Report On

Financial Challenges faced by SMEC International & Strategies to mitigate them

By

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An internship report submitted to the BRAC Business School (BBS) in partial fulfillment of the requirements for the degree of
Bachelors of Business Administration (BBA)

BRAC Business School (BBS)
BRAC University
September 2025

Declaration

It is hereby declared that

1. The internship report submitted is my/our own original work while completing degree at Brac University.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I/We have acknowledged all main sources of help.

Student's Full Name & Signature:

Sanjana Chowdhury Mahee
21104050
Brac Business School
BRAC University

Supervisor's Full Name & Signature:

Dr. Mohammad Enamul Hoque,
Associate Professor, Brac Business School
BRAC University

Letter of Transmittal

Dr. Mohammad Enamul Hoque,

Associate Professor,

BRAC Business School

BRAC University

BRAC University

Kha 224, Bir Uttam Rafiqul Islam Ave, Dhaka 1212

Subject: Submission of Internship Report on "Financial Challenges Faced by SMEC Int. and Strategies to mitigate them"

Dear Sir,

I am happy to present my Internship report entitled 'Financial Challenges Faced by SMEC Int. and Strategies to mitigate them' to your good seldom, as part of my Bachelor of Business Administration at BRAC University.

The report is a report on my internship experience of 12 weeks at SMEC Int. Pty. Ltd. done after interviewing staff of the finance department and secondary data by research papers and journals. The corporate culture of the company has also been noted by me and incorporated into the report.

Sincerely yours,

____

Sanjana Chowdhury Mahee

21104050

BRAC Business School

BRAC University

Non-Disclosure Agreement

This agreement is made and entered into by and between SMEC Int. Pty. Ltd. and the undersigned student at Brac University, Sanjana Chowdhury Mahee (21104050).

Acknowledgement

I would like to offer my utmost gratitude to all the individuals who helped me during my internship. To begin with, I would like to acknowledge my on-site internship supervisor, Mr. Md. Azam Khan, and the whole Finance department at SMEC Int. Pty. Ltd. as they have provided me with priceless guidance in the course of my internship. I would also be glad to mention my academic supervisor, Dr. Mohammad Enamul Hoque, who has been instrumental in mentoring me not only at the time of finding an internship but also at the university in my fourth year of my studies. Lastly, I am very grateful to my parents and friends who have always given me unparalleled support when I stepped into the corporate world.

Executive Summary

This report analyzes the financial risk experienced by SMEC International, (delays on projects, cost overruns, and late payments) and proposes solutions that can help reduce such risks. The research is separated into three chapters. Chapter 1 gives a general account of the internship experience at SMEC International, which consists of the undertaken works, such as the calculation of revenue using IFRS 16 and the reconciliation of banks, providing the preparation of a trial balance and analysis of an exchange rate. It is also a reflection on challenges faced, the complexity of IFRS 16 and lack of networking opportunities, and gives recommendations on how future internships can be improved.

Chapter 2 presents SMEC international, its history, structure, values and major projects, such as partnership with international organizations such as the World Bank and ADB. The chapter brings to focus the sustainability practices by SMEC and their sticking to the CSR aspects by means of projects like the Winter Blanket Drive and the Greater Dhaka Sustainable Urban Transport Project.

Chapter 3 deals with the SMEC financial challenges where special emphasis is given to the effects of project delays, cost overruns and late payments on the financial stability of the company. The report examines the cause and effects of such problems, and considers the effectiveness of cost-benefit analysis, resource calendars, ERP systems, and contingency plans in controlling such financial risks. The research intends on streamlining the financial management of SMEC so that it will be in a position to have improved project implementation and economic sustainability.

Keywords: Cost benefit analysis, ERP, Resource Calendar

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1.1 Student Information

Student Name: Sanjana Chowdhury Mahee

Student ID: 21104050

Program: Bachelor of Business Administration

Department: BRAC Business School

Major: Finance

Minor: Computer Information Management (CIM)

1.2 Internship Information

1.2.1 Company Information

Period: 3 months (20th January, 2024 – 20th April, 2024)

Company Name: SMEC International Pty. Ltd

Department: Finance & Accounts

Address: Anabil Tower (8th Floor), Plot 3, Block NW (J), Kamal Ataturk Avenue, Gulshan 2, Dhaka-1212, Bangladesh

1.2.2 Company Supervisor's Information

Name: Md Azam Khan

Department: Finance & Accounts

Designation: Senior Manager

1.2.3 Job Responsibilities

The assigned duties and the responsibilities that have been bestowed upon me as an intern in the SMEC International Pty. Ltd are as follows:

- Helped in the calculation of the revenue under the IFRS 16 with respect to the leasing revenue and expenses.
- Bank reconciliation is done by comparing entries in the cash book and bank statements.
- Helped to prepare the trial balance: sorted out and checked accounting entries.
- Examined the fluctuations of exchange rates and developed PIVOT tables of the financial data.
- Assisted in preparing audit reports on four entities by gathering facts and providing compliance.
- The tracking of outstanding invoices and following up on overdue payments are some of the managed accounts.

1.3 Internship Outcomes

1.3.1 Student's Contribution to the company

As an intern at SMEC International, I was keen to work in the finance department and assisted in some of the primary financial functions of the company. These were calculating revenue using the IFRS 16, carrying out bank reconciliation, and preparing trial balance as well as exchange rate and pivot table analysis. Personally, I also participated in the preparation of audit reports of four entities, which gave me a great experience concerning the financial auditing process. Despite the limited experience of long-term strategic decision-making because of the brief internship, my work facilitated any financial processes, which led to the overall efficiency of the department.

1.3.2 Benefits to the student

The internship at SMEC International also enabled me to practice theory in real life especially in financial reporting and analysis. It provided me with a good introduction to the business aspect of the industry and reiterated my career objectives in corporate finance. I have acquired problem-solving skills in the process of identifying and resolving gaps in financial data. Further, the internship also equipped me with knowledge on how auditing is practiced within the IFRS 16 system of the consultancy firm, and my skills in communication and working with others were enhanced. This has been crucial in my future career aspirations and also provided me with the necessary skills towards success in corporate finance.

1.3.3 Difficulties Faced During Internship Period

There were a number of challenges that I encountered during my internship which affected the way I learned. The complex nature of IFRS 16 was a challenge, as it was not easy to comprehend and implement in the specified time slot. Also, I was the sole intern in the department, which restricted my networking and connection-making capabilities, causing more problems in collaborating and getting mentoring. Moreover, the absence of specialization in one, ongoing task during the internship complicated having a deeper perspective on the way in which the company conducts auditing, which would have been a preferable learning and growth opportunity

1.3.4 Recommendations

To make the internship experience within the SMEC International organization better, it is possible to make a few improvements. First, interns need to have the chance to attend team meetings to provide them with a chance to work on the current projects and know what the decision-making process is. Since it is an engineering consultancy firm and has employees of both technical and non-technical background, it would be helpful to organize events such as the Lunch and Learn sessions. Such events may include departmental presentations of various facets based on the current issues and experiences in the industry and assist employees and interns to keep up to date with the industry at large. Furthermore, since the scope of work conducted by SMEC focuses on site visits, offering interns a site visit to one of the projects undertaken by the company would give them a rich hands-on learning opportunity, as they will have a better perspective on the role played by the company in the development of Bangladesh. Lastly, it should be encouraged that at the close of their internship, interns should make a presentation or report detailing their contribution and observations to the position as well as offer suggestions on how the position can be improved.

Chapter 2: Organization Overview

2.1 Introduction

2.2 Overview of the organization

ACE Consultants Ltd. (Subsidiary of SMEC Int. Pty. Ltd)

ACE Consultants Ltd. is a renowned consulting company in Bangladesh which began in 1958 being known as Associated Consulting Engineers Ltd. In 1971, the company was nationalized and engaged in the reconstruction of Bangladesh, which obtained its independence. It was privatised in 1977 and changed its name in 2002 to ACE Consultants Ltd. ACE provides consulting services to government, private and international organizations in Bangladesh and internationally. ACE has numerous areas of operation such as civil, mechanical, electrical engineering, environmental and financial studies. They have roads, bridges, railway, air and port, water, electricity, oil and gas, housing and others as their projects. They have collaborated with major foreign donors such as World Bank, ADB, UNDP, USAID among others and numerous government projects in Bangladesh.

ACE employs more than 600 employees as of January 2020 and works on approximately 26 projects.Some of their key projects include:

- Padma Multipurpose Bridge Project Construction Supervision Consulting Services; •
- Construction supervision consultation services on Padma Bridge Rail Link Project;
- Design Review and Construction Supervision Multi Lane Road tunnel under the river Karnaphuli, Chittagong;
- Design and Supervision Consulting Services of Matarbari ultra super critical coal-fired power project;
- Bazar Rail Construction Supervision Project conducted by Dohazari-Cox;

ACE has been fully acquired by SMEC International Pty Ltd. SMEC belongs to the Surbana Jurong Group that is owned by Temasek Holdings, a company supported by the Government of Singapore. History Of SMEC Int. Pty. Ltd

1949-1974

Snowy Mountains Hydroelectric Scheme

On 17 October 1949 the Snowy Mountains Hydroelectric Scheme construction began with the Governor-General, Sir William McKell, Prime Minister Ben Chifley and William Hudson firing the first blast at Adaminaby. The A$820 million multi-purpose project which included hydropower, roads and bridges was heralded as the largest infrastructure project in Australia.

1960

Sharing our expertise

The department of foreign affairs approached snowy mountains authority (SMA) in 1960 to offer its technical support to the Australian aid projects both in Australia and in foreign nations.

1967

A wonder of the modern world

The Snowy Mountains Hydroelectric Scheme is considered to be one of the most complicated integrated water and hydroelectric power schemes in the world. The scheme was considered by The American Society of Civil Engineers to be among the seven civil engineering wonders of the modern world in 1967.

June 24, 1970

Snowy Mountains Engineering Corporation (SMEC) was established

SMEC has gone global with an office in Dhaka, Jakarta and Kuala Lumpur as well as Canberra and Sydney in Australia.SMEC Malaysia came into being in 1991.The geological exploration of the Mekong River, the roads in northern Thailand and the hydropower plant in Cambodia and Malaysia were also considered the international projects.

