



**Daffodil**  
*International*  
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# **Performance Evolution of Filament Engineering Ltd (Muspana)**

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## Letter of Transmittal

22th November, 2022

To,

Fatema Nusrat Chowdhury

Assistant Professor

Department of Business Administration

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Daffodil International University

**Subject: Submission of the Internship Report on “Performance Evolution of Filament Engineering Ltd “(Muspana)”.**

Dear Mam,

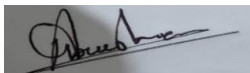
Hope you are doing well by the grace of Allah. It is a great pleasure for me to be preparing the internship report under your supervision on “Performance Evolution of Filament Engineering Ltd “(Muspana)”.

I have tried with the best of my capability to accommodate as much information and tried to comply with the commands as you have given. I attempted my excellent to make this file as a whole lot informatory as possible. I simply consider that it will fulfil your requirement. However surely accept as true with that this document will serve the justification of my internship application.

I am grateful to you for your guidance and kind at every step of my endeavor on this report. I shall be highly obliged, if you kindly take a look and to go through the report and inspect my performance.

The report and all of my efforts will be successful if it can serve as unbiased.

Yours faithfully,



Md. Abu Shama

ID No: 191-11-6097, Batch: 52, BBA Program

Department of Business Administration

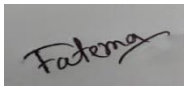
Faculty of business & Entrepreneurship

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## Certificate of Approval

I have the pleasure to certify that Md. Abu Shame, ID: 191-11-6097 is the student of BBA program (Major in Finance) has completed his “Internship Program” entitled “**Performance Evolution of Filament Engineering Limited (FEL)**” with brand name Muspana. Under the supervision as the incomplete achievement for the award of B.B.A degree. He has done this according to my instructions and guidance and given his best effort to make it a good one. I also certify that I have gone through the draft report thoroughly and it is satisfactory to serve the stated purpose. He was found honest, sincere, trusty, hardworking and industