Report On

Sources of Short-term Financing, Their Costs, Challenges and Effectiveness: The Perspective of a Bangladeshi Construction Company - Western Engineering (Pvt.) Ltd.

By

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

Brac Business School Brac University January 13, 2022

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Declaration

It is hereby declared that

- 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.

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Letter of Transmittal

Riyashad Ahmed Assistant Professor, Brac Business School Brac University 66 Mohakhali, Dhaka-1212.

Subject: Submission of internship report on "Sources of Short-term Financing, Their Costs, Challenges and Effectiveness: The Perspective of a Bangladeshi Construction Company - Western Engineering (Pvt.) Ltd".

Dear Sir,

I am very pleased to submit the internship report on "Sources of Short-term Financing, Their Costs, Challenges and Effectiveness: The Perspective of a Bangladeshi Construction Company - Western Engineering (Pvt.) Ltd. that I have prepared under your kind and careful supervision.

This report is the reflection of my learning and experience in Western Engineering (Pvt.) Ltd. during my internship period. In the making of the report, I have tried hard to collect and use the most recent and relevant data so that I can make the report as detailed and useful as possible. It has indeed been a great experience for me to work on the topic of this report. I would like to thank you for giving me the opportunity to work on the topic of the report and supervising me throughout the internship period.

Therefore, I sincerely hope that by acknowledging my hard work and dedication, you would accept the report.

Sincerely yours,



Md. Ismail Hossain ID: 16204011 Brac Business School Brac University January 13, 2022

Non-Disclosure Agreement

This agreement is made and entered into by and between Western Engineering (Pvt.) Ltd. and the undersigned student at Brac University for the commitment of avoiding unapproved disclosure of confidential data of the company.

Masud Rana

Western Engineering (Pvt.) Ltd.

Md. Ismail Hossain

Student

Acknowledgement

First of all, I would like to extend my heartfelt gratitude to all the faculty members of Brac business school and other departments of Brac University from whom I have gained necessary knowledge during the last four years that have helped me complete my responsibilities during my internship period and make and finish this report. I would especially like to thank Riyashad Ahmed sir for his kind and careful supervision during the internship period. I would also like to thank my co-supervisor Saif Hossain sir for staying there for me. I acknowledge my on-site supervisor Mr. Masud Rana for all his support during the internship period. I would also like to acknowledge all the employees of my internship department and other departments of Western Engineering (Pvt.) Ltd. who have helped me by providing important insights into the company that were needed for the completion of this report. I thank all the authors whose articles or books I have reviewed in the literature review process. While making the report, I have also collected information from different internet sources such as websites.

Executive Summary

The internship report has described the internship, the internship organization, and undertaken a research on short-term financing of the internship company named Western Engineering (Pvt.) Ltd. in order to know the effectiveness of the company's short-term financing sources.

The report started with its first chapter titled overview of internship where the internee student, the internship, and on-site supervisor's information; job scopes; student's contribution; student's benefit; and problems faced have been described. Then, in the second chapter of the report called organization part, an overview of the company, its management, marketing, accounting, operations management, and information system practices have been presented. Moreover, using Porter's Five Forces, the industry competitiveness of the organization has been analyzed which found that the level of competition in the company's industry is moderate. Furthermore, the SWOT analysis has also been undertaken in this part of the report that showed the strengths, weaknesses, opportunities, and threats of the company. After that, in the third chapter of the report named project part, a research project has been done to find out the effectiveness of short-term financing sources of Western engineering (Pvt.) Ltd. To achieve its main objective, the research first, started with reviewing the literature where it found that no single study exists on the company on the topic of this research and that no single research considers enough the effects or cost resulting from a short-term financing source's accompanying challenges while evaluating the effectiveness of the source. In the process of filling up this gap, after stating the research objectives, significance, and methodology, the research, in the findings and analysis part, identified 5 internal and 6 external short-term financing sources used by the company. The report found that all the 5 internal sources do not have any interest costs and all the 6 external sources have different interest costs among which accruals has a highest charge of 60% per annum and banker's acceptance has the least charge of 3.5% per annum. As a result, when the effectiveness of the sources is evaluated from only interest cost perspective then all the internal sources are equally effective and all the external sources are effective to different degrees for the company where the banker's acceptance is the most effective and the accruals is the least effective external source. After that, the paper found that the company faces various challenges when financing from its different short-term financing sources and the challenges are related to: the use, characteristics, consistency, and loan size capacity of the sources; and financing application processing time taken by the sources etc. The research found that the internal sources become effective to different degrees instead of being equally effective when their accompanying challenges are considered and when the effects or costs resulting from the accompanying challenges of the external sources are added with their normal interest costs then the degrees of effectiveness of the sources change from what they used to be when only interest costs were considered and the bank loan becomes the most effective source replacing the banker's acceptance and the accruals remains the least effective external source for the company.

Additionally, the research also found that not all the items of accruals are cost free rather most of the items of accruals would cost a firm if it pays late and thus, the firm can, to a notable or useful extent, control accruals by paying late until a tolerable or an acceptable or allowable point with late fees.

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List of Acronyms

WEL	Western Engineering (Pvt.) Ltd.
Pvt	Private
Ltd	Limited
HR	Human Resource
EFinance	Electronic Finance
ID	Identity
NBFIs	Non-Bank Financial Institutions

Chapter 1: Overview of Internship

1.1 Student Information

Myself Md. Ismail Hossain, bearing ID: 16204011, a BBA student at Brac Business School, Brac University. I have done my major in Finance and minor in Marketing. I have prepared this internship report as a part of the requirement for my BBA degree.

1.2 Internship Information

1.2.1 Period, Company Name, Department/ Division, Address

The name of the company I have worked for is "Western Engineering (Pvt.) Ltd." Its address is: TCB Bhaban (10th floor), 1 Karwan Bazar, Dhaka 1215. The period of my internship at the company was from August 16, 2021 to November 15, 2021 (3 months). I worked in the Accounts department of the company.

1.2.2 Internship Company Supervisor's Information

The name of my on-site supervisor is Masud Rana. He is the Additional Chief Executive in Finance & Accounts Division of the company. I have completed my 3 months internship work at the company under his careful supervision.

1.2.3 Job Scope - Job Description/ Duties/ Responsibilities

As I worked in the Accounts Department of the company, all my responsibilities were related to the work of an Accountant. My job responsibilities at the company were as follows:

- Entering different payments of site offices or projects from vouchers into Tally software
- Releasing different bills of site offices or projects
- Checking and balancing receipt & payment reports of head office with the receipt & payment reports of site offices.
- Communicating with site offices' accountants
- Coordinating with banking department
- Helping the supervisor with other Accounting related works.

1.3 Internship Outcomes

1.3.1 Student's contribution to the company

During my internship period at the company, the company was about to shift to use SAP software from using Tally software for accounting practices. For this reason, it needed to finish its entire accounts related work very quickly with accuracy. In this regard, I helped the supervisor as well as the Additional Chief Executive of the finance and accounts division achieve this goal of a quick and accurate shift to the SAP software by performing my responsibilities as stated above which were part of the goal. Moreover, I communicated with different employees of my department and other departments of the company and shared my latest institutional learning with them. Furthermore, I contributed to create a new young and energetic environment in my department as well as in the company.

1.3.2 Benefits to the student

The benefits I realized after completing my 3 months' work in the company are as follows:

- Had an opportunity to use or test my institutional learning or knowledge in real life work
- Saw my long institutional learning as well as accounting practices in action
- Learned practical works of Accounting and Finance
- Got familiar with professional life
- Developed different habits of professional life
- Experienced company work culture or environment by being a part of it
- Got experience of working with employees from diverse background
- Realized additional directions of how to cope with people from diverse background
- Got connected with professional people

1.3.3 Problems/ Difficulties faced during the internship period

The problems I faced while working at the company are as follows:

No session to introduce the company and work: No introduction or orientation session was arranged by the company to introduce interns with the company and the work as well as responsibilities of the interns. As a result, I felt a bit unfamiliar, at least at the beginning with the systems of my department as well as the company and was unclear about my responsibilities.

Lack of discipline in leading: Some employees other than the one under whom I was working were directly coming to me to have their work done by me. They should have come to me via my co-supervisor under whose direct supervision I was working. Because, being led under multiple people simultaneously, creates indiscipline and misunderstandings.

Work schedule/ work-life balance: The work schedule of the company is 6 days a week from 9:30am to 5:30pm. On top of that, I had to spend about 3 to 4 hours on the road while commuting to and from the office. Thus, this made balancing work-life a bit difficult. As a result, I could hardly get time to work on the internship report.

Data collection: Since employees used to be busy with their work, it became a little difficult to collect data from them for the internship report.