1980 - 1995

Continued global expansion

In the 1980s, it entered into new projects in another 20 countries such as: China, Egypt, Ethiopia and Saudi Arabia. Almaty, Delhi, Hong Kong, Lahore and Manila offices were opened.In 1993, SMEC was privatised through a government sale of assets to the employees.

2000 - 2012

The new Millenium

The growth has since been associated with SMEC making several acquisitions to diversify its profile such as Brisbane City Enterprises (2005), EGC Pakistan (2007), Dare Sutton Clark (2008), CEIS Pakistan (2009), Lean and Hayward (2011), GMC Global (2012) and Vela VKE (2012).

2016

SMEC joins Surbana Jurong

Being part of the Surbana Jurong Group we have built our technical capabilities and services to provide a superior lifecycle of services within the urban, industrial and infrastructure environment. Our new alliance gives us a pool of talent of 13,000 committed individuals operating in a network of 110 offices in 40 countries around Asia, Australasia, the Middle East, Africa and the Americas.

2016-2022

Redefining exceptional

This was a year of massive growth and development of SMEC alongside its parent company the SJ Group. With the expert knowledge of more than 5,000 employees and spanning 40+ countries, SMEC still managed to provide the complex major project, world-class technical excellence and advanced engineering solutions. Being a part of the SJ Group, SMEC can benefit from the ability of our parent company and sister companies to flexibly and efficiently operate in both local and international markets. We possess access to an international network of design and engineering experience with 16,000 co-workers in 10 multi-disciplinary brands such as architects, designers, planners, engineers and other specialists.

2024

Engineering positive change

SMEC simplifies the complex. The possibilities that we are opening up our people to are going to make the future a better place since infrastructure will be viewed in a new perspective. We are resolved to create a difference and difference to the people, the environment and the clients and communities which we serve. Our groups via our system of world specialists utilize profound understanding, systems thinking to overpresent unequivocal complexities and offer combined engineering solutions in an assortment of heterogeneous settings. We offer state of the art infrastructure, urban solutions and energy solutions as a trusted service provider to its customers and communities as an entity in the SJ Group. We are making changes that are desirable.

2.2.3 Vision

"Engineering positive change"

2.2.4 Mission

"SMEC is committed to positively impact the people, the environment and the clients and communities we serve.
Through our network of global specialists, our teams draw on deep expertise and systems thinking to simplify the complex and deliver integrated engineering solutions across a range of diverse environments" (ACE Consultants Ltd., n.d.).

2.2.5 Core Values

"SMEC is committed to creating a rewarding, inclusive workplace for our people by encouraging personal and professional development, recognizing good performance, fostering equal opportunities, and ensuring employee health, safety, and wellbeing" (SMEC, n.d.).
"Integrity: We act responsibly and conduct our business and ourselves with the highest ethical standards, accountability, and transparency" (SMEC, n.d.).

"People: We value our global and diverse talent by creating a safe, inclusive, and supportive environment where our people can thrive" (SMEC, n.d.).

"Partnership: We build trusted and enduring relationships with clients, colleagues, and partners to achieve shared success" (SMEC, n.d.).

"Professionalism: We act in the best interest of our clients and the communities in which we work, delivering innovative solutions to the highest of standards" (SMEC, n.d.).

2.2.6 Corporate Social Responsibility

Sustainability

SMEC International Pty is a company with a strong sense of sustainability and this aspect contributes significantly to its Corporate Social Responsibility (CSR). The name of the company is based on the

Figure 1: SMEC International Snowy 2.0 Pumped Storage, Australia

Snowy Mountains Hydroelectric Scheme that was one of the biggest renewable energy initiatives. This experience has made SMEC concentrate on sustainable design of infrastructure as well as city planning at the very outset of every project. SMEC engages in large-scale renewable energy projects such as the Australia-Asia Power Link as one of the ways to build a greener future. Their CSR policy relies on four primary categories of sustainability, namely, human, financial, natural, and social. This demonstrates that the company is responsible towards the environment, communities, and wants to influence communities on a long-term basis positively. In the Corporate Social Responsibility (CSR) strategy of SMEC International Pty, sustainability is an important aspect. This has been a result of its efforts on the Snowy Mountains Hydroelectric Scheme which is a major portion of the company's history. Snowy 2.0 is one such big project of this commitment. It demonstrates that SMEC is employing innovative concepts to conserve the environment with renewable power of 2,000 megawatts and approximately 350,000 megawatt-hours of storage energy supplied to the Australian power grid. Snowy 2.0 is a big-battery. It retains energy when demand is not high and releases it when demand is high. The site of the project is Mount Kosciuszko National Park, which is a sensitive environment. Due to that fact, SMEC employs a high level of technology and powerful environmental safeguards to ensure that the project is environment friendly and sustainable.

Figure 2: Greater Dhaka Sustainable Urban Transport Project (BRT-2, EPCM)

Similarly, the Greater Dhaka Sustainable Urban Transport Project (BRT 2) is social and environmentally sustainable. It promotes the use of low-emission and efficient public transport mode by the constructions of 20 km Bus Rapid Transit (BRT) corridor. The project will incorporate energy efficient street lights, pedestrian friendly and safe walking paths, elaborate environmental and social impact assessment (ESIA) to ensure the project will be sustainable and the community will be benefited. The project demonstrates how SMEC has committed to four areas of sustainability, namely, human, financial, natural, and social. It also demonstrates the way that the company is contributing to creating a more equal and stronger future using sustainable infrastructure.

SMEC Foundation

The SMEC Foundation is an employee-driven program that was established in 2001 to assist the company in its Corporate Social Responsibility (CSR) objectives. It is aimed at assisting communities and alleviating poverty through providing small grants. The Foundation collaborates with the local charities and invites employees to participate. It has so far financed more than 200 projects in more than 30 countries. It has a decentralized system of funds that implies that various regional offices have the ability to fund local projects directly. The local teams of SMEC also participate in the implementation of the projects and ensure that the running is smooth.There is also emergency assistance given by the Foundation when there is a natural disaster. It was seen as having a positive impact and was crowned an ABA100 Winner in the Australian Business Awards in 2019 in the Community Contribution category.

> **"SMEC Foundation Projects**
> 1. Supporting school and homecare programs in Africa
> 2. Kathmandu Environment Education Program (KEEP)
> 3. Multipurpose outdoor learning domains
> 4. School Improvement Project
> 5. Winter Blanket Drive
> 6. Water Aid and SMEC Partner to Address Gender Inequality in School
> 7. Delivering Infrastructure to Help Alleviate Poverty in Vietnam"

Project: Winter Blanket Drive
Expertise: SMEC Foundation

One of the coldest winters in the history of Bangladesh happened in December 2014. A lot of unfortunate citizens in Dhaka and Khulna were in a poor state, and cold climate caused additional illness. Employees in the Bangladesh office of SMEC set up a winter blanket drive in order to assist the victims. SMEC has contributed 2500 dollars to purchase warm and woolen blankets. They were provided to old, widowed and poor urban slum dwellers of Dhaka and rural dwellers in Khulna. The SMEC employees delivered more than 400 blankets personally bringing some much needed relief during the harsh winter.

Diversity, Inclusion and Equality

SMEC International Pty aims at developing an inclusive, flexible and strict working environment that will allow employees to develop and perform their best. SMEC is a member of the Surbana Jurong global group that operates with a diverse group of employees in over 40 countries to assist in bringing innovative and efficient solutions to projects. The company promotes equal opportunities to all people and ensures that all the employees are treated evenly on the basis of their performance and ability.There is also a zero-tolerance policy of any form of harassment or discrimination at SMEC. Due to its high level of commitment, SMEC ANZ has been listed as an Employer of Choice due to Gender Equality and SMEC Bangladesh has been recognized by the Great Place to Work Institute. These awards indicate the level at which the company takes inclusiveness, respect and high standards at the workplace. SMEC is no exception and has good rules to try to avoid fraud and corruption.

Health & Safety

Health and safety at SMEC International Pty is a large portion of the attention the company gives to the wellbeing of its employees. The company collaborates with employees in ensuring that it continues to improve in this regard. The Zero-Harm Vision of SMEC is all about ensuring the workplace is safe and that there are no preventable risks after which the vision is to ensure that there are zero incidents. To ensure that, SMEC proactively engages in updating its safety rules, procedures, and tools on a regular basis to be in a better position of managing risks and preventing the occurrence of accidents. The employees are also provided with adequate training and resources to keep them at par with information. The company tends to check the efficiency of the safety system used and seeks the possible methods to make it even more effective. This aids in the development of a good safety culture throughout the company.

Governance

SJ and SMEC enjoy good corporate governance framework to ensure that their directors and employees operate in an effective and disciplined manner.This assists the companies and their subsidiaries to excel in the long-run. To achieve these objectives, the boards are guided by certain rules and practices and they continue to enhance their systems of governance and compliance.This involves frequent training and development to create a good compliance culture. They too have a zero-tolerance policy towards fraud and corruption.

