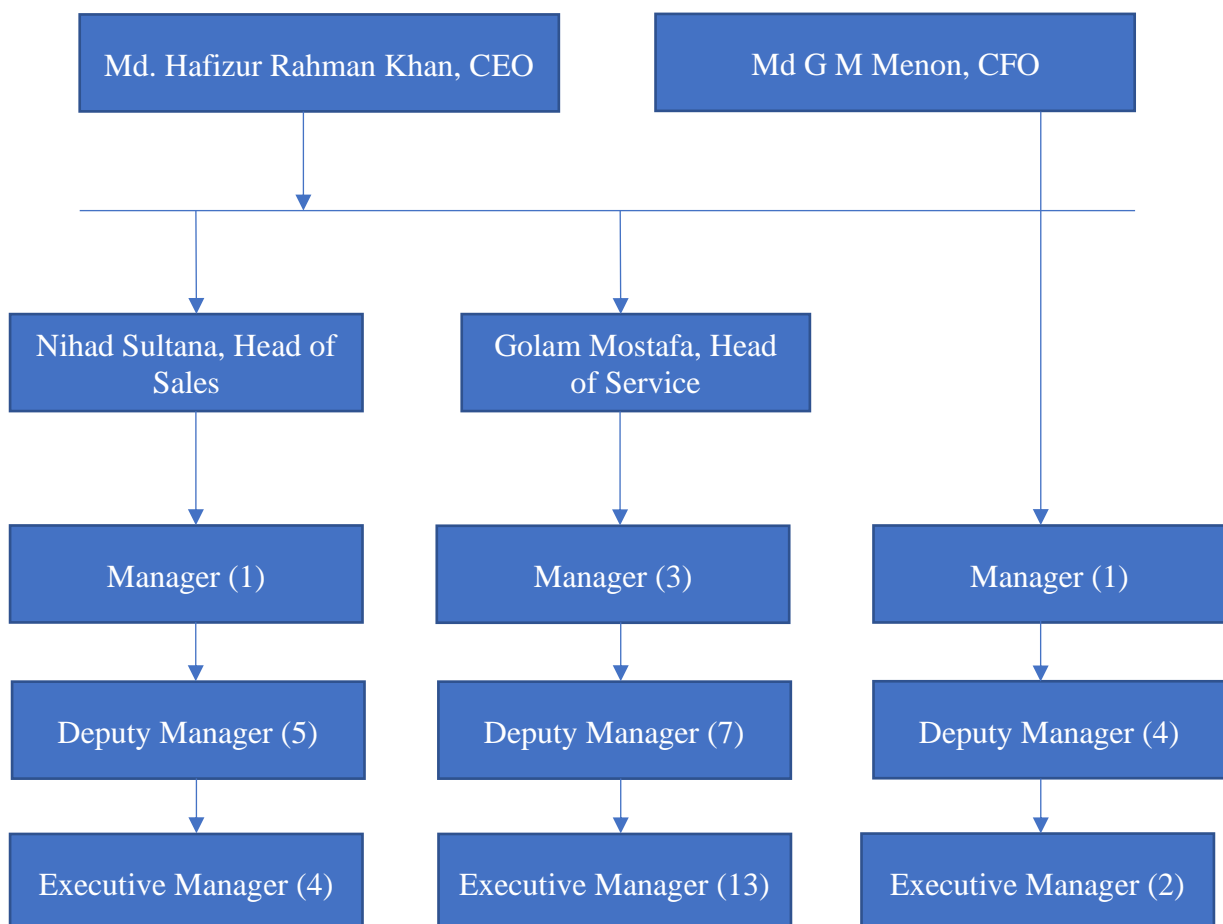
<b>KEY PARTNERS</b> <ul style="list-style-type: none"> <li>Siemens Healthineers, Germany, Siemens Healthineers, USA and other subsidiaries who manufacture these equipment.</li> </ul>	<b>KEY ACTIVITIES</b> <ul style="list-style-type: none"> <li>Importing the healthcare equipment</li> <li>Installing the equipment at the hospitals</li> <li>Transporting the reagents to Bio Trade International.</li> </ul>	<b>VALUE PROPOSITION</b> <ul style="list-style-type: none"> <li>Offering the value to diagnose and treat disease and save lives.</li> <li>CT scan machine, MRI Machine, X-ray machine, in-vitro and in-vivo diagnostic reagents.</li> <li>Service for equipment malfunctions.</li> </ul>	<b>CUSTOMER RELATIONSHIP</b> <ul style="list-style-type: none"> <li>Maintaining liason over phone calls.</li> <li>Which ones have we established?</li> </ul> <p>How costly are they? How are they integrated with the rest of our business model?</p>	<b>CUSTOMER SEGMENTS</b> <ul style="list-style-type: none"> <li>Hospitals, Medical colleges, and research institutes.</li> <li>Private hospitals</li> <li>Government hospitals and hospitals under Bangladesh Army and Defence</li> </ul>
	<b>KEY RESOURCES</b> <ul style="list-style-type: none"> <li>Service Engineers who have the skill to install the equipment and fix them if needed.</li> <li>Technology used in the manufacturing and fixing of the products.</li> <li>AI</li> </ul>		<b>CHANNELS</b> <ul style="list-style-type: none"> <li>In-person visit.</li> <li>Emails</li> </ul>	
<b>COST STRUCTURE</b> <ul style="list-style-type: none"> <li>Salary of the service engineers and all other employees.</li> <li>Import costs including Tariff, Clearing and Forwarding costs, transportation costs and purchase price of the imported equipment itself.</li> <li>Costs associated with the technology.</li> </ul>		<b>REVENUE STREAM(S)</b> <ul style="list-style-type: none"> <li>Primary revenue comes from the sales of the imported equipment and diagnostic reagents.</li> <li>Service charge</li> </ul>		

Table 1. Business Canvas Model of Siemens Healthineers, Bangladesh

## 2.3 Management Practices

### 2.3.1 Decision Making

Ever since its formation, Siemens Healthineers has been liberal and flexible in terms of making decisions. Siemens Healthineers, Bangladesh has two leaders at the topmost level- Hafizur Rahman Khan, Chief Executive Officer and MD G M Menon, Chief Financial Officer. They are the leaders of the company and are responsible for taking the key decisions. Right below these two leaders are two key personnel—Nihad Sultana, Head of Sales and Golam Mostafa, Head of Service and General Manager. All the decisions regarding Sales and Service are taken by them. However, important decisions call for the approval of any or both of the company heads.



*Figure 1. Organogram of Siemens Healthineers, Bangladesh*

In short, all minor decisions of a particular department are taken by the executive managers or employees of that department, but significant decisions require the approval of the head of the department and if need be, the leaders as well.

In terms of monetary decisions, any agreement which is below 500000BDT, requires the approval of the Business Admin of that department, Performance Controller, and the Finance and Accounts Team; any agreement in excess of 500000BDT and less than 1000000BDT call for the approval of the Chief Financial Officer, and finally, any amount equal to or exceeding 1000000BDT will require the approval of the Chief Executive Officer along with all the other professionals mentioned previously.

### **2.3.2 Employment Policy**

Employees at Siemens Healthineers are selected on the basis of three types of employment—outsourced contractors, permanent employees, and business apprentice. Outsourced contractors are temporary in-house employees whose employment duration continues or terminates based on the need of their work to the company. Permanent employees are not transient and their contract is life-long unless they themselves decide to terminate. Finally, business apprentices are the type of employees who are initially offered a contract of one year. During this period of one year, they are trained and after one year, based on company need and their performance, they are hired or retrenched.

Siemens Healthineers maintains fair, impartial, and accurate employment policies for all of its employees. There is one HR Business Partner who looks after all the policies and if need be, with the consent and approval of the company heads, modifies some of the policies. Siemens Healthineers, Bangladesh, like most other MNCs has the same employment policies except a few exceptional practices.

Siemens Healthineers has an Employee Engagement policy in place to ensure that employees engage more and contribute more towards the betterment of Siemens Healthineers. In terms of Leave policy, Siemens Healthineers, follows all the common policies practiced elsewhere. However, LFA or Leave Fair Assistance is something they have in place that's unique. Under this policy, all employees are bound to take a week's leave each year and the company offers them benefits and finances so that the employees can enjoy the leave. Apart from that, Siemens Healthineers, Bangladesh has a Star Award policy in which the company rewards and recognizes a particular employee for being loyal and working at the company for a particular period of time. The policy starts at the minimum of 5 years. The employee receives a token of gift for completing a certain number of years. In addition to it, Siemens Healthineers has a medical policy which includes benefit scheme for general in-patients, general out-patients, maternity, and periodic health checkups.

### **2.3.3 Recruitment Process**

The recruitment starts when a particular department sends a requisition for recruitment to the HR Business Partner. The HR business partner first checks if internal recruitment is possible to fill in the vacancy; if not, an external recruitment will be done. An advertisement containing the job specifications, job responsibilities and salary packages are prepared and published on LinkedIn and Bdjobs. There is no written test in the assessment phase. An applicant is directly put into the interview phase, but two or three interviews are conducted to fully assess an employee. Based on his/her performance at the interview, the decision is taken.



### **2.3.4 Compensation Systems**

Siemens Healthineers follow the regular and common compensation systems used by the most other MNCs. Siemens Healthineers has mainly five types of compensation and they are: Basic salary, house rent, gratuity fund, provident fund, and medical benefit.