1.3.4 Recommendations to the company on future internships

From my internship experience with the company, I would like to give it the following recommendations to improve the learning and experience of future interns and their contribution to the company:

- Arrange an introduction or orientation session with interns at the beginning of their work in order to introduce them with the company and their responsibilities using a power point presentation.
- Make sure that an intern is being led by one person in order to maintain discipline and avoid misunderstanding.
- Since the interns have to simultaneously prepare the internship report while working at the company, and taking the question of work-life balance into account, it is preferable that they work 5 days a week instead of 6 days.

Chapter 2: Organization Part

2.1 Introduction

This particular chapter of the report is all about the company Western Engineering (Pvt.) Ltd. on which the report has been prepared. The chapter starts with presenting an overview of the company where its vision, mission, management, functional divisions and departments etc. have been introduced. After that, the chapter shows practices of different functional departments of the company such as management practice, marketing practice, accounting practice, operations management and information system practice. Moreover, the chapter 2 analyses Porter's Five Forces to know the competitiveness in the WEL's industry. Further, in order to know the strengths, weaknesses, opportunities, and threats of the WEL, the organization chapter undertakes SWOT analysis as well. Then, the chapter summarizes the part by providing concluding remarks about it. Finally, the chapter ends while providing some recommendations.

2.2 Overview of the Company

2.2.1 Background

Western Engineering (Pvt.) Ltd. was established in 1998 with a view to making significant contributions in nation building especially in the hydraulic construction sector. It is a private limited construction/ contractor company headquartered at Kawran Bazar, Dhaka that mainly constructs hydraulic structures, and water control structures i. e. switch gate dam, concrete blocks' dam. It also works for highway construction, river dredging etc. Moreover, the company does business with solar power and jute related products as well. Currently, the company has 1772 employees. Most of the projects of the company are government plans. Hence, most of the working partners of the company are also different government organizations. So far, the company has completed 66 different projects. At present, it is working on 48 projects. According to the company, environmental, economic, and social sustainability are always in the core of all its activities. In line with that, the company uses modern equipment from different countries like the USA, Japan, the UK, Germany, and the Netherlands etc. in all their projects. So far, it has used 581 different types of equipment in its various projects. As stated by the company, it has been awarded for its recognition of quality performance.

2.2.2 Vision

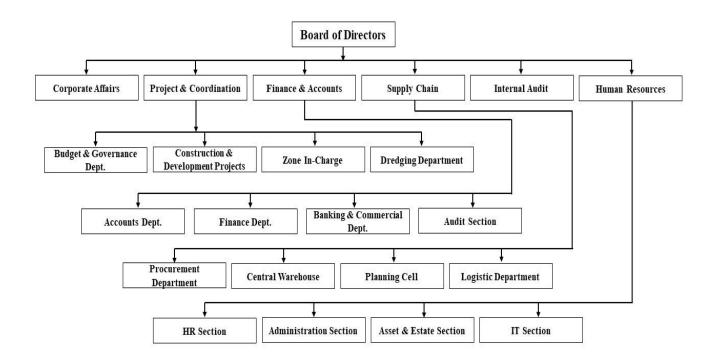
Western Engineering (Pvt.) Ltd. is being driven "to reach the zenith of the engineering development works with the philosophy of sustainable approach".

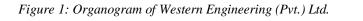
2.2.3 Mission

- On time delivery of projects
- Quality works
- Committed to a greener and cleaner environment.
- Friendly work environment through open communication and with mutual trust

2.2.4 Organogram

The following is the organogram designed by the company.





Source: http://www.westernengineeringbd.com/management-2/#top

2.2.5 Divisions, Departments and Sections of the WEL

2.2.5.1 Project and Coordination

Budget and Governance Department

This particular department under budget and coordination of the company is mainly responsible for preparing the budgets for and governing the budgets related activities of its various project works. For that, the department uses different budgeting approaches to estimate the probable costs of various project works of the company.

Zone In-Charge

The zone in-charge of a particular project zone is mainly responsible for handling administrative functions such as coordinating his/ her zone's works. The projects of the company are divided into several zones in order to make works more effective, fast.

Construction and Development Projects

This particular department of the company is at the center of all its departments as well the company because this is the department that gives physical shape to all its efforts by implementing its projects.

Dredging Department

The Dredging Department is responsible for all kinds of dredging works at different projects of the company. The department mainly works in the river dredging related projects of the company. For the dredging works, the company has different equipment brought from different countries.

2.2.5.2 Supply Chain

Planning Cell

The planning cell of the supply chain is there to plan all the necessary goods of different projects of the company. The cell's main duty is to estimate all the required raw materials or inputs for various projects of the company.

Procurement Department

This department's work is to buy all the necessary inputs for various project works of the WEL. So, the department is engaged in the buying process of the company. To do its buying works, the

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department first gets the buying list from the Planning Cell and then gets necessary funds from the Finance and Accounts.

Central Warehouse

This is the place where all the raw materials or inputs of various projects of the company are kept. The central warehouse not only preserves the input materials but also keeps track of them and keeps informing the Planning Cell and the Procurement Department about their latest state.

Logistic Department

The work of this department is to move the unfinished materials from the points of buying to the points of work via the warehouse. The department has to move the materials efficiently and effectively.

2.2.5.3 Finance and Accounts

Finance Department

The main responsibilities of this department are: preparing and reporting financial performance reports of the WEL and other companies in order to know the financial condition of the WEL and the other companies, valuing securities of different companies, and estimating the risks and returns related to different investment proposals. Therefore, the main tasks of the department are analytical.

Banking and Commercial Department

All the work of this department is with banks. Talking to banks, negotiating, managing loans, paying interests, and repaying the principal loan amounts etc. are the major responsibilities of the department. The department tries to manage bank loans efficiently and effectively.

Accounts Department

Performing the tasks of accounting – recording transactions with journals, posting to general ledger, trial balancing, preparing financial statements etc. is the main responsibility of the department. The department uses Tally and SAP software for their work.

2.2.5.5 Internal Audit

The main responsibilities of this particular department are to check whether appropriate rules and regulations were followed while practicing accounting, if there is any mistake in any part of the accounting works, if ethics and morality are being practiced by the company employees etc.

2.2.5.6 Human Resources

HR Section

The works of this section are to recruit, select, train and develop, make performance appraisal systems, make compensation systems etc. The section follows different methods and uses various tools in order to successfully complete their tasks.

Administrative Section

All the administrative tasks of the company are done by this section. Tasks like looking after the office time maintenance records employees, granting leave to employees, adjusting employee salaries, preparing and publishing different notices etc. are regularly done by this section.

Asset and Estate Section

This section looks after all the different types of assets of the company. The company places this particular section under the Human resources. Taking care of the assets of the company is the prime responsibility of the section.

IT Section

The IT section makes sure that employees of the company are being able to properly access and utilize the IT facilities of the company. For that, it works to have the employees using computers with the latest different software installed in them. It also makes high speed Wi-Fi available for all. Besides, maintenance of the IT hardware assets of the company too falls under the section's responsibility. The company placed this section under the Human Resources.

2.2.5.7 Corporate Affairs

The corporate affairs office of the company is responsible for maintaining communications and relations with internal and different external entities or stakeholders. Maintaining Public relations, government relations, investor relations, community relations are the prime tasks of the office.

2.2.6 Management

Table 1: Management of Western Engineering (Pvt.) Ltd.

Name	Designation
Nargis Ahmed	Chairman
Bashir Ahmed	Managing Director
Md. Sharawar Zaman Dhali	Deputy Managing Director
Md. Nagir Ahmed Apurbo	Director
Brig. Gen. Md. Zahedur Rahman, BGBMS,	Chief of Project & Coordination
ndc, psc (Retd.)	
S.M. Masud Ul Azim	Chief Supply Chain Officer
Mashfique Mashud Khan	Chief Operating Officer (Jute & Textile)
Lt. Col. Md. Ziaul Hassan, psc Engrs. (Retd.)	Chief Engineer (Civil)
Md. Siddiqur Rahman	Chief Engineer (Civil)

2.2.7 Working Partners

The following organizations are the notable working partners of Western Engineering (Pvt.) Ltd. Most of the working partners of the company are government organizations.



Figure 2: Working Partners of Western Engineering (Pvt.) Ltd.

2.2.8 Projects

2.2.8.1 Completed Projects

Since its establishment, the WEL has completed a total number of 66 projects. Some of the notable ones from these completed projects are listed below.

