Report on
COST ANALYSIS ON LAFARGEHOLCIM BANGLADESH LIMITED (LHBL)

By
Sadia Zaman
ID: 20204041

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

BRAC Business School
BRAC University
September 2024

DECLARATION

It is hereby declared that-

- The report's whole work done by myself and not published any other website.
- Would like to maintain coherence of the reports.
- Would like to implement reference and intext so that no one raised question about the report authenticity Don't publish anything which is illegal and harmful for the Lafargeholcim and against employment contract.

Student's Full Name & Signature:

Sadia Zaman

ID: 20204041

Supervisor's Full Name & Signature:

Dr. Abu Saad MD. Masnun Al Mahi

Assistant Professor, Finance

Brac Business School

LETTER OF TRANSMITTAL

Date: 20 September, 2024

Abu Saad Md. Masnun Al Mahi
Assistant Professor (Finance)
BRAC Business School, BRAC University

Subject: Submission of Internship Report on Cost Analysis on LafargeHolcim Bangladesh Limited (LHBL).

Respected Sir,
To fulfill the requirements for my Bachelor of Business Administration (BBA) at BRAC University, I am glad to submit my internship report titled "Cost Analysis on LafargeHolcim Bangladesh Limited (LHBL)". My report reflects my experience and contributions during my internship at LafargeHolcim Bangladesh Limited, which focuses on HR practices, financial analysis, and marketing strategies.

I would like to thank my supervisor, Abu Saad Md. Masnun Al Mahi, for continuous feedback and encouragement.

Sincerely,
Sadia Zaman
ID: 20204041
BRAC Business School
BRAC University

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to Muntaha Mursalin Chowdhury for providing me the opportunity to pursue my internship at LafargeHolcim Bangladesh Limited. It has been an invaluable learning experience that has contributed immensely to my professional and personal development.

I am extremely grateful to my supervisor**,** Abu Saad Md. Masnun Al Mahi, for his invaluable guidance, encouragement, and support during my time here. His insights and advice have pushed me to grow and learn in ways I didn’t think possible. I could not have asked for a better mentor.

This internship has been a defining period in my life and I could not have done it without all of the help of my mentors.

EXECUTIVE SUMMARY

This report includes a comprehensive analysis of my internship at LafargeHolcim Bangladesh Limited, in which I worked on financial analysis of the company's performance, marketing strategies of the company, and HR practices in the organization. The structure of the report is divided into different sections that serve as the gateways that provide important insights on the financial analysis of the company, the marketing analysis, opportunities and threats, management analysis, and evaluation of efficiency of operations.

The first part of the paper aims at establishing the company history and the different kinds of leadership. It then looks at its marketing approach, that is brand development and the identification of the ideal client. Further, it reviews the accounting practices of the company, discussing the basic concept, accounting cycle, and convenient ways of financial reporting. Some key findings during this internship are cost structures, how the company is affected by economic fluctuation, and LafargeHolcim Bangladesh Limited 's position within competition from Heidelberg Cement and Premier Cement. The opportunity to build professional experience in promoting HR operations, financial reports, and process optimization has existed in LafargeHolcim Bangladesh Limited and contributed to my personal growth and the company's improvement. A review of the business's information systems and operational management is included in another section, along with a competitive and industry analysis using Porter's Five Forces and other frameworks. A summary of the internship's results, difficulties encountered, and suggestions for future development round out the report.

My professional development has been greatly aided by the experience and practical knowledge I have obtained from this internship. This report offers strategic insights that could help the company in the future, in addition to reflecting on my accomplishments for the organization.

CONTENTS

CHAPTER 1: OVERVIEW OF THE INTERNSHIP

1.1 STUDENT INFORMATION

Name	Sadia Zaman
Student Id	20204041
Program	Bachelor of Business Administration
Major & Minor	Finance & Accounting
Session	Fall’20-Spring’24

1.2 INTERNSHIP INFORMATION

Period	04.24.2024–07.24.2024
Company Name	LafargeHolcim Bangladesh Limited (LHBL)
Department	Human Resources
Address	NinaKabbo, Level-7, 227/A, Bir Uttam Mir Shawkat Sarak, (Tejgaon Gulshan Link Road), Tejgaon, Dhaka-1208, Bangladesh

1.2.1 Internship Company Supervisor’s Information

Name	Muntaha Mursalin Chowdhury
Position	Senior Executive-Recruitment & Employee Engagement, Human Resources

1.2.2 Job Description

Having sought an internship at LafargeHolcim Bangladesh Limited, the roles and tasks within the division are vast and general in achieving both the operational and organizational goals of LafargeHolcim Bangladesh Limited. My role is mainly to help in all aspects of the HR area, which entails helping in the operations of the day-to-day running of the department. I style various kinds of reports to help in tracking various HR indicators or assessing the performance of the workers or the general compliance with the organizational standard. This reporting function is very useful in making human resource decisions due to its provision of relevant insights.

I support the HR Manager in her work, with a focus on the selection and recruitment process. This comprises following up on the recruitment drive process by assisting in the posting of jobs, screening candidates, arranging for interviews, and forming part of the interviewing team. After candidates are chosen, I help with the training process of the new members of staff and other organizational development issues. This includes involving themselves in the process of conducting paperwork to be produced for acceptance by the new employees, arranging for orientation meetings, and a host of activities that indicate that the newcomers are well-equipped to go to work.

Besides recruitment and staffing, I participate in the development of training material. This involves coming up with training material, which has to be done in consultation with the HR Manager to come up with training material that will be effective in raising the level of skills and knowledge of the employees. I also help with the other work of the HR operation department; this entails employee file maintenance, document processing, and handling legal issues.

An element of the internship is to consult with the identified company's HR manager in terms of the organizational development of the HR department and the plans of the company. This process is critical and referred to as strategic planning since it enables organizations to connect HR functions with other strategic goals. I was involved in the design and delivery of a range of organizational work activities to improve the current efficiency and value of work delivery, employee motivation schemes, systems of measuring employee performance, as well as health promotion activities.

In general, my internship at LafargeHolcim Bangladesh Limited enabled me to gain broad exposure. Thus, it becomes apparent how the intern has become an essential part of LafargeHolcim Bangladesh Limited's continuous operation in the right functioning of the departments, as well as maintaining its competitiveness and effectiveness.

1.3 INTERNSHIP OUTCOMES

1.3.1 Student's contribution to the company

LafargeHolcim Bangladesh Limited offered a great opportunity during the internship. I showed great practical activities by performing daily HR operations and facilitating corresponding processes through changes if needed. Through different reports that I generated, the HR team was equipped with information to make the right decisions. This combination of involvement in more junior processes such as hiring and onboarding was important in making sure that new employees were well incorporated into the organization, which consequently led to improved standards of employee satisfaction and a lower turnover rate. I also participated in the evolution of the training modules that improved the skills of employees of LafargeHolcim Bangladesh Limited, thus increasing productivity within the business organization.

I also made a small input by assisting in the financial reporting and analysis. The activity of mine in the organization of the analysis of the financial data and the assistance in the budget allocation made a positive impact on the general optimization of the use of the resources of the company. I also engaged in the connection of human resource management activities with organizational performance indicators to ensure the organization got to realize the repercussions of its human resource management plans.

1.3.2 Benefits to the student

I benefited greatly from the LafargeHolcim Bangladesh Limited internship in both a professional and personal sense. The chance to obtain practical expertise, in crucial departments in any business, was one of the biggest advantages. Through this experience, I was able to gain a thorough understanding of how these roles contribute to the overall operations of the organization. In addition, I picked up useful abilities in data analysis, report writing, and strategic planning—all necessary for a prosperous corporate career.

It also availed me the opportunity to work with more experienced personnel, and this aspect gave me having understanding of the best practices in the industry. This helped me get a taste of real-life business issues and, quite frankly, being able to help solve them.

1.3.3 Problems during the internship period

As much as I had a good experience with the internship, I faced the following challenges: The internship was useful, but I faced the following challenges during the internship: The difficulty was adopting the new style of work with a higher working pressure for several days. Due to time constrain and other multiple tasks that I performed at one time, I had to quickly learn effective time management. Another problem was the complexity of the company’s systems to navigate.

1.3.4 Recommendations to the company on future internships

Some recommendations can be provided to LafargeHolcim Bangladesh Limited to improve the internship situation for the subsequent interns, in consideration of all the experiences during the internship. First and foremost, it will be useful for the given business to provide interns with an organized onboarding process. An effective orientation training that avails the intern of the various procedures, policies, and ethical practices of the organization may be categorized under this category. Had there been an effective introduction, interns would have been far much quicker to adapt to their positions, thereby resulting in increased self-confidence.

Finally, it is high time for the organization to consider creating further opportunities for interns to engage in cross-functional projects. By so doing, interns would get to know more about the organization and how different departments within that organization work to achieve their planned goals and objectives. Furthermore, when interning through cross-functional projects, interns would gain exposure to the organizational functions that they would not attend to when fully functioning interning in a specific department, thus making interns gain diverse experiences to develop a comprehensive set of skills.

CHAPTER 2: ORGANIZATION PART

2.1 INTRODUCTION

Figure: LHBL Plants

LafargeHolcim Bangladesh Limited has its operation in Bangladesh for almost two decades, and it is one of the prominent cement manufacturers in this country. It has the biggest Foreign Direct Investment (FDI) in the country's cement sector, involving an investment of about 500 million US dollars. The company owns the largest cement plant, Chhatak, in Sunamganj, near Sylhet, which is a fully integrated plant, and three grinding plants are at Meghnaghat (Unit I & II) in Narayaganj and Mongla in Bagerhat. LafargeHolcim Bangladesh Limited is a result of the globalization of the cement industry through a technical collaboration between Holcim Group in Switzerland and Cementos Molins in Spain.

Another significant aspect that has been implemented in LafargeHolcim Bangladesh Limited is the cross-border limestone sourcing operation. The company supplies limestone, which is one of the key inputs in the cement manufacturing process, through the company's quarry in Meghalaya, India. In its most efficient and without interruption supply chain, this limestone is conveyed through a 17-kilometer belt. In this manner, the potential of the plant to produce clinker locally has the potential of saving about USD 45 million of foreign exchange yearly.

LafargeHolcim Bangladesh Limited has been equipped with modern technology that serves for creative ways of operating and adherence to global standards that enable the company to meet the increasing demands created by infrastructural growth in Bangladesh. LafargeHolcim Bangladesh Limited also specializes in customized cement for high-profile construction projects and is still coming up with new products that have been developed to address some of the main construction concerns in Bangladesh.

Sustainability and Corporate Social Responsibility (CSR) are also among the core values of the company. LafargeHolcim Bangladesh Limited's Geocycle program has been developed to transform industrial waste into a source of fuel, thereby minimizing the company's negative impact on the environment. Moreover, they have an e-commerce site named NirmanBandhob.

Figure: Logo of LafargeHolcim Bangladesh Limited

Figure: Logo of E-commerce Platform

Figure: Logo of Waste Management Industry

2.2 OVERVIEW OF THE COMPANY

2.2.1 Operation System

LafargeHolcim Bangladesh Limited sells cement under two premium brands: Supercrete and Holcim Strong Structure**.** It also offers value-added solutions customized for the Bangladesh market by leveraging Smart Blend Technology: Holcim Water Protect (addresses key problems of water seepage, dampness, and water ingress that are of significant concern for home builders) and Holcim Shokti (Bangladesh's first Rapid High Early Strength cement).

It has a wide network of 500+ distributors and 7,000+ retailers that help it distribute its products across the country. It also has its e-commerce website (nirmanbandhob.com) through which customers can buy cement, and aggregates directly from the company.

In addition, the company is driving the circular economy through its Geocycle project in recycling. LafargeHolcim Bangladesh Limited is the only professional waste management and disposal company in Bangladesh. Geocycle Bangladesh sources and disposes of a significant amount of waste that contributes to sustainability, prevents it from ending up in landfills, and prevents environmental pollution.

2.3 MANAGEMENT PRACTICES

2.3.1 Leadership style

LafargeHolcim Bangladesh Limited follows a transformational leadership approach, especially regarding such aspects of the company as sustainability, innovation, and employee engagement. A significant aspect of this leadership is to develop strategies for a long-term purposeful change, including the organizational culture, in which people are encouraged to participate and adhere to the company's management sustainable approaches, for instance, in the area of environmentalism and community welfare. The CEO and the management are very active in involving everyone in the organization structure and encouraging the free flow of information and ideas. Managers promote professionalism in their subordinates and foster corporate responsibility and sustainability where employees are given a chance to own their work and also carry out projects that enable the accomplishment of global sustainable development goals.

2.3.2 Directors and Team

Figure: Board of Directors Management Team

2.3.3 Human Resources Planning

Another factor that has been observed about LafargeHolcim Bangladesh Limited, the company's HR planning is organized and based on available data, and this has been achieved with a view of the relevance of HR planning to strategic planning.

HR currently analyzes the number of employees an organization possesses and the number required shortly depending on the organization's plans of expanding its production or intensifying product advertising campaigns.

Recruitment forecasting requires the prognosis of new positions, that competencies should match the expansion of the company, and both technical and managerial recruitment.

LafargeHolcim Bangladesh Limited currently focuses on technical skills development to meet industry changes, new technologies, and other practices in employee training. Training courses are also carried out to build future leaders. The organization plans for future leadership succession by developing talent acquisition within the organization; hence, no barrier when changing leadership, and no disturbance impact is incurred.

LafargeHolcim Bangladesh Limited has ensured that in its staff hiring policy, it recruits people from different backgrounds and with different views to enhance creative thinking and teamwork across the departments.

2.4 MARKETING PRACTICES

2.4.1 Marketing Strategy

LafargeHolcim Bangladesh Limited is globally recognized. They need to implement comprehensive marketing strategies to maintain the level of innovation, sustainability, and customer satisfaction. Their main focus is to always to meet the needs of customers and provide them with high-quality products and services.