### **2.4 Marketing Practices**

Siemens Healthineers, Bangladesh is a healthcare company selling healthcare equipment and diagnostic reagents across Bangladesh. Being a healthcare company, Siemens Healthineers is not allowed to directly market or advertise any of their products. Hence, there is no direct marketing strategy Siemens Healthineers adhere to. Siemens Healthineers sells most of its equipment via Government tenders monitored by Directorate General of Drug and Administration (DGDA) and Directorate General Defense Purchase (DGDP). The best performing equipment out of all the participants of the tender wins the deal. However, the sales people make a list of potential clients and phone them or pay visits to convert the potential client into successful customer.

#### **2.4.1 Segmentation and Targeting**

Siemens Healthineers mainly targets all the hospitals, research institutes, and medical colleges in the country. Since the government hospitals are placed in tenders, they can't particularly target and segment their equipment in that dimension. In this regard, they have to convince the regulatory bodies including BSMMU, DGDA, DGDP, and so on by winning the tenders. Thus, after speaking to the Sales team, it is clear that Siemens Healthineers, Bangladesh doesn't have any hard-and-fast segmentation and targeting strategy. They adopt the mass strategy for targeting.

## **2.5 Accounting Practices and Financial Performance**

### **2.5.1 Accounting Practices**

The accounting cycle or the fiscal year of Siemens Healthineers starts in October and concludes in September. With regard to the depreciation technique, Siemens Healthineers, Bangladesh follows the straight-line depreciation method—the most common depreciation method. In this method, the accounting professional reduces the value of a particular equipment over its useful life.

In terms of the method of accounting, accrual basis accounting is followed at Siemens Healthineers, Bangladesh. Whenever a bill or invoice is received, the accounting professionals of Siemens Healthineers, Bangladesh records the expenses and revenues.

As far as audit is concerned, Siemens Healthineers doesn't have any internal audit team and they don't have carry out any audit functions. However, Siemens Healthineers hires external audit team and the audit is carried out in the month of December. Currently, an audit is being conducted at Siemens Healthineers, and Islam Hoque Hanif & Co. Chartered Accountants has been hired to carry out this audit.

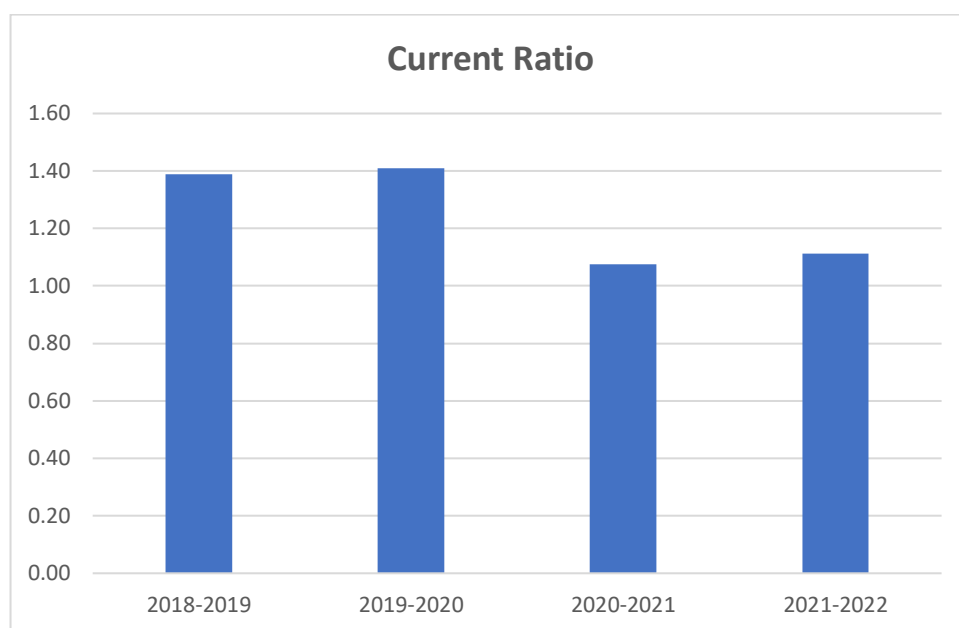
### **2.5.2 Financial Performance**

Since Siemens Healthineers, Bangladesh is a private company, it doesn't make any of its statements and information public. To conduct the financial analysis, the data from the Siemens Healthineers (consolidated) has been used and all the currencies are in Euro. The financial analysis of Siemens Healthineers has been delineated below:

### 2.5.2.1 Liquidity Ratios:

Liquidity ratio evaluates the financial situation of a company. Liquidity determines the ability and the ease with which a company can convert its assets to cash. There are two types of liquidity ratios: current ratio and quick ratio.

**Current Ratio:** Current ratio indicates a company's ability to pay off its current obligations using current assets.



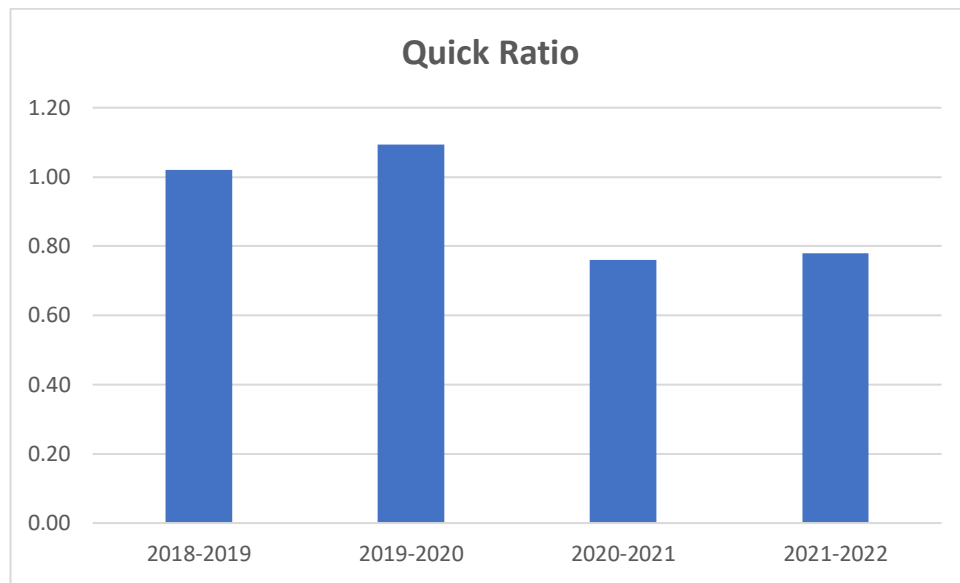
Ratio	2018-2019	2019-2020	2020-2021	2021-2022
Current Ratio	1.39	1.41	1.08	1.11

Figure 2. Current Ratio

From the table, we can notice that the current ratio of Siemens Healthineers was at 1.39 in 2019. In the next year, the ratio rose to 1.41, followed by a decline in 2021, plummeting to 1.08. Finally, in 2022, it stood at 1.11. Thus, out of the last 4 years, in 2019, Siemens Healthineers was most easily satisfying its short-term obligations using its current assets.

Perhaps, the Ukraine war, COVID 19 and the global recession have likely led to the steep declines in 2021 and 2022.

**Quick Ratio:** Quick ratio indicates the ability of a business to use its cash or cash equivalents to pay off the short-term obligations. In this calculation, the most liquid assets are taken into account and items like inventory are excluded.



Ratios	2018-2019	2019-2020	2020-2021	2021-2022
Quick Ratio	1.02	1.09	0.76	0.78

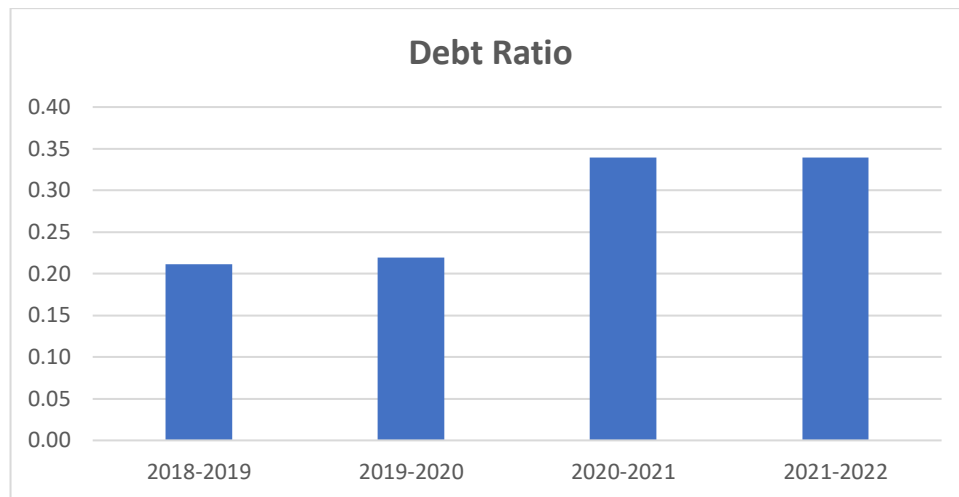
Figure 3. Quick Ratio

From the above figures, we can notice that the quick ratio of Siemens Healthineers was 1.02 in the year of 2019. In the next year, it rose to 1.09, but between 2020 October and 2021 September, the ratio shows a steep decline; it dropped to 0.76. In the year 2022, the ratio rose by 2.63% and stood at 0.78. Over the last two years, the quick ratio has remained significantly low as compared to 2019 and 2020. These miserly figures are attributable to COVID 19, economic downturns, and Ukraine-Russia conflict.

Hence, over the last two years, the liquidity ratios of Siemens Healthineers haven't been up to the mark and as the numbers suggest, they may be struggling in this regard.