“Corporate Governance Framework & Policies

1. Corporate Quality Policy
2. Corporate Health & Safety Policy
3. Corporate Environment Policy
4. Risk Management Policy

5. Code of Conduct
6. Business Integrity Policy
7. Diversity & Inclusion Policy
8. Mental Health, Wellbeing & Belonging Policy"

2.3 Management Practices

2.3.1 Company Organogram

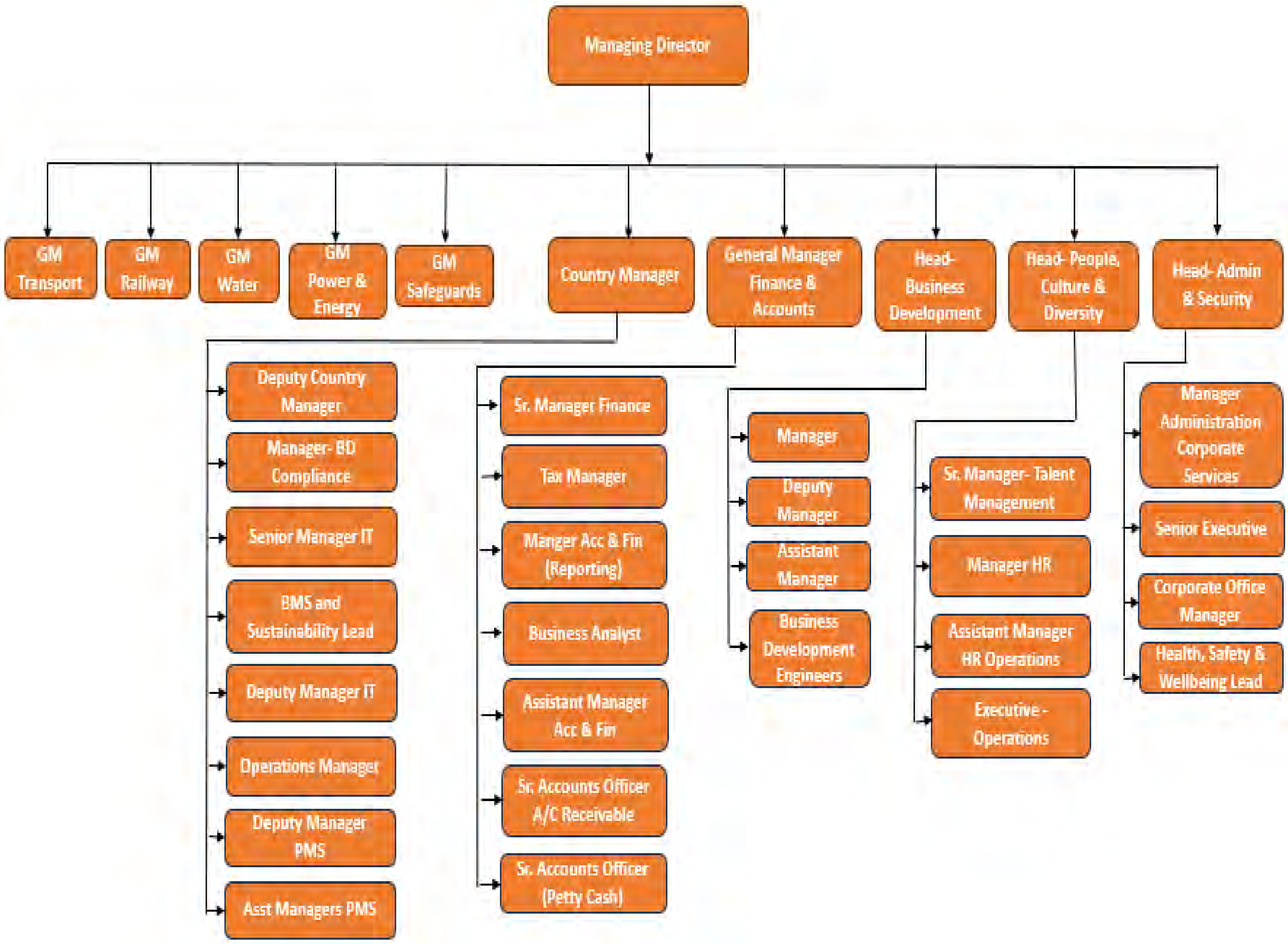

Figure 3: Company Organogram

2.3.2 Form of Leadership

SMEC International has a working culture that is based on participative leadership. The office layout, except the cabins containing the top executives, is open plan whereby the departments are located close to each other. This setup creates free communication between the subordinates and the supervisors which make it easy to delegate tasks and provide feedback on time. The processes also help in increasing efficiency. The company has recently shifted its weekly meetings to monthly meetings because senior managers discovered that the weekly meeting format was not contributing to improvement of the company but instead dragging it back. Also, there is an open and friendly communication between senior and junior employees, which promotes the discussion of the difficulties, and provides a supportive and collaborative atmosphere at work.

2.3.3 Recruitment and Selection Process

Figure 4: SMEC Int. Recruitment Flowchart

In the case of SMEC international Pty, when a job vacancy comes, it may be filled either internally or externally. The entire system is managed by HR software known as a Workday that is utilized throughout the job posting procedure to the stage of onboarding. Hiring of in-house people is also done through workday. Recruitments are put up on LinkedIn and the Careers section of the company. Interview schedules are also made using Workday. Then, the shortlisting and interviews of candidates are conducted online or face-to-face where the candidates are evaluated on basis of skills, technical knowledge and communication. The due diligence is one of the most significant steps during which a person who has worked with the candidate before completes a form regarding previous performance of the candidate. At the last phase, the employment agreement, the successful candidate undergoes a day-long induction program. This session provides the overview of the company and describes the functioning of each department. In some cases, each of the departments conducts its own meetings to elaborate on their operations. The graduate engineer recruitment process is however more competitive. It normally entails case study resolutions, focus group discussions, one or two in-person interviews.

2.3.4 Performance Appraisal System and Compensation System

At SMEC International Pty, appraisal of the employees is largely informed by their performance. The appraisal is carried out by the immediate manager and supervisor of the employee. The supervisor and manager establish Key Performance Indicators (KPI) on every employee at the beginning of the year. By the mid-year, they monitor the progress of the employee and make any adjustments if necessary, and revise the KPIs depending on the performance of the employee. The supervisor develops a final rating at the end of the year depending on the overall performance of the employee. According to the policy of SMEC, the appraisal is conducted based on the ratings of KPI provided by the supervisor.

2.3.5 Training

SMEC International Pty is a company that attaches importance to its employees and pays attention to their skills development during regular training programs. Its parent company Surbana Jurong (SJ) has an SJ Academy, which provides digital training to all its employees throughout the SJ Group. The courses are primarily beneficial in enhancing technical and soft skills. SMEC also organizes special training to some employees based on their needs. Besides that, virtual training can be conducted by using video conferencing applications such as Microsoft Teams.

2.4 Marketing Practices

This is because SMEC is an engineering consultancy and thus, its marketing activities are more related to business-to- business (B2B) communications, client relationship management and reputation-based marketing. Business development teams are joined with marketing to help in project bidding, client engagement and corporate communications.

2.4.1 Marketing strategy

By emphasizing on sustainable engineering and infrastructure solutions, a combination of the global and local knowledge, and innovative and technology-driven client-centric services, SMEC International has a strong marketing strategy that helps it to maintain a strong presence in the market. The company adheres to the requirements of global environmental sustainability by focusing on sustainability to improve its image as a responsible engineering company.Local knowledge is crucial in the integration of local knowledge to incorporate custom solutions that address the specific needs of a particular region that builds trust and minimizes the risk of the project. Its focus on innovation and client satisfaction makes SMEC stand out of the crowd and find long-term partnerships. Moreover, the emphasis on quality and the ability to create values in the long term makes SMEC a valuable ally to clients who want to have long-lasting, efficient, and future-proof infrastructure projects.

Value Proposition

"Creating sustainable solutions through engineering excellence and global expertise tailored for local needs".

2.4.2 Target customers, targeting and positioning strategy

The SMEC International aims to serve a wide client base comprising government and public sector agencies, private infrastructure developers, and multilateral development banks such as ADB, World Bank, and JICA in major sectors of the economy such as transport, power and energy, water and environment, urban and social development and survey and Geographic Information System (GIS).Its targeting approach is B2B, where it focuses on large-scale infrastructure projects and the relationship building of long-term relationships with clients through trust, reliability and displayed expertise. SMEC is a global, yet locally based engineering consultancy that provides end-to-end infrastructure solutions, being a holistic consultancy that is involved in the strategic advice all the way to implementation of projects.

2.4.3 Marketing channels

As a service company, SMEC International Pty advertises its products by offering a combination of both direct approach to the client, formal tendering procedures and strategic communications. In its services, the firm depends on the services of specialized business development teams to personally interact with customers, takes part in tendering and submissions of proposals in projects of both the government and the private sector, and attends industry conferences and exhibitions to demonstrate its potential. At the corporate communications level, SMEC also relies on its official web pages to show project portfolios and thought leadership information, LinkedIn as its main tool of professional outreach and contact, and internal communication via newsletters and corporate reports to keep the entire organization on track.

2.4.4 Product/New product development and competitive practices

Although it does not deal with actual products but with the services of SMEC International Pty., the company is constantly investing in the creation of smart infrastructure solutions, digital engineering services (BIM, GIS, data analysis, and so on), environmental and sustainability consulting and climate-resilient and ESG-advisory services. Such developments allow SMEC to be competitive in an industry that is fast changing. Its competitive practices are based on using the combined global knowledge and best practices in diverse markets, investing in digital transformation to improve efficiency and innovation, and establishing strategic partnership and local collaborations to provide context-specific and impactful infrastructure solutions.

2.4.5 Branding activities

SMEC International Pty. has a corporate brand, which is closely associated with the Surbana Jurong (SJ) Group, which implies that there is a unified global image in all regions of its operation. The company has consistently used its visual and messaging guidelines to ensure brand consistency such as having a shared logo, color palette, and tone of communication in the marketing content, project resources, and digital platforms. SMEC enhances its brand displayed by placing flagship projects across different world markets in a prominent manner that reflects its technical prowess and viable history in the difficult infrastructure projects. One of the aspects of its branding approach is the focus on the principles of ESG, innovation, and sustainability that are applied to all of its external communication to demonstrate the company being committed to responsible and future-oriented engineering. At SMEC, the company builds the brand by engaging the employees in its internal engagement programs, company newsletters and internal campaigns, which makes the employees have a strong sense of identification and identification to the values and the strategic vision of the company.

2.4.6 Advertising and promotion strategies

SMEC uses a limited conventional advertising strategy, with the focus on professional and project-related promotion to the target audience. Its marketing plans are based on the active presence in LinkedIn where the company provides project news, personal experiences of employees, and content on thought leadership to establish credibility and interest in the industry. The SMEC site is search engine optimized and has elaborate project case studies in order to appeal to clients and stakeholders using organic searches. The company also engages in industry awards, conferences and speaking opportunities actively to increase its visibility and thought leadership. The digital marketing campaigns are coordinated with the overall communication strategy of the Surbana Jurong (SJ) Group. The focus of social media efforts is on LinkedIn, but internal (or CSR) engagement is done more selectively and on Facebook and Instagram. The growing focus on rich digital content (videos, webinars and virtual events by SMEC) is also aimed at the expanding the reach of the content to more professional audience in the changing digital environment.