1. **Innovation:** In this challenging market, the core component is innovation. They offer a unique product innovation to stand out in this competitive market, which differentiates them from their competitors.
2. **Customer Solutions**: Through LafargeHolcim Bangladesh Limited, it is now possible to offer specific construction market solutions on critical issues such as durability, strength, and environmental issues. Some of them are Holcim Water Protect and Holcim Shokti which are advertised to meet some challenges that constructors in Bangladesh face, such as water seepage and high-strength concrete in structures.
3. **Digital Marketing and E-Commerce:** To this end, LafargeHolcim Bangladesh Limited has engaged in digitalization by offering their customers the chance to buy cement and aggregates through an online platform called NirmanBandhob. This eliminates the intermediaries, thus increasing the convenience to the customers and increasing the visibility of LafargeHolcim Bangladesh Limited's online brand image.

2.4.2 Target Consumers

1. **B2C Market**: This segment involves homeowners constructing their own houses and small-scale contractors constructing affordable houses. To this group, LafargeHolcim Bangladesh Limited promotes products such as Supercrete and Holcim Water Protect,

which provide extra protection from problems such as water seepage, thus leading to the durability of constructed houses.

2. **B2B Market:** Another major market comprises of real estate builders and commercial contractors who engage in construction and development of residential and commercial premises. These targeted consumers can be identified as of LafargeHolcim Bangladesh Limited's ultra-premium cement brands namely Holcim Strong Structure and Holcim Shokti cement that offers high strength and structural integrity in medium to large commercial structures and infrastructure development projects.
3. **Infrastructure Project:** Most of the of LafargeHolcim Bangladesh Limited products are used in any government agencies and corporations who undertake mega infrastructural projects such as construction of bridges, highways and industrial buildings. Such applications require 'High Performance Cement' which matches certain quality parameters; manufactured by of LafargeHolcim Bangladesh Limited's Holcim Strong Structure and Supercrete Plus.

2.4.3 Marketing Channels

1. **Direct Distribution:** Currently, the company is selling through 500 distributors and 7,000 retailer outlets throughout Bangladesh. This means that LafargeHolcim Bangladesh Limited products cover all the areas of the country, including areas that have high populations densities, and those with low population densities. The company has a large distribution channel that helps the company to make sure it is well represented in the retail market (B2C).
2. **E-Commerce (NirmanBandhob**): Through the NirmanBandhob e-commerce platform customers can directly buy products from LafargeHolcim Bangladesh Limited which would prove most useful for the individual consumer and small contractors. In addition, this platform offers the details of some products, their price and contacts for sales and services describing the purchasing experience.
3. **Corporate Sales Team:** LafargeHolcim Bangladesh Limited also has huge sales team, for business to business (B2B) clients, it has a separate corporate sales department that deals with real estate developers, infrastructural companies. This team offers individual attention, assistance, and solutions to the unique circumstance of large scale programs.
4. **Digital Marketing:** Most of the sales in LafargeHolcim Bangladesh Limited are made via internet sales with the help of social media, LinkedIn, internet advertisements and

digital marketing. Digital marketing also assists in the promotion of sustainability and innovation agenda to the general public.

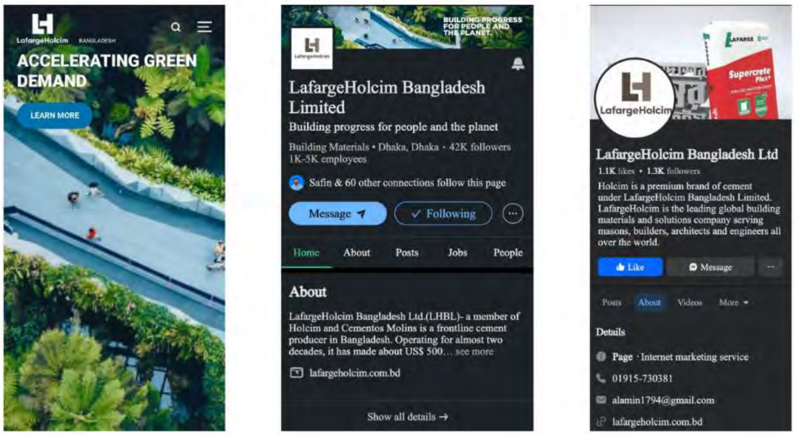


Figure: Company’s official website, LinkedIn page, Facebook page

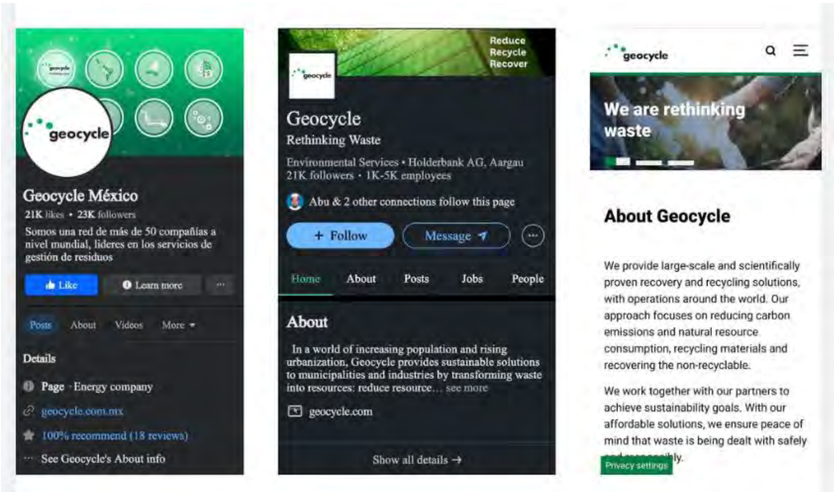


Figure: Waste Management Industry Facebook page, LinkedIn page and official website

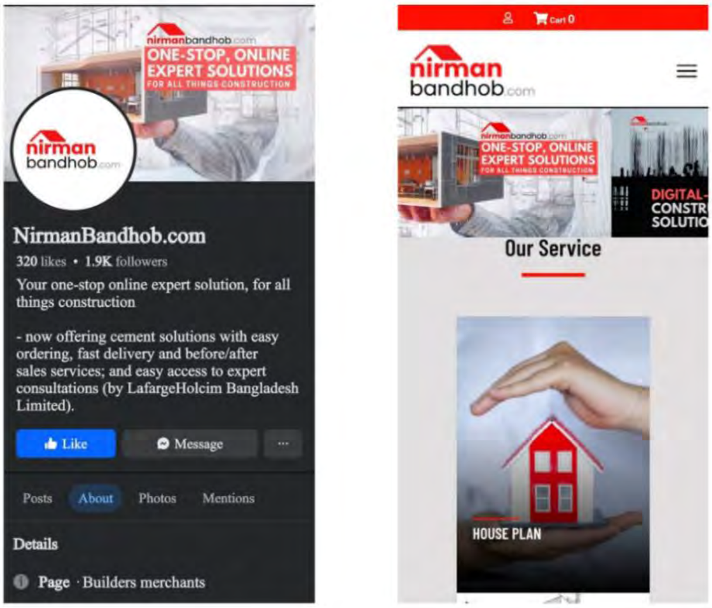


Figure: E-commerce Facebook page and official website

2.4.4 Products and Services

Limits of Main Chemical and Oxide Constituents of Ordinary Portland Cement		
Sr. No.	Constituents	Percent Content (%)
01.	Lime (CaO)	60-67
02.	Silica (SiO2)	17-25
03.	Alumina (Al2O3)	3.0-8.0
04.	Iron Oxide (Fe2O3)	0.5-6.0
05.	Magnesium Oxide (MgO)	0.1-4.0
06.	Sulphur Trioxide (SO3)	1.3-3.0
07.	Alkalies (K2O, Na2O)	0.4-1.3

Figure: Raw materials used for manufacturing of Cement

Raw materials are the prime ingredient for making cement. Mixing of raw materials is an important to make high quality cement. Raw materials used in the production of cement include lime, silica, alumina and various other mineral ingredients. This mixture is ground, mixed and heated at high temperatures in a rotary kiln to produce clinker, an intermediary product which is required more than 80% to make cement. The clinker is then finely ground and mixed with gypsum to produce cement.

1. **Cements:** Holcim provides a wide variety of cement products designed to satisfy different building requirements in Bangladesh. Long-term strength and durability are desirable for structural applications. Supercrete Plus also promotes sustainability. The purpose of Holcim Water Protect is to address problems with water seepage. Constructing a smooth, beautiful finish at a lower cost is ensured by Supercrete, while Holcim Shokti provides quick early strength. Holcim Red, an Ordinary Portland Cement, offers rapid strength development and improves project efficiency, while Holcim Grey is specialized for stabilizing soil and provides a quick and effective solution.

Figure: Cements

2. **Aggregates:** For structural constructions requiring long-term stability and durability, 20 mm aggregate is the ideal option. On the other hand, 10 mm aggregate works well in applications that call for a smoother, more refined finish, especially in projects where

surface smoothness and aesthetic detail are important considerations. Each aggregate fulfills a different function in building, supporting both aesthetic appeal and structural soundness.

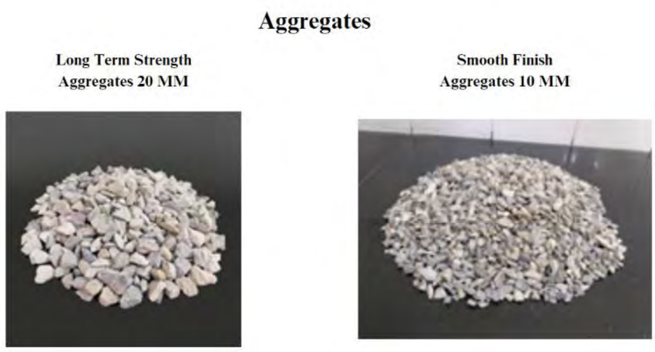


Figure: Aggregates

2.4.5 CSR and Sustainability

LafargeHolcim Bnagladesh Limited believes social welfare is a significant duty. As a result, they have engaged in a variety of CSR activities.

1. **Community Development:** LafargeHolcim Bangladesh Limited runs a Community Development Center in Chhatak including a primary school, medical center and a training center. They are free education supports, medical facility providers as well as skill development trainers. Six sub-centers provide similar services to the village people from remote areas covering more than 26,000 populations.
2. **Healthcare Initiatives:** LafargeHolcim Bangladesh Limited provides free services including; consultation, medicinal support, vaccination and capacity building though health counseling. During Covid they have given more than 82,000 free health services and counseling sessions, 9,800 vaccinations. The company has also supported by distributing 200 sanitary latrines, 29 tube-wells and 125 arsenic removal filters to maintain cleanness and safe sources of drinking water.

Figure: Helping communities during Coronavirus

3. **Education:** Free programs offered by LafargeHolcim Bangladesh Limited such as primary education, primary school, library point, scholarships for more than 2,000 students and adult learners.

Figure: Enlightening communities through education

4. **Employment and Women Empowerment:** Since then, the company also offers skill development training in tailoring, embroidery, solar panel installation, mobile servicing etc., which benefits the local particularly the women to earn money for their livelihood.
5. **Infrastructure Development:** Beneficiaries of LafargeHolcim Bangladesh Limited support construction of schools, public facilities, roads and other infrastructure hence promoting the economic development of the area as well as improved standards of living.
6. **Environmental Protection:** LafargeHolcim Bangladesh Limited has leading position with regard to disposal of waste and conservation by co-processing waste in cement kiln.

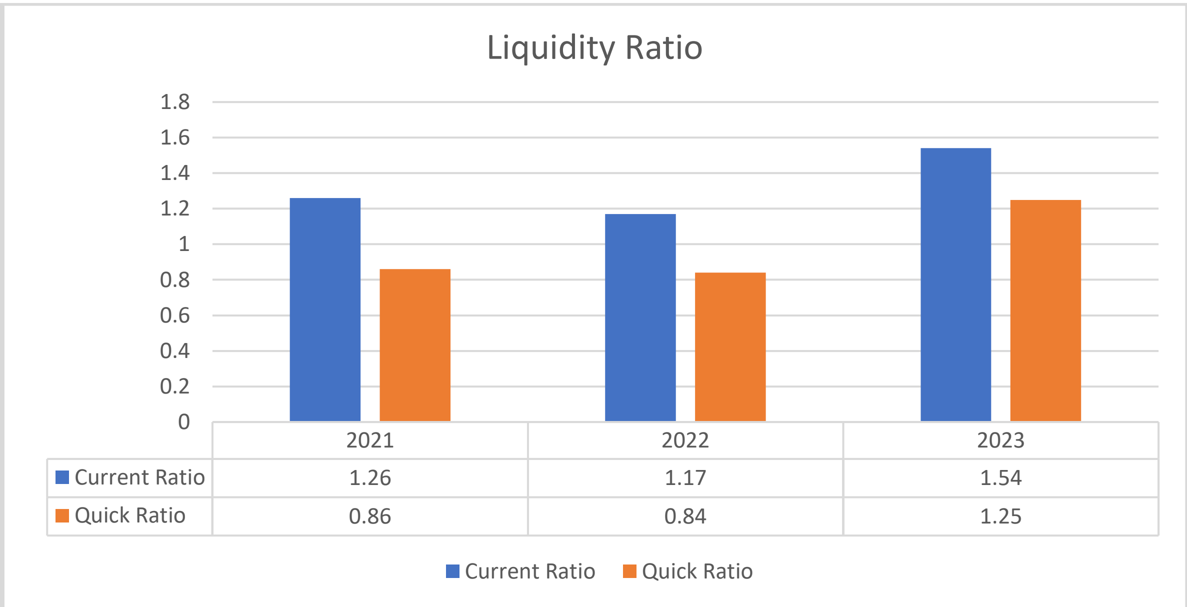
Figure: LafargeHolcim organizes workshop on environment friendly blocks

7. **Meghalaya Initiatives (India):** The Indian subsidiary of LafargeHolcim Bangladesh Limited Lafarge Umiam Mining Private Limited (LUMPL), has portfolio activities in sectors of Healthcare, Education, Infrastructure & Livelihood activities in the villages located close to its quarry of limestone at Meghalaya, India.