### 2.5.2.2 Leverage Ratios:

Leverage ratio indicates how much of a company's assets or growth or capital is funded by the use of debt. A higher debt ratio signals a company's high inclination towards debt to fund its assets.



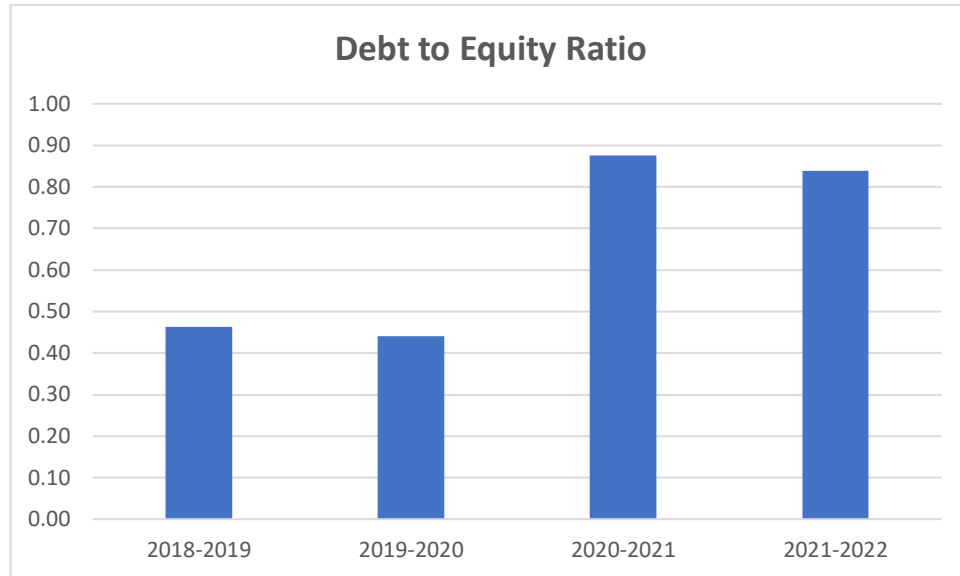
Ratios	2018-2019	2019-2020	2020-2021	2021-2022
Debt Ratio	0.21	0.22	0.34	0.34

Figure 4. Debt Ratio

**Debt Ratio:** Debt ratio simply denotes the ratio of total debts to total assets. In the analysis below we can see that the debt ratio of Siemens Healthineers has grown over the last four years. In other words, their reliance on debt has increased. In 2019, the debt ratio was 0.2. In the next year, it was nearly the same. However, in 2021 and 2022, it rose and stood at 0.34. Therefore, over the last two years, Siemens Healthineers' reliance on debt has increased, which is very evident in the above figures.

**Debt-to-equity Ratio:** Debt to equity ratio also represents how much of debt a company has taken in order to finance its projects, expansion, and so on. A higher debt-to-equity ratio

indicates a company is in high investment risk and has sourced capital from borrowing in large numbers.



Ratios	2018-2019	2019-2020	2020-2021	2021-2022
Debt to Equity Ratio	0.46	0.44	0.88	0.84

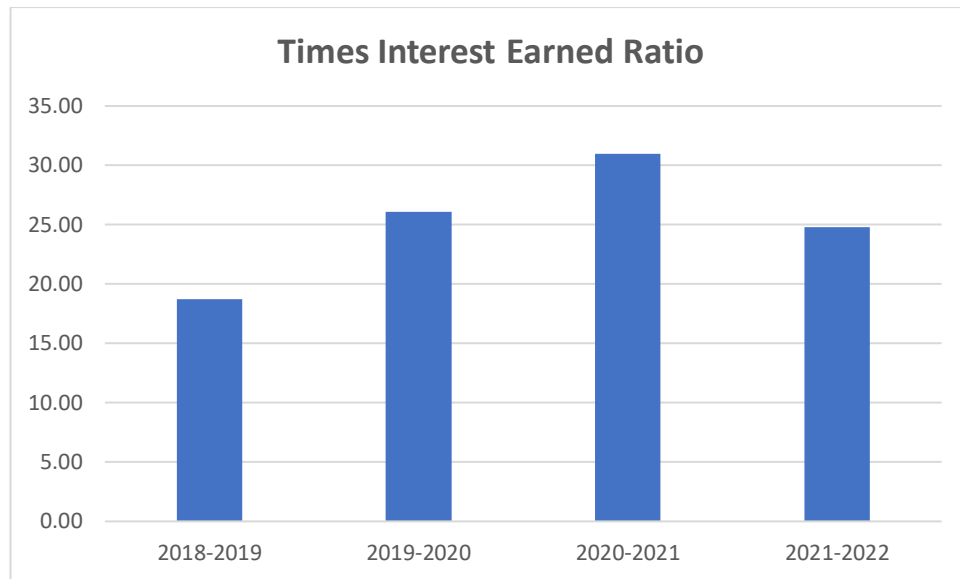
Figure 5. Debt to Equity Ratio

From the above diagrams, it is clear that Siemens Healthineers, over the last four years has been at an indifferent position in regards to debt financing. In 2019, the debt-to-equity ratio stood at 0.46. In the next year, it dropped by 4.55% and reached 0.44. In 2021, the ratio increased by 100% and stood at 0.88. In this year, the debt dropped a little and plummeted to 0.84.

Hence, considering both the yardsticks, the dependence on debt for Siemens Healthineers has grown over the years and in the past two years, their debt relative to equity has been high.

**Times Interest Earned Ratio:** Times Interest Earned ratio denotes the ability of a company to pay its debts. It further indicates the financial freedom of a company after clearing all the

obligations. A Times Interest Earned ratio of more than 2.5 is considered acceptable and it indicates the company can comfortably meet its debt obligations.



Ratios	2018-2019	2019-2020	2020-2021	2021-2022
Times Interest Earned Ratio (TIE)	18.70	26.08	31.00	24.81

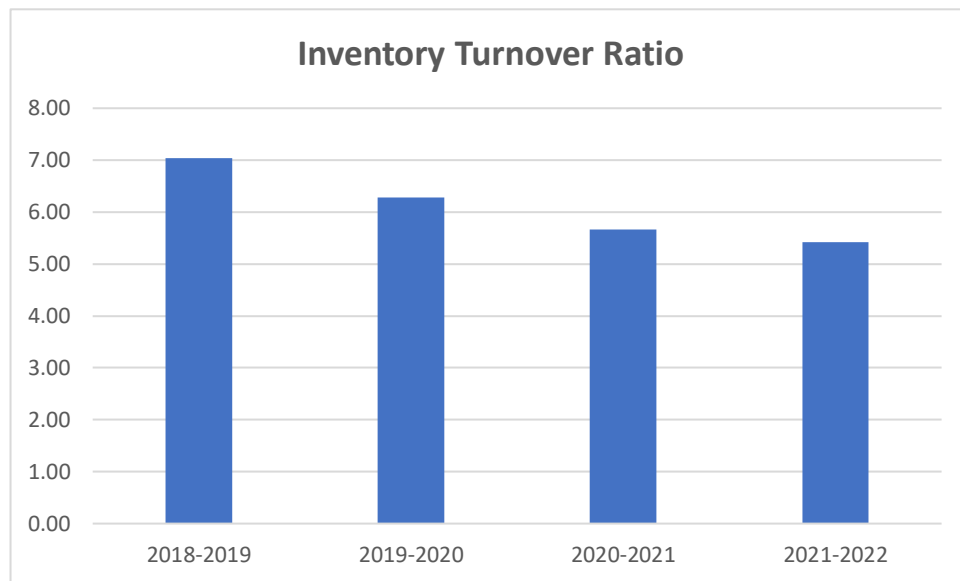
Figure 6. Times Interest Earned Ratio

From the above data we can understand that between 2019 and 2021, the times interest earned ratio has gradually increased over the years. However, in 2022, the times interest earned ratio declined to 24.81. Nevertheless, all in all, Siemens Healthineers has been able to maintain a times interest earned ratio of more than 2.5, which signals that it can very easily pay off its debt obligations.

### 2.5.2.2 Efficiency Ratios:

**Inventory Turnover Ratio:** Inventory Turnover ratio indicates how many times the inventory of a company is sold and subsequently replenished within a particular period of

time. A strong Inventory Turnover Ratio is preferred to a weak ratio since a strong ratio signals strong sales.



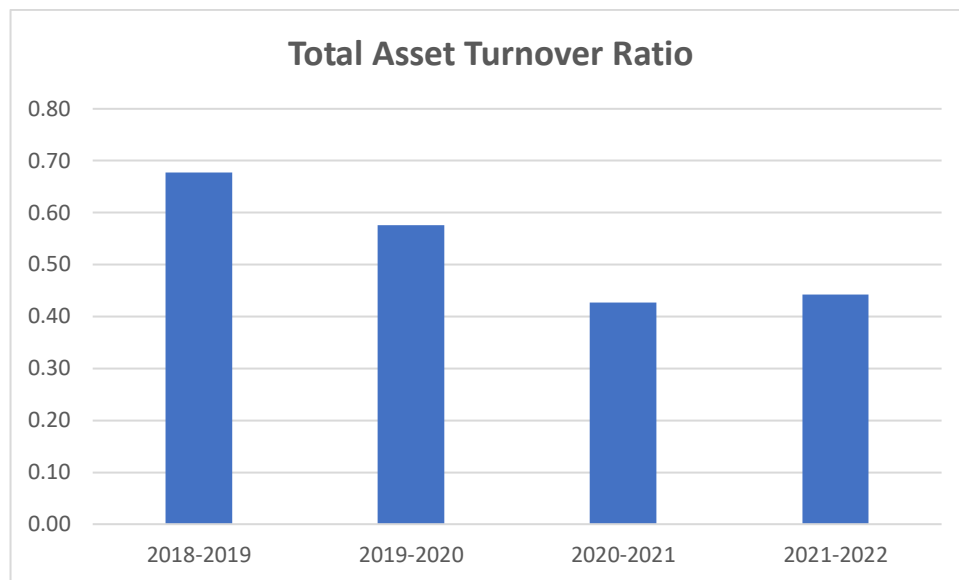
Ratios	2018-2019	2019-2020	2020-2021	2021-2022
Inventory Turnover Ratio	7.03	6.28	5.66	5.42

Figure 7. Inventory Turnover Ratio

From the above figures, it can be noticed that over the years, the Inventory Turnover ratio of Siemens Healthineers has decreased. In 2019, the ratio was 7.03, which meant Siemens Healthineers replaced its inventory in every 7.03 days on average. In the next year, it dropped by nearly 12% and fell to 6.28. In 2021, the inventory turnover ratio further plummeted to 5.66. Finally, in this year, it has again deteriorated and stood at 5.42. Thus, Siemens Healthineers, as compared to four years back, are more quickly replacing its inventory. This ratio for Siemens Healthineers is not only low but also showing a decreasing trend. Hence, it is a negative sign for Siemens Healthineers as a weak ratio suggests weak sales or excessive inventory.