- ✓ Rampal Thermal Power Plant
- ✓ Cold storage construction task in Barisal
- ✓ Musapur closure construction project
- ✓ Retired embankment construction work of Jamuna river in Bogra
- ✓ Rubber dam construction work over Manikchari river, Cox's Bazar
- ✓ Drainage cum irrigation pump house building project at Talimnagar
- ✓ Noakhali LGED construction task

- ✓ Development work at Cox's Bazar Airport
- \checkmark Canal excavation and development task along the sides of Purbachal link road
- ✓ Jamuna river bank protection work in Manikganj
- ✓ Goshinga-Raja Bari road upgrading work in Gazipur
- ✓ Land development work at Rampal Thermal Power Plant
- ✓ Charfession pourasava area protection work from Meghna river, Bhola
- ✓ Bhairab river re-excavation work in Meherpur
- ✓ Padma river bank protection work at Kuthibari
- ✓ Operation theater equipment supply and installation at Sheikh Hasina National Institute.
- ✓ Electric motor and submersible pump supply at BADC projects

Source: http://www.westernengineeringbd.com/project-completed/#top

2.2.8.2 Ongoing Projects

Currently, the company is working with its 48 ongoing projects. Some of these running projects are listed below.

- > Earth Protection and Embankment building tasks, Paira
- > Embankment building work at Kohelia Power Plant
- Feni-Noakhali national highway construction project
- Flood Control work in Noakhali
- ➢ Gazaria thermal power plant land development task
- > Land Development work at Matarbari Coal Fired Power Plant
- > Navigability and improvement work from Pakshi river to Mongla
- > Pabna-Naogaon-Dinajpur-Panchagarh river route dredging project
- Pre-Payment Meters supply and installation work in Savar, Gazipur, Narsingdi, and Mymensingh
- > Purbachal New Town project in Gazipur
- Ramgoti and Komolnagar protection work from the erosion of Meghna river in Lakshmipur
- River Flood Control project at Bakkhali
- > Sheikh Hasina Specialized Jute Textile Mill construction work in Jamalpur
- > Sheikh Hasina Textile College construction work in Jamalpur

- > Sirajganj BSCIC industrial park land development work
- > Slope and river bank protection project at Tazumuddin, Bhola

Source: http://www.westernengineeringbd.com/our-ongoing-projects/

2.2.9 Equipment

As the WEL is a construction company, it has to use different types of equipment in order to run its daily project works. Mixer lorry, drum truck, auto block plant, dredger, excavator, generator, forklift, wheel loader, bulldozer, and batching plant are the most used ones. Most of these are from countries like the USA, the Netherlands, the UAE, China, Japan, Germany, the UK, and India. So far, the company has used 581 different types of equipment.

2.2.10 Sister Concerns

The Organizations below are the sister concerns of the WEL.



Figure 3: Sister Concerns of Western Engineering (Pvt.) Ltd.

2.3 Management Practices

2.3.1 Human Resource Management

2.3.1.1 Recruitment Process

After doing personnel planning where **trend analysis of forecasting methods** is mostly used to predict future demand for personnel and the decision whether to recruit from external or internal sources is made, the HR section of the company starts its recruiting process.

In order to recruit from the internal sources, the HR manages promotions for existing employees and uses employee referrals. Hence, the HR section fills the required demand from the internal sources.

When recruiting from external sources, the HR section first, develops proper ad and then circulates this ad using different platforms, channels or medium such as:

- Media
- External referrals
- Internet
 - Company website
 - ➢ Job portals
 - ➢ Social media
 - University career sites

Using the above mediums, the HR section of the WEL tries to make a pool of as many applicants as possible.

3.3.1.2 Selection Process

The selection process of the company starts right after the recruitment process is done. In the selection process, the HR section uses multiple steps of evaluation in order to confirm the best candidates. The steps involved in the evaluation process are as follows:

- Screening out CVs
- Interviewing shortlisted candidates
- Arranging written test during the interview session

After completing the above steps, the best candidates are confirmed or hired.

2.3.1.3 Training and Development Initiatives

For the training and development of the employees, both on the job and off the job trainings are arranged.

On-the-job training: In this method, employees are given training through doing. Here, the employees gradually improve their required skills by doing their work. The HR section of the

company uses this technique of training mostly when transferring employees from one department to another and for interns.

Off-the-job training: Here, the employees of the company are trained with professional expert trainers. This method is used mostly when the company requires its employees to acquire new skills in order to cope with changing time or environment. For instance, the WEL has just finished a training program to make its employees learn to operate the software named SAP which the company plans to replace with Tally software.

2.3.1.4 Performance Appraisal System

In order to decide on promotion, retention, payment etc. and assess the training needs for employees the company appraises performance of its employees using the methods below:

- Alternation Ranking Method
- Paired Comparison Method

Using the above method, the company tries to evaluate its employees' performances and then takes actions thereby.

2.3.1.5 Compensation System

In addition to regular payment, different incentives are also offered to employees of the WEL. The company uses both the following basic approaches to setting its pay rates:

- Market-based approaches
- Job evaluation methods

Using the market-based approaches, the company undertakes surveys to see the market average pay rate for a particular job position and tries to set its pay rates accordingly.

Under the job evaluation method, the company assesses the importance of each job poison to it and then sets pay rates according to that.

2.3.2 Leadership Style

The company uses autocratic leadership style in its decision making processes. Most of the decisions of the company are taken by the higher authority and general employees have very little participation in them. Whatever decisions are taken by the higher authority, the general employees follow them. As a result, an autocratic type of leadership is there in the organization.

2.4 Marketing Practices

Western Engineering (Pvt.) Ltd. is a large construction service provider company. But, the company has no Marketing department. As a result, all the contents under this particular part could not be reviewed. However, from my work experience in the company, I could review and give some insights about the following marketing aspects of the company.

Target Customers

The main target customers of the company are different government organizations such as Bangladesh Water Development Board (BWDB), Bangladesh Inland Water Transport Authority BIWTA), Dockyard and Engineering Works (DEW), Bangladesh Power Development Board (BPDB), Bangladesh Economic Zones Authority (BEZA) etc. Other than these, the Company also targets medium to big sized civil organizations of Bangladesh to construct different building structures such as Dormitories etc.

Marketing Channels

In order to provide its services to customers, the company uses direct and retail channels.

Direct channel: Through this channel, the company directly provides its services to different customers using their own manpower.

Retail channel: Here, what the company does is, it uses other small contractor companies as subcontractors to provide its services to the customers.

Service/ New service development and competitive practices

Services provided by the WEL are:

- Creating dams with concrete blocks
- Building switch gate dams
- Building bridges and highways

- River dredging
- Building different civil structures etc.

According to the company, it competes with its competitors by providing better quality services.

Branding Activities

Although the company has no marketing department, still, some branding activities are there in the company. Branding activities like having pads and diaries with the company logo on them etc. are in place here. And these often make people remember the brand name of the company.

Since the company does not have a Marketing department, information about the contents such as marketing strategy, targeting and positioning strategy, advertising and promotion strategies, critical marketing issues and gaps is not available and hence, the contents could not be reviewed.

2.5 Financial Performance and Accounting Practices

2.5.1 Financial Performance

Since Western Engineering (Pvt.) Ltd. is a private limited company, the financial statements of the company are not shared with everyone. Thus, it was not possible to access the company's financial statements. As a result, the task of financial performance evaluation of the company using ratio analysis and other methods could not be done.

2.5.2 Accounting Practice

Core Accounting Principles

Core accounting principles as stated in GAAP such as the cost principle, revenue recognition principle, full disclosure principle, matching principle etc. are followed by the WEL. Under the finance and accounts division, the company has its accounts department that is devoted to practice accounting by following its core principles.

Method of Accounting

Accrual basis of accounting is followed in the WEL. In line with that, the company records its accounting transactions when they actually occur instead of recording them when cash flow occurs.

The Accounting Cycle

The Accounting department of the WEL follows all the steps of the accounting cycle when practicing accounting in the department. The steps of the accounting cycle such as identifying transactions, recording the transactions as journal entries, preparing general ledger, preparing unadjusted trial balance, making adjusting entries, preparing adjusted trial balance, preparing financial statements, and closing the books, are all carefully practiced in the accounting department of the company.

Depreciation Method

Among the four methods of depreciation such as straight-line depreciation, declining balance depreciation, sum-of-the-years' digits depreciation, and units of production depreciation, the company uses the second one which is the declining balance depreciation method.

Accounting Disclosures

Additional information or attachments, or notes about activities that significantly impact the financial statements or outcomes of the company are attached to the financial statements of the company. So, accounting disclosure is practiced in the company.

2.6 Operations Management and Information System Practices

2.6.1 Operations Management

For operations management activities such as scheduling, resources allocation, quality management etc. the company mostly relies on cell phone, telephone and email. Additionally, as software, MS Office is used. With the help of these tools, the operations management activities of the company are carried out.

2.6.2 Information System Practices

To collect, process, store, and share data the company uses different tools such as MS, Access, MS Excel, MS Word, MS PowerPoint, Google data studio, Google Analytics, IBM SPSS

Statistics, Tally ERP, SAP, company website etc. In addition to some other tools, the company uses these tools in order to practice information systems in it.