Figure: Contribution to Meghalaya CM's Relief Fund and Awareness Campaign

2.5 FINANCIAL PERFORMANCE

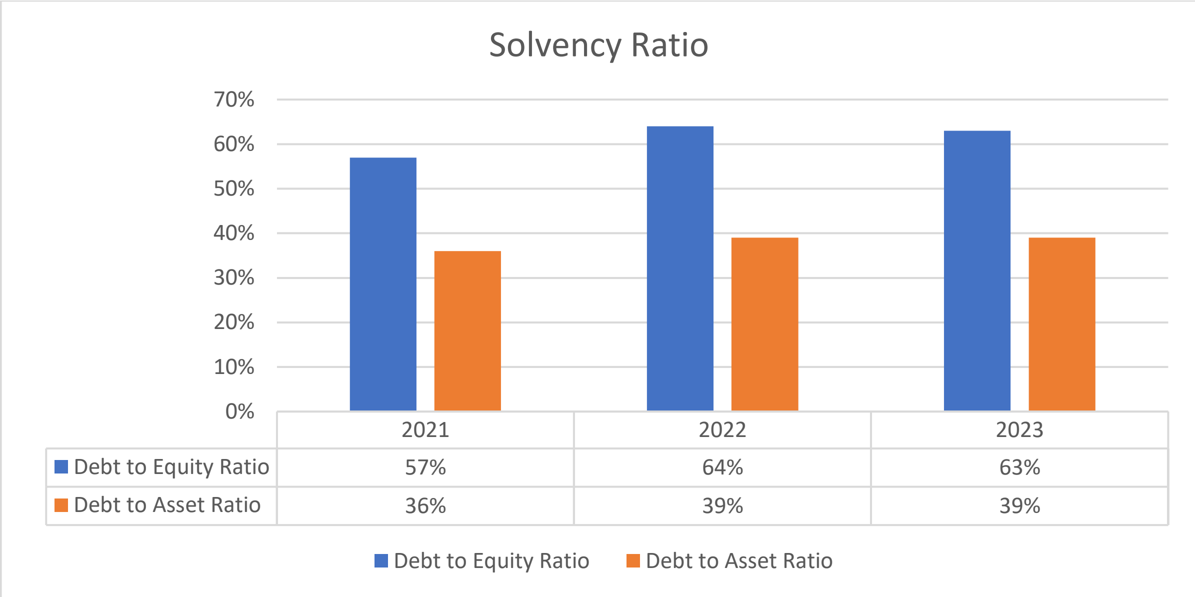
1. Liquidity Analysis



	2021	2022	2023
Current Ratio	1.26	1.17	1.54
Quick Ratio	0.86	0.84	1.25

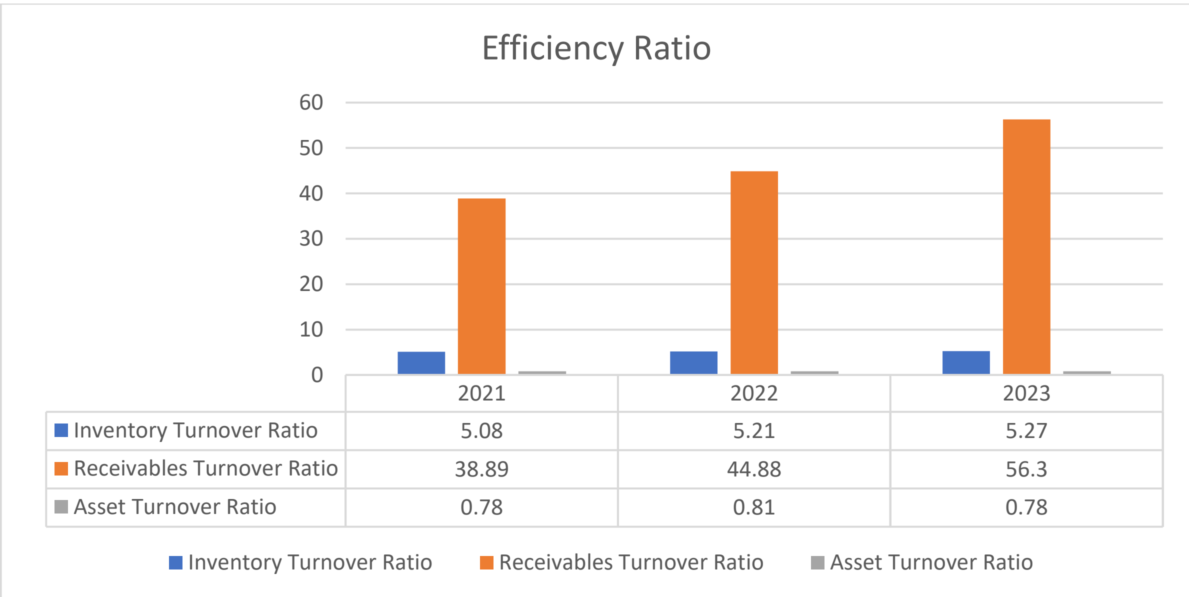
Liquidity Ratio Interpretation: The current Ratio was enhanced in 2023 from 2020, while the Quick Ratio was also enhanced meaning that there was an upgrade on the liquidity aspect. It means that the company is in a better position compared to the previous periods or even to the similarly situated competitors to cover short-term liabilities even if without using inventory assets.

2. Solvency Analysis



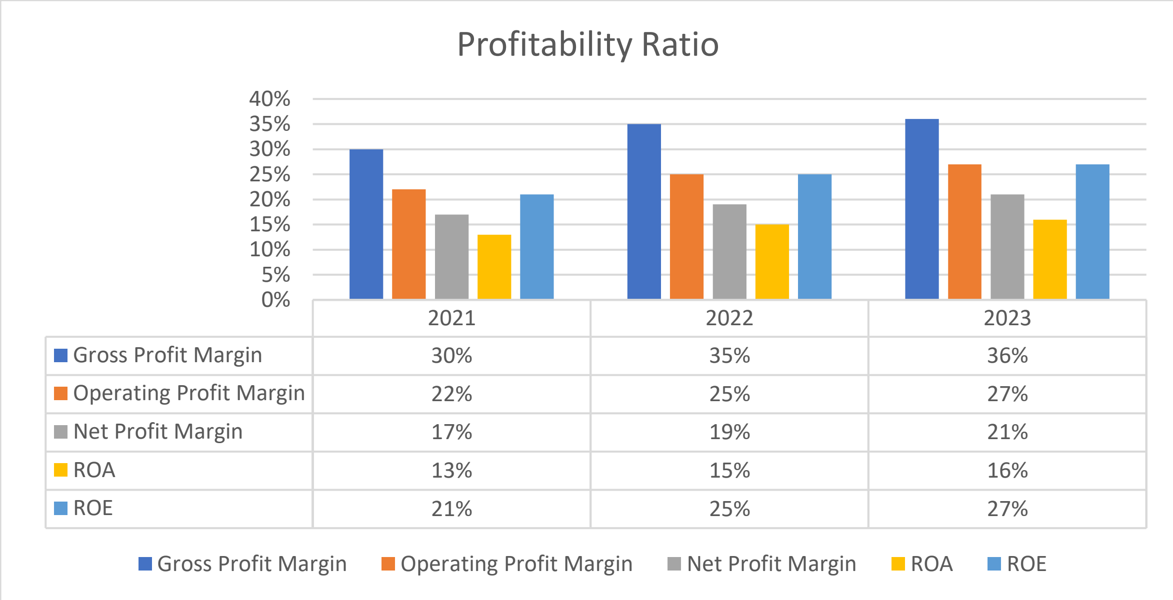
Solvency Ratio Interpretation: The Debt to equity and Debt to asset ratios have also been reported to be relatively constant, implying that a company's structural capital has not altered much. A slightly lower rate of reliance on debt was also recorded in 2023 due to prudent borrowing.

3. Efficiency Analysis



Efficiency Ratio Interpretation: The Inventory Turnover and Receivables Turnover Ratios are a sign of improvement in the management of inventory and collected receivables respectively. On the other hand, the Asset Turnover Ratio was relatively constant with an average figure indicating efficient utilization of assets to generate sales.

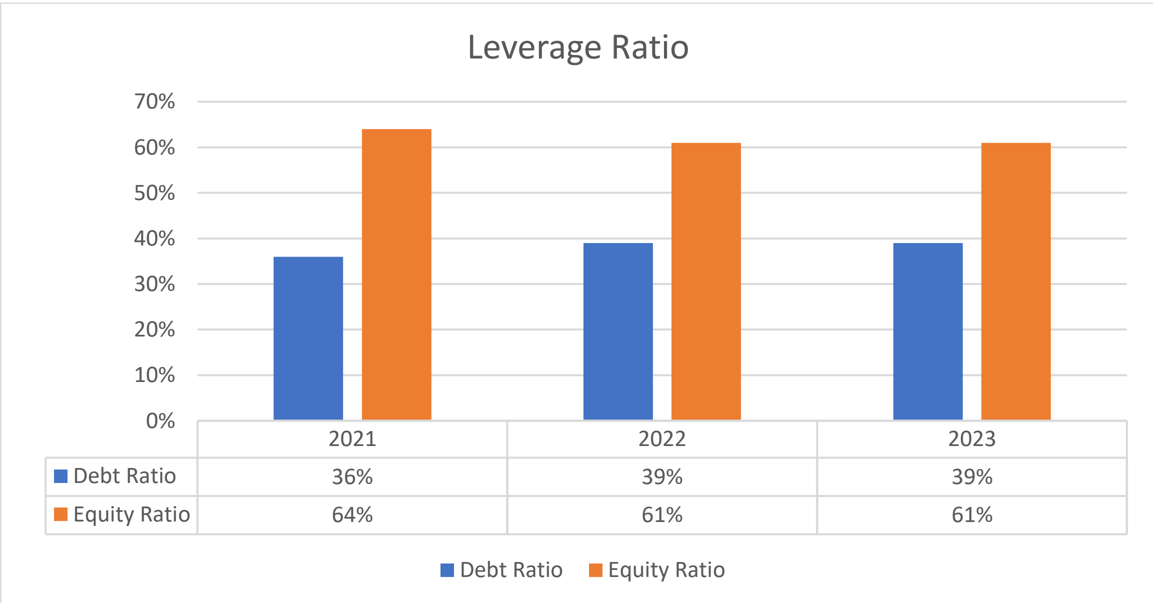
4. Profitability Analysis



	2021	2022	2023
Gross Profit Margin	30%	35%	36%
Operating Profit Margin	22%	25%	27%
Net Profit Margin	17%	19%	21%
ROA	13%	15%	16%
ROE	21%	25%	27%

Profitability Ratio Interpretation: Gross Profit Margin which is on the higher side, Operating Profit Margin which has shown consistent improvement, and Net Profit Margin which is again on the higher side shows that it has better efficiency in terms of production, has better control over costs and operational efficiency and has good health financially and earns better operating profit after all the expenses. On the other hand, ROE (Improved) and ROA (Increased) suggest that the company is capable of converting its assets into a net income and shareholder has high income on their equity.

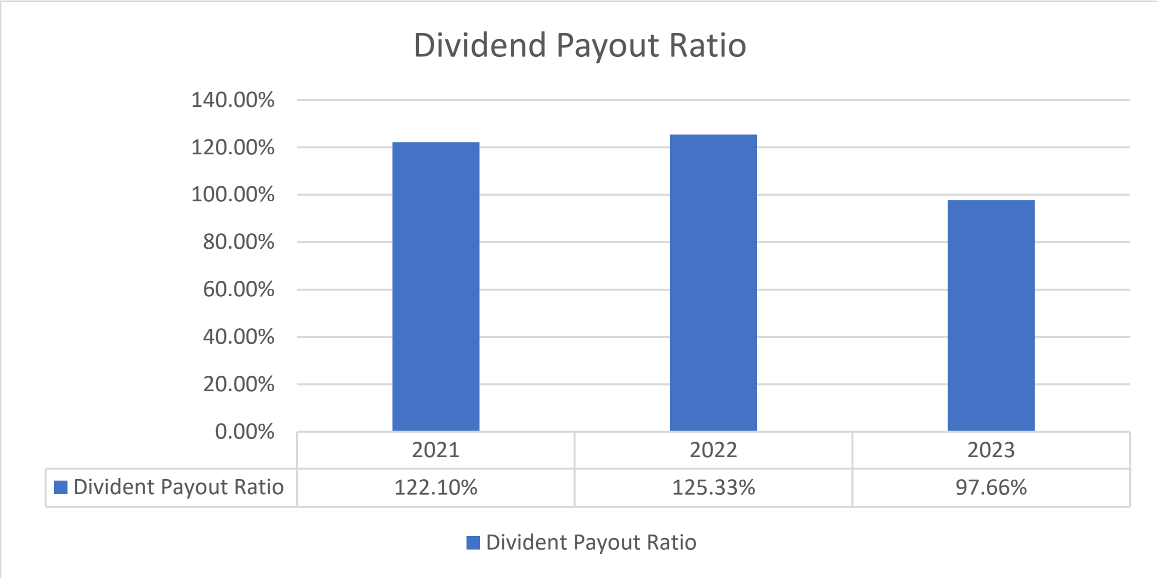
5. Leverage Analysis



	2021	2022	2023
Debt Ratio	36%	39%	39%
Equity Ratio	64%	61%	61%

Leverage Ratio Interpretation: Debt Ratio (Steady) from the analysis indicates that has a moderate debt level that is owed to the assets. Then, there is the Equity Ratio (Decreased) that supports the fact that the company has a low risk of financial as well as the company has a rather conservative attitude.

6. Dividend Payout Analysis



Dividend Payout Interpretation: It decreases further over the years. First, the payout ratio was greater than 100%, showing that after the declaration of the dividends, the company is paying more than it is earning, possibly by using resources or through debt. Nevertheless, the decline toward 97% suggests the company is starting to retain more of its earnings, which can be useful in funding growth or increasing balance sheet strength.