**Total Asset Turnover Ratio:** Total Asset Turnover ratio shows a company’s ability to generate sales by the usage of its assets. A high Asset Turnover ratio is preferred to a low ratio because it means that the company can efficiently convert its assets into sales.



Ratios	2018-2019	2019-2020	2020-2021	2021-2022
Total Asset Turnover Ratio	0.68	0.58	0.43	0.44

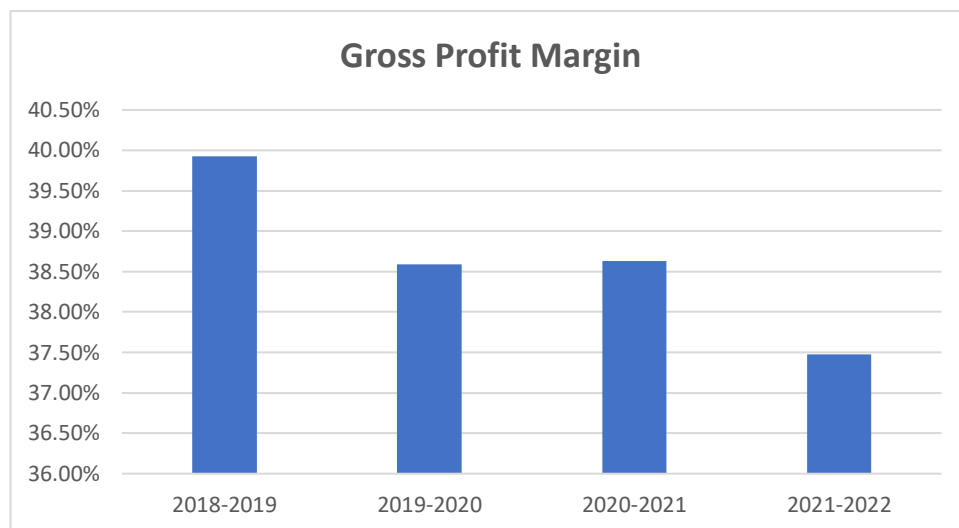
Figure 8. Total Asset Turnover Ratio

In 2019, we can notice the asset turnover ratio of Siemens Healthineers was 0.68. This means for every dollar in total assets, Siemens Healthineers generated \$0.68 in sales. In the next year, its efficiency in this regard decreased by 14.7% and fell to 0.58. In the next year, it further declined to 0.43 and in 2022, it stood at 0.44. Hence, the efficiency of Siemens Healthineers has been decreasing since 2019. The assets of Siemens Healthineers increased in the last four years has increased at a very fast rate and as compared to that, the rate of increment in sales is not that quick, and hence, the decline in this ratio over the years.

### 2.5.2.3 Profitability Ratios:

Profitability ratios determine the profit margins of a company and it indicates a company's ability to earn profits. There are mainly three types of profitability ratios: Gross Profit Margin, Operating Profit Margin, and Net Profit Margin.

**Gross profit Margin:** Gross profit margin is the comparison of gross profit of a company to its sales. The figure of gross profit ratio indicates how much a company can generate in the form of revenue after paying its cost of goods sold (COGS).

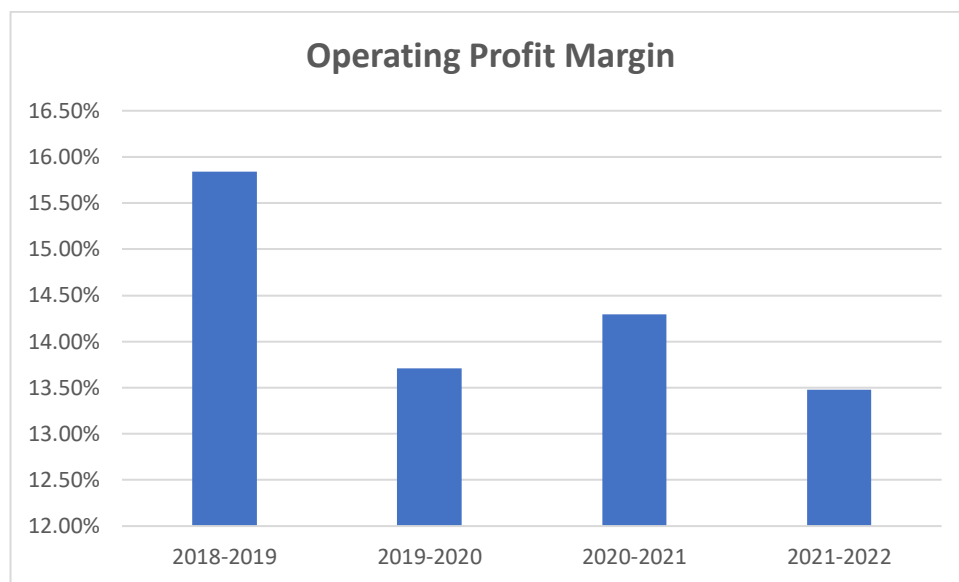


Ratios	2018-2019	2019-2020	2020-2021	2021-2022
Gross Profit Margin	39.92%	38.59%	38.63%	37.47%

Figure 9. Gross Profit Margin

From the above table, we can notice that the Gross Profit Margin of Siemens Healthineers has declined over the past four years. In 2019, the margin was 39.92%, followed by a decline in 2020, which plummeted to 38.59%. In 2021, the margin rose again, but in the last year, it dropped to 37.47%. Hence, Siemens Healthineers has to focus on its gross profit margin and take steps to improve the ratio.

**Operating Profit Margin:** Operating profit margin tells us how much a company’s operations contribute to its profitability. It is a strong and important indicator of a company’s profitability.



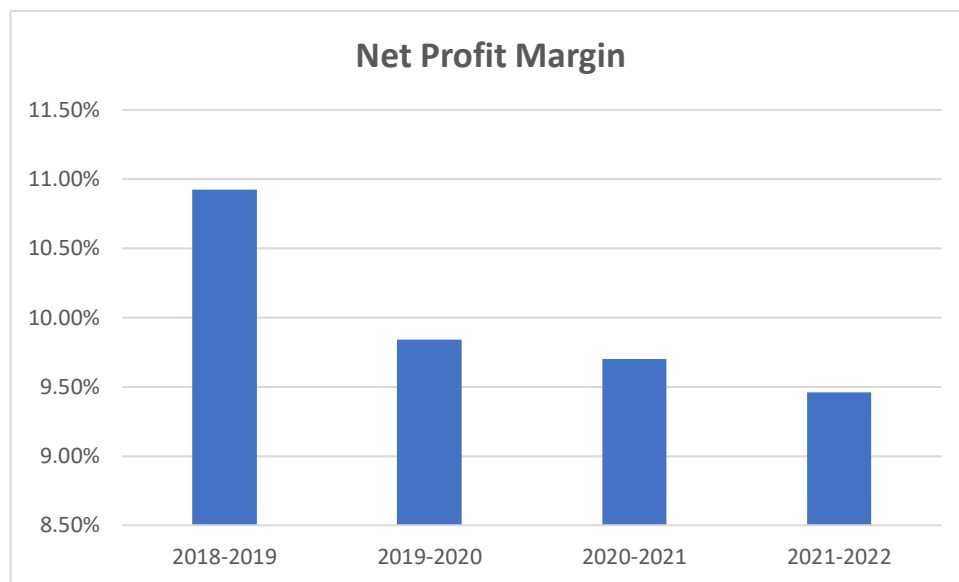
Ratios	2018-2019	2019-2020	2020-2021	2021-2022
Operating Profit Margin	15.84%	13.71%	14.30%	13.48%

Figure 10. Operating Profit Margin

We can see that in the year of 2019, the operating profit margin of Siemens Healthineers was 15.84%, which means for every dollar of revenue, they generate 15.84 cents in profit. This ratio reduced to 13.71% in the next year, followed by an increment of .59% in the year of 2021. In

2022, the ratio decline again and stood at 13.84%. Hence, in the big picture, the operating margin of Siemens Healthineers has been showing a downward trend. Therefore, they should focus on this margin to make sure the ratio is more consistent and upward trending.

**Net Profit Margin:** Net profit margin is one of the most important profitability ratios. It indicates how much profit a company makes from every dollar of sales after accounting for all types of costs and expenses.