2.4.7 Critical Marketing issues and gaps

Although SMEC has a strong presence in the engineering consultancy market, its branding and communications are compromised by the fact that it is a B2B business, which means that most people are unaware of its brand. One of the difficulties is the need to deliver consistent brand messages across all its global offices to make them aligned with the overall identity of the Surbana Jurong Group. Also, although SMEC does more and more embrace the use of digital platforms, there is still a lot of potential to improve employer branding and recruitment using more active and interactive content. Another area that the company can work on is its narration of ESG and sustainability initiatives, which are core to its values but that it has not fully used in its external communications. What is more, the necessity of more powerful digital marketing tools, including client portals, specific newsletters, and quality content marketing, is becoming more significant to encourage the client interaction and competitive advantage in the quickly changing digital environment.

2.5 Financial Performance and Accounting Practices

2.5.1 Financial Performance

Profitability Ratio

Figure 5: SMEC Int. Net Profit Margin

The margin shows a consistent decline over the three years. The downward trend reflects rising cost pressures due to imported raw material price hikes, exchange rate depreciation of the BDT, and inflationary impacts on operational expenses. In Bangladesh, businesses operating in engineering, infrastructure, and consultancy sectors often face longer receivable cycles and project payment delays, further compressing profitability. SMEC's ability to pass rising costs onto clients seems limited, and efficiency in contract execution needs reinforcement to maintain profitability.

Figure 6: SMEC Int. Gross Profit Margin

SMEC experienced a strong gross profit margin of 47.53% in 2021, indicating effective cost management and efficient project execution. This was a period of high profitability, likely driven by favorable conditions and the company's ability to control production and operational costs. However, in 2022, the gross profit margin decreased to 44.57%, reflecting the impact of rising raw material prices, inflation, and delays in project payments. These challenges limited SMEC's ability to maintain profitability at the same levels. In 2023, the gross profit margin further declined to 32.40%, suggesting continued pressure on costs and a reduction in the company's ability to pass on rising expenses to clients. The decline in 2023 reflects the ongoing operational difficulties amid inflationary costs and longer project timelines.

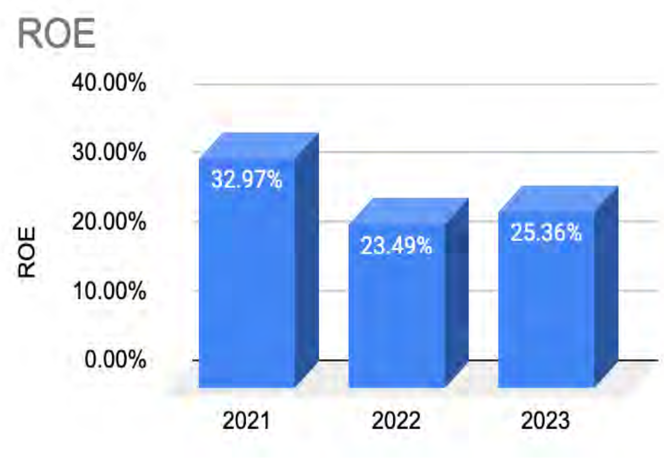

Figure 7: SMEC Int. ROE

ROE has significantly decreased in 2022, but has leveled out in 2023. The 2021 sharp figure (33) indicates good profitability, increased leverage, and efficiency of assets. The 2022 fall is correlated with deteriorating margins and asset turnover under the pressure of increased inflation and depreciation of currencies. The fact that the weak recovery in 2023 is indicating a sign of resilience is backed up by the fact that the company is experiencing better asset turnover to offset the reduced leverage. Investors will understand that SMEC is able to sustain above-average returns in macroeconomic headwinds but balancing efficiency and financing policy will be the key to sustaining ROE.

Figure 8: SMEC Int. ROA

The ROA ratio shows the capacity of the company to make a profit out of its assets. A slight decline in ROA in 2022 can be explained by the presence of potential conditions in the market, inflationary pressures, or increased costs affecting the efficiency of assets. Nevertheless, the increase in ROA in 2023 to 16.55, a bit higher than the 2021 level, indicates that SMEC International was able to adjust itself to the opportunities encountered in 2022. This recovery is a sign of the more effective use of assets and profitability in 2023, which may be the result of optimized operations or more advantageous positioning on the market. The profitability of SMEC International seems to be rather high regardless of external headwinds, which shows the resilience of the company and its capacity to increase the turnover of assets.

Liquidity Ratio

Current Ratio has continued improving from 1.99 in 2021 up to 2.88 in 2023. This shows that there is an improvement in the solvency of SMEC on short-term liabilities using short-term assets. The growth indicates that the firm has been in a better liquidity status in the last three years, which enables it to manage the financial commitments better and reduce risks associated with changes in the cash flow.

Figure 9: SMEC Int. Current Ratio

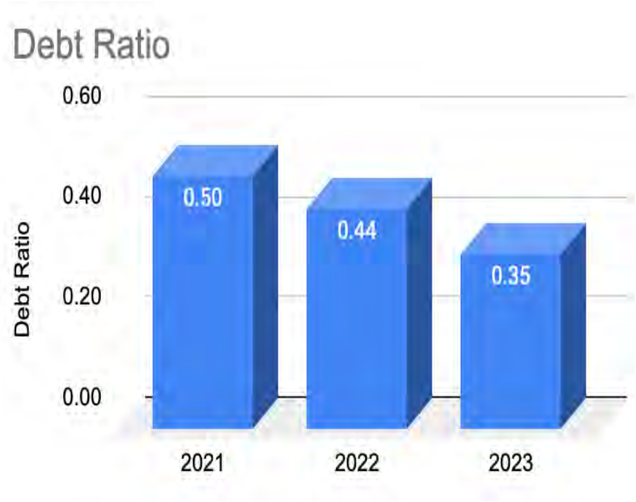

Figure 10: SMEC Int. Debt Ratio

The Debt Ratio is lower than it was in 2021, which was 0.50, and in 2023, it is 0.35. This indicates that SMEC has been able to work out of its debts in financing its operations, which is a good indicator of its financial stability in the long run. A smaller debt ratio would suggest that the company has less financial leverage which means it is drawing more on equity and internal funding to finance its operations which may decrease financial risk.

Debt-to-Equity Ratio has also been reduced by a considerable margin, as the ratio was 1.01 in 2021, but 0.53 in 2023. This decline indicates a significant decline in debt to equity ratio in the capital structure of the company. The lower ratio shows that SMEC has been decreasing its debts against its equity base which is a more conservative financing strategy which minimizes the financial risk of the company.

Figure 11: SMEC Int. Debt-to-Equity Ratio

Turnover Analysis

Asset efficiency came back to various levels, after declining in 2022, in 2023. The decrease of 2022 is consistent with the slow implementation of projects during the disruptions of the post-pandemic situation and the tightening of the budget of the government. The recovery in 2023 is an indication of improved utilization of assets, which may be related to the acceleration in the infrastructure projects of the public-private partnership and foreign-assisted programs (e.g., ADB, World Bank-funded infrastructure projects with the strong involvement of SMEC). The recovery suggests that SMEC optimized its asset core more effectively in 2023, although the sector is facing wider uncertainties.

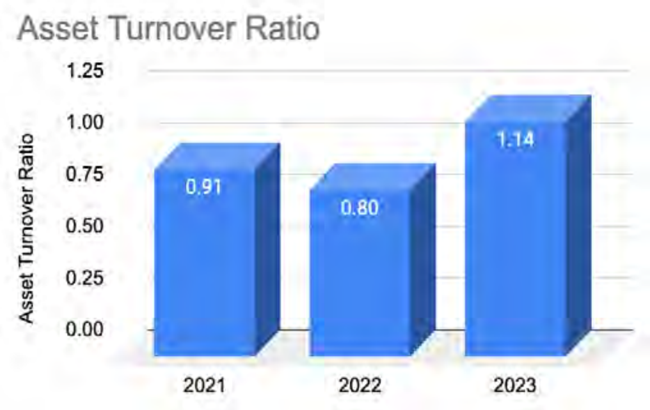

Figure 12: SMEC Int. Asset Turnover Ratio

Figure 13: SMEC Int. Inventory Turnover Ratio

The inventory turnover ratio decreased slightly to 0.14 in the year 2022 as compared to 0.15 in the year 2021, which means that there was a slight decrease in the inventory turnover. Nevertheless, the growth to 0.24 in 2023 indicates that SMEC had better management of their inventory, which may be because of a better plan and adjustment of operations to respond to supply chain pressures, and inflationary costs. It is important to note that this increase indicates that the company has been able to address the issue of operational inefficiency and streamline its inventory operations in 2023, leading to a better financial performance.

2.5.2 Accounting Practices

SMEC International follows internationally accepted practices of accounting so as to provide transparency and consistency in both its financial reporting. The company has adhered to the International Financial Reporting Standards (IFRS) particularly the accounting of lease, which refers to the IFRS 16 standard requiring the right-of-use assets and lease liabilities to appear on the balance sheet. This standard will ensure SMEC recognizes all the short-term and long-term leased assets and the future lease commitments are recognized. Its financial statements are highly audited by KPMG, which is one of the major international audit and assurance companies, and therefore, the financial reporting of the company is in tandem with the international reporting standards and presents stakeholders with the necessary information that is correct and reliable. This is an effective audit procedure in handling corporate governance and financial integrity standards at SMEC.

2.6 Operations Management and Information System Practices

SMEC International Pty Information Management System	
Microsoft Teams	For daily communication
Microsoft Outlook	Mails
Share point	For data-sharing such as project progress update, man-month update and time schedule update this software is used.
Engage	To engage with our international office, to build strong international connection and engagement this platform is used as SMEC social media.
One drive	Internal Data Sharing
Cybereason	Data protected security. Used to protect the data. Protect data from security breaches.
Workday	For Recruitment Process and it is used from job requisition till employment agreement.

2.7 Industry and Competitive Analysis

2.7.1 Porter's Five Forces Analysis

Figure 14: Porter's Five Forces of SMEC Int.