2.7 Industry and Competitive Analysis

2.7.1 Porter's Five Forces Analysis

In order to find out the industry competitiveness of the WEL, Porter's Five Forces Analysis has been undertaken below.

Threat of Substitutes

There are about 4000 construction firms in Bangladesh and 100 of them are capable of executing projects in foreign countries (The Daily Star, 2018). That means a large number of substitutes are available in the industry. Therefore, the threat of substitutes in the industry of the WEL is acute.

Threat of New Entrants

- **Economies of Scale:** The economies of scale is large in the construction industry. So, it is difficult to enter the industry of the WEL according to this particular point.
- Service Differentiation: The service differentiation is high in the construction industry which makes it difficult for new entries.
- **Capital Requirements:** The requirement of capital to enter this industry is high as many heavy equipment are needed for the operations. As a result, it is difficult to enter the industry of the WEL.
- **Cost advantages independent of size:** The cost advantage is high in this industry that makes it difficult to enter the industry.
- Access to distribution channels: Accessing the distribution channels of the construction industry is not that difficult in Bangladesh as the country has a large number of working population. This is why this point makes new entry to the industry easy.
- **Government and legal barriers:** To start a construction firm, especially a company, a good number of legal formalities have to be maintained. Hence, this point makes it difficult to enter the construction industry.

Overall, it is not that easy to enter the industry of the WEL which is the construction industry.

Rivalry among Existing Firms

- Number and balance of competitors: A moderate number of competitors are there in the industry. So, the rivalry among the companies is moderate.
- **Degree of difference between services:** The degree of difference between different services of the construction industry is high. Hence, from this aspect, the rivalry is low here.
- **Growth rate of an industry:** The growth rate of Bangladesh construction market is high. So, according to this point, the rivalry among existing firms of the construction industry is lower.
- Level of fixed costs: The level of fixed costs is lower in the industry. Therefore, from this point of view, the rivalry here is lower.

From the above analysis, it can be said that the rivalry among existing firms in the construction industry of Bangladesh is lower.

Bargaining Power of Suppliers

- **Supplier concentration:** The number of suppliers for the industry is high. As a result, the bargaining power of suppliers is lower here.
- **Switching costs:** The switching cost is lower here. Hence, the bargaining power of suppliers is lower according to this point.
- Attractiveness of substitutes: The attractiveness of substitutes is high in the construction industry. And this makes suppliers' bargaining power low.
- **Threat of forward integration:** There is a less chance that the suppliers of the WEL's industry will enter its industry. For this reason, the bargaining power of the suppliers goes down here.

According to the above analysis, the bargaining power of suppliers to the construction industry in Bangladesh is lower.

Bargaining Power of Buyers

• **Buyer group concentration:** The numbers of buyers of the main services of the WEL is fewer. So, the bargaining power of buyers is higher here.

- **Buyer's cost:** The costs of buyers are higher in this industry. As a result, the buyers' bargaining power is higher as well.
- **Degree of standardization of supplier's services:** The degree of standardization of suppliers' services is mixed in this industry. So, the bargaining powers of buyers are mixed too here.
- Threat of backward integration: There is always a chance that the main buyers of the company will enter the industry of it or give the works to the buyers' own organization. Hence, the WEL's main buyers' bargaining power is higher with this point.

The analysis above shows that the bargaining power of buyers is higher in the construction industry of Bangladesh.

To sum up, the level of competition in the WEL's industry, which is the construction industry, is medium.

2.7.2 SWOT Analysis

Table 2: SWOT analysis on Western Engineering (Pvt.) Ltd.

Strengths	Weaknesses
 Long experience of working in its industry Big number of modern and good quality equipment Effective link with buyers Good ability to gain work tenders Modern and good quality office facilities Training employees to make them cope with new facilities 	 Lack of skilled personnel Lack of sound company culture Unattractive salary structure Rental head office
Opportunities	Threats
 Extending business by providing other type of services of its industry as well Bangladesh is a fast developing country that will keep generating more demand for construction works 	 Chances of getting relationships with main buyers bad Chances of being unsuccessful securing work tenders Might struggle getting skilled personnel because of unattractive salary structure Lack of skilled personnel may lead to poor quality output Poor work life balance of employees because of lengthy work schedule can hamper employees' output quality

2.8 Summary and Conclusions

After starting its journey in 1998, Western Engineering (Pvt.) Ltd. is now a company of 1772 employees. The company has so far completed 66 different projects and is currently working with some 48 projects. In its organizational structure, the company has different divisions under which various departments and sections are functional. There are 9 members with different designations in the management of the company. Most of the working partners or customers of the company are different government organizations. In its HR practice, the company recruits personnel from internal and external sources after doing the personnel planning by using the trend analysis of forecasting methods. The WEL uses multiple evaluation processes such as

screening CVs, written exams, interviews to select its required candidates. To develop employees' skills, the company provides them with both on-the-job and off-the-job training. Alternation ranking method and paired comparison method are used to appraise the employees' performances. Then market-based approaches and job evaluation methods are used to determine the company's compensations. The WEL organizational leadership style is an autocratic one. When it comes to accounting practices, the WEL follows all the accounting core principles by GAAP and all the steps in the accounting cycle. The accrual basis of accounting is followed here. For depreciation, the declining balance depreciation method is in place here. Accounting disclosure is too practiced by the company. In operations management, the company mostly relies on cell phone, telephone, and email in order to manage its operations. Various software tools such as Tally ERP, MS Office, SAP etc. are in place here to practice the Management Information System. From Porter's Five Forces Analysis, it observed that the level of competition in the WEL's industry is moderate. Finally, the SWOT analysis showed that with different strengths such as a big number of modern equipment, the company at the same time does have some weaknesses like lack of skilled personnel as well and with some opportunities, it has some threats too. However, it is found that the company does not have a marketing department in it. Moreover, it is also seen that the company being a private limited one does not share its financial statements with all.

2.9 Recommendations

From the above reviews and analyses, I have the following recommendations for the WEL:

- Should at least have a Marketing section if not a department
- Should increase focus on civil works beside government projects
- Should ensure employee participation in decision making processes
- Should improve salary structure a bit to attract more skilled candidates
- Should focus on improving company culture
- Should focus on work life balance issues of the employees

Chapter 3: Project Part

3.1 Introduction

In order to run a company, the most important thing without which it cannot continue is perhaps the money. A company, from time to time, needs financing with different terms such as long term and short-term to carry on its businesses. Usually, a long-term financing or loan is used by a company to finance the buying of its permanent properties or assets such as buildings, equipment etc. and a short-term financing or loan is used to finance the daily operations of the company. Managing the short-term financing or working capital of a company is very important for the company since without it, the daily operations of the company will be stuck. Therefore, In order to smoothly run a company's daily operations, short-term financing or working capital financing is one of the most important tasks for the company. And, a proper management of short-term financings is very crucial because the financings have to be made on time and from efficient sources. As a consequence, this project part of the report is going to undertake a research project on short-term financing of the company Western Engineering (Pvt.) Ltd.

The main objective of the research is to find out the degree of effectiveness of each of the shortterm financing sources of the WEL. So far, no single study exists in the body of literature on the company on the topic of this research which is short-term financing. Moreover, it has also been observed while reviewing literature that no single study has incorporated enough the costs or effects resulting from a short-term financing source's accompanying challenges while evaluating the effectiveness of that source. For this reason, it is the purpose of the research to fill up these gaps.

It is very important for the WEL to incorporate the costs that result from the company's shortterm financing sources' accompanying challenges with the sources' interest costs because evaluating the effectiveness of the company's short-term financing sources from only interest costs perspective will not give the actual view. For instance, a source can have a relatively less interest rate than another source but it might not be as useful to the company as the other source which would make the other source with higher interest rate more effective for the company than the source with lesser interest rate. This is very important not only for the WEL but also for other companies. Hence, by presenting how a company can evaluate the effectiveness or degree of effectiveness of its short-term financing sources more accurately by adding the costs resulting from the sources' accompanying challenges with the sources' interest costs, the research tries to add new understanding in the research field.

In order to achieve the main objective of the research, the project, first of all, starts with reviewing the literature. Then, after stating the broad and specific objectives, significance of the research, and the research methodology, the project identifies the sources of short-term financing of the WEL. After that, the research finds out the interest costs of the sources and evaluates the sources' effectiveness considering only the sources' interest rates or costs. Next, the project presents the accompanying challenges of the sources. From here, after analyzing the challenges, their possible effects or costs are added to or considered with the sources interest rates or costs and a further evaluation is done to present the actual effectiveness of the sources.