7. DuPont Analysis

Year	Revenue	Net Profit	Total Assets	Total Equity	EBIT	Operating Income
2021	20,534,442	3,507,631	26,220,739	16,679,048	4,827,659	4,554,909
2022	23,594,038	4,444,511	28,971,479	17,710,330	5,743,712	5,970,473
2023	28,388,093	5,941,726	36,196,406	22,226,289	6,576,551	7,757,799

3-Factor DuPont Analysis

Particulars	2021	2022	2023
Profit margin=Net income/Revenue	17%	19%	21%
Total asset turnover=Revenue/Total assets	13%	15%	16%

Financial leverage==Total assets/Shareholder Equity	157%	164%	163%
ROE	4%	5%	6%

3-Factor Interpretation: According to the 3-Factor DuPont Analysis, the Return on Equity (ROE) increased gradually between 2021 and 2023, rising from 4% to 6%. Steady increases in profit margins and asset turnover along with a constant financial leverage ratio are the main drivers of this improvement. This suggests that LafargeHolcim Bangladesh Limited is improving the efficiency with which it manages its equity and makes money from its assets, which will increase returns to shareholders.

5-Factor DuPont Analysis

Particulars	**2021**	**2022**	**2023**
Tax Burden=Net Income/EBIT	73%	77%	90%
Interest Burden=EBIT/Operating Income	106%	96%	85%
Operating Profit Margin=Operating Income/Revenue	22%	25%	27%
Asset Turnover= Revenue/Total Assets	78%	81%	78%
Financial leverage==Total assets/Shareholder Equity	157%	164%	163%
ROE	21%	25%	27%

5-Factor Interpretation: This is considered preferable to the other variables, for example, including interest and tax burdens offers a broad view of the business financial performance. In addition, sometimes it cannot be avoided that the trends in operational profit margin and asset turnover are what they are, whereas a reduced tax and interest charges are good for ROE. Thus, based on the analysis of the operations of LafargeHolcim Bangladesh Limited that is included to the studied sample companies it is possible to reveal the following factors which define how this company regulates its financial and operation factors causing the increase of the level of profitability and returns to shareholders.

DuPont Interpretation: The 3-Factor and 5-Factor analyses have also depicted an inclination in upward trend in ROE which confirms the fact that LafargeHolcim Bangladesh Limited expands in terms of its ability to increase returns on investment on its equity capital base. The first is a comforting increase in the company's return on equity (ROE), not only a confirmation that the company is profitable but also indication of how well the company is managing its equity, liabilities and assets. Operating management efficiency, management of this interest cost and taxes has been said by the more sophisticated 5-Factored Du-Pont analysis to be responsible for this accomplishment in the case of LafargeHolcim Bangladesh Limited. In general, LafargeHolcim Bangladesh Limited 's financial performance has improved, providing its stockholders with higher profits.

2.6 ACCOUNTING PERFORMANCE

1. **Accounting Standards with Compliance:** LafargeHolcim Bangladesh Limited being a public limited company follows the IFRS that is the International Financial Reporting Standards. These standards have been internationally recognized as the framework for international financial reporting standards. LafargeHolcim Bangladesh Limited would also be required to observe BFRS which while being compatible with IFRS might have peculiar standards applicable to organizations in Bangladesh. BFRS is implemented by the Institute of Chartered Accountants of Bangladesh (ICAB).
2. **Revenue Recognition:** LafargeHolcim Bangladesh Limited earns its income from the sales of cement and aggregates, as well as from the provision of other related products. Revenue is probably recognized when the physical possession of the goods is passed to the buyer, which implies when the product is conveyed, the buyer bears the liability. Likely by IFRS 15, "Revenue from Contracts with Customers", LafargeHolcim Bangladesh Limited determine the right time and the right amount of revenue to be recognized taking into consideration with conditions of delivery of the related contractual goods and services.
3. **Expenses recognition:** LafargeHolcim Bangladesh Limited appeared to recognize operating expenses namely administrative, sales, and marketing expenses in the period in which the expenses were made. This follows accrual accounting by the International Financial Reporting Standards (IFRS) in that expenses that are incurred to generate specific revenues are recognized when these revenues are earned. Wages and salaries, bonuses, and other emoluments paid to employees of LafargeHolcim Bangladesh Limited form part of the expenses of the income statement in the period in which the employees render their services. Other stockholders' or employees' benefits which may include pension funds or retirement benefits may also be recognized under the provisions of the laws of the country and the international accounting standards particularly IAS 19 on "Employee Benefits".

4. **Inventory Valuation:** LafargeHolcim Bangladesh Limited would probably use the weighted average cost or FIFO method to price the inventory which includes cement, raw materials, and others. This is useful in matching the cost of the inventories with their sales and identifying the older inventories at their original cost. Any deterioration of inventory through slow-moving products, obsolescence, or damaged items would require an entry, hence inventory should be reported at the cost or net realizable value whichever is lower.
5. **Cost management:** The company would include only costs directly incurred in cement production, including costs of raw material, energy, and labor. These are capitalized as part of inventory and expensed when the inventory is sold as a cost of sales. LafargeHolcim Bangladesh Limited probably categorizes the fixed costs such as employees' salaries, depreciation as well as variable costs such as raw materials and energy, which helps the company to control the company's profit and working effectiveness. Since LafargeHolcim Bangladesh Limited is engaged in a capital-intensive trade – large-scale cement manufacturing, among other things, means a great investment in plant, machinery, and equipment has been made. Depreciation would be taken systematically on these assets over the remaining useful life IAS 16 'Property, Plant, and Equipment'.

2.7 OPERATIONS MANAGEMENT AND INFORMATION SYSTEM PRACTICES

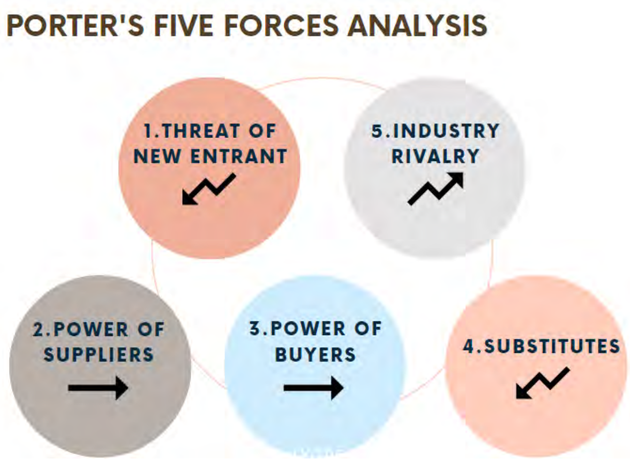
1. **Production Planning and Control:** LafargeHolcim Bangladesh Limited spends a lot of time manage the production process to guarantee the efficiency of operations. It confirms the existence of an adequate stock of raw materials (such as limestone, gypsum, and clinker) and that production is done in a way that meets the market demand there is overstocking.
2. **Quality Management:** Its importance can be seen from the fact that the product must be produced of high quality. LafargeHolcim Bangladesh Limited probably employs highly standard quality control measures in its production lines and factories; they embrace current trends in quality control of raw materials, control of the manufacturing process, and even the end product.
3. **Supply Chain Management:** LafargeHolcim Bangladesh Limited's operation super-section includes the procurement of raw materials, production, and supply of the products. This is particularly true in the cement industry because the product is bulky, and thus, requires to be transported in large quantities. LafargeHolcim Bangladesh

Limited tries to have control over its supply chain management to minimize lead times as well as the cost of transportation to distributors and customers.

4. **Lean Manufacturing and Process Efficiency**: LafargeHolcim Bangladesh Limited can also apply lean manufacturing, where there is reduced or minimal occurrence of waste and improved processes. It follows the principle of Kaizen, which means the determination of a company to bring incremental, steady improvement to operations and costs.
5. **Customer Relationship Management:** Relationships with distributors and customers can be managed by LafargeHolcim Bangladesh Limited due to CRM systems. These systems help the sales and marketing departments by assisting them with customer information and orders besides keeping track of customer feedback that assists in building customer relations. Since LafargeHolcim Bangladesh Limited acknowledges the importance of sustainability, it may also incorporate specific systems to track emissions and energy usage, water consumption, and so forth. It assists the company to meet the environmental standards as well as enhancing the levels of sustainability. The production of cement entails the use of many processes that are almost fully automated. LafargeHolcim Bangladesh Limited automates its production lines to optimize the workflow and minimize the roles of people in monotonous tasks. Some of the smart manufacturing technologies include the predictive maintenance of the equipment and real-time process monitoring, therefore reducing the likelihood of downtimes.

2.8 INDUSTRY AND COMPETITIVE ANALYSIS

2.8.1 Porter's Five Forces Analysis



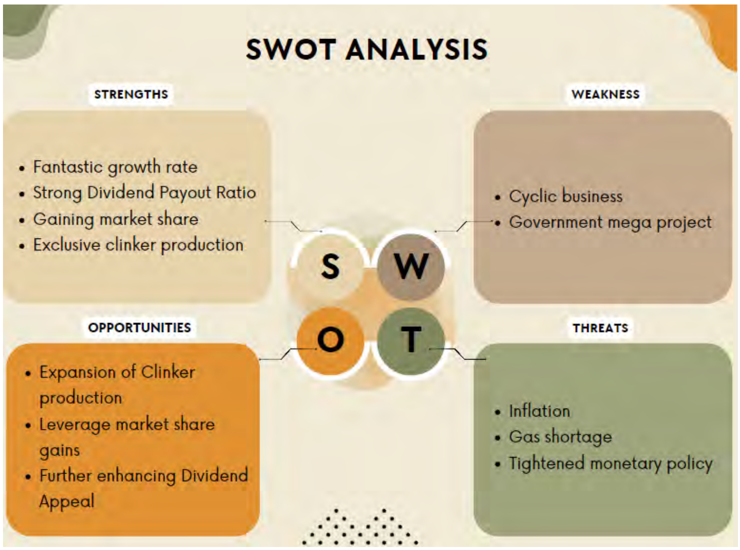
1. **Threat of New Entrants:** Cement manufacturing and its distribution is a capital-intensive undertaking which demands vast amounts of money to put up cement factories

and distribution centers. Currently, new entrant companies have high entry barriers because of the challenges of realizing scale economies, establishing brand images and setting up mechanisms that supply products to the market. Moreover, there are factors associated with regulation and the requirements for access to the material (such limestone) that act as a barrier against new competitors Even, there other associated barriers or hindrances such as regulation and accessibility to raw materials such as limestone. Thus, the threat of new entrants is closely related to the market of LafargeHolcim Bangladesh Limited and is low.

2. **Bargaining Power of Suppliers:** LafargeHolcim Bangladesh Limited has a number of suppliers, which supply important materials such as limestone, sand and coal. Some of the inputs for these materials are easy to source for though other suppliers who produce these materials have moderate power since quality inputs are essential in the production process. Although, since LafargeHolcim Bangladesh Limited have numerous supplies and has long-term supply partnership, these suppliers have less power over LafargeHolcim Bangladesh Limited by supply disruptions or high prices. Consequently, the bargaining power of suppliers can be said to be moderate.
3. **Bargaining Power of Buyers:** Construction industry buyers are important and despite the rivalry on price and product, LafargeHolcim Bangladesh Limited's reputation coupled with diversification limits the bargaining power of the buyers. Nevertheless, the pressure from competition and availability of substitutes helps buyers to have some bargaining power particularly in the bargaining of prices. Therefore, it can be strongly stated that the bargaining power of buyers is moderate.
4. **Threat of Substitute Products or Services:** Cement does not have many close substitutes that are as effective as the product itself in construction work. Steel, wood and glass are some other building materials, used in some building construction but are relatively expensive and may be taken as most ineffective than cement when it is used in large construction. In addition, LafargeHolcim Bangladesh Limited's customers have a concentration in sustainable innovations and the special purpose products which adds further disadvantage for substitutes to replace cement. Therefore, it can be concluded that the threat of substitutes is low.
5. **Industry Rivalry:** The cement industry is competitive with various companies both local and international companies that have entered the market. LafargeHolcim Bangladesh Limited has appreciable threats from players in the same industry; where the rivals offer price, distribution, and branding competition to LafargeHolcim

Bangladesh Limited. However, the market competition is stiff despite having a higher expertise in areas such as product quality, brand awareness and distribution services. Thus one can infer that the intensity of rivalry among the players in the industry is high.

2.8.2 SWOT Analysis



Strengths and Opportunities:

1. **Growth Rate:** During the past few years, LafargeHolcim Bangladesh Limited has maintained a good growth rate showing a positive indication of its ability to meet the growing demand and increasing operational returns.
2. **Good Dividend Payout Ratio:** The dividend payouts ratio has a healthy figure in LafargeHolcim Bangladesh Limited to investors the assure that financial performances and regular dividend yields are not exceptional but constant. This increases the confidence of investors and provides a company ground to the company in the respective market.
3. **Gaining Market Share:** LafargeHolcim Bangladesh Limited has been privileged to manage the growth of its market share that reflected its increasing participation in the extremely saturated cement market.
4. **Exclusive Clinker Production:** LafargeHolcim Bangladesh Limited as the only clinker producer that offers a strategic advantage to pull through all the joint challenges in the industry. This enables the company to have increased control over supply chain, cost reduction and proper sourcing of raw materials for the production of cement.

5. **Expansion of Clinker Production:** Since LafargeHolcim Bangladesh Limited is already one of the foremost players in clinker production it could potentially strengthen its position even more by increasing this capacity thus presenting the option for export or selling this product to other cement players.
6. **Leverage Market Share Gains:** So they have enhanced the scope of operations by capitalizing on potential market share that has increased its positioning of its brand and hence can adapt to cater for the increasing demand.
7. **Further Enhancing Dividend Appeal:** Hence, the good dividend payout must be a useful tool to attract more institutional investors as well as enlarge the base of long-term shareholders to help fund the company's expansion.