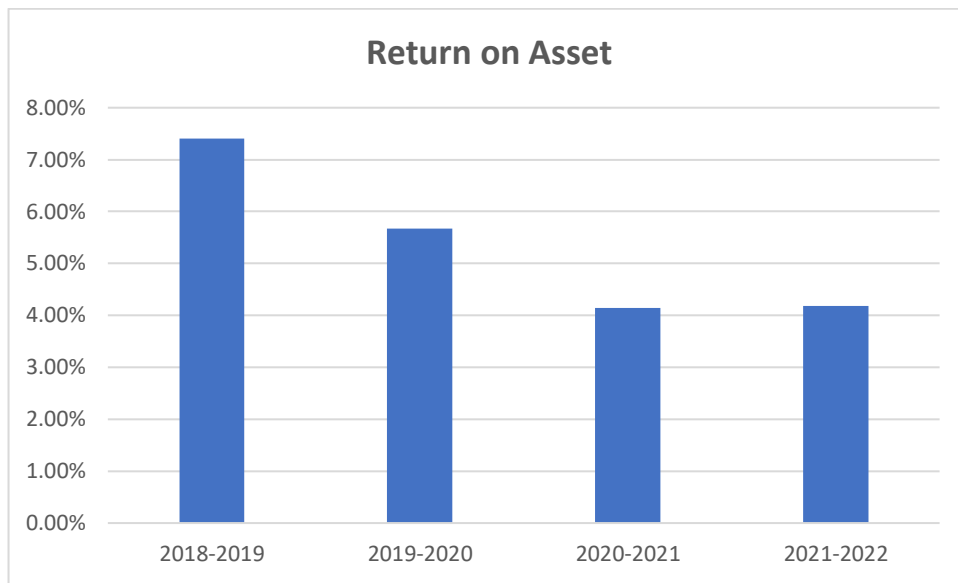
Ratios	2018-2019	2019-2020	2020-2021	2021-2022
Net Profit Margin	10.92%	9.84%	9.70%	9.46%

Figure 11. Net Profit Margin

From the above figures, it is very evident that the net profit margin of Siemens Healthineers, over a period of four years, has been downward trending. In 2019, the ratio stood at 10.92%, the highest of the next four years. The next three years, this ratio declined consistently. However, as per the comments made by the Accounting professionals at Siemens Healthineers,

the net profit margin is acceptable. Nonetheless, Siemens Healthineers should focus on making this ratio consistent.

**Return on Assets:** Return on Assets is a type of profitability ratio which determines a company’s profit with respect to the sum total of the assets it possess. It is considered an important profitability ratio across many industries.

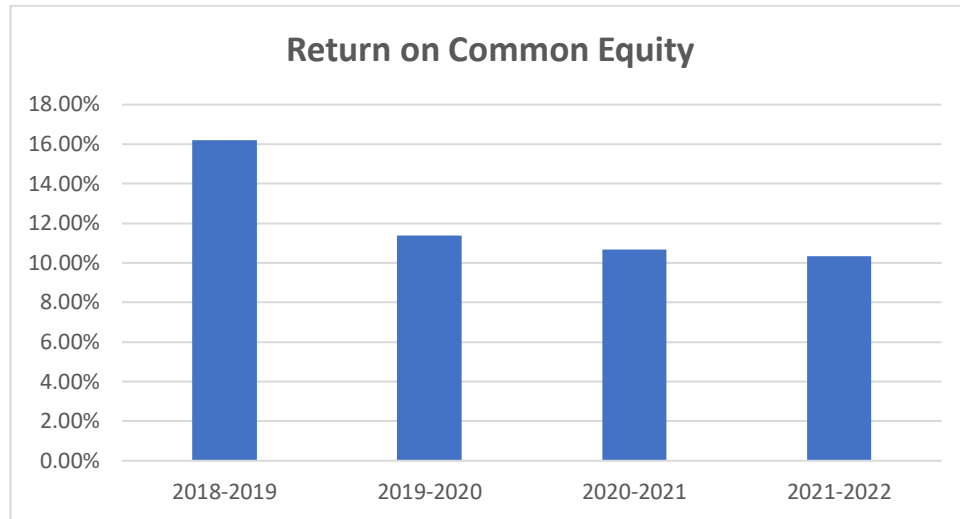


Ratios	2018-2019	2019-2020	2020-2021	2021-2022
Return on Asset (ROA)	7.40%	5.67%	4.14%	4.19%

Figure 12. Return on Assets

We can notice in the year of 2019, the Return on Assets of Siemens Healthineers was 7.40%, which meant for every dollar Siemens Healthineers invested in assets, generated an income of 7.40 cents. In the next year, the ratio experienced a sharp decline; It fell to 5.67%. This trend continued and in 2022, the ratio stood at 4.19%. Hence, the decline might signal an over investment in asset, which failed to generate revenue up to the mark.

**Return on Equity:** Return on Equity is a profitability ratio which measures the profit of a company with respect to shareholder’s equity. It determines how efficiently a company is converting its funds obtained from equity into profits.



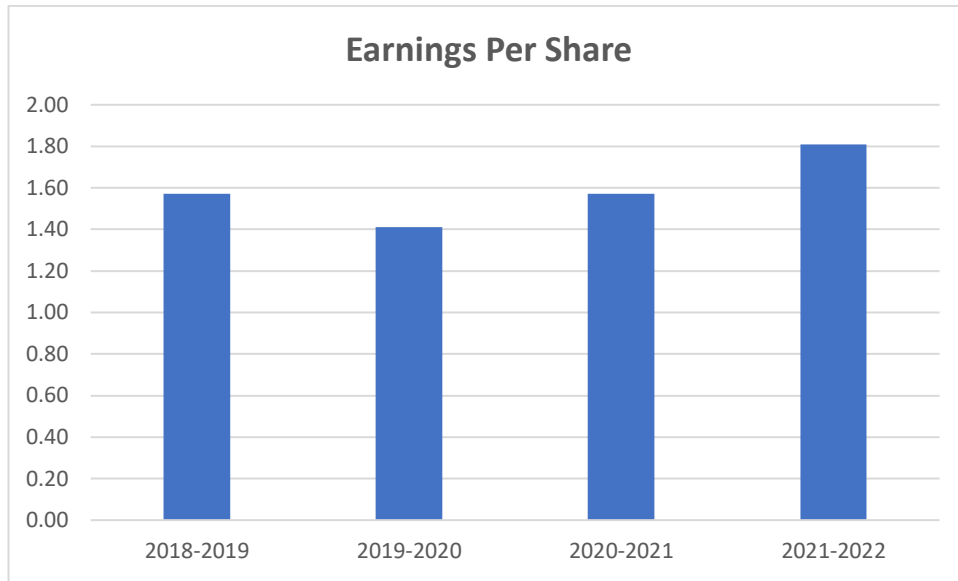
Ratios	2018-2019	2019-2020	2020-2021	2021-2022
Return on Common Equity (ROE)	16.21%	11.37%	10.69%	10.35%

Figure 13. Return on Equity

We can notice that the ROE of Siemens Healthineers has dropped over the years. In 2019, the return was 16.21%, which declined to 11.37% in the next year. In 2021, the trend continued and fell to 10.69%, followed by a further diminution in 2022, when it stood at 10.35%. Thus, in 2022, Siemens Healthineers generated .1035 profit for each dollar of equity. The value of equity has risen over the four years and the net profit hasn’t grown at the same rate and hence, the declining Return on Equity.

**2.5.2.4 Market Value Ratio:**

Earnings Per Share (EPS) tells us how much a company makes for each stock held by the stockholders. The EPS is a very crucial yardstick for investors while deciding to invest or purchase the shares of a company.



Ratios	2018-2019	2019-2020	2020-2021	2021-2022
Earnings Per Share (EPS)	1.57	1.41	1.57	1.81

Figure 14. Earnings Per Share

In 2019, the EPS of Siemens Healthineers was 1.57, followed by a decline in 2020, when it plummeted to 1.41. This decline is most likely owing to COVID 19 and the reluctance of the investors to invest in the stock market. In 2021, the EPS rose to 1.57 and in the next year, it took a leap. Currently, the EPS is 1.81. At this moment, as per the figures of 2022, we can conclude that the EPS of Siemens Healthineers is acceptable, decent, and attractive to the investors.

## 2.6 Operations Management and Information System Practices

### 2.6.1 Operations Management:

When a customer is finalized by the Sales team by winning a tender, the process of imports starts. Siemens Healthineers, Bangladesh places a purchase order from whichever Siemens Healthineers they are importing from. As per the software PATAC, the exporting Siemens

Healthineers can confirm all the order, customer and equipment details. Once the order is approved and confirmed, sales order and material code are created in the SAP software in order for the order to be tracked. Once this process is done, the Supply Chain Team is informed. The Supply Chain Team collects all the documents including Pro Forma Invoice, Country of Origin, Insurance documents and applies for Letter of Credit through a bank particularly HSBC. Once the shipment is done, the equipment is directly transferred to the customer and all the costs and revenues are booked in the SAP and CIRCADIAN software.

### **2.6.2 Information Systems:**

Siemens Healthineers uses multiple systems and software to process, share, record, and track data. They use the following tools and software for their day-to-day operations and data-based tasks:

**SAP:** Siemens Healthineers use SAP software, an Enterprise Resource Planning (ERP) to manage all of their day-to-day operations. It is a database for storing all types of journal entries. In SAP, they record all of their day-to-day transactions; bill their revenue and enter their costs. This software is convenient in the way that it can be tracked very easily.