1. **Threat of New Entrants**
   a. The risk of new entrants is medium.
   b. Infrastructure and technology are expensive to be deployed.
   c. Despite the existence of the barriers, smaller players locally can venture into the market as long as they can fit into the government project or niches.
2. **Bargaining Power of Suppliers**
   a. The supplier bargaining power is high.
   b. The demands of equipment and materials of high quality and specialization require dependence on international suppliers, especially when it comes to a project in infrastructure and civil engineering.
3. **Bargaining Power of Buyers**
   a. The bargaining power of buyers is medium to high.
   b. They can pick among various consultancy firms and this compels SMEC to stay competitive with regard to pricing and services offered.
   c. The engineering consultancy services are dominated by the government, and big corporations whose terms can be dictated.

   d. Budget constraints and politics play a major role in development of public projects which include infrastructure and urban development.

4. **Threat of Substitute Services**
   a. The threat of substitutes is medium.
   b. Technological improvement provides substitutes to the traditional consultancy, although the long-time experience and reputation of SMEC in highly complicated engineering projects offers some security.

5. **Industry Rivalry**
   a. Industry rivalry is high
   b. It faces a stiff competition with the local engineering consultancy firms and the international players in Bangladesh who include Nippon Koei, AECOM, and DDC among others.
   c. The developing need for infrastructure and development projects results into a greater number of consultancy firms in the market increasing the difficulty of getting large scale projects.
   d. Contesting both on price and service differentiation forcing SMEC to be innovative and ensure good relations with important clients such as government agencies and companies.

2.7.2 SWOT Analysis

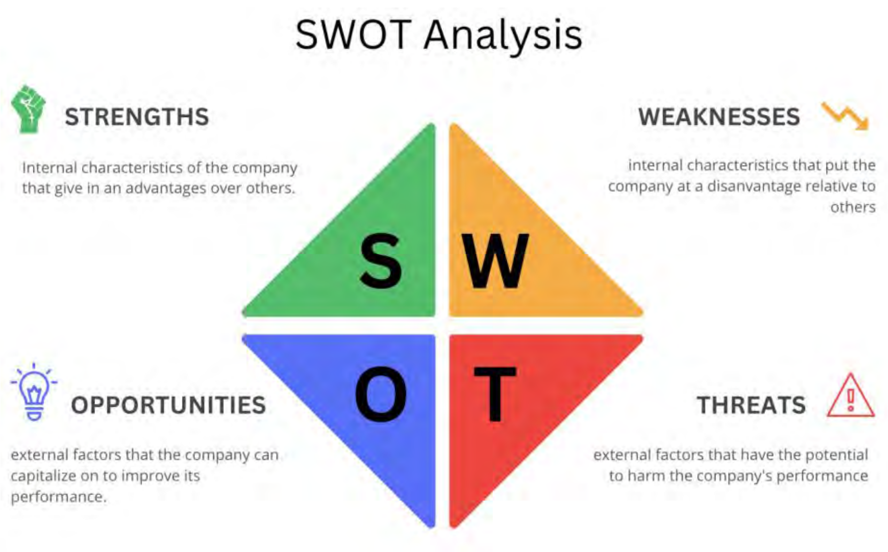

Figure 15: SWOT Analysis of SMEC Int.

Strengths:

- Good presence across 40+ countries across the globe. Besides, ACE Consultant Ltd. is a local partner of SMEC International Pty Ltd. Being one of the branches of SMEC International Pty Ltd, and being under the Surbana Jurong Group (a global urban, infrastructure and managed services consulting firm) ACE Consultants Ltd enjoys the benefits of international experience, global reputation, and finances. The sovereign fund is owned by Temasek Holdings, which is the sovereign wealth fund of Singapore, which increases the level of trust and credibility among its clients and governments.
- Experienced in a few significant projects in Bangladesh as a Lead Team such as "Padma Multipurpose Bridge Project (PMBP), Construction of Single Line Dual Guage Railway Track between Dohazari and Cox Bazar via Ramu and Ramu between Myanmar and Gundum near Myanmar.
- SMEC Bangladesh is very robust in undertaking development projects by multilateral agencies such as ADB, World Bank, JICA, etc. Its experience encompasses roads, bridges, power and energy infrastructure, and water resource management which are major areas of the national development plans of Bangladesh.
- Provides multidisciplinary services in planning, design, feasibility studies, environmental analysis, implementation of the project, and monitoring of the project. Integrated service

approach enables it to bid on various types of projects contributing to the stability in revenues.

Weaknesses

- As a subsidiary, some strategic decisions depend on approvals from regional or global headquarters, which can slow responsiveness to local market changes. Limited flexibility in financial or operational autonomy at the country office level.
- A significant share of SMEC's projects in Bangladesh are tied to funding from international financial institutions such as JICA, ADB AND World Bank. Any disruptions in aid, policy shifts, or donor withdrawal can negatively impact the project pipeline.
- Limited Brand Recognition among the General Public while well-known in government and donor circles, the SMEC brand lacks visibility among private sector clients and the general public in Bangladesh. May face challenges in expanding into new sectors like private real estate consultancy.

Opportunities

- The government is actively promoting Public-Private Partnerships in infrastructure development. SMEC can leverage its international experience to play a key advisory role in structuring and managing PPP projects.
- As climate resilience and sustainable development gain priority, SMEC can provide expertise in climate-smart infrastructure, renewable energy, and disaster resilient design since providing sustainable engineering and position solutions is the core objective of the company.

Threats

- One can find local companies and foreign rivals such as DDC, Systra and Nippon Koei (NK) also involved in donor-funded projects. Fair competition can be influenced by price undercutting and lobbying.
- The bureaucratic red tape in a project and change in government policies can also be a great contributor to timelines and profitability of an organization. Even properly organized projects can fail because of systematic inefficiencies.
- Premise on foreign exchange and economic stability that results in depreciation of the BDT or appreciation of the AUD, USD and SGD can influence the revenue flow of the foreign-funded projects. Project operation costs may be affected by inflation or fluctuating currencies.

2.8 Summary and Conclusion

A general profile of SMEC International Pty Ltd with a focus on its historical course, the organizational structure, and values. ACE Consultants Ltd. has been integrated into SMEC making it stronger in its operations both locally and internationally, which has improved its strengths in major infrastructural projects. Another issue highlighted in the chapter was the efforts of SMEC to achieve sustainability by its CSR program, including the Winter Blanket Drive and the Greater Dhaka Sustainable Urban Transport Project. Moreover, the participative leadership style in SMEC helps in developing a collaborative workplace atmosphere which adds to the enhancement of communication and productivity. The good governance system in the company makes it financially transparent and ethical in its operations. In general, the international scope, focus on innovation, and sustainability of activities make SMEC one of the most important players in the engineering consultancy.

Chapter 3: Financial Challenges faced by SMEC International & Strategies to mitigate them

3.1 Introduction

This chapter deals with financial issues of SMEC International, in terms of project delays, cost overruns and late payments. These problems are of a significant concern in massive infrastructure projects, which tend to interrupt the cash flow and financial stability of the company. Late payments, especially those made by clients, increase liquidity issues and negatively affect the efficiency of the operation. Equally, cost overruns, which are usually caused by unforeseen complexities, inflations and bad planning, put extra pressure on financial resources. This chapter discusses the causes and effects of such challenges, but also evaluates the measures that SMEC International has put in place to curb the effects and enhance financial management practices in future projects.

3.1.1 Background and Problem Statement

Financial misfortunes remain a constant issue in mega projects involving infrastructure where their effect may be felt in a critical way on the implementation of the project and the overall stability of the organisation. SMEC International is a leading international engineering consultancy that is also in a highly competitive environment where financial resource economy is essential in maintaining the continuity of operations. Other major financial issues facing the firm include project delays that when accompanied by delayed remuneration and increased costs lead to significant disruptions in the cash flow. Even though these obstacles are pervasive throughout the industry, they are even more pronounced in the case of organisations like SMEC International that are highly dependent on payments that are dependent on time and massive, trans-boundary projects that are marked by complex financial interactions.

Delay in the project, be it due to extrinsic factors (e.g., regulatory changes, site factors) or intrinsic factors (e.g., poor resource management, inefficient planning) is a major cause of fiscal instability. As realised in interviews with the finance department at SMEC International, late payments significantly hamper the ability of the organisation to meet operations expenditures, and thus influence resources allocation and appropriate procurement of resources on time. These delays cause a cyclical crisis where cash inflow caused by completed work does not align with financial requirements and thus liquidity is put under strain as well as the continuance of the firm to fund ancillary projects.

Another salient problem is cost overruns, which are as a result of unexpected complexity of the project, inflationary pressures and unstable material prices. On projects that exceed their budget estimates, funds have to be repurposed and this further drains financial resources and creates delays in other projects being run simultaneously. This, combined with poor liquidity and reliance on external funding, adds to the strain on the financial position, thus making it impossible to handle its portfolio of projects efficiently by SMEC International.

Therefore, an in-depth understanding of the underlying causes and the consequences of such financial problems is necessary in order to come up with effective mitigation measures. This chapter will look at the challenges faced by SMEC International and how the strategies have been implemented to overcome such challenges hence leading to increased financial stability and better project implementation in future.

3.1.2 Objective of the Study

The main goal of Chapter 3 is to analytically discuss the financial problems SMEC International face with special reference to project delays, cost overruns and delays of payments. The paper aims at examining the consequences of these issues to the financial stability of the firm, its performance and its survival. The chapter will assess the financial implications of project delays with a focus given to the cash-flow impact, liquidity limitations, and the resultant increase of the cost of borrowing. The report shall also examine the mitigation measures undertaken by SMEC International such as cost benefit analyses, use of resource calendars and adoption of ERP systems. The chapter will help optimize the financial management practices of SMEC International by generating a financial impact, as well as critically evaluating the effectiveness of these strategies in future projects.