3.1.1 Literature Review

Short-term Financing: From the Sources to the Effectiveness

There are a lot of definitions available for the term "short-term financing". Two of such definitions are – "Any financing which a borrower pays off within a shorter repayment period is known as short-term financing. The period is normally under a year. However, Some lenders offer short-term financings whose periods are more than a year" (Wood, 2020). "Short-term financing is the financing needs for a small period of time usually less than a year" (EFinanceManagement, 2021). However, For the purpose of this research, the first one will be used. Businesses use this type of financing to finance their seasonal or cyclical obligations (Brigham & Daves, 2015). Since lenders do less financial examinations of businesses while approving short-term loans, this type of loans can be obtained much faster than long-term loans (Brigham & Daves, 2015).

Sources of short-term financing are the organizations or persons from where short-term credits are taken. An organizational source can be a bank and a personal source can be any person who wants to invest. Generally, there are a variety of sources of short-term financing that offer shortterm credits in different forms. These sources can be categorized into two basic groups such as unsecured sources and secured sources. Trade credits are an example of an unsecured source and commercial banks are an example of a secured source. No collateral is needed while taking short-term credits from unsecured sources but when it comes to taking the credits from secured sources the collateral is needed (Keown el al., 2005). Normally, depending on the sources' costs, borrowers choose their suitable sources or forms.

Usually, the interest rates or expenses are considered as the costs of short-term financing. While lending money, the rate of return which a lender gets or the rate which a borrower pays is an interest rate (Madura, 2015). Normally, at the time of obtaining, the costs of short-term debts are less than long-term credits. Even then, short-term credits are more risky than long-term credits since their interest expenses fluctuate more than the interest expenses of the long-term credits (Brigham & Daves, 2015).

Challenges in short-term financing are the obstacles borrowers face when managing short-term credits. Borrowers of short-term credits face a variety of challenges while obtaining such credits. The borrowers are exposed to different challenges while managing short-term credits from different sources or forms. Such challenges often cost the borrowers.

Effectiveness in short-term financing is the degree of efficiency and convenience that a particular such financing source can bring for the borrower. It is very important for the borrowers to correctly evaluate the effectiveness of short-term financing sources for them and choose the better options. Most of the time, firms do not consider enough the costs that result from the challenges of short-term financing sources. And, this literature review did not find any research that incorporated such costs enough while evaluating the effectiveness of short-term financing sources especially in case the of a construction company.

This is why it is the purpose of this research to evaluate the effectiveness of short-term financing sources of a construction company while incorporating the costs resulting from the sources' challenges.

Short-term Financing in Construction Industry in Bangladesh

Bangladesh is now one of the fastest growing economies in the world (World Bank, 2021; Shah, 2009). For this reason, many different infrastructural projects both in private and government sectors are running in the country. As a result, construction companies of the country are taking different types of financing from different sources in order to run their operations. Huge amounts

of lending are being made to the construction industry especially from the banking sector. Credit to the construction industry was up 20.24% in the year 2018 from a year earlier. Financing in the construction industry of the country will soar in the coming years since many infrastructural projects will be implemented in line with the government's vision to make Bangladesh a developed country by 2041 (The Daily Star, 2019; The Financial Express, 2019).

The Case of the WEPL

Most of the projects of Western Engineering (Pvt.) Ltd. are government projects. Currently, the company is working for many government projects and some private projects. To start and run the projects, the company first needs to invest money from its own fund. This is why it needs different forms of financing from lenders. At present, the lenders, especially the banks, are keenly offering credits to those contractor construction companies who obtain and run government projects. And then, the contractor companies pay back the lenders soon after they get money from the government (The Daily Star, 2019). And this is true for the WEPL as well.

However, No single study has been found on the WEPL on the topic of the research. This is why this study is going to fill this gap.

3.1.2 Objective

Research Question

The main research question of the study is "to what extent is each of the short-term financing sources of Western Engineering (Pvt.) Ltd. effective for it?"

Broad Objective

The broad objective of the research is to evaluate and find out the degree of effectiveness of each of the short-term financing sources of Western Engineering (Pvt.) Ltd.

Specific Objectives

The specific objectives of the research are as follows:

- Identify different short-term financing sources used by the company
- Find out the costs of each of the short-term financing sources of the company
- Identify the challenges involved while financing from each of the short-term financing sources

- Find out the impacts of the challenges of each of the short-term financing sources on the company
- Evaluate the degree of effectiveness of each of the short-term financing sources for the company

3.1.3 Significance

The research will reveal what different short-term financing sources a Bangladeshi construction company uses to finance its short-term financial needs, the costs of the sources, challenges the company faces while financing from these sources, how these challenges impact the company and to what extent these sources are effective for the company.

Therefore, the research will provide an opportunity to the company of the research to recheck and rethink about the effectiveness of its short-term financing sources and take necessary actions thereby.

Moreover, the research can also be helpful for other companies especially construction companies as they would be able to gain knowledge about short-term finance related issues that are going to be presented in the report.

The research can further be helpful for other researchers as they would be able to use it as a source of data for further research on topics similar or related to this research. Additionally, the study would also help students by making them see short-term financing in action.

Finally, there is no single research available on the WEPL on the topic of this study in the body of literature. Hence, this research can be a new addition in the body of literature.

3.2 Methodology

3.2.1 Type of the Research

Based on Nature of Research Question

The research has the characteristics of both descriptive and evaluative research.

Based on Data Collection

Since the research needed to have both qualitative and quantitative data analysis, based on data collection, it is a mixed method research.

Based on Time Horizon

The data were collected only once from relevant sources. Therefore, based on the time horizon, it is a cross-sectional research.

3.2.2 Data Collection Techniques

Research Instrument

Interviews of relevant persons of the company were taken in order to collect necessary data. The type of the interviews was semi-structured and they were individual in person interviews. These interviews are the primary sources of data. Different online sources have also been used to collect further relevant data and these are the secondary sources of data.

Validity and Reliability

The validity and reliability of the study have been ensured by taking the data from valid and reliable sources that are trustable.

3.2.3 Data Analysis Techniques

Qualitative Data Analysis

The qualitative data have been analyzed using relevant financial theories and the thematic analyses are also there.

Quantitative Data Analysis

Appropriate financial formulas and mathematical operations are there to analyze the quantitative data.

3.3 Findings and Analysis

3.3.1 Sources of Short-term Financing of the WEL

3.3.1.1 Internal Sources

Company cash budget: Cash budget is an internal source of short-term financing for the WEL. When preparing the cash budgets, the forecasted collections on sales of services during a certain budget period are allocated against the forecasted costs during that period. And this forecasted collection on service sales becomes a source of short-term financing for the company.

Service sales: To finance expenses other than the expenses projected in the cash budget, service sales revenue in excess of expenses is used as a short-term financing source. This is an internal source too.

Company owner: Another internal source of short-term financing for the company is its owners. When service sales revenue of a certain period cannot cover the expenses of that period or when the financing is needed before the selling of services or service proceeds is received, then the owners of the WEL often invest their money in the company for short-terms. And this is how the owners act as an internal source of short-term financing for the company.

Selling assets: Sometimes, the company sells its liquid assets such as short-term securities or other physical assets in order to finance its short-term needs. Hence, this also works as an internal short-term financing source for the company.

Retained profit: A further source of short-term financing for the company is its retained profit. The company sometimes uses its retained profits to finance its short-term financing needs.

3.3.1.2 External Sources

Bank loan: Small termed bank loans are a very common and important source of short-term financing for the company. The WEL very often takes short-term loans from different banks in the country like The City Bank in order to meet its different small term financing needs.

Loan from non-bank financial Institutions: Another important source of short-term financing for the company is different financial institutions in Bangladesh. The WEL often knocks

different financial institutions like IDLC for short-term loans so that the company can use them in its various short-term expenses.

Banker's acceptance or L/C: Banker's Acceptance is another source of short-term financing for the company. Sometimes, the WEL uses a letter of credit (L/C) when importing something from abroad. This is how the L/C acts as an external source of short-term financing for the company.

Trade credit: It is another most common and important source of short-term financing for the WEL. The company often buys goods from different businesses on account on different terms. This is how trade credit works as an external source of short-term financing for the company.

Accruals: Accruals is again, a most important source of small term financing for the WEL. The WEL is a contractor company that often employs many workers to carry on its different projects' works. The company also has to operate different plants while doing its various projects' tasks. As a result, a big amount of salaries and other bills like electricity bill accrue in each month which the company is supposed pay at the starting of the very next month. In this way, the accruals play its role as a source of external financing for the company.

Third party loan (from individuals): A third party loan or a loan from an individual is the last but not the least source of short-term financing for the WEL. The company sometimes takes small term loans from different individuals such as a random individual investor, a friend of the owner, a relative of the owner etc. on different interest rates.