Risks and Challenges:

1. **Cyclical Business Nature:** The industry is volatile in general due to specific demand drivers among which are business cycles and the construction business. This puts LafargeHolcim Bangladesh Limited in a situation where its demand tends to decrease during certain period especially during the times of recession.
2. **Government Mega Projects:** While government infrastructure projects helpful in creation demand of cement but delays or even scaling back of these essential project might reduce the sales volume of LafargeHolcim Bangladesh Limited.
3. **Inflation:** Cost factors such as inflation may lead to a rise in the price of the raw materials used in production together with energy hence affecting the profitability of the company. These costs can also be transferred to customers, which in result decrease demand as well.
4. **Gas Shortages:** Cement manufacturing is energy intensive and thus, any disruption in gas supply greatly affects LafargeHolcim Bangladesh Limited especially in its clinker making process. It can result into slowdown of the production process or even higher costs.
5. **Tightened Monetary Policy:** There are high possibilities that with strict monetary policies in place the borrowing costs may go up which is fully capable of derailing LafargeHolcim Bangladesh Limited's expansion plans or slow down construction project demand from customers in case of extra financing costs.

2.9 RECOMMENDATIONS AND CONCLUSIONS

For the improvement of the LafargeHolcim Bangladesh Limited, it has been suggested that there should be improvement in the organizational training programs of the company especially for leadership training and technological advancement training due to challenges facing industries in the course of their evolution. In addition to its existing e-commerce site NirmanBandhob, the company also needs to increase its online promotional activities and continuously by creating content, and analyzing consumer feedback.

Another factor that LafargeHolcim Bangladesh Limited should build up is the sustainability effort where the company should invest in more of the energy producing equipment that is renewable. They can be introduced in a manner that will allow the employees gain experience in different departments to make them understand the operation of the company and ways in which departments can collaborate efficiently. As a final strategy, LafargeHolcim Bangladesh Limited should further adapt its innovation strategy and focus on meeting the customers' needs. However, LafargeHolcim Bangladesh Limited has earned a strategic competitive advantage to becoming a market leader in the Bangladeshi cement industry since 2016 because of their financial strength, vast market experience and sustainability policy. The company has proved to be very flexible and has also adopted various changes for instance in its marketing strategies and techniques. However, much more has to be done in areas like sustainability, staff development and more use of technology for efficiency and effectiveness in serving its clients in order for to sustain its competitiveness. Thus, if LafargeHolcim Bangladesh Limited focuses on these areas, it can guarantee sustainable success and reinforce its leading position on the cement market.

CHAPTER 3: COST ANALYSIS ON LHBL

3.1 Introduction

Cost analysis is an important factor when assessing organizational performance especially when conducting business in a growing market competition. This chapter is designed to pay attention to the identification, analysis, and discussion of the cost analysis of the LafargeHolcim Bangladesh Limited to understand the problems and their repercussions on the operational and financial performance of the company. The LafargeHolcim Bangladesh Limited operates in a sector that depends on global factors including the changing economic conditions, increasing price of the materials, and geo-political conflicts. These variables have profound effects on the level of demand, cost of production, and overall profit.

This chapter's primary focus is to discuss the cost structures throughout the analysis of LafargeHolcim Bangladesh Limited in the past few years. Also, this chapter holds a relative analysis of LafargeHolcim Bangladesh Limited with its closest competitor groups—the Heidelberg Cement and the Premier Cement – to enhance the general perspective on the industry's performance. This paper considers patterns in LafargeHolcim Bangladesh Limited's revenue, price of raw materials, and manufacturing costs in the hope of providing a detailed and profound assessment regarding its competitive positioning as well as global performance.

The chapter is subdivided into certain clear sections. The paper starts with the outline of the research, with an emphasis on LafargeHolcim Bangladesh Limited's costs and the impact of economic factors on the enterprise. Subsequently, a competitor analysis is performed to reveal the comparative advantages and disadvantages of LafargeHolcim Bangladesh Limited competing against its counterparts. The last few parts present the significance and solution of the encountered issues that can help the company grow in the future and gain a competitive advantage.

3.1.1 Objectives

The specific purpose of this chapter is to make a cost analysis to identify all the cost factors that determine the financial performance of LafargeHolcim Bangladesh Limited. Also, it seeks to consider the effects of such economic factors as inflation, currency devaluation, and interruptions of the supply chain on the global level on the cost structure of the company. Based on the following consolidated statements of competitor analysis for LafargeHolcim Bangladesh

Limited, Heidelberg Cement, and Premier Cement, the chapter also outlines the competitor's market positioning and operational strategy. This study shows the issues of LafargeHolcim Bangladesh Limited and provide possible solutions for the improvement of its competitiveness and cost control.

3.1.2 Literature Review

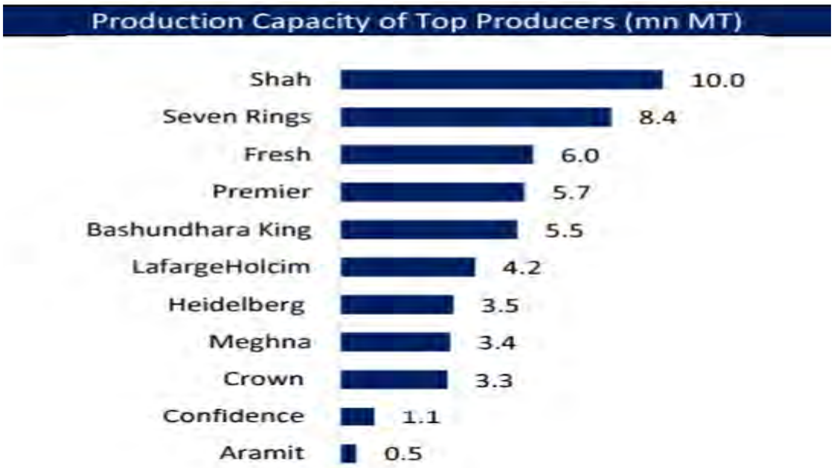
I have review some articles, blogs, websites, papers to collect some external information and factors that affecting the cement industry in Bangladesh. This literature review will give the insights of the market situation, price, production capacity, inflation, fluctuations and so on.

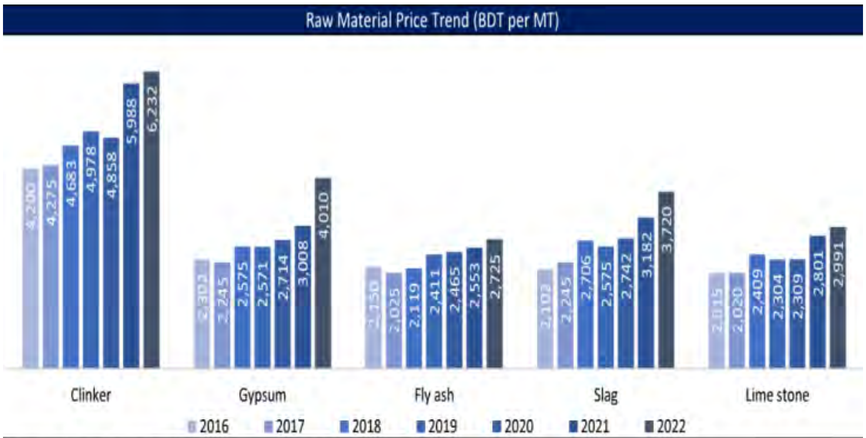
Mir Cement's article blog has the updated cement price in the Bangladesh. They state that Bangladesh has the largest market in cement industry which is rising constantly. It has shown the chart of price of different cement brand including LafargeHolcim Bangladesh Limited and its competitor's products. According to local data the price of 50kg cement bag sold at 495tk in February 2022 which increased by 10tk than last month. In April 2020, it has reached an all-time high price. The raw materials prices also increased in the international market. **(CEIC)**. The current war between Russia and Ukraine has seriously affected the international market Bangladesh still needs to import primary raw materials like clinker, limestone, slag, fly ash, and gypsum. Around 62 – 92 percent of cement is clinker. The clinker price in the international market shot up from \$60 to \$75 – \$80 per ton. Furthermore, other raw materials like limestone, slag, fly ash, and gypsum have increased by \$10 – \$12 per ton. **(dailysun, 2022)**

Cement Brand (50KG Bags)	Price in BDT
Mir Cement	500-550
Holcim Water Protect Cement	600-650
Seven Ring Cement	500-550
Bashundhara Cement	500-550
Supercrete Cement	500-550
Premier Cement	500-550
Holcim Strong Structure Cement	520-600
Shah Cement	500-550
Holcim Shokti	600-650
Akij Cement	500-550
Scan Cement	500-550
Fresh Cement	480-550

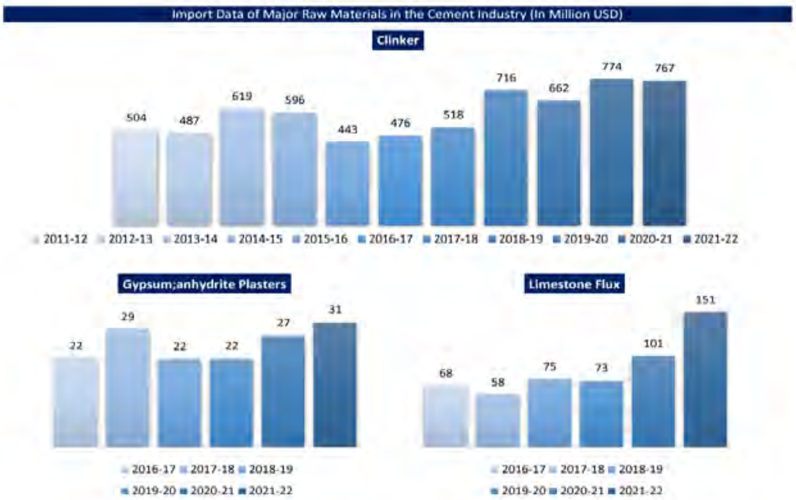
According to EBL Securities research, the government recently announced in January, 2023, that gas bills for large industries would increase by nearly 150% (from BDT 11.98 to BDT 30 per cubic meter), for the captive power plant, by 130% (from BDT 13 to BDT 30 per cubic meter), and for power generation by 178% (from BDT 5.02 to BDT 14 per cubic meter), which is expected to further exacerbate production costs.

Additionally, the record-high gasoline price jump of 51.7% in 2022 boosted transportation costs by 20% for both road and river transportation. Consequently, cement businesses are paying extra this year for the local transportation of raw materials and completed goods. In the top producers, LafargeHolcim Bangladesh Limited has high (4.2) production capacity than Heidelberg Cement (3.5) and lower than Premier Cement (5.7). **(EBL Securities Ltd., 2023)**





Source: Annual Reports of Listed Companies and EBLSL Research



CemNet's article focuses on the issues in the gas supply deal between LafargeHolcim Bangladesh and Jalalabad Gas Transmission and Distribution System Ltd which was started in 2003 because there is a big gas demand and supply gap in Bangladesh. LafargeHolcim's critics point that serious concerns must be applied over the current rates status of industrial rates which must be changed to commercial rates, according to the Consumer Association of Bangladesh. **(ICR Newsroom, 2018)** About the mentioned gas supply deal the article shows that according to the sources Jalalabad Gas Co is expected to face loss of a sum of Tk 728 crore in the next 2 years. It was started in 2003 and the gas has been provided to LafargeHolcim at preferential rates, this has called for a lot of concerns for the company has been inclined in a way that it gains a lot at the expense of the public good. **(DailyIndustry, 2024)**

From the article of CemNet, it is clear that Bangladesh has recorded a consistent increase of its clinker imports due to increased cement production capacity. According to the data available the import of clinker during the fiscal year 2021-22 increased by 5.52% to 35.13 million tons while the 33.3 million tons in the previous year. Cement and clinker majorly import materials that include other raw materials from countries such as Thailand, Vietnam, and China. It also discusses issues in Chittagong Port such as poor performance in bulk cargo handling, long cycle time and high cost which are detrimental to the cement chain import schedule. **(Cement News, 2022)**

3.2 Methodology

Cost analyzing and competitive positioning of the LafargeHolcim Bangladesh Limited, the methodology of the current chapter is based on both qualitative and quantitative research methods. Company records, industry reports, and other relevant market research are used in the qualitative analysis to identify factors that are beyond the company's control, such as the economic cycle in the markets, changes in inflation levels, and the strategies being applied by competitor firms. Quantitative data encompasses financial data from the years 2021 to 2023 regarding cost factors like purchasing cost of raw materials, manufacturing cost, and operating expenses. LafargeHolcim Bangladesh Limited is chosen as the main firm of the sample, with two of its main competitors, Heidelberg Cement and Premier Cement, from the same geographical region and in terms of similar scope of operations. This study will seek to offer an assessment of the cost analysis and performance of LafargeHolcim Bangladesh Limited within its existing industrial environment based on internal data and external information.

3.3 Discussion and Findings

3.3.1 Cost Analysis

LafargeHolcim Bangladesh Limited operates in a capital-intensive sector in which the cost of production has a considerable influence on the company's profits. Its overhead cost of production mainly comprises the cost of its raw materials, production costs, operations expenses, and energy costs.

1. **Raw material costs:** Some of the basic raw materials, which are slag, gypsum, and limestone, may not be available in adequate quantity due to various circumstances in the international market. For instance, due to the Russia-Ukraine conflict and the outbreak of COVID-19, the company was unable to procure some of the materials it needed. For instance, higher import costs may occur in resistance due to fluctuation of the Bangladeshi taka, which may lead to a high cost of raw materials. Therefore, inflation positively affects LafargeHolcim Bangladesh Limited because high raw material prices around the world lead to higher production costs.

The materials include in Raw materials cost:	**The cost includes in Production cost:**
• Silica • Alumina • Iron Oxide • Magnesium Oxide • Sulphur Trioxide • Gypsum • Sand • Limestone • Clay	• Export Cost • Facility Operation • Maintenance • Other supplies and spares • Material handling • Other expenses • Technical Studies • Depreciation • Amortization of intangible assets

2. **Production costs:** Electricity, gas, and fuel have high costs, and the increase in those costs has a tremendous effect on the facility’s operations since cement production requires so much power, especially clinker production, which is energy-sensitive. As defined earlier, rising inflation in the global energy price can lead to increased production costs because the cost of everything goes up. It can also cause them to experience an energy shortage, which can have a major impact on their operations. LafargeHolcim Bangladesh Limited is likely to record high labor costs, particularly in areas like maintenance and facility operation departments. Large machinery and

equipment entail higher costs in terms of maintenance since their value depreciates with time. This goes a long way in adding to the long-term operational cost.