3.1.3 Significance of the Study

The economic sustainability of SMEC International is crucial to retaining its competitiveness and reputation in the international framework of the engineering consultancy business. The frequent issues of delays in project completion, cost increase, and arrears in payment have a negative impact on the profitability of the business and its ability to maintain operations in the multiple projects that are running simultaneously. Through an evaluation of the financial consequences of these barriers, the current work aims at clarifying the particular financial dangers that the organization is facing. It also strives to implement a systematic model of optimising risk management procedures and financial planning in upcoming work thus strengthening the ability of SMEC in the face of financial instability and protecting its economic sustainability.

3.1.4 Scope of the Study

This paper will look at the financial issues facing SMEC International especially with reference to the large scale infrastructure projects. It evaluates the effects of project delays, cost increases, and payment delays on SMEC in terms of liquidity and cash flow and the impact of the project on its execution. The study includes interview information of the key individuals in the finance department of SMEC, which is supplemented with secondary financial information, thus clarifying the extent and the effects of these obstacles on the firms operation. The analysis will involve the last three years taking into consideration the macroeconomic environment of Bangladesh, such as inflation and currency changes, to show which external factors further increase such problems. However, the short internship duration (three months) and inability to access sensitive data, could also have limited the ability of the study to conduct a more detailed analysis.

3.2 Methodology

3.2.1 Research Design and Approach

This study follows a qualitative approach in investigating the financial issues that SMEC International is confronted by and specifically on the delays in projects, delays in payments and cost increase. To explore these problems, semi-structured interviews were carried out with the key personnel in SMEC International, that is, the staff dealing with finance and project management. Thematic analysis was used to analyze the responses and the findings further supported by secondary data sources, such as research papers, blogs, and journals. This two-fold method will yield a complete insight into the dynamics of financial performance and management strategies of SMEC.

3.2.2. Data Collection

The study used two main sources of data:

Interviews: Semi-structured interviews were to be carried out on professionals in Finance and Project Management fields at SMEC International. The interviewee's information are as given below:

- **Finance Department:** Md. Azam Khan
  Position: Senior Manager, Finance
- **PMS Department:** Habibatur Rahman Iffat
  Position: Assistant Manager, PMS

The interview questions sought to investigate the reasons of financial problems, project delays, cost overrun, and payment delays and how they can be handled. Transcription of the interviews was done followed by the analysis of the responses to identify common themes.

The following areas were put in the interview questions:

- Reasons and causes of project delays, late payments, and cost overruns.
- The effect of these problems on the financial wellbeing of the organization.
- Financial stress causes, including internal and external.
- Specific solutions applied by SMEC to handle financial risks.
- The use of government policies and administrative changes in financing projects.

Secondary Sources: For secondary data 15 conference paper, research paper, blog, & book were acquired to supplement the interview results and confirm them. These sources were a theoretical and empirical base of comprehending the general tendencies, challenges, and best practice of financial management in the infrastructure business.

3.3 Findings

3.3.1 Impact of Project Delays

Late delivery of projects, particularly due to delay in payments by clients was also found to be a big financial problem to SMEC Int. According to an interviewee in the finance department, late payments usually create cash flow problems to the company and it becomes hard to sustain resource distribution and sustain the work without any issue. By way of illustration, payments that are time based are especially problematic since they cause a continuing shortage of cash, which interferes with the operations and acquisition of resources. This observation highlights the effect of late payouts on the normal financial circulation of a project, which generates cash flow difficulties in the short term. The situation is worsened by the fact that time-based payment systems require delays, which lead to a long-term lack of money, which will not allow the company to sustain operational costs and ensure the availability of the required resources to continue working on the project.

Moreover, project delays will cause serious liquidity constraints, which will require SMEC Int to use its financial resources to service several projects. This has not only an influence on the ability of the company to have a steady work schedule and ability to procure the required materials and equipment. Late payments, especially milestone payments also make managing money more difficult. Late payments reduce the supply of subcontractors and other project equipment within the timeline; this has a direct impact on the firm in terms of delivering the results of the project on time. These cash flow interruptions have a backwash effect and make it impossible to make other financial payments and slow down the progress of the whole project.

These findings of the interview are in line with the literature available today on the effects of project delays on financial management and allocation of resources. Doloi (2013) established that delays in construction projects are a significant cause of financial inefficiency in the construction projects especially when clients fail to give timely approval. These delays have an impact on cash inflows and procurement with disruption to operations that in most cases necessitates the acquisition of extra funds to meet temporary liquidity issues. In addition, this is supported by the research by ActiveCollab (2021), which has found poor management of the site, insufficient planning, and slow approval of clients as major reasons for delays, which inevitably result in higher costs and disruptions in the cash flow. In the case of SMEC Int, delayed payments and project delays prevent any continuity in the operations, not to mention that they overburden the financial resources of the company in the long-term perspective of financial stability.

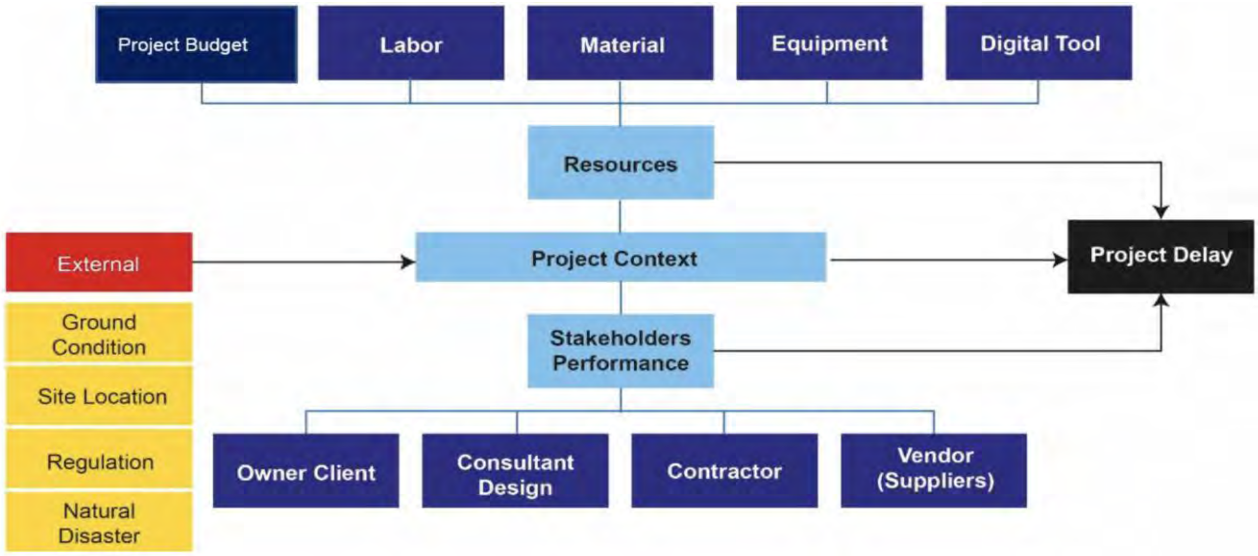

Figure 16: Flowchart on Factors Affecting of Project Delays

The flowchart helps in showing how different internal and external issues cause project delays. The timeline of the project may be disrupted by external factors that include ground conditions, location of the site, regulations and natural disasters. In the internal environment, such areas as resource management, project budget, labor, materials, equipment, and digital tools also play an important role in continuing the progress. These factors play into the project setting where the ineffective management or unexpected circumstances may cause delays. Besides, the output of the major stakeholders, which include the owner, consultant, contractor, and the vendors, influences the project timelines directly. Any delays in these areas be it due to shortage of resources or inefficiency by the stakeholders, eventually results in overall project delays; this shows how closely related these contributing factors are.

3.3.2 Impact of Cost Overruns

Overruns are common among the large scale infrastructure projects and cost overruns involve important financial consequences to the companies such as SMEC International (Tawfek & Bera, 2018). The interviews conducted with the key staff of SMEC indicated that one of the biggest challenges the company encounters is cost overruns. Such overruns cause a disruption of the cash flow, resulting in liquidity problems, poor financial capabilities, and finally, time delays in projects. Cost overruns have the most significant effect especially in cases where there are unexpected costs and available budgets cannot accommodate the extra costs (Mohammad, 2025). According to the interviews, we have to resettle funds on other projects when the costs are higher than the budget or postpone acquisition of necessary resources. This does not only limit the process of the current project but also puts a burden on our operations as a whole. The relationship between cost overruns and cash flow problems that is directly related to fines highlights the need to have proper financial management and planning to reduce their frequency.

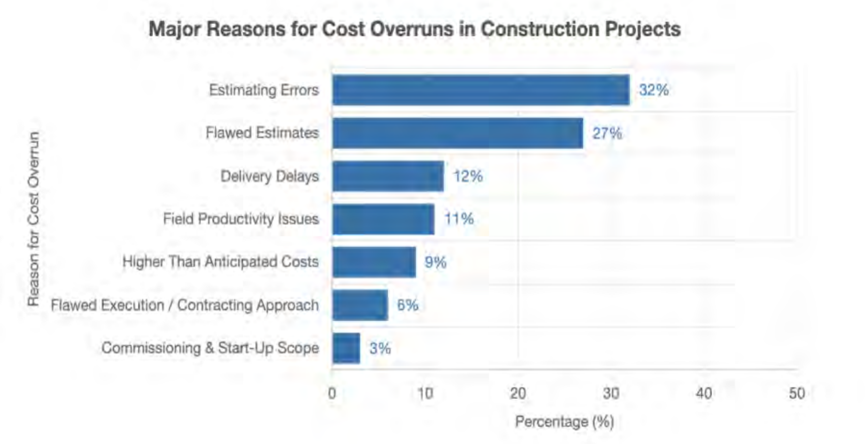

Figure 17: Reasons for Cost Overruns

Source: Contimod Website

As seen in the chart, poor estimation is the main cause of cost overheads in construction projects. The largest contributor which is estimated errors with the error reduction being 32% is the next followed by the flawed estimates with 27. These two factors are combined to constitute significant 59 per cent of the cost overruns. Other important factors are operational issues, which include delivery delays (12 percent) and field productivity (11 percent), making a total of 23 percent. 9% of the overruns are caused by unexpected costs, including increased costs compared to the anticipated costs. The impact of improper implementation and contracting strategies is comparatively significant at 6% and the least significant impact is on the issues of commissioning and start-up scope with only 3%. Hence, most of the cost-overruns might be resolved to inaccurate estimation and planning and the operational and execution related issues provide secondary challenges (Mohammad, 2025).