3.3.2 Costs of the Sources

Table 3: Costs of the short-term financing sources of the WEL

Source	Cost (percentage per annum)	Comment				
Internal Sources						
Company cash budget						
Service sales		All these internal sources do not cost the				
Company owner	N/A	company since it does not have to pay any				
Selling assets		interest for getting funds from these.				
Retained profit						
External Sources		·				
Bank loan		All the banks from which the company take loans charge an interest or a lending rate of				
	9	9%. (Effective interest rate has not been considered since the information about compensating balance is unavailable.)				
Loan from non-bank financial institutions (NBFIs)	14	All the NBFIs the company takes loans from demand an interest rate around 14%.				
Banker's acceptance or L/C	3.5	The LCs cost the company around 3.5%.				
Trade credit	15.57	Most of the trade credits of the WEL are termed as 2.5/30, net 90. (Effective interes rate has not been considered here since it has not been considered for bank loans.)				
Accruals*	60	The company has to pay a 5% extra if it does not pay its electricity bills at the starting of the following month or within the stipulated time.				
Third party loan (from individuals)	15	All the third party individual loans of the WEL cost around 15%.				

* Note: Although the accruals are considered as zero cost financing source, this fact has not been considered here. Because, the company has to pay a 5% extra if it does not pay its electricity bills at the starting of the following month or within a stipulated time or if it delays the payments. Here, it works like the trade credit terms such as, paying electric bill within a certain time will cost 5% less and paying after the time will cost 5% more.

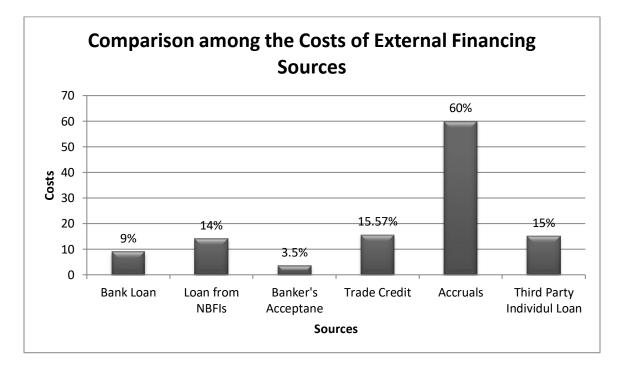
It is also said that firms cannot control the accruals. But to the contrary, here, it is also evident that a firm can, to a notable or useful extent, control accruals by paying late until a tolerable or an acceptable or allowable point with late fees.

Therefore, it can be said that accruals are not always a zero cost financing source and most of the sources or items of accruals do cost if firms wish to pay late. It can further be said that a firm can, to a notable or useful extent, control the accruals.

3.3.4 Effectiveness of the Sources

Internal Sources

If only normal interest rate or cost is considered, which for the time being is considered here in this part that does not take into account the accompanying challenges of the sources then all the internal short-term financing sources of the company are equally effective for the company since none of the sources costs the company or involves any interest payment.



External Sources

Figure 4: Comparison among the costs of different external short-term financing sources of the WEL Again, if only normal cost or interest rate is considered which here in this part, for the time being, is considered that does not take into account the associated challenges of the sources then as shown in the above figure among the 6 used sources, the banker's acceptance is the most effective and the accruals is the least effective external short-term financing source for the company. The other 4 sources fall somewhere between these two sources.

3.3.3 Challenges of the Sources

3.3.3.1 Internal Sources

Company cash budget: If the service sales revenues of the company arrive late or amount of costs exceed the amount estimated in the cash budget by big margins then it becomes problematic for the company.

Service sales: Obtaining work projects, their numbers, and volumes are not always satisfactory which are directly connected to the service sales revenue of the company. Also, as most of the money generated here is allocated in the cash budget and retained profit, enough money is not always left here that can be used to finance short-term financing needs.

Company owner: The challenge involved financing from this source is that there is no consistency here. That means the owners cannot always ensure the required level of funds from their own pocket.

Selling assets: The challenge here is that salable assets do not always exist and if they do then although they are liquid assets in nature but still, there is no surety that they will sell within required time. But still, if the salable assets are there, in most cases, the assets are sold almost readily and the size of the fund derived from here is good.

Retained profit: There is no guaranty that enough profits will always be generated from where financing can be made. Then again, the source is capable of providing short-term financing fund whose size and consistency is better than the service sales and company owner sources.

3.3.3.2 External Sources

Bank loan: The main challenge the company faces when managing loans from banks is the lengthy process of loan sanctioning by the banks. Banks demand many documents such as financial statements, work orders etc. They also require the company to provide collateral. Further, the banks check out the latest credit ratings, transaction history and profile of the

company. After doing all these analyses and completing all legal procedures, only then the banks lend money to the company. As a result, the banks take a lot of time to sanction loans to the company. Another challenge is that the banks sometimes cannot provide the required level of amount or promised level of amount because of liquidity issues.

Loan from non-bank financial institutions: The same challenges like the banks are involved here just the acuteness of the challenges is different. The NBFIs also examine the company but not as deeply as the banks. As a result, they take less time to sanction loans than the banks. Like the banks, the NBFIs too sometimes, cannot meet the company's level of fund requirement or provide their promised level of fund because of the same liquidity issues but the intensity or risk of such failures is more here than the banks.

Banker's acceptance or L/C: It becomes tough to manage an L/C from banks when the company tries to bring costly materials from abroad. Because, in such situations what the banks do is they again examine the related documents and the firm thoroughly which is time consuming and if not satisfied they sometimes refuse the request of the L/Cs. Furthermore, the source can only be used to finance the costs of importing materials.

Trade credit: Since the WEL has good relationships with its suppliers, the company does not face much challenge when financing from this particular source. But still, there are two challenges the company faces here. One is that the source cannot be used to finance cost sources other than the buying of materials and the other one is that not all the materials can be bought using this source, meaning that the company has to buy a good amount of materials on cash as well.

Accruals: The WEL cannot extend the terms of the items of this source much longer. For instance, it can hold the staff salaries for 2 months at best and electricity bills for 3 to 4 months. Moreover, not all types of costs can be financed from here; rather only a few cost sources such as tax, electricity bills etc. can be financed using this source.

Third party loan (from individuals): The quantity and consistency of loans from this source is not always up to the mark. That means it is not always possible to get enough funds from this source. But still, if the fund's use to the company is considered then this source can serve better

than the sources like accruals, banker's acceptance and if the loan collection time is considered then the source can be better than the NBFIs.

3.3.5 Effectiveness and Degree of Effectiveness after Considering the Challenges of the sources related to financing size, consistency, fund managing time, use of fund and characteristics of the sources along with the interest costs or charges

3.3.5.1 Internal Sources

All the 5 internal short-term financing sources of the company are ranked below (1 = most) effective and 5 = least effective) according to their effectiveness or degree of effectiveness to the WEL after considering their accompanying challenges.

1. Company cash budget: The cash budget is the most effective internal short-term financing source for the WEL because among all the 5 internal sources, this particular source provides the biggest portion of funds to the company and the funds here are always readily available as they are estimated and reserved beforehand.

2. *Selling assets:* The company often sells out its various liquid assets such as treasury bills to finance its different working capital or small financing needs. This source is the second most effective internal source for the company because the biggest amount after the company budget source can be derived from here and as the assets are liquid in nature, the fund can almost readily be accessed.

3. *Retained profit:* The retained profit is the third largest internal short-term financing source of the company. And the probability of fund availability here is better than the next two sources and worse than the previous two sources. As a consequence, this is the third most internal effective short-term financing source for the company.

4. *Company owners:* This is the fourth most effective source for the company as the richness of funds and the possibility of getting funds from here is lesser than the above three sources and better than only the service sales source.

5. *Service sales:* This source is the least effective one among the all 5 sources because most of the time, almost all its amount is allocated in the cash budget and retained profit.

3.3.5.2 External Sources

All the 6 external short-term financing sources of the company are ranked below (1 = most) effective and 6 = least effective) according to their effectiveness or degree of effectiveness to the company after considering the effects or adding the costs resulting from their accompanying challenges with normal interest costs or charges.

1. Bank loan: Bank loan is the most effective external short-term financing source for the company because the biggest and single biggest source of costs of the WEL is the salaries and wages of its staff and the bank loan is the main source from which these salaries and wages along with other costs are financed or paid. As a result, this source plays the most important role when it comes to external financing of the company. No other external financing sources of the company is capable of financing this big sized need of funds as effectively as the bank loan because the other sources take more time than the banks to fund such a big amount of money although they take less time than the banks when it comes to smaller sized fund needs.

2. *Trade credit:* The second largest source of costs of the WEL is the purchases of materials by the company. No other external short-term financing sources of the company can finance this cost source as quickly as the trade credit. This source comes at the second position of effectiveness because it cannot finance the salaries and wages and other costs but can finance only the second largest cost source of the company which the materials purchase.