3. **Operational Costs**: LafargeHolcim Bangladesh Limited is therefore faced with several operational expenses in maintaining its facilities and its logistic operations. The Chhatak plant, where the company uses limestone imported from Meghalaya, India, is especially vulnerable to price fluctuations in transportation and supply chains. With the rise in fuel costs, the common road and river transport expenses have also risen. In addition, operating costs such as costs of facilities, material handling, and technical studies have escalated in the past years. Complex production equipment requires constant care, while other general business overheads such as administration and employee costs are also considered operation costs.
4. **Energy Costs:** Energy costs contribute to a major percentage of LafargeHolcim Bangladesh Limited's expenses since energy is input in most of its operations. They have pointed out that the company is currently affected heavily by energy tariffs since it relies much on natural gas and electricity. The existing contract with Jalalabad Gas, which is expected to be valid until the end of 2025, offers gas with regulated rates. However, if this agreement is not renewed, the cost of energy is bound to rise if other sources have not been sourced or other agreements have not been found. LafargeHolcim Bangladesh Limited has researched the means of covering escalating costs by considering renewable energy sources and energy-saving technologies; however, such policies are currently in the process of being implemented.
5. **Overall Cost Implications**: External factors such as inflation, currency devaluation, and global disruptions have resulted in changes in cost dynamics for LafargeHolcim Bangladesh Limited. Although having local cement production provides a competitive advantage, increasing costs of raw materials and energy that have to be imported create problems for profitability. In turn, LafargeHolcim Bangladesh Limited has provided strategies for increasing operational efficiency, cost-cutting, and price adjustments. Nevertheless, they can only partly shield the inflation of costs and would be even more problematic in a price-sensitive environment.

Cost Ratios

	2021	**2022**	**2023**
Cost of Sales Ratio = (Cost of Sales / Revenue)	64%	65%	68%
Raw Material Cost Ratio = (Raw Materials Cost / Revenue)	23%	29%	32%
Production Cost Ratio = (Production and Maintenance Costs / Revenue)	13%	11%	9%
Energy Cost Ratio = (Power and Fuel Costs / Revenue)	9%	8%	8%
Operating Cost Ratio = (Cost of Sales / Revenue)	64%	65%	68%
Non-Operating Cost Ratio = (General & Admin Expenses + Sales & Marketing Expenses + Finance Costs / Revenue)	10%	11%	8%

Looking at the ratios derived from costs, it is possible to outline more significant costs for LafargeHolcim Bangladesh Limited. Analyzing the trends for three years from 2021 to 2023 to compare the costs that have the strongest effect on the enterprise's financial organization and profit-making capacity**.**

Another major cost for LafargeHolcim Bangladesh Limited is the raw material cost, of which there has been a consistent upward trend in the last three years. While in 2021, the raw material cost ratio was at 23%, in 2023, it was 32%; an increase of 9%. This sharp growth indicates that the company's costs of the materials needed in its production line are increasing at the fastest rate. These influences include; fluctuating inflation rates, supply constraints, or oversensitivity to changes in certain suppliers' prices. The cost of raw materials is very relevant since it plays a very big role in the company's ability to sustain profit margins as well as make reasonable prices within the market.

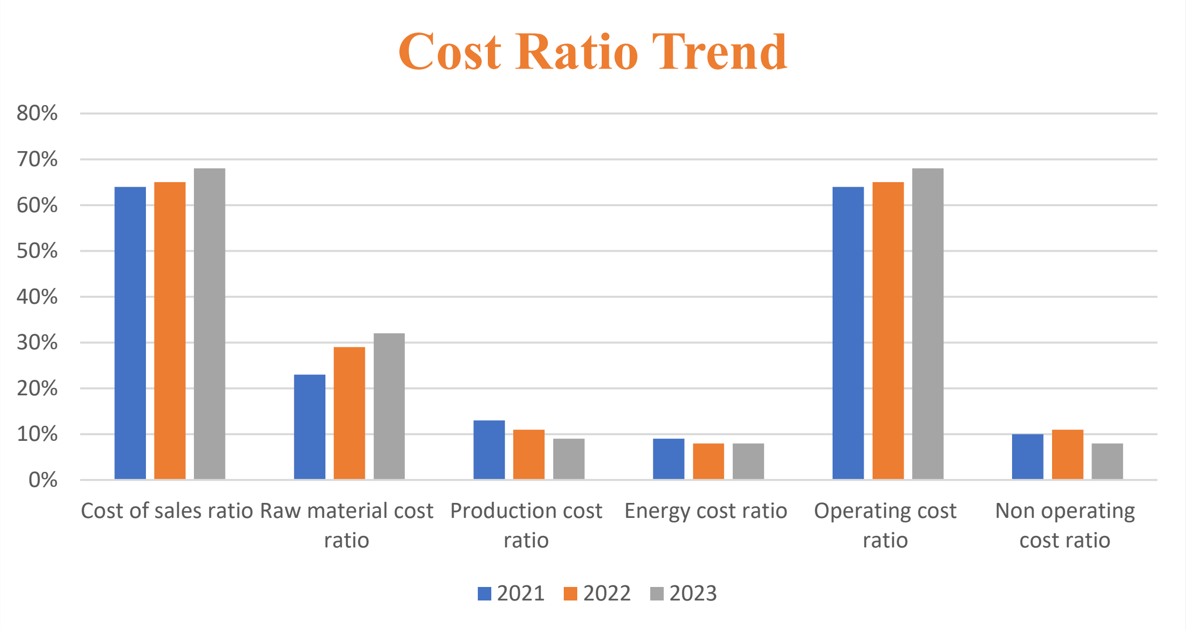
There is another major cost, called the operating cost ratio, that has been traditionally high and rising steadily over the past decade. It increased from 64% in 2021 to 68% in 2023, thus ranking as one of the biggest expenses by percentage. The operating cost includes expenses that relate to the day-to-day running of the business, for instance, emoluments, repairs, and other incidental expenses. The fact that operating costs have been on the steady rise for the past few years implies utilization inefficiencies or increasing costs in these areas that will impact negatively on the company's breakeven point if not well checked.

The cost of sales ratio, which entails all the expenses required to prepare and make sales of the products is the next suitable measure. On the same note, fixed asset turnover is as follows; this ratio reduced from 64% in 2021 to 68% in 2023 due to a similar trend in operating and raw material costs on fixed assets. This relation means that an increase in both purchasing cost and operating cost are important contributors to an increase in the total cost of sales. Consequently, these costs are critical areas of concern for LafargeHolcim Bangladesh Limited to work on to enhance its profitability.

On the other hand, there seems to be less influence of the energy cost ratio and the non-operating cost ratio on the total cost. Relative energy costs organized in an energy cost ratio appeared to have been controlled at, or slightly above, 8-9% for the past three years this refers to the organization's energy cost control policy. Also, the non-operating cost ratio reduced from 10% in 2021 to 8% in 2023 meaning there has been some consideration through managing costs outside the operations. In terms of efficiency or operations of production, the production cost ratio reduced from 13% in 2021 to 9% in 2023.

Therefore, LafargeHolcim Bangladesh Limited's cost trends rely on the raw material and operating costs, which are huge and have been continually increasing. Mitigating these issues by enhancing the supply chain, Raw Material purchasing, and operational procedures will indeed remain central to cost containment and revenue recovery for sustained profitability.

Cost Ratio Trends Analyzing



Some of these factors can be understood from the following cost ratio trends of both the manufacturing and administrative expenses of LafargeHolcim Bangladesh Limited for the period of 2021-2023. This way one can identify some concerning factors and reap some benefits in that a company's cost can be controlled. Below is a detailed evaluation of the trends across the various cost components:

1. **Cost of Sales Ratio (Increasing**): These overall productions and operating expenses have been progressively increasing and are evident from the consistent upward trend. This ratio depicts the total cost of sales or manufacturing the products, hence showing that the company is under cost pressure. This may be due to factors like increased raw materials cost, operating cost or inflation, which have increased the overall production cost of these goods and services. The trend points out that the operating margin is being depressed at LafargeHolcim Bangladesh Limited as the cost of goods sold to generate revenue has increased.
2. **Raw Material Cost Ratio (Increasing):** This has a huge implication for LafargeHolcim Bangladesh Limited, especially because raw material is a fundamental input in its production line. High raw material costs may be attributed to disruptions in globally sourcing the materials, the high cost of imported materials, or reliance on a certain supplier. The increasing trend indicates that LafargeHolcim Bangladesh Limited needs to find ways how to manage the raw material cost, for instance, through supply chain integration where the firm can directly buy from suppliers at cheaper prices. Such a tendency may have deteriorated the profit margin even more if not arrested.

3. **Production Cost Ratio (Decreasing):** This decline suggests either increased productivity or better management of costs in the organization. LafargeHolcim Bangladesh Limited has probably improved its production efficiency, minimized wastage, or procured efficient technology. This ratio is being reduced, which is good given that it implies that the company is efficiently controlling the direct cost of production. However, the effectiveness of these strategies is subject to the fact that cost reductions could not be achieved at the expense of product quality.
4. **Energy Cost Ratio (Stable):** Stability in the energy cost ratio confirms that LafargeHolcim Bangladesh Limited maintains the energy expenses well, although there may be such external conditions as the instability of energy prices or a lack of supplies. This could be attributed to measures such as energy efficiency and fixed-term supply arrangements that can reduce what is spent on energy. This stability is important because as a commodity, energy is still a major factor in cement making.
5. **Operating Cost Ratio (Increasing):** This can be attributed to the consistent increase of this figure, which parallels the details seen in the cost of sales ratio, which refers to increasing costs in managing the business. This may comprise factors such as labor intensity costs, maintenance charges as well as overheads. Inefficiencies or inflationary forces are evident when the phenomenon of increasing operating costs is identified in the company. Consequently, addressing these costs through the enhancement of processes, workforce productivity, or through other digital projects could help to reverse this demography.
6. **Non-Operating Cost Ratio (Decreasing):** This downward trend is as a result of better control of the other operating expenses including financing costs, depreciation expenses, and administrative expenses. The reduction in this ratio gives indication of improved control of costs outside the core operating areas. Nonetheless, LafargeHolcim Bangladesh Limited should keep tracking these costs to contribute to their further decrease in the future.

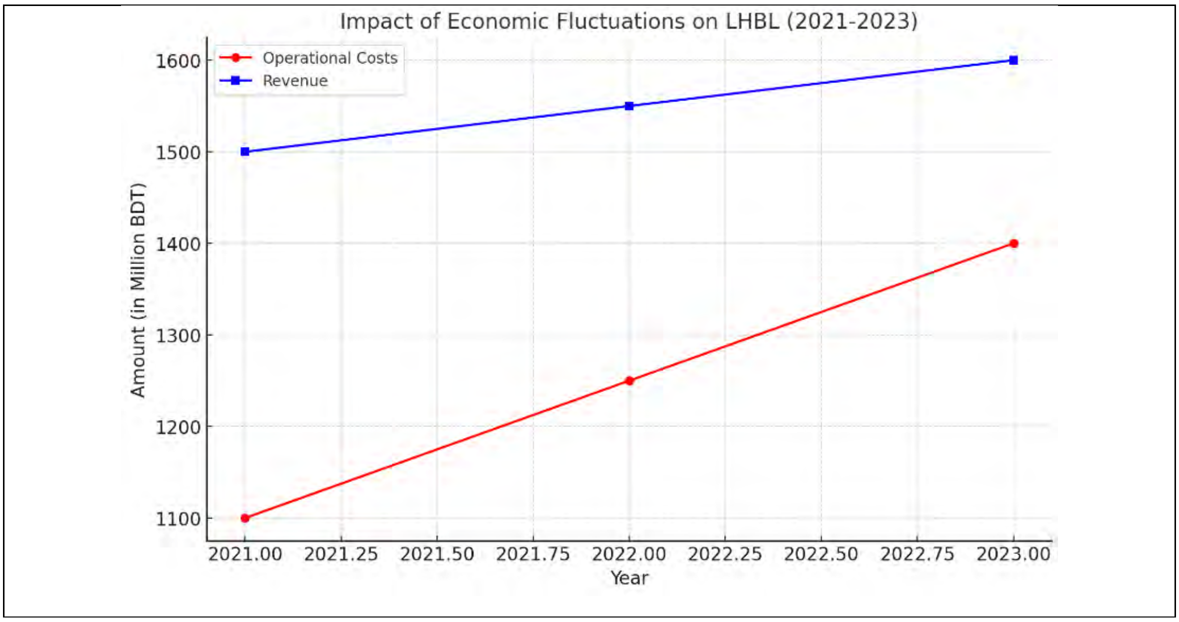
3.3.2 Effects of Economic Fluctuation on Cost Scenario

Fluctuations in the economy directly affect the costs of LafargeHolcim Bangladesh Limited across the organization for sourcing raw materials and other requirements, the manufacturing process, and the distribution network. From 2021 up to 2023, different changes in the global and domestic environment, including inflation, supply chain disruptions, and devaluation of currencies, directly impact the cost and hence the profitability of LafargeHolcim Bangladesh Limited.