3.3.2.1 The Financial Consequences of Cost Overruns

Poor planning, change in design, unexpected complexities of the project and inflation of the material costs are some of the factors that usually cause cost overruns (Doloi, 2013). The interviews revealed that cost overruns usually compel SMEC to change its cash flow by redistributing funds among various projects interrupting the seamless running of all the projects in progress. Such a redistribution of finances decreases the capacity of the company to meet their current operating expenses and it becomes hard to sustain the momentum of the project and work within the time schedule. When the resources are at full capacity, suppliers are not paid in time, machinery is delayed and sourcing of materials is delayed which causes inefficiencies in every corner of the board.

The effect on the working capital is one of the main elements of the cost overrun as it is needed in daily operations. The working capital, which is computed as the current assets minus the current liabilities, will allow a company to meet its short-term liabilities and to operate without any interruption. When there are overruns in costs, working capital is minimized and this presents the business with a scenario where it is difficult to fulfill its financial commitments. According to one of the interviewees in the finance department, unexpected costs usually cause problems in cash flows, and it is hard to fulfill the financial commitments and ensure proper running of operations in various projects. This decline in the working capital has a direct impact on the capacity to acquire the required resources like equipment and materials thus having an impact on the capacity of the business to operate.

3.3.2.2 Impact on Financial Liquidity

Cost overruns have dire effects on financial liquidity, which is used to determine the ease at which assets can be turned into cash. Liquidity plays a very important role in making sure that a firm is in a position to fulfill its short term expenses which include payment of sub-contractors, acquiring materials and also paying the salary. In cases of cost overruns in projects, in particular large-scale ones, the capacity of SMEC International to ensure adequate liquidity is becoming more problematic. This is more objectionable when the payment is made at a later date or in less installments than expected hence negative cash flow. When the liquidity is reduced due to cost overruns, they tend to resort to external financing, which in this case is short-term loans which further increases the financial burden of the company (Gupta, 2025). This also increases the cash flow problem and may put the firm in a volatile financial situation.

The high cost of borrowing is one of the significant impacts of liquidity constraints. SMEC International may have to borrow in the short term using short-term loans or lines of credit in order to meet the immediate costs incurred as a result of cost overruns. Although this would temporarily eliminate the liquidity crisis, it adds the extra cost of borrowing and thus puts more pressure on the company financially (Gupta, 2025). Debt servicing-interest payments on the debts- is a financial responsibility that competes with the operational funds. This has a cyclical effect of diverting the financial resources at SMEC International to the repayment of debts and leaving less money to carry out the projects.

3.3.3 Impact of Payment Delays

Delays in payment is one of the major financial problems of SMEC International, particularly in the infrastructure development of large scale infrastructure projects. Any delays in payments made to clients have a domino effect on the financial system of the company. Cash flow which is essential in the continuity of the daily operation is strained leading to inefficiencies, interruptions of operations and inability to take care of short term liabilities like procurement and wages (Hobbs, 2025). As one of the interviewees in the finance department pointed out:

The fact is that delayed payments can make the company have problems with cash flow, and it is challenging to keep the resources distribution and proceed with the work effectively. Payments in terms of time are especially troublesome since they lead to a continuous cash shortfall, which affects operations and acquisition of resources.

This slow flow of payments makes SMEC International experience liquidity issues in which cash based on the client payments does not keep up with the current expenditures of the company. Lack of timely payments results in SMEC being unable to purchase required resources and compensate subcontractors, as well as running its own internal business, and this has a severe impact on the organization, imposing a huge financial burden.

3.3.3.1 Time Value of Money and Impact on Cash Flow

One of the most important financial concepts that is directly impacted by late payments is the Time Value of Money (TVM). According to TVM, money today is more valuable than the same value of money tomorrow because of its earning potential. Late payments imply that SMEC International will not be able to spend the money at the point of its greatest demand. This will decrease the worth of the postponed payment because the company will not have the chance of investing or carrying out working capital (Woods, 2023).

It has caused a lot of disorientation in the cash flow management of SMEC International because of delayed payments by clients. According to Enshassi and Abuhamra (2014), this type of delay makes companies turn to other financing methods, which raises the cost of capital. Such dependence on outside finance not only increases the cost of finances but also limits the company to invest back into other lucrative projects thus limiting growth prospects. The interest rate climate is also high in Bangladesh, which adds to the financial pressure and impacts on the profitability of the project and the survival of business in general.

3.3.3.2 Net Present Value (NPV) and Inflation Impact

Net Present Value (NPV) is a simple concept in the field of project finance that is utilized to determine the profitability of an investment or a project. NPV is used to calculate the present value of future cash flows, which is discounted at some suitable rate to indicate the opportunity cost of capital. The greater delay in acquiring client payment by SMEC International, the less value its payment is in the present day terms.

The economic slowdown, client spending reduction, and tightened credit conditions also affect the company during economic down-turn periods, like a recession. According to one paper by Alam and Rahman (2021), a recession increases financial instability and consequently, postpones payment even further and contributes to the liquidity status of firms in Bangladesh, including SMEC International. The problem of inflation is also a major challenge to the construction industry, such as SMEC International, and this can also accentuate the impact of late payment. Inflation causes the cost of materials, labor, and equipment to rise and in most cases, leads to cost overruns when they have not been properly factored in project budgets. Delayed payments also put additional pressure on cash flow so that companies have to raise their funding sources, which may be expensive capital. Such an amalgamation of increased expenses and financial liability may impair the capability of a company to re-invest the money into other lucrative projects which may impact on the financial stability of the company in the long run (Musarat & Alaloul, 2020).

In the context of SMEC, this implies that despite the fact that the payments will be received eventually, their value, factoring in the inflation and economic conditions, will be lower than expected, which will have a detrimental effect on profitability and cash flow. This reduces the NPV of the project rendering it less appealing to the investor and further limiting the capacity of SMEC to make returns.

This is pushed by the effects of inflation and the economy in Bangladesh like recession. Inflation destroys the buying capacity of future payments and it becomes harder and harder to project budgets and profitability of SMEC. This inflationary effect lowers the real value of undervalued payments, lowering the profitability of the projects SMEC is currently undertaking.

Along with TVM and NPV, the late payments generate financial ripple effects in the operations of SMEC International. With the company struggling to maintain its operations because of the liquidity problems caused by late payments, it will be increasingly dependent on outside financing. The necessity to borrow money at elevated interest rates in the times of inflation adds to the financial load, which is reflected in the loss of profitability and management of cash flows.

3.3.4 Mitigation Strategies to overcome these Financial Challenges

1. **Cost-Benefit Analysis (CBA)**

   The Cost-Benefit Analysis (CBA) refers to a financial tool of decision-making that is used to assess the possible benefits of a project against the cost of the project. CBA assists project managers to establish whether the project is worth venturing into by comparing the estimated financial returns with the expenditures on the project (ActiveCollab, 2025). This is the most useful analysis in cases of budget overruns. In case of unnecessary expenses, it is possible to prove additional funding with references to CBA, which will show the financial benefits in the long-term perspective of the project completion and the expenses. It makes a possibility to objectively evaluate the financial feasibility and gives the evidence to justify the decision to attract more funds (ActiveCollab, 2025).

2. **Effective Payment Conditions including Fines:** SMEC International also insists on clarification of the terms of payment at the initial stages of the projects. This approach includes:
   - **Payment Schedule:** An established schedule on when the payments are to be made and they are typically based on certain milestones of the project or a certain level of completion. Payments are made according to project advancement hence both the contractor and client know when to make payments.
   - **Late payment penalty:** To motivate the payment processes, the SMEC International has introduced a penalty clause, according to which in case of failure to make the required payments within the agreed time, a penalty can be imposed on the amount

per day (1 percent). This will make the client feel that he or she is encouraged to pay on time and the project will be able to sustain itself financially.

- **Grace Periods:** There are grace periods of 5 days after the due date and it allows clients some time (a brief period) to make their payments without penalties. Subsequent to this the penalties are imposed, which minimize the chances of disruption of cash flows as a result of late payments.

3. Using Resource Calendar

Resource Calendar is a tool that is needed to maintain the availability and workload of employees. In my personal experience (2024), I've seen that resource calendar can enable the project managers to know the status of employees working on the different projects. This monitoring system assists in identifying the effectiveness of every employee and identifying whether their work is worth the company retaining them. Through the analysis of this data, SMEC International can make good decisions on the allocation of resources, and this may result in the minimization of overhead expenses in regard to poorly performing or unneeded employees. This initiative will assist in the effort of optimum utilization of resources and aid in the cost reduction through avoiding unnecessary overhead spending.

4. Earned Value Management (EVM)

Earned Value Management (EVM) is an all rounded project management method which involves comparison of planned progress with the actual output of the project. Evaluating the worth of work done and the cost involved, EVM allows the project managers to keep track of project health and point out any potential cash flow problems at the initial stages (Project Management Institute, 2017). EVM can allow SMEC International to:

- **Detect Early Cash Flow Issues:** EVM gives insights on whether the project is on course or there is a potential of budget overruns. Through the comparison of planned value (PV) and earned value (EV), the project managers are able to identify the variation in the initial plan and make the necessary corrective action (Project Management Institute, 2017).
- **Informed Decision Making:** EVM assists project managers to make informed decisions on whether to change the allocation of resources in the event of cash flow issues, seek extra funds, or to renegotiate payment conditions in order to enhance

liquidity. This also assures a smooth running of the project without high financial hitches (Project Management Institute, 2017).

5. **Develop Contingency Plans**

Another essential step in dealing with unexpected opportunities of risks and financial challenges is the development of contingency plans. In the case of SMEC International, contingency funds are the lubricants used to cushion the effects of the unforeseen delays and cost increment. Such monies are set aside to offset:

- **Uncertain Delays:** Projects can also experience delays because of circumstances that are not under the control of the project like weather, logistics or change in regulations. The use of contingency funds will not derail the project budget due to such delays (England & Moreci, 2012).
- **Cost Escalations:** Increase in costs of materials or a sudden increase in labour costs may strain project finances. Contingency funds represent a risk buffer since the project will proceed without necessarily halting and seeking extra funds in the process. This proactive method will guarantee easier implementation of the project and control of financial resources (England & Moreci, 2012).