3. *Third party loan (from individuals):* This source is at the third place because if the quickness of fund managing time and the use of the source to the company is compared to the next external sources then this source does better than them. For example, the company can manage more or less the same size of loans from the third parties in a shorter time than taking them from the NBFIs. But, if the loan size is taken into account then the source does worse than the bank loan source and if both loan size and fund collection time is considered then it again does worse than the trade credit source.

4. Loan from non-bank financial institutions (NBFIs): This particular source is in the fourth place because the source cannot provide loans as quickly as the trade credit and the third party loan sources can. Moreover, it also cannot provide loans as big as the bank loan source can within a relatively shorter period of time. But, the use of the source to the company is better than

the next two sources because the fund from this source can be used to finance any of the cost sources of the company which is exactly where the next two sources lack.

5. Banker's acceptance or L/C: Although this source has the least cost of financing (3.5%) among all the 6 external sources, the source can only be used when bringing something from abroad. For this reason, the source is placed under the fifth position of effectiveness.

6. *Accruals:* This source ranks last because only a few cost sources can be financed from here and for a shorter period of time. And the items that cost when taking payment time extension, have big charges such as 60% for electricity bills. Hence, this source ranks last in effectiveness for the WEL among all the 6 external short-term financing sources of the company.

Illustration of impact of financing time (on time or late) on the sources' effectiveness

Now, we have just seen that even after having similar characteristics and greater interest rates, some financing sources among the first four most effective sources as presented above, shown as more effective than the others. The main reason for this is loan or fund or finance managing or raising or gathering time. To understand why, it needs to be seen how fund gathering or raising or managing time from different sources affects the effectiveness of the sources. That means, how managing funds quickly makes a source more effective than another even after having greater interest rate, is going to be illustrated below now.

As mentioned earlier, the WEL is a contractor company that works in different construction projects. As a result, the company holds a big number of staff in each project. The salaries and wages, accommodation, food, and different utility bills of these staffs cost the company greatly. In fact, these staff related costs altogether are the largest cost source among all the company's project works related short-term or working capital costs. Now, if the project works delay or slow down or are stuck because of financing delay then the staffs will have to be kept for additional periods by the company which will increase the costs of the company because all the staff related costs will have to be paid for the additional periods.

In an average level or sized project site of the company, the monthly unavoidable staff related expenses amount to about tk. 600,000. The company can manage a trade credit almost instantly but it takes the company around a month to manage a loan from a NBFI. Now, suppose, if at

some point in a running project, the company has to take a loan amounting to tk. 2,000,000 from a NBFI which it often does to finance its material purchases especially for those materials that it cannot buy on account and at this time, if there is not enough inventory of materials or required items of materials available to carry on works at full pace which too the company sometimes faces, then the work would slow down or might almost stuck for a month (because as mentioned just earlier, it takes the company around a month to manage a loan from a NBFI) but the company would have to bear the tk. 600,000 unavoidable staff related costs of this month. This means, because of the slow work as a consequence of financing delay by the NBFI for a month, if not the entire tk. 600,000 which is a month's unavoidable staff costs but it would cost the company about tk. 300,000 for nothing since the work would not fully progress during this period but the workers would be paid. Now, since the company has to or would ultimately have to bear the useless cost of tk. 300,000 that resulted from the loan delay by the NBFI, when evaluating the effectiveness of the financing source, it should add this amount with the source's interest costs. If it does so then the real cost of the source would be:

Normal interest cost of the loan charged by the NBFI = Tk. 2,000,000 * 14% (as per table 2) = 280,000 Tk. (+) Cost resulting from financing delay by the NBFI = Tk. 280,000 + Tk. 300,000 = 580,000 Tk.

The real cost of financing Tk. 2,000,000 from the NBFI = Tk. 580,000 / Tk. 2,000,000 *100

= 29%

Although, the normal interest cost of taking a loan from a NBFI is around 14% as per the table 2 but when the effects or costs resulting from the loan sanctioning time (around a month) taken by the NBFI are added with the 14% cost then the real or total cost of financing from this source becomes more than double which is 29% as illustrated above. This is one of the main reasons why, even after having greater interest rate (15.57%) than the NBFIs and third party individual loan sources which have 14% and 15% interest rates respectively, the trade credit source has been shown as more effective as the company can manage financing from this source within a lesser time than the other two sources. For the same reason, the third party individual loan source

that has an interest rate of 15% has been shown as more effective than the NBFIs source which has a 14% interest rate. And when it comes to the bank loan source, as mentioned earlier, although the banks take relatively longer times to sanction loans but it takes the company more time to manage a loan or fund from the other 5 sources which is as big as what it usually takes from the banks. Also, the interest rate of the bank loans is 9% which is less than the next three most effective sources. All this makes the bank loan source most effective for the company. Additionally, the time fact does not play an important role for the last two sources when evaluating their effectiveness rather their use to the company does. And as mentioned earlier, because of their limited use to the company, they are the least two effective sources of external short-term financing for the company.

Note: The WEL, in its each project, usually has three types of staff. Some are the company's permanent staff; another portion is daily basis staff, while a further portion is the staff that are contracted to stay with their project or the company until the end of their respective project. The tk. 600,000 unavoidable monthly staff related costs as mentioned in the above illustration, mainly result from the portion of staff that are contracted to stay with their project or the company until the end of the project. Moreover, as per the above illustration, or the impact of the illustration is that the company's profits would shrink or it might see losses in the projects or tenders that it gains on the basis lump-sum contract. But, in cases of the tenders or projects that the company gains on the basis of re-measurable contract or cost-reimbursement, the company would lose its reputation instead of profit losses for late or expensive project delivery. Furthermore, of course the company would show the useless cost of tk. 300,000 as labor cost in its accounting reports. The main thing here is that it should consider or add such costs with interest costs while evaluating the effectiveness of its short-term financing sources. Lastly, only one type of cost that increases because of financing delay which is the staff related cost is shown in the above illustration but there are other costs that also increase because of financing delays such as the rents of different rental vehicles.

Comparison

Table 4: Comparison between effectiveness of external short-term financing sources of the WEL before considering the accompanying challenges of the sources and after considering the challenges

Effectiveness with only normal interest rates			Effectiveness when challenges are added			
Rank		Rank				
1	Banker's acceptance or L/C)	1	Bank loan			
2	Bank loan	2	Trade credit			
3	Loan from non-bank financial institutions (NBFIs)	3	Third party loan (from individuals)			
4	Third party loan (from individuals)	4	Loan from non-bank financial institutions (NBFIs)			
5	Trade credit	5	Banker's acceptance or L/C)			
6	Accruals	6	Accruals			

3.4 Summary and Conclusions

The project has identified that the WEL is currently using 5 internal and 6 external sources to finance its different short-term financing needs. The internal sources do not have any interest costs and the external sources have different interest costs or charges. Among the external sources, accruals has a charge of 60% per annum which is the highest and banker's acceptance charges the least with around 3.5% charge per annum. It is important to mention here that the research has found that not all the items of accruals are cost free rather some accruals items would cost a company if it extends the payment terms just like trade credit terms and a firm can ordinarily to some extent, control accruals by extending payment time or range or term up to a tolerable or an acceptable or allowable point. However, the report has shown that when evaluating the effectiveness of the sources from only interest rate or interest cost perspective then all the internal sources are equally effective for the company since none of them has any interest costs but all the external sources are effective to varying degrees for the company and the banker's acceptance stands as the most effective external source and the accruals positions itself in the least effective source level. The research has found that different internal and external short-term financing sources of the company expose it with various challenges when financing from them. The challenges are related to: the use of the sources to the company, the sources' ability to finance consistently, fund sizes that can be managed from the sources, characteristics of the sources, and time required to manage funds from each source. Different sources expose these

challenges to different degrees. The research has presented that the internal sources become effective to different degrees for the company when their accompanying challenges are considered in the effectiveness evaluation process and when the effects or costs resulting from the accompanying challenges of the external sources are added with their normal interest costs then the degrees of effectiveness of the sources change from what they used to be when only interest costs or interest rates were considered and the bank loan becomes the most effective source replacing the banker's acceptance and the accruals remains the least effective external source for the company. The differences among loan sanctioning or fund releasing or financing application processing times taken by different sources play the main role behind the changing of the external sources' effectiveness after adding the costs resulting from their accompanying challenges with their interest costs. The more time an external source takes to sanction loan or release fund or give fund, the more its effectiveness decreases as the company's work during the loan delayed time does not progress but it has to pay for its staff related expenses for the period. For this reason, when evaluating the effectiveness or degree of effectiveness or costs of a shortterm external financing source, the WEL should add the possible costs that can result from the source's accompanying challenges or more specifically, mainly from the financing application processing time or fund releasing time taken by the source with the source's interest costs. This can be true for other construction or related companies when their situations would match the WEL. And when evaluating the effectiveness of an internal short-term financing source, the company should consider the source's accompanying challenges. This too can be true for other construction or related companies. Additionally, it should also be kept in mind that not all the items of accruals are cost free rather most of the items of accruals would cost a firm if it pays late and hence, the firm can, to a notable or useful extent, control accruals by paying late until a tolerable or an acceptable or allowable point with late fees.