1. **Inflation:** Increased inflationary pressure influences the cost of raw materials, employee wages, and energy costs. From 2021 to 2023, inflation has increased and this affected the cost of production for LafargeHolcim Bangladesh Limited. LafargeHolcim Bangladesh Limited produces its clinker. If they face increased inflation, which may lead to increased raw material costs, producing their clicker can give them some control over the costs and increase production costs, reducing the profit margin. In that, they need to adjust the price by increasing to maintain the profitability. It can reduce the demand if the market is price-sensitive.
2. **Supply Chain Disruption:** Another effect is global supply chain disruptions. The COVID-19 outbreak and the Russia-Ukraine war affected the supply chain, causing shortages and a delay in the availability of raw materials. They found that this significantly affected production schedules and increased transportation or shipping costs. However, the congestion of important ports, especially Chittagong, compounded some issues: longer times to offload dry bulk materials such as clinker and limestone. Such extensions cost a lot of money when it comes to storage, meeting demurrage charges, as well as missing production capacity. High dependence on imports of raw materials compounded by the problems of handling at ports further increased cost issues for LafargeHolcim Bangladesh Limited.
3. **Monetary Policy:** The monetary policy has also had an impact, which has affected their financial flexibility. Bangladesh Bank and all other central banks raised the interest rate, which led to a higher cost of borrowing, thereby impacting LafargeHolcim Bangladesh Limited's capital expenditure and cost of operation. Due to this rising interest rate, the worldwide economy was slowdown and reduced the demand for building and infrastructure projects.
4. **Currency Depreciation:** Currency depreciation is one of the factors. The high import cost of raw materials is due to the devaluation of the Bangladeshi taka against many foreign currencies. This led to the increased cost implications of production for LafargeHolcim Bangladesh Limited. As a large part of the products is imported, the depreciation of the taka has added an extra burden to the cost structure. Changes in the exchange rate also brought fluctuations in the cost of machinery, spare parts, and many other operational inputs that are usually addressed in another currency. Therefore, total

production costs escalated at LafargeHolcim Bangladesh Limited, pressurizing profits in a low-price-sensitive market where raising prices is not easily feasible.

5. **Energy Price Volatility**: Another important element that has caused costs to increase further for LafargeHolcim Bangladesh Limited is higher energy prices. Specifically, cement production, more so clinker manufacturing, is an energy-intensive process that utilizes natural gas and electricity. Larger industries' costs of gas tariffs rise by 150% in 2023, and the remaining 50% rise is imposed on captive power plant rates. These rises affected the energy costs of LafargeHolcim Bangladesh Limited, especially the Chhatak plant, as the energy source required for the production of clinker from cement is natural gas. Also, the challenges that resulted from the changes in fuel prices around the world influenced the cost of transportation. Fuel prices rose by 51.7% in 2022 to affect road and river transportation costs of raw and finished materials. These higher logistics costs were an additional load to LafargeHolcim Bangladesh Limited's cost level, putting extra pressure on margins.



This graph illustrates how LafargeHolcim Bangladesh Limited's operational expenses and revenues were affected by the changes in the economy between 2021 to 2023. The revenue growth is slower on the graph due to production costs and other economic considerations, while the growing operating expenses as a result of inflation, supply chain interruptions, and currency devaluation. When the operational cost increases, there is a slight change noticed in the revenue.

Before and After effect of Economic Fluctuations

Before the actual crisis instigated by the outbreak of COVID-19 and the Russia-Ukraine war crisis, LafargeHolcim Bangladesh Limited mostly functioned in relatively stable macro environments. There was stable cash flow as there was a global supply chain magnificently, low inflation rates, and cheap energy. The price of some of the inputs such as clinker, limestone, slag, and gypsum was stable with little fluctuations in the global market. However, the cost of logistics and transportation was not a matter of concern as the international shipping costs were less and ports were effectively operating. In general, energy costs remained moderate, especially due to a stable contract with Jalalabad Gas for the supply of energy at a reasonable price to LafargeHolcim Bangladesh Limited. Fixed costs such as maintenance and production costs were relatively low because there was no major disruption of operations on the global market. In all, these stability conditions ensured cost control, a reasonable profit margin, as well as steady incremental revenue.

The outbreak of the COVID-19 pandemic and the Russia-Ukraine war affected LafargeHolcim Bangladesh Limited by increasing its costs. The cost of imports, including clinker and gypsum, rose sharply due to disruption of the supply chain and higher demand around the world. A number of raw materials increased in price—clinker from \$ 60 to \$ 75 – \$ 80 per ton, and other components such as limestone and slag—by \$ 10 – \$ 12 per ton. The price of energy also rose significantly; specifically, the gas tariffs for large industries increased by 150 percent in 2023. This had a direct ripple effect on clinker production since this is an energy-intensive process. Other issues that impacted the company's finances included increased costs of natural gas and electricity. In 2020, subsided road and river transport costs surged by 20% because of unprecedented fuel price rises (51.7% in 2022). The congestion and problems at Chittagong also made it very costly and time-consuming to import raw materials. The appreciation of major foreign currencies to the Bangladeshi taka raised the cost of raw materials and production equipment that were imported, raising the production cost. The company's operational costs, such as wages and procurement costs, rose, occasioned by high inflation levels, leading to a decline in profit margins. Some of the markets are rather sensitive to price, and this restricts the possibility of passing these costs to the consumers.

3.3.3 Competitors Analysis

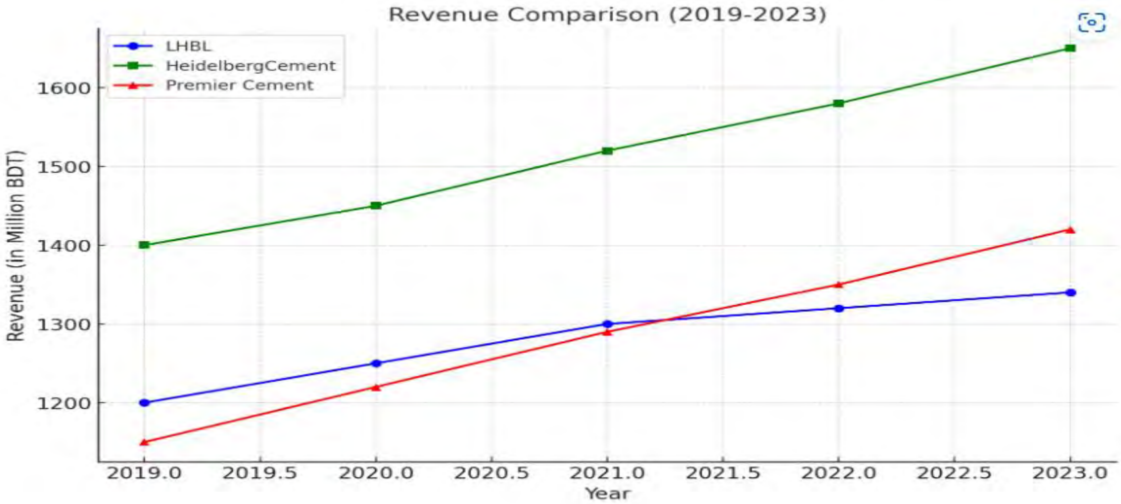
Why Heidelberg Cement and Premier Cement?

There are many cement companies in the cement industry. I choose Heidelberg Cement and Premier Cement as LafargeHolcim Bangladesh Limited's competitors. Both of them represent competitors from the point of strategic management; their production capacities are not significantly different as well as their customer base.

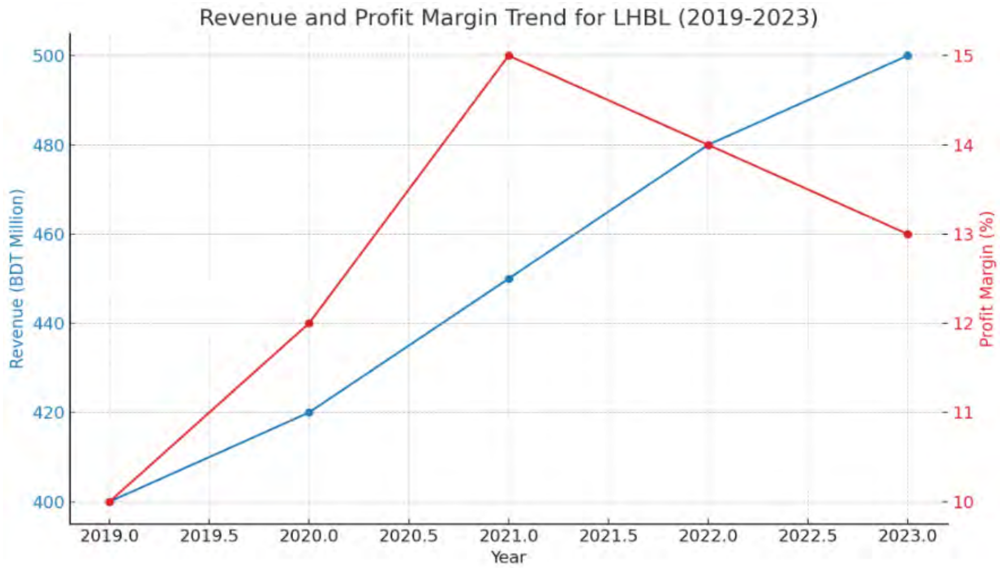
Heidelberg Cement and Premier Cement, a company whose name dominates the local market, have been chosen as competitors to LafargeHolcim Bangladesh Limited because they are major players in the market. Heidelberg Cement, having the experience and strength of a world-class company and a premium brand image, is one of the biggest multinationals in Bangladesh, whereas Premier Cement operates widely within the country and has a commanding market share. Heidelberg cement production is 3.5 million operating within the direct competition with LafargeHolcim Bangladesh Limited's 4.2 million, while Premier Cement production is 5.7 million and also targets market needs and competition for huge projects.

These companies also reflect the two extreme positions of forces in the marketplace. Heidelberg Cement primarily emphasizes high-quality production targeting the premium segments and setting up higher standards in the production of those segments, whereas Premier Cement offers its products at cheaper rates, extending its distribution network, and targeting more volume-oriented segments. LafargeHolcim Bangladesh Limited fits right in the middle of both as it provides distinct products that meet particular construction demands, such as Holcim Shokti and Holcim Water Protect. The competitors are important due to the sensitivity of the Bangladeshi cement industries in terms of price, especially since these competitors established an essential benchmark for LafargeHolcim Bangladesh Limited in terms of cost control, product differentiation, and strategic positioning.

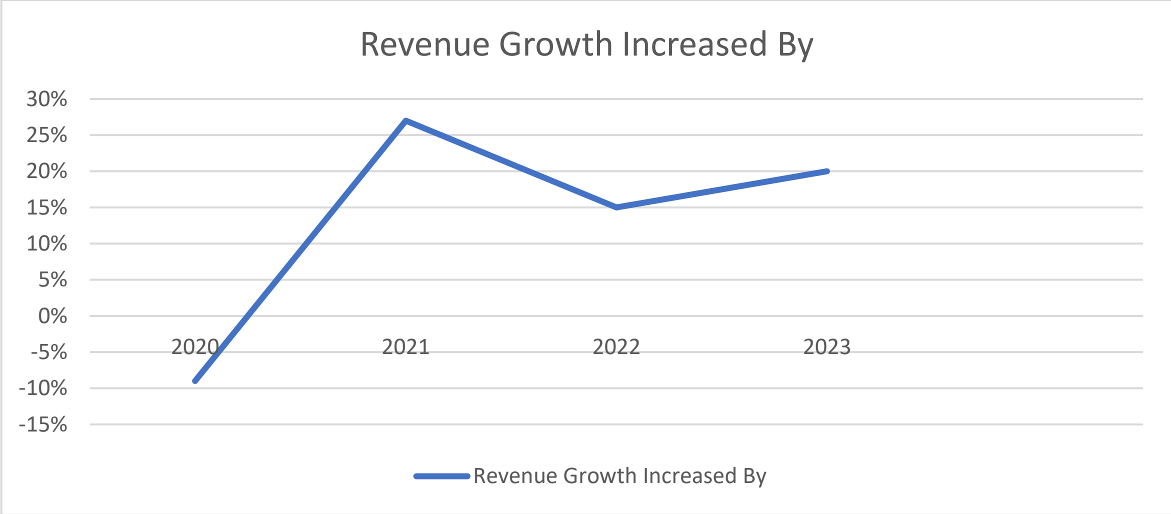
Competitors Analysis through Revenue comparison



The graph illustrates the growth in revenues of three cement companies in Bangladesh from the year 2019 to 2023. The companies of the sector are LafargeHolcim Bangladesh Limited, Heidelberg Cement, and Premier Cement. Sales revenue is expressed in millions of Bangladeshi Taka (BDT). Another thing that the graph shows is that the cement industry of Bangladesh has shown some growth in the last couple of years. The cement market leader continues to be Heidelberg Cement, while LafargeHolcim Bangladesh Limited and Premier Cement have been growing at a steady rate. The overall revenue of LafargeHolcim Bangladesh Limited has been moderate in the whole period without any significant changes in revenues. In 2019, it was 1200 million BDT; in the year 2022, it increased to 1350 million BDT. Nevertheless, it shrank down a bit in 2023. However, in the case of Heidelberg Cement, they have recorded a progressive rise in their annual revenues. As it can be seen, it began at a slightly lower starting point than that of LafargeHolcim Bangladesh Limited as of 2019 and constantly grows faster than the other two enterprises. Its revenue by the end of the year 2023 was 1600 million BDT, which is far more than the others and this figure was the highest among the three. Therefore, there has been an improvement in the company's revenue, though not as bright as Heidelberg Cement. It was around 1100 million BDT in 2019, and over the years, the expanse grew to about 1400 million BDT in 2023.



This graph shows the revenue and profit margin of LafargeHolcim Bangladesh Limited from the year 2019 to 2023. Revenue is presented in millions of local currency, which is Bangladeshi Taka (BDT) On the other hand, the profit margin is in percentage. There seem to be a correlation between the company's revenue and the net profit margins. This is an indication that profit margin is normally influenced by the level of increase in revenue. However, this relation is not always going in ascending order; for example, the company experienced a decline in the profit margin in 2022 and 2023 while the level of revenues remained almost stable. The revenue of the company has been increasing over the year, which is depicted in the figure below. Beginning in 2019, which was comparatively low, it gradually levelling up and reached its highest in 2021. Nevertheless, the revenue slightly reduces in 2022 and 2023, as shown. The profit margin has shown more variation, which makes it hard to analyze what is happening in the business. It is at a comparatively lower level in 2019, steeped up in 2020 and has further raised in 2021. However, it was slightly lower in 2022, reduced further in 2023 and remained in this range for the next year.



This graph represents the percentage change in company or industry revenue growth from 2020 to 2023. This can also be seen from the graph, where the overall annual growth in revenue is observed to be slightly increasing over the period, especially a rapid rise observed in 2021 after a sharp drop in 2020. In 2020, the revenue growth was comparatively low and below -9%. In 2021, there was a dramatic change as revenue growth rose by more than 27%. While the growth rate somewhat slowed down in 2022, getting to about 15%. For 2023, revenue growth kept on rising to what can be estimated as a little over 20%.