**CIRCADIAN:** It is a supporting tool of SAP. It acts as an extension for SAP. All the details of the transactions that can't be recorded in SAP are booked here including pictures of the bills. Imbursements, requisitions all types of transactions along with all the details are booked in this system.

**PATAC:** It is also a supporting tool of SAP. This software mainly deals with tax. Siemens Healthineers, Bangladesh records all the equipment details and the tax details in this system which is also accessible by Siemens Healthineers, Germany. This software is used so that Siemens Healthineers, Germany is aware of all the details of the business and to ensure tax is



not paid multiple times. After receiving PO, TO ASK FOR PI, PATAAC, LOA, DAMEX AND CHECKLIST NEEDS TO BE SUBMITTED.

**DAME-X:** DAME-X is also a version of SAP. This software is used to check the end user. This system helps to identify if the end user or the entity that is purchasing from Siemens Healthineers, is eligible for it. This system checks the customer's financial health including checking for bankruptcy, fraud or disallowed cheques.

**E-mails:** Apart from that, in terms of communicating and sharing data with clients like Clearing and Forwarding agents, customers, Bangladesh Customs, and banks, Siemens Healthineers, Bangladesh opt for e-mails. E-mails is the most convenient tool for them when it comes to communicating with the external parties mentioned above.

## **2.7 Industry and Competitive Analysis**

The industry and competitive analysis of Siemens Healthineers, Bangladesh have been explained in detail by using Porter's Five Forces and SWOT Analysis below:

### **2.7.1 Porter's 5 Competitive Forces Analysis**

#### **Rivalry Amongst Competitors:**

The competitors of Siemens Healthineers in the Bangladeshi market include GE, Philips, Hitachi, and so on. An equipment-wise competitors' market share in the Bangladeshi market has been portrayed below:

	MRI	CT Scan	USG	Mammo	C-Arm	X-ray	Gamma	Angiogram
Siemens Healthineers	30%	38%	5%	30%	63%	14%	74%	59%
General Electric	24%	20%	8%	18%	4%	5%	4%	29%
Hitachi	41%	24%	4%	0%	0%	2%	0%	0%
Toshiba	0%	13%	19%	0%	0%	2%	0%	0%
Philips	4%	4%	0%	0%	4%	0%	0%	7%
Simadzu	0%	1%	0%	0%	0%	2%	0%	5%
Neosoft	2%	0%	0%	0%	0%	0%	0%	0%
Medison	0%	0%	4%	0%	0%	0%	0%	0%
Aloka	0%	0%	11%	0%	0%	0%	0%	0%
Fukuda	0%	0%	8%	0%	0%	0%	0%	0%
Listem	0%	0%	0%	0%	0%	6%	0%	0%
China and Others	0%	0%	0%	52%	29%	68%	22%	0%

*Table 2. Market Share of Competitors in Bangladesh Based on Equipment Sold*

From the table, we can deduce that although Siemens Healthineers is dominating in some of the equipment, the overall market scenario in the healthcare industry of Bangladesh is very competitive with three or four companies regularly competing with Siemens Healthineers. Thus, we can conclude, to Siemens Healthineers, Bangladesh a moderate to low level of threat exists in this dimension.

### **Supplier Power:**

Siemens Healthineers, Bangladesh doesn't manufacture any healthcare equipment in Bangladesh. All the equipment are sourced from their partner companies including Siemens Healthineers, Germany and Siemens Healthineers, USA. Apart from these two, products are

imported from other countries as well. Hence, the power of these suppliers is not concentrated and dominating. Since all the Siemens Healthineers across the globe operate for the betterment of Siemens and in co-operation, there exists no power of suppliers and all the subsidiaries work toward the common goal of the parent company, Siemens Healthineers, Germany. Therefore, we can conclude, for Siemens Healthineers, Bangladesh the power of suppliers is low since all the Siemens Healthineers work toward the common goal of Siemens Healthineers, Germany, which is the parent company of all Siemens Healthineers.

### **Buyer Power:**

There are a lot of buyers in the healthcare industry. Besides, there are many substitutes to Siemens Healthineers in the Bangladeshi healthcare sector and the products of the substitutes are more or less priced the same. Hence, the switching costs for the buyers is very low. Additionally, there is extensive market knowledge at the end of the users. Thus, the negotiation power of the buyers is high in this case. Therefore, we can infer, for Siemens Healthineers the buyer power is high in the healthcare industry in Bangladesh.

### **Threat of Substitutes:**

There are substitutes galore in the healthcare industry of Bangladesh. Some of the substitutes the buyers can choose from are: General Electric, Philips, Hitachi, Toshiba, and so on. These substitutes are priced at the same level or sometimes, even lower. Due to the negligible price differences, these competitors can cater to the buyers very easily. Besides, in some cases, as mentioned previously, the substitutes outperform Siemens Healthineers, Bangladesh. For

instance, considering MRI machines and USG machines, Siemens Healthineers, Bangladesh is not the best performer in the Bangladeshi healthcare industry. Hence, it can be deduced that a moderate level of threat exists in this dimension.

### **Threat of New Entrants:**

This type of business is very capital intensive. To manufacture this healthcare equipment from scratch requires a lot of resources—factories, workers, technology—which will entail a lot of capital. Hence, it will not be easy for any business to start operating in this sector. Apart from that if any business attempts to imitate Siemens Healthineers—plans to import these equipments from outside Bangladesh—the same thing will happen. Import based businesses willing to operate in Bangladesh’s healthcare industry are likely to face the same challenges regarding capital. Therefore, it can be concluded that a very low level of threat exists in terms of new entrants entering this industry.

### **2.7.2 SWOT Analysis**

The SWOT Analysis of Siemens Healthineers, Bangladesh have been laid down below:

#### **Strengths:**

- Siemens Healthineers, Bangladesh have the established brand name of Siemens AG and Siemens Healthineers associated with them. This advantage gives Siemens Healthineers, Bangladesh a reputed brand image.

- Siemens Healthineers, Bangladesh get the capital support from the common stockholders who bought shares in Siemens Healthineers, Netherlands. The funds obtained from the sale of shares are disbursed from Siemens Healthineers, Netherlands.
- Siemens Healthineers, Bangladesh is one of the market leaders in the Bangladeshi healthcare industry, which indicates they can attract customers when rolling out new products in the Bangladeshi market.
- Siemens Healthineers provide both 24/7 service and uptime service, which most of the competitors fail to offer.
- The products of Siemens Healthineers are of the best quality and the customers rely on their products showing high loyalty.

**Weaknesses:**

- There is no scope of R&D for Siemens Healthineers, Bangladesh. All the R&D are imported and this at times, gets very costly.
- Siemens Healthineers has lost the market share in two major equipment: X-ray and Ultrasound machine.
- Siemens Healthineers do not have any storage facility to store the imported healthcare equipment. With a storage facility, they can import in bulk and store them and supply their customers as per their need.

**Threats:**

- The dollar crisis in Bangladesh has forced banks to be restrictive in terms of opening LCs and this will negatively impact the imports of Siemens Healthineers, Bangladesh in the future.

- Due to the crisis, banks have set a margin that has to be deposited for opening LCs. Previously this was free of cost. Now that a deposit has to be earmarked, funds get accumulated, which could have been used on other issues, and this might result in problems regarding funds in the future.
- Diagnostic reagents arrive when the exporters get them on hand and this breaches the agreement between Siemens Healthineers and Bio Trade International (the buyer of all reagents in Bangladesh). This in the future might hamper Siemens Healthineers, Bangladesh as the customers might at some point stop doing business with them.

### **Opportunities:**

- The economy of Bangladesh is gradually booming and people's purchasing power is increasing meaning they can afford medical services easily and this is where the biggest opportunity of Siemens Healthineers, Bangladesh lies: to tap into this growing market.
- DGDA has started offering new import incentives for healthcare equipment, which can be availed by Siemens Healthineers. This incentive might help Siemens Healthineers, Bangladesh in the long run as their imports will be more flexible.

### **2.8 Summary and Conclusion:**

Siemens Healthineers, Bangladesh is operating as a subsidiary of Siemens Healthineers. In Bangladesh, the management practice of Siemens Healthineers is pretty much the same as other MNCs operating in Bangladesh. The company has two leaders at the top and they are responsible for key decisions. With regard to marketing practices, Siemens Healthineers, Bangladesh can't promote their product as this will not comply with the healthcare equipment promotion laws. However, the sales team focus on promoting their products by maintaining liaison with existing and potential customers. In terms of financial performance, Siemens

Healthineers (consolidated) has performed good over the last four years. Despite difficult economic situations, COVID 19, and Russia-Ukraine conflict, their operations, performance, and profitability as per the ratios is acceptable. As far as the competitors' scenario is concerned, Siemens Healthineers has lost market shares in equipment like USG and X-ray and based on the analysis, in my opinion, a low to moderate level of threat exists in this dimension. However, as operations management, the core function of the business and information systems of Siemens Healthineers, Bangladesh is strong and stable, it will be a tough job for any competitor to replicate or replace them and be the market leader.

## **2.9 Recommendations:**

Although the operations and performance of Siemens Healthineers, Bangladesh is up to the mark, there is some room for improvement. For instance, some of the financial ratios of Siemens Healthineers show a downward trend. Although the values are acceptable and signal a stable financial health, they must focus on making their operations more streamlined across the globe. Additionally, Siemens Healthineers, Bangladesh should focus more on R&D. At the moment, there is no investment in R&D in the Bangladesh branch and most of the R&D are imported, which is very costly. If Siemens Healthineers, Bangladesh can develop its R&D, they can regain the lost market shares of USG and X-ray. Followed by this, they can generate more revenue by tapping into this ever-increasing market. Apart from that, they can adopt some measures with regard to the foreign exchange. A dollar crisis is imminent in Bangladesh. Siemens Healthineers, Bangladesh significantly needs USD for their imports and as the USD continues to appreciate, more costs are being booked in the form of import payments. They can stop this by entering into currency forwards or currency futures contract with the banks, and in my opinion, this will save them a large amount of money in terms of import costs.