3.5 Recommendations

When evaluating the effectiveness or degree of effectiveness or costs of a short-term external financing source, the WEL or other construction or related companies (when their situations match the WEL) should add the possible costs that can result from the source's accompanying challenges such as financing application processing time or fund releasing time taken by the source with the source's interest cost. And, when evaluating the effectiveness of an internal

short-term financing source, the company or other construction or related companies should consider the source's accompanying challenges.

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Appendices

Appendix A: Trade Credit's Interest Rate Calculation

Credit term: 2.5/30, net 90

Cost of trade credit = $\frac{Discount rate}{1 - Discount rate} \times \frac{365}{Credit period - Discount period}$ = $\frac{0.025}{1 - 0.025} \times \frac{365}{90 - 30}$ = 15.57%

Appendix B: Interview Schedule Interview Questionnaire of the Project Part

- What are the different internal short-term financing sources of the WEL?
- What are the different external short-term financing sources of the WEL?
- Is there any interest cost for the internal sources?
- What is the interest rate or charge of each of the external sources?
- What are the various challenges the company faces while financing from each of the internal sources?
- What are the various challenges the company faces while financing from each of the external sources?

Appendix C: Copy of Research Proposal

Sources of Short-term Financing, Their Costs, Challenges and Effectiveness: The Perspective of a Bangladeshi Construction Company -Western Engineering (Pvt.) Ltd.

Proposed by Md. Ismail Hossain ID: 16204011

Course Code: BUS 400 Course Title: Internship Semester: Summer 2021

> *Supervisor* Riyashad Ahmed Assistant Professor

> *Co-supervisor* Saif Hossain Assistant Professor

Brac Business School

Brac University

Date of Submission: 07th December, 2021

Research Questions

Research Question

The main research question of the study is "to what extent is each of the short-term financing sources of Western Engineering (Pvt.) Ltd. effective for it?"

Broad Objective

The broad objective of the research is to evaluate and find out the degree of effectiveness of each of the short-term financing sources of Western Engineering (Pvt.) Ltd.

Specific Objectives

The specific objectives of the research are as follows:

- Identify different short-term financing sources used by the company
- Find out the costs of each of the short-term financing sources of the company
- Identify the challenges involved while financing from each of the short-term financing sources
- Find out the impacts of the challenges of each of the short-term financing sources on the company
- Evaluate the degree of effectiveness of each of the short-term financing sources for the company

Preliminary Literature Review

Short-term Financing: From the Sources to the Effectiveness

There are a lot of definitions available for the term "short-term financing". Two of such definitions are – "Any financing which a borrower pays off within a shorter repayment period is known as short-term financing. The period is normally under a year. However, Some lenders offer short-term financings whose periods are more than a year" (Wood, 2020). "Short-term financing is the financing needs for a small period of time usually less than a year" (EFinanceManagement, 2021). However, For the purpose of this research, the first one will be used. Businesses use this type of financing to finance their seasonal or cyclical obligations (Brigham & Daves, 2015). Since lenders do less financial examinations of businesses while

approving short-term loans, this type of loans can be obtained much faster than long-term loans (Brigham & Daves, 2015).

Sources of short-term financing are the organizations or persons from where short-term credits are taken. An organizational source can be a bank and a personal source can be any person who wants to invest. Generally, there are a variety of sources of short-term financing that offer short-term credits in different forms. These sources can be categorized into two basic groups such as unsecured sources and secured sources. Trade credits are an example of unsecured sources and commercial banks are an example of secured sources. No collateral is needed while taking short-term credits from unsecured sources but when it comes to taking the credits from secured sources the collateral is needed (Keown el al., 2005). Normally, depending on the sources' costs, borrowers choose their suitable sources or forms.

Usually, the interest rates or expenses are considered as the costs of short-term financing. While lending money, the rate of return which a lender gets or the rate which a borrower pays is an interest rate (Madura, 2015). Normally, at the time of obtaining, the costs of short-term debts are less than long-term credits. Even then, short-term credits are more risky than long-term credits since their interest expenses fluctuate more than the interest expenses of the long-term credits (Brigham & Daves, 2015).

Challenges in short-term financing are the obstacles borrowers face when managing short-term credits. Borrowers of short-term credits face a variety of challenges while obtaining such credits. The borrowers are exposed to different challenges while managing short-term credits from different sources or forms. Such challenges often cost the borrowers.

Effectiveness in short-term financing is the degree of efficiency and convenience that a particular such financing source can bring for the borrower. It is very important for the borrowers to correctly evaluate the effectiveness of short-term financing sources for them and choose the better options. Most of the time, firms do not consider enough the costs that result from the challenges of short-term financing sources. And, this literature review did not find any research that incorporated such costs enough while evaluating the effectiveness of short-term financing sources especially in case of a construction company.

A-4

This is why it is the purpose of this research to evaluate the effectiveness of short-term financing sources of a construction company while incorporating the costs resulting from the sources' challenges.

Short-term Financing in Construction Industry in Bangladesh

Bangladesh is now one of the fastest growing economies in the world (World Bank, 2021; Shah, 2009). For this reason, many different infrastructural projects both in private and government sectors are running in the country. As a result, construction companies of the country are taking different types of financing from different sources in order to run their operations. Huge amounts of lending are being made to the construction industry especially from the banking sector. Credit to the construction industry was up 20.24% in the year 2018 from a year earlier. Financing in the construction industry of the country will soar in the coming years since many infrastructural projects will be implemented in line with the government's vision to make Bangladesh a developed country by 2041 (The Daily Star, 2019; The Financial Express, 2019).

The Case of WEPL

Most of the projects of Western Engineering (Pvt.) Ltd. are government projects. Currently, the company is working for many government projects and some private projects. To start and run the projects, the company first needs to invest money from its own fund. This is why it needs different forms of financing from lenders. At present, the lenders, especially the banks, are keenly offering credits to those contractor construction companies that obtain and run government projects. And then, the contractor companies pay back the lenders soon after they get money from the government (The Daily Star, 2019). And this is true for the WEPL as well.

However, No single study has been found on the WEPL on the topic of the research. This is why this study is going to fill this gap.

Preliminary Methodology

Type of the Research

Based on Nature of Research Question

Based on the nature of the research question, the research is going to have the characteristics of both descriptive and evaluative research.

Based on Data Collection

Since the research will need to have both qualitative and quantitative data analysis, based on data collection, it will be a mixed method research.

Based on Time Horizon

The data will be collected only once from relevant sources. Therefore, based on the time horizon, it will be a cross-sectional research.

Data Collection Techniques

Research Instrument

Interviews of relevant persons of the company will be taken in order to collect necessary data. The type of the interviews will be semi-structured and they will be individual in person interviews. These interviews will be the primary sources of data. We will also use different online sources to collect further relevant data and these sources will be the secondary sources.

Validity and Reliability

The validity and reliability of the study will be ensured by taking the data from valid and reliable sources that are trustable.

Data Analysis Techniques

Qualitative Data Analysis

The qualitative data will be analyzed using relevant financial theories and thematic analysis will also be there.

Quantitative Data Analysis

Appropriate financial formulas and mathematical operations will be there to analyze the quantitative data.

Significance of the Issue

The research will reveal what different short-term financing sources a Bangladeshi construction company uses to finance its short-term financial needs, the costs of the sources, challenges the company faces while financing from these sources, how these challenges impact the company and to what extent these sources are effective for the company.

Therefore, the research will provide an opportunity to the company of the research to recheck and rethink about the effectiveness of its short-term financing sources and take necessary actions thereby.

Moreover, the research can also be helpful for other companies especially construction companies as they would be able to gain knowledge about short-term finance related issues that are going to be presented in the report.

The research can further be helpful for other researchers as they would be able to use it as a source of data for further research on topics similar or related to this research. Additionally, the study would also help students by making them see short-term financing in action.

Finally, there is no single research available on the WEPL on the topic of this study in the body of literature. Hence, this research can be a new addition in the body of literature.

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Appendix

Table A-1: Proposed timeline of the report work

	September		October	November	December				
Task	Week 2	Week 3	Week 4	Week (All 4)	Week (All 4)	Week 1	Week 2	Week 3	Week 4
Choose a Research Topic								-	
Literature Review									
Identify Research Question									
Submit the Proposal									
Data Collection and Interview									
Analyze Data									
Writing Process									
Submit First Draft									
Submit Second Draft									
Submit Final Dissertation									