Benchmark Against Competitors

	2021			2022			2023		
	LHBL	**Heidelberg**	**Premier**	**LHBL**	**Heidelberg**	**Premier**	**LHBL**	**Heidelberg**	**Premier**
Cost of Sales Ratio	64%	61%	66%	65%	63%	67%	68%	66%	70%
Raw Material Cost Ratio	23%	25%	28%	29%	27%	31%	32%	28%	35%
Production Cost Ratio	13%	10%	14%	11%	9%	12%	9%	8%	11%
Energy Cost Ratio	9%	6%	10%	8%	7%	9%	8%	7%	9%
Operating Cost Ratio	64%	61%	66%	65%	63%	67%	68%	66%	70%
Non-Operating Cost Ratio	10%	6%	11%	11%	7%	12%	8%	6%	10%

Cost performance shows that LafargeHolcim Bangladesh Limited occupies a middle ground between Heidelberg Cement and Premier Cement. Heidelberg Cement again stands out as the most cost-efficient of all, keeping the lowest cost ratios and good operational control. LafargeHolcim Bangladesh Limited is moderately efficient, and it fails to offset Heidelberg's effectiveness in cost control—the cost of sales and the raw material costs in particular. In the same respect, Premier Cement has a higher cost-efficiency ratio than both of them, though progressive and remarkably higher at most points Due to its highly centralized, high volume, low-margin business model, Premier Cement has this high cost-efficiency ratio.

Regarding cost of sales, LafargeHolcim Bangladesh Limited holds better position than Premier Cement but it is less effective than HH, in this overall cost operation has the opportunity to make better. Concerning the raw material costs, LafargeHolcim Bangladesh Limited does better than its competitors during the first period, and then its competitive pressure increases, except for Heidelberg which shows higher rates in later periods, indicating problems in material sourcing and cost containment. However, there are indications that LafargeHolcim Bangladesh Limited has been working on cutting down the costs of its production and energy costs, balancing Heidelberg in terms of equivalent production costs and progressively, though still lower, in energy cost efficiency.

For non-operating costs, LafargeHolcim Bangladesh Limited is the least efficient at the start but shows improvement in the subsequent years to be more efficient than Heidelberg and considerably better than Premier Cement. However, a challenge that has been observed from the operations of LafargeHolcim Bangladesh Limited over the years has been higher operating costs than Heidelberg's, which are continuing to increase at a faster pace, and this therefore calls for better operational cost controls to ensure better competitiveness in the marketplace. On balance, many aspects indicate the fact that LafargeHolcim Bangladesh Limited is strong in some areas but there is an increasing tendency in cost incidence in some critical sub-categories which shows that specific strategies have to be put in place to align with Heidelberg and to edge past Premier Cement.

3.4 Recommendations

In order to combat economic fluctuations, LafargeHolcim Bangladesh Limited should invest in energy saving technology and automate manufacturing process to save costs and improve efficiency. Having more sources of raw materials including from the domestic market can help to mitigate the effects of currency devaluation and supply chain disruption worldwide. Also long term contract with suppliers to mitigate the inflation by sticking to price mentioning in the contract and exploring opportunities for renewable energy can help to maintain stable expenses. Therefore, it is necessary to adjust the pricing policies in accordance with the existing market trends and at the same time provide customers with diversified products in order to ensure constant demand and profit margin.

As the existing Jalalabad gas supply contract terminates in 2025, there is a possible shortfall of gas supply for the cement plant; thus, LafargeHolcim Bangladesh Limited should be looking for long-term energy sources. To diversify its energy sources, the company can consider investing in renewable energy sources such as solar, wind energy or waste-to-energy technologies which are derived from natural gas. The use of energy efficiency technologies particularly in the process of clinker production will assist in reducing the amount of gas used. Expanding energy choices and increasing the company's efficiency can help protect LafargeHolcim's operations from future disruptions of gas supplies.

LafargeHolcim Bangladesh Limited can adopt some of the measures to counter increasing raw material costs and production costs. First, they should source from different suppliers both domestic and international, to avoid disruptions of the supply chain and leverage on price negotiations. Managing value requires managing costs effectively, and one way of doing this is by locking in long-term supply agreements on raw materials. Also, the company has to incorporate other similar but locally available materials to minimize the importation of these products. On the production side, they can improve energy efficiency through the use of more energy-efficient equipment and should consider the idea of using renewable energy to save costs on electricity and fuel. Thus, it is beneficial to achieve labor and maintenance savings through the application of automation and digital tools in the company's operations. Last of all, practicing sustainability in production, for instance, through Geocycle recycling of wastes from production in other products, would go a long way in cutting down costs of raw materials and operational costs, hence enhancing the company's profitability.

With the monetary policies becoming strict and costly to borrow, LafargeHolcim Bangladesh Limited should start being more cautious with the way it invites financing. One possibility is the refinancing of outstanding loans at better interest rates as long as it minimizes cost. Instead, the company may seek equity financing or other financing methods that do not involve being tied to high-interest payments. It is also important for LafargeHolcim Bangladesh Limited to manage its cash flow well by enhancing its efficiency and cutting down on unnecessary spending. Improving working capital management, for example, through improving payment terms from suppliers or to customers would result in more working capital and less reliance on funding from external sources. LafargeHolcim Bangladesh Limited can also implement cost-reduction within the organization departments that can help cut costs and reserve the savings for higher return on investments.

3.5 Summary and Conclusions

In conclusion, this report has established a cost analysis and an overall analysis of the company by assessing its various costs, performance, strengths and weaknesses, and competitive advantage within the cement industry. The study also shows that LafargeHolcim Bangladesh Limited has faced several problems, such as economic fluctuations, rising costs of raw materials and production, rising inflation and competition from Heidelberg Cement and Premier Cement. However, several challenges have limited LafargeHolcim Bangladesh Limited's performance. Despite these challenges, LafargeHolcim Bangladesh Limited has demonstrated considerable moderate revenue growth and has also been able to enhance its financial ratios, particularly liquidity and profitability.

The SWOT analysis reveals that LafargeHolcim Bangladesh Limited's key strength is that it is capable of manufacturing clinker locally and that will be a major strength for the company. The company has also strengthened its market position through its sustainable practices, like the Geocycle project. However, the company requires solving the problem of the growing costs of its operations and developing newer and more effective technologies for its use. Thus, LafargeHolcim Bangladesh Limited can reduce these risks and enhance its cost management by investing more in the development of another source of energy and further cutting costs.

Marketing and e-commerce should also receive more funding, especially from the company's platform, NirmanBandhob, to help the company fully penetrate the market and meet the needs of the consumers. Besides, the continuing development of leadership and training activities for employees will be crucial to sustaining future growth and development.

Altogether, the organization has many opportunities to further expand its operations and is ready to overcome all the discovered internal and external operational challenges and threats to ensure continuous growth in the Bangladeshi cement industry.

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APPENDIX

1. Liquidity Analysis

Current assets	2021	2022	2023
Inventories	2,839,158	2,930,286	3,435,272
Trade receivables	556,658	525,707	504,241
Other current assets	1,149,467	2,150,258	4,931,397
Cash and cash equivalents	4,429,276	4,843,726	9,345,525
Total current assets	8,974,559	10,449,977	18,216,435

Current liabilities	2021	2022	2023
Trade payables	6,213,486	7,218,254	10,047,135
Other current liabilities	804,207	1,051,807	1,191,014
Borrowings	30,288	-	-
Lease liabilities	-	27,582	27,402
Current income tax liabilities	81,586	332,307	555,586
Unclaimed dividend	18,662	286,823	26,349
Total current liabilities	7,148,229	8,916,773	11,847,486

Year	Current Assets (A)	Current Liabilities (B)	Inventory (C)	Current Ratio (A/B)	Quick Ratio ((A-C)/B)
2021	8,974,559	7,148,229	2,839,158	1.26	0.86
2022	10,449,977	8,916,773	2,930,286	1.17	0.84
2023	18,216,435	11,847,486	3,435,272	1.54	1.25

2. Solvency Analysis

	2021	2022	2023
Non-current liabilities			
Lease liabilities	-	3,844	112,365
Borrowings	27,809	-	-
Deferred tax liabilitlies	2,075,324	2,056,545	1,826,315
Employee benefits	290,329	216,786	103,337
Provisions		67,201	80,614
Total non-current liabilities	**2,393,462**	**2,344,376**	**2,122,631**
Current liabilities			
Trade payables	6,213,486	7,218,254	10,047,135
Other current liabilities	804,207	1,051,807	1,191,014
Borrowings	30,288	-	-
Lease liabilities	-	27,582	27,402
Current income tax liabilities	81,586	332,307	555,586
Unclaimed dividend	18,662	286,823	26,349
Total current liabilities	**7,148,229**	**8,916,773**	**11,847,486**
Total Liabilities	9,541,691	11,261,149	13,970,117

	2021	2022	2023
Capital and reserves			
Share capital	11,613,735	11,613,735	11,613,735
Retained earnings	5,302,040	5,871,541	10,071,574
Other components of equity	-236,727	-214,283	-171,405
Foreign currency translation	-	439,517	712,912
Non-controlling interests	-	-180	-527
Total equity	16,679,048	17,710,330	22,226,289

	2021	2022	2023
Capital and reserves			
Share capital	11,613,735	11,613,735	11,613,735
Retained earnings	5,302,040	5,871,541	10,071,574
Other components of equity	-236,727	-214,283	-171,405
Foreign currency translation	-	439,517	712,912
Non-controlling interests	-	-180	-527
Total equity	**16,679,048**	**17,710,330**	**22,226,289**

	2021	2022	2023
Revenue	20,534,442	23,594,038	28,388,093
Cost of sales	-14,412,397	-15,259,770	-18,118,730
Gross profit	**6,122,045**	**8,334,268**	**10,269,363**
Other operating income	134,615	44,616	102,678
General and administrative expenses	-1,240,843	-1,777,613	-
Sales and marketing expenses	-460,908	-618,781	-2,047,003
Other operating expanse	-	-12,017	-567,239
	-1,567,136	-2,363,795	-2,511,564
Operating profit	**4,554,909**	**5,970,473**	**7,757,799**

Year	Total Assets (A)	Total Liabilities (B)	Total Equity (C)	Debt to Equity Ratio (B/C)	Debt to Asset Ratio (B/A)
2021	26,220,739	9,541,691	16,679,048	**57%**	**36%**
2022	28,971,479	11,261,149	17,710,330	**64%**	**39%**
2023	36,196,406	13,970,117	22,226,289	**63%**	**39%**

3. Efficiency Analysis

Assets	2021	2022	2023
Non-current assets			
Property, plant and equipment	16,408,511	16,033,485	17,073,033
Intangible assets	317,776	2,170,241	906,938
Goodwill	-	317,776	-
Investment in subsidiaries	519,893	-	-
Total non-current assets	**17,246,180**	**18,521,502**	**17,979,971**
Current Assets			
Inventories	2,839,158	2,930,286	3,435,272
Trade receivables	556,658	525,707	504,241
Other current assets	1,149,467	2,150,258	4,931,397
Cash and cash equivalents	4,429,276	4,843,726	9,345,525
Total current assets	**8,974,559**	**10,449,977**	**18,216,435**
Total Assets	26,220,739	28,971,479	36,196,406

Year	Cost of Sales (A)	Inventory (B)	Revenue (C)	Trade Receivables (D)	Total Assets (E)	Inventory Turnover Ratio (A/B)	Receivables Turnover Ratio (C/D)	Asset Turnover Ratio (C/E)
2021	14,412,397	2,839,158	20,534,442	556,658	26,220,739	5.08	36.89	0.78
2022	15,259,770	2,930,286	23,594,038	525,707	28,971,479	5.21	44.88	0.81
2023	18,118,730	3,435,272	28,388,093	504,241	36,196,406	5.27	56.30	0.78

4. Profitability Analysis

Year	Gross Profit (A)	Revenue (B)	Operating Profit (C)	Profit of the Year (D)	Total Assets (E)	Total Equity (F)	Gross Profit Margin (A/B)	Operating Profit Margin (C/B)	Net Profit Margin (D/B)	ROA (D/E)	ROE (D/F)
2021	6,122,045	20,534,442	4,554,909	3,507,631	26,220,739	16,679,048	30%	22%	17%	13%	21%
2022	8,334,268	23,594,038	5,970,473	4,444,511	28,971,479	17,710,330	35%	25%	19%	15%	25%
2023	10,269,363	28,388,093	7,757,799	5,941,726	36,196,406	22,226,289	36%	27%	21%	16%	27%

5. Leverage Analysis

Total Assets (B)	Total Equity (C)	Debt Ratio (A/B)	Equity Ratio (C/B)
26,220,739	16,679,048	36%	64%
28,971,479	17,710,330	39%	61%
36,196,406	22,226,289	39%	61%

6. Cost Ratios

	2021	2022	2023
Revenue	20,534,442	23,594,038	28,388,093
COGS:			
Raw material cost	4,816,723	6,858,702	9,095,748
Consumption of purchased clinke	3,202,502	3,381,058	3,029,008
Power and fuel costs	1,901,678	1,859,805	2,331,023
Production and maintenance costs	2,603,149	2,534,758	2,627,693
Plant general and administrative costs	407,127	407,359	296,152
Freight cost to customers	338,777	338,777	777,625
Depot operating and transportation costs	923,099	923,099	1,232,032
	14,193,055	16,303,558	19,389,281
General and Administrative Expenses	1,475,405	1,777,613	1,653,367
Sales and Marketing Expenses	460,908	618,781	567,239
Other Operating Expenses	136,051	-12,316	102,678
Finance Costs	39,043	275,935	29,028

Year	Cost of sales ratio	Raw material cost ratio	Production cost ratio	Energy cost ratio	Operating cost ratio	Non operating cost ratio
2021	64%	23%	13%	9%	64%	10%
2022	65%	29%	11%	8%	65%	11%
2023	68%	32%	9%	8%	68%	8%