## **Chapter 3**

### **Project Part: Global Firms' Foreign Exchange Risk Management**

#### **During Crises: The Case of Siemens Healthineers**

##### **3.1 Introduction**

I worked as an Intern at Siemens Healthineers, Bangladesh from October 3, 2022 to December 29, 2022. I was assigned in the Finance and Accounts department.

During my internship, I have worked on C&F costs, reconciliations, LC margins, and so on. More or less, all of the tasks included exchange rates and much of the revenue and costs depended significantly on the movement of USD dollars and Euro. The abrupt movements of exchange rates of Euro during Brexit, COVID 19, economic downturns, and Russia-Ukraine conflict seemed very fascinating to me. Hence, I decided to research further to better comprehend the issue. Since as per the BBA internship program, I am required to prepare a research project, I decided to research on the effectiveness of foreign exchange risk management particularly economic risk management of Siemens Healthineers by investigating the relationship between USD/Euro movement and the revenue of Siemens Healthineers.

There are three types of exchange rate risks: transaction risk, translation risk, and economic risks. Transaction risk is the risk a company incurs when it purchases products in a different currency except from the currency they operate on. Effectively, the delay in time between a transaction and the settlement defines the transaction risk. On the other hand, translation risk is experienced whenever exchange rate volatility affects the financial reporting of a multinational firm. Finally, economic risk is the risk that is experienced on the overall market value of the company due to exchange rate fluctuations. Mainly, economic risk is seen due to



exchange volatilities which change the purchasing power and spending pattern of customers. This scenario leads to changes in revenues and expenses. In this report, I will focus on the economic risk out of the three risks. And by foreign exchange risk on the title of the project, the economic risk has been implied.

### **3.1.1 Problem Statement**

Since 2020, the world is grappling with COVID 19—a pandemic—that has dealt huge blows on economies worldwide, which has led to negative impacts on multinational businesses. Apart from that, the Russia-Ukraine conflict has resulted in economic downturns. These economic downturns have led to abrupt decline in the efficiency of the foreign exchange market (Jamal & Bhat, 2022)

The abrupt movements in exchange rates that happen due to factors like COVID 19 lead to movements in ROA, which is a determining factor of the profit of an organization (Bui & Nguyen, 2021). Multinational companies like Siemens Healthineers whose business model comprises of cross border trade highly rely on the foreign exchange market. For instance, Siemens Healthineers, Bangladesh has to regularly transact with Siemens Healthineers, Germany and other branches and they have to protect themselves from exchange rate risk and execute these transactions at a stable BDT/Euro or BDT/USD rate. Otherwise, the company will end up paying large amounts in local currency resulting in increment of costs and reduction of revenue. However, the case hasn't been favorable for Siemens Healthineers, Bangladesh during struggling times like COVID 19 and the recent dollar issue in Bangladesh. Back then, the foreign exchange markets were inefficient, which led to large payments for Siemens Healthineers, Bangladesh when considered in local currency.

Although much research has been conducted on exchange rate management skill of global companies, only a handful amount of research has been carried out on this topic from the standpoint of revenue and exchange rate relationship. Furthermore, little study is done on this topic considering the following factors: economic risk, healthcare industry and unfavorable times like COVID 19, economic downturns, Russia-Ukraine conflict. Besides, all the literature has focused on this topic by comparing factors of exchange rate or components of exchange rates to indicators like Net profit, ROA or ROE and not much focus has been given on economic risk. Thus, these points clearly indicate that there is a need of research on this topic. This research will effectively aim to understand the relationship between real exchange rates and revenue, which will mainly include the difficult phases and downturns of the economy, followed by a conclusion as to how effective the economic exchange rate risk management of Siemens Healthineers is.

### **3.1.2 Research Questions**

The main research question of this research is as follows:

- Does Siemens Healthineers have an effective foreign exchange risk particularly economic risk management skill?

Since we are going to put emphasis between the relationship between revenue and exchange rates, this study aims to address the following specific questions:

- Does a relationship exist between exchange rates of Euro/USD and revenue figures of Siemens Healthineers?
- Based on the direction of the relationship, does abrupt movement of Euro/USD contribute to declining revenue?

### 3.2.1 Literature Review

According to Hung (1994), exchange rate movement of USD and manufacturing profits of firms operating in the USA are correlated, which indicates if the value of USD appreciates, there will be a drop in the revenue and ultimately, profit figures. This theory can be further confirmed in a research published in Journal of Macroeconomics. The research verifies, by the inspection of transitory and permanent component of the uncertainty of exchange rates, that depreciation in exchange rates increases a firm's profit and vice-versa. (Baum et al., 2001)

The export prices change based on currency movement, which consequently impact the product's aggregate demand, which contributes either negatively or positively to revenue figures (Klitgaard, 1999). The prices of exports adjust based on foreign exchange market and this influences the demand, which has an effect on the revenue of a business. Hence, exchange rates play a significant role in any multinational company. It can be further confirmed by looking at the profitability in the manufacturing industry of South Africa, which reduced significantly due to RAN/USD fluctuations (Yeboah, 2019). Therefore, with fluctuations in exchange rates, as per the researches mentioned above, it is likely for multinational firms to experience revenue contraction. Hence, a multinational firm must protect itself from exchange rate risks, which stem from economic downturns. As per Emre & Derekoy (2020), the fluctuations in foreign exchange rates, asset size, and foreign sales don't have any significant impact on ROE or ROA between 1999 and 2019 in Turkey. From this research, it can be assumed that those firms in Turkey have a good risk management skill as far as exchange rate is concerned.

Overall, the fluctuations in exchange rates might impact the revenue and costs. The changes in revenue, costs and FX gain/loss figures might influence the profit figures of a company.

However, there are firms that skillfully and effectively hedge themselves against the exchange rate risk, and in this dissertation, we will try to check if Siemens Healthineers has an effective economic risk management skill.

### **3.2.2 Objectives**

The primary objective of this study is to check if Siemens Healthineers has an effective economic risk management skill, which will be done by evaluating and comprehending the relationship and impact between exchange rate movements of USD with respect to Euro and the revenue of Siemens Healthineers.

The specific objectives of this study are as follow:

- To determine if a relationship exist between revenue margins and exchange rate movement of Euro with respect to USD.
- To determine the direction of relationship between exchange rate of Euro with respect to USD and revenue figures.

### **3.1.3 Significance**

Exchange rates play a significant role for multinational businesses like Siemens Healthineers. The depreciation of a particular currency with respect to another makes the imports from that country costlier and likewise, appreciation of a particular currency makes the exports costlier. These situations increase the cost and since prices are changed, demand might shift downward, reducing revenue, which later on, diminishes the profit. For instance, in case of Siemens Healthineers, a German company, if the USD devalues with respect to Euro, the American customers will hesitate to import from Siemens Healthineers as the products have become more expensive, leading to decreased revenue. This will in turn decrease the profit. Subsequently,

continuous diminution in revenue can force the companies to levels of increased costs, which might negatively impact their imports and their business overall. In addition, if imports are delayed or stopped, the healthcare industry in which they are operating will be affected as well. Not only the economy will suffer but also the common people will find it difficult to access healthcare services. Therefore, it is important for multinational companies like Siemens Healthineers to hedge themselves against the exchange rate risk. Otherwise, costs might increase, resulting in reduced profit margins. Due to this, regular business operations will be disrupted significantly.

Therefore, the foreign exchange market depends on the economy and in itself is an indirect factor of economic performance. Hence, it is important for multinational companies to protect themselves against economic exchange rate risk so that they can run their business smoothly. Additionally, it is also important for global firms to effectively manage economic exchange rate risk because a collective effort to manage economic risk can help prevent economic downturns and unemployment. Besides, as crises periods like COVID 19, Brexit, Russia-Ukraine conflict, and US China trade war continue to disrupt economies, it is important for global businesses particularly those operating in the healthcare industry to be protected from risks arriving from exchange rates.

Hence, full-fledged research has been conducted to check if Siemens Healthineers has been successfully able to insulate itself from economic risk. This will be understood by verifying if a direct relationship exists between exchange rates and revenue. Also, it can be confirmed by checking if devaluations of Euro vis-à-vis USD contribute to negative turnovers. Based on the research, further action can be taken by MNCs to forestall foreign exchange issues specifically economic risks and hedge themselves against falling turnover that stem from the uncertainties in currency market.

## 3.2 Methodology

In order to check if Siemens Healthineers has a good economic risk management skill, this research will check if there exists any relationship between revenue of Siemens Healthineers and exchange rates of Euro with respect to USD. This is because if an appreciation of Euro with respect to USD doesn't impact the revenue of Siemens Healthineers, it can be concluded that Siemens Healthineers have a good economic risk management approach. Therefore, revenue data of Siemens Healthineers (consolidated version) from 2017 to 2022 has been used. However, in order to extract the trend of the revenue figures, in the regression test, change in revenue has been used.

Two types of data have been gathered to complete this research and they are:

- Data of exchange rates of Euro with respect to USD through 2017 and 2022, which also covers struggling times like Brexit period, COVID 19, and Russia-Ukraine conflict. This data has been collected from [Exchangerates.org](https://www.exchangerates.org/), a website that contains all the Euro with respect to USD rates till date. Rates on the last day of a month—of the corresponding quarter—has been taken.
- Revenue of Siemens Healthineers of every quarter has been collected from the Annual Report of entire Siemens Healthineers (consolidated version). Then change in revenue has been determined for each quarter. This is done to extract the trends of revenue.