6. **Enterprise resource planning (ERP)**

Enterprise resource planning (ERP) systems, often referred to as enterprise resource planning systems, refer to a type of software used in managing small businesses, medium-sized enterprises, and large corporations. The ERP Systems such as SAP, Oracle ERP, and Microsoft Dynamics offer a complete financial and project management system, which will allow SMEC International to simplify the whole invoicing and payment process. The advantages of an ERP system are:

- **Real-Time Invoice Tracking:** ERP systems provide the use of features to help track invoices in real-time once they are created and paid. This integration is useful as it enables the project managers to have a close look at the financial health of the project and the project managers are also sure that payments will be received on time (Calviño, 2024).

- **Complete Financial Management:** These systems do not just keep a track of invoices but also connect them with the general project financial management. This enables successful budgets, expenditures and cash flow management which gives an overall picture of the project finances (Calviño, 2024).
- **Higher Productivity:** ERP systems enable the automation and centralization of financial processes, which include invoice preparation, approvals, and payments, thereby increasing administrative overhead and reducing errors, and thus see to it that project budgets are met and financial risks are avoided (Calviño, 2024).

Through these strategies, SMEC International would easily cope with the financial issues like late payment, cost overruns, project delays that would translate to improved project deliverables and financial soundness.

3.4. Conclusion

Finally, SMEC International has substantial financial issues which are mainly due to project delays, cost overruns and non-payment. These problems have an impact on the cash flow, liquidity, and financial health of the company and put its capacity to effectively run various projects at risk. Nevertheless, through cost benefits analysis, resource calendar, ERP systems and setting of clear payment terms, SMEC has been on the offensive to curb these risks. Regardless of the current difficulties, these strategies offer systematized ways to enhance the financial stability and project implementation that will allow SMEC to undertake the intricacies of big infrastructural projects more effectively and resiliently.

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Appendix

Appendix A: Interview with Engineer PMS

Interviewee: Habibatur Iffat
Position: Assistant Manager
Date of Interview: 25 May, 2025

Q1: What do you think are the main reasons behind project delays, late payments from clients, and cost overruns that create financial pressure for SMEC?

Response: The reasons behind the project delays are multifaceted and depend on several factors. In the case of projects where SMEC acts as consultants for the detailed design and tender assistance phase in a lump-sum contract capacity, the project delays are fundamentally caused by changes in design due to client comments and integration with other projects. Beyond this cause, the bureaucratic and long approval process during payment disbursement has a significant impact on project financials for the Consultant. In the case of Construction Supervision Projects, the cost overruns are primarily caused by the delay in variation approval due to a similar but higher level of bureaucratic process.

Q2: From your experience, are these delays and cost overruns usually caused by internal issues like planning problems or resource shortages, or external factors like delayed client approvals or policy changes?

Response: I have seen that the major impact that causes distinguishable delays in the projects is due to the delayed client decision-making process and approval process.

Q3: When planning project budgets, what do you think leads to cost overruns most often in infrastructure projects?

Response: Cost overruns are directly related to the delay in project delivery, which, as mentioned before, is fundamentally tied to the Client's reluctance in variation approval (in case of supervision projects) and alignment/design approval (in case of design projects).

Q4: How often do clients delay payments in your projects, and what kind of impact does that have on the project's financial flow in daily operations?

Response: Delayed payments from the client have been a recurring issue in several of the projects I've managed. In some cases, the impact was significant enough that we had to continue project operations on a reduced budget. This often led to resource optimization and other difficult decisions. While we managed to maintain deliverable timelines, the quality of output and the team's overall efficiency were inevitably affected.

Q5: In your view, how do different types of payment delays — like milestone-based or time-based payments — affect project activities financially?

Response: In milestone-based projects delayed payments cause disruption in cash flow that subsequently impact the procurement of equipment or delayed payments for the subcontractors in addition to generating a substantial lockup.

For time-based payments, it is more impactful as that can lead to a continuous cash deficiency and to a substantial degree of risk and uncertainty.

Q6: Are there certain points during a project where cash flow feels especially tight or at risk because of these issues?

Response: Yes, during the mobilization period and setting up the offices, while conducting the survey work, having enough cash inflow is important to maintain a smooth kick-off. In addition, during the closure of the project, the cash flow issues can be considered as a high-risk issue to attend to.

Q7: Do changes in government administration or updates in public policy make financial challenges like payment delays or project hold-ups more likely or severe?

Response: Yes, significantly so. The implementation of these projects are tied with the bureaucratic process and changes in policies and administrative processes has a crucial impact on payment delays and project hold-ups.

Q8: Can you share a situation where a political or administrative change clearly affected project funding, payment schedules, or overall progress?

Response: We have recently faced such impacts after the recent July uprising and sudden change in the political scenario of the country.

Q9: Considering these challenges, what steps or systems does SMEC already use to reduce the impact of cost overruns, time delays, and late payments?

Response: The initiatives to overcome these challenges are case sensitive. As a thumb of rule, SMEC maintains risk registers, a strong contract management framework, regular financial planning and forecasting, documentation of delays and a clear communication channel alive with the stakeholders.

Q10: Are there any new tools, strategies, or approaches you think could be introduced to help improve financial planning, manage risks better, or speed up client payments?

Response: With the increased availability of AI tools. I believe further improvement can be made through "what if" analysis for different scenarios, i.e., predictive analytics for risk & cost Forecasting.

Q11: Have you seen any good examples — either at SMEC or in another firm — where financial challenges like these were handled successfully?

Response: Yes, I have seen several good examples of handling financial challenges.

Q12: What lessons from those experiences do you think could help SMEC improve its future project planning and financial strength?

Response: The lessons would be:

- Building strong communication channels with the stakeholders
- Establishing buffer funds for high-risk projects
- Adopting dynamic cash flow forecasting

Q13: Are there any specific project processes or workflows you think could be improved to reduce financial stress during the project cycle?

Response: Yes, an adequate amount of advance payment and contingency budget approved under each project could help improve financial stress.

Q14: What kinds of tools or systems do you use to track project cost and time performance? Do they help with predicting or managing overruns and delays?

Response: Excel, Microsoft Project, and SMEC's internal project planning system.

Appendix B: Interview with Finance Department

Interviewee: Azam Khan
Position: Senior Manager
Date of Interview: 27 May, 2025

Q1: What causes project delays, late payments from clients, and cost overruns which create financial challenges for SMEC?

Response: From my experience and understanding, there are several key factors behind these issues. When it comes to project delays, they can stem from both internal and external causes. Externally, we often see delays due to things like late client approvals, poor site management, or inadequate supervision by the contractor. Design changes—especially in large-scale construction projects—can also significantly affect timelines.

Delayed payments usually occur due to administrative inefficiencies or financial constraints, where clients might be facing funding shortages that slow down disbursements.

As for cost overruns, they're often driven by scope creep, where additional work gets added mid-project without adjusting the budget. Other factors include poor cost projections, weak contract management, and improper risk allocation. On top of that, inflation in material costs and unrealistic timelines can also contribute heavily to overspending.

Q2: Based on your experience, how do things like overdue payments from clients, going over budget, and delays in project delivery affect SMEC's day-to-day cash flow?

Response: Due to delayed delivery, it affects the cash flow of the company. Delay delivery sometimes leads to cost overruns as well. It is affected by delaying vendor payment, employee salary, and sub consultancy fees.

Q3: When you're trying to estimate project costs or manage cash flow, what kinds of problems do these financial constraints usually cause?

Response: Financial constraints can cause delays and inefficiencies in project execution, affecting overall productivity. Insufficient financial resources can hinder the availability of necessary materials, equipment, or personnel.

Q4: How much do changes in government policies or administration affect issues like delayed payments or difficulties in carrying out project work?

Response: Changes in government policies can alter the payment discipline of public entities. Increased delays in public payments can affect private sector liquidity and profits, leading to higher likelihood of bankruptcies and lower economic growth. Delays in payments can cause liquidity constraints for individuals and businesses, affecting their ability to manage expenses and investments.

Q5: Can you think of a time when a political or administrative change had a clear impact on project funding or approval processes?

Response: Yes, in 2024, during the political turmoil, the whole administration changed which eventually impacted the ongoing project. During the interim government period, the scope of the project was changed, which had a clear impact on project funding and approval.

Q6: How do delayed payments and extended project timelines affect the company's expected profits or financial forecasts?

Response: Delayed payments do not affect the revenue of the company; rather, the debtors increase, which elevates the risk of bad debts.
Although sometimes when the clients understand that the project needs extension, the project is extended with cost, and it doesn't affect the profitability of the project.

Q7: Since these financial problems seem to come up often, what systems or strategies does SMEC currently use to deal with or reduce their impact?

Response: Exploring additional income streams which can provide more financial stability. Cut the extra fat and reduce operational costs, etc.

Q8: Are there any tools, strategies, or steps you think could be introduced to help SMEC manage risks related to cost, time, and cash flow more effectively?

Response: The tools and strategies to manage risk related to cost, time, and cash flow are:

- Contracts should be made in such a way where penalties will be charged for late payment.
- EVM (Earned Value Management), Trend Analysis, Reserve Analysis
- Contingency Planning: Embrace a proactive approach by developing robust contingency plans to address potential delays. Allocate buffer time for critical activities, allowing flexibility to accommodate unforeseen challenges. Continuously assess and refine contingency plans throughout the project lifecycle.
- Continuous Monitoring and Reporting
- Risk Register

Q9: Have you seen any good examples at SMEC where similar financial problems were handled successfully?

Response: Yes, I have seen several good examples of handling financial challenges.

Q10: What key lessons or takeaways from those experiences do you think could help improve how SMEC plans projects or manages its finances in the future?

Response: Efficiently allocating resources based on project priorities and financial constraints can optimize performance and reduce waste. Regularly updating financial forecasts based on current data and trends can provide a clearer picture of future financial health and help in making informed decisions.

Excel sheet of Raw Data

SMEC Financial Outlook