To conduct this research, two types of hypotheses will be developed. A Regression test will be run using MS Excel. The test will check if a relationship exists between movements of USD and Euro and the change in revenue of Siemens Healthineers. Moreover, from the regression test, the direction of the relationship of the two variables can be identified.

### 3.3 Findings and Analysis

The variables that will be used for this analysis are:

- Exchange rates of Euro with respect to USD i.e., value of 1 Euro in USD
- Change in revenue values

#### 3.3.1 Hypothesis (for regression test)

Through this hypothesis, I attempt to check if a relationship exists between exchange rates and change in revenue figures of Siemens Healthineers. This will be a two-tailed test conducted via the MS Excel software. Since movement in exchange rates can move the revenue either upward or downward, this will be a two-tailed test. The hypotheses for this test are as follow:

- **Null Hypothesis:** There exists no relationship between exchange rates of Euro with respect to USD and (%change) in revenue figures of Siemens Healthineers.
- **Alternative Hypothesis (H<sub>1</sub>):** There exists a relationship between (%change) in revenue figures of Siemens Healthineers and exchange rates of Euro with respect to USD.

#### Description of Variables:

- **Exchange Rates of Euro with respect to USD:** This is an independent variable. This is not controllable by Siemens Healthineers. This variable contains all the previously-existing market rates of USD and Euro.
- **Change in Revenue of Siemens Healthineers:** This is a dependent variable. This variable can be controlled by Siemens Healthineers and this variable depends on a number of factors. This variable has been expressed in Euro, a monetary unit.

**Test Procedure:**

- The data set was organized and in MS Excel, in the Data tab, 'Data Analysis' option was selected.
- Among different tests that pop up upon opening 'Data Analysis', the Regression test was selected.
- The inputs X and Y are the independent and dependent variables respectively. The input columns were selected and a confidence level of 95% was chosen.
- The test was run and the results that appeared have been shown underneath 'Step 2'.

**Step 1:**

Period	Change in Revenue	Exchange Rate (in \$)
Q1, 2017		1.0522
Q2, 2017	2%	1.0655
Q3, 2017	-3%	1.1427
Q4, 2017	10%	1.1815
Q1, 2018	-12%	1.2002
Q2, 2018	1%	1.2328
Q3, 2019	2%	1.1702
Q4, 2019	12%	1.604
Q1,2019	-91%	1.1492
Q2,2019	10%	1.2233
Q3,2019	-7%	1.1368
Q4,2019	44%	1.0897
Q1, 2020	-40%	1.2246
Q2, 2020	36%	1.1026
Q3, 2020	-35%	1.1235
Q4, 2020	59%	1.173
Q1, 2021	1%	1.2216
Q2, 2021	2%	1.1726
Q3, 2021	-12%	1.1857
Q4, 2021	18%	1.1581
Q1,2022	1%	1.1371
Q2, 2022	24%	1.1074
Q3, 2022	-38%	1.0477

*Table 3. Dataset for Regression Test*



## **Step 2 (Outcome of Regression):**

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.05647977							
R Square	0.00318996							
Adjusted R Square	-0.0466505							
Standard Error	0.32241148							
Observations	22							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	0.006653105	0.0066531	0.06400345	0.80285884			
Residual	20	2.078983259	0.10394916					
Total	21	2.085636364						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-0.1997253	0.763814546	-0.2614841	0.79639314	-1.79301456	1.39356389	-1.7930146	1.393563886
Exchange Rate (in \$)	0.16379072	0.647422247	0.25298903	0.80285884	-1.18670842	1.51428987	-1.1867084	1.514289866

*Figure 15. Summary Output*

### **Discussion:**

The correlation test ran above using MS Excel shows that the r value is .003, which is close to 0. It effectively explains only 0.3% variation in changes of revenue. The p value is 0.802 or 80.2%. In this case the p value exceeds .05 or 5%, which renders the null hypothesis valid. Moreover, we know, as long the r value is zero, no relationship exists between the variables. Additionally, since the p value is greater than .05 and the primary criteria to reject null hypothesis is not fulfilled, we fail to reject null hypothesis. Since the p value is greater than .05 and the deviation from null hypothesis is not statistically significant, we fail to reject the null hypothesis.

### **3.3.2 Analysis of Findings:**

Although theories and research confirm that exchange rates and revenue are correlated, and exchange rates impact revenue figures, in this case, no relationship exists. This might be the case for several reasons. Firstly, as the research initially assumed that no relationship between the variables bespeak an effective economic exchange rate risk technique, this might be true. Whenever exchange rates became unfavorable for a particular subsidiary, that subsidiary might

have opted for currency forwards or currency futures, thus hedging themselves from economic risk, which effectively is one of the parts of foreign exchange risk. For these reasons, with exchange rate fluctuations, during the struggling times of the economy, the revenue of Siemens Healthineers remains unaffected. Besides, there might be other reasons for not finding a relationship between the variables. For instance, the number of observations is not reliable. If the number of observations were higher, the results might have been different. Additionally, there might be lack of unrecognized or hidden variables in the regression system. Besides, another reason why no relationship exists might be because the revenue data taken is from a consolidated version. If the data could have been collected from annual report of a particular country of operation, the revenue trend might be different and a relationship could have existed. As per the results and hypothesis of this research, we conclude that no relationship exists between the exchange rate of Euro/USD and the revenue of Siemens Healthineers.

Therefore, we fail to reject the null hypothesis and so there exists no relationship between the exchange rate of Euro/USD and change in revenue of Siemens Healthineers. Hence, as no relationship exists, in accordance with our hypothesis, we can say that Siemens Healthineers have a good economic exchange rate risk management technique. They may have opted for futures or forward contracts in order to execute their transactions during the time frames included in the research. In short, since no relationship exists, certainly there will be no impact of exchange rates movement on the net profit figures.

### **3.4 Summary and Conclusion:**

I had selected this research because although massive amounts of research have been done that focused on exchange rates risk management, only handful of researches have been conducted that try to assess the economic risk management skill by checking the direct relationship between exchange rates and revenue, that too during struggling periods of the economy. In this

research, I attempted to check if a relationship exists between two variables: exchange rates of Euro/USD and the revenue of Siemens Healthineers. Thus, to check this, a test was required: Regression test. The test checked that no relationship existed between the exchange rates and change in revenue. Since no relationship existed, the fact that exchange rates impact revenue is out of question.

Thus, we failed to reject the null hypothesis and concluded that the revenue of Siemens Healthineers had absolutely no relationship with the exchange rates of Euro/USD during the following events: Brexit, Covid-19, and Russia-Ukraine conflict, which answers our research question that Siemens Healthineers has an effective economic exchange rate risk management technique.

### **3.5 Recommendations:**

These following recommendations can be made after conducting the research:

- Same research can be conducted by using more observations, which might give a different output.
- Unrecognized or hidden variables could be added to the regression test, which might produce different outputs.
- Instead of a consolidated version, data from a particular country of operation could be chosen, which will lead to more accurate test results.
- Pharmaceutical industry could be researched since those goods have the same demand.

## References

Jamal, A., & Bhat, M. A. (2022). COVID-19 pandemic and the exchange rate movements: evidence from six major COVID-19 hot spots. *Future Business Journal*, 8(1). <https://doi.org/10.1186/s43093-022-00126-8>

Hung, J. (1992). Assessing the exchange rate's impact on US manufacturing profits. *Quarterly Review-Federal Reserve Bank of New York*, 17, 44-44.

Klitgaard, T. (1999). Exchange Rates and Profit Margins: The Case of Japanese Exporters. *Federal Reserve Bank of New York Economic Policy Review*, 5(1), 41–54.

Levy, M. D. (1987). Corporate profits and the US dollar exchange rate. *Business Economics*, 31-36.

Bui, M. T., & Nguyen, H. M. (2021). Determinants Affecting Profitability of Firms: A Study of Oil and Gas Industry in Vietnam. *Journal of Asian Finance, Economics and Business*, 8(1), 599–608. <https://doi.org/10.13106/jafeb.2021.vol8.no1.599>

Baum, C. F., Caglayan, M., & Barkoulas, J. T. (2001). Exchange rate uncertainty and firm profitability. *Journal of Macroeconomics*, 23(4), 565–576. [https://doi.org/10.1016/s0164-0704\(01\)00178-1](https://doi.org/10.1016/s0164-0704(01)00178-1)

Yeboah, M., & Takacs, A. (2019). DOES EXCHANGE RATE MATTER IN PROFITABILITY OF LISTED COMPANIES IN SOUTH AFRICA? AN EMPIRICAL APPROACH. *International Journal of Energy Economics and Policy*, 9(6), 171–178. <https://doi.org/10.32479/ijeep.8208>

Emre, K. U. R. T., & Derekoy, F. ANALYSIS OF THE RELATIONSHIP BETWEEN EXCHANGE RATE CHANGES AND PROFITABILITY IN TURKEY: EXAMPLE OF BIST MANUFACTURING SECTOR. *Journal of Business Economics and Finance*, 9(4), 304-319.

*Exchange Rates UK - Compare Live Foreign Currency Exchange Rates.* (n.d).  
<https://www.exchangerates.org.uk/>

*Siemens Healthineers Corporate Homepage.* (n.d). <https://www.siemens-healthineers.com/>

*Financial Ratios.* (2022, June 3). Investopedia. <https://www.investopedia.com/financial-ratios-4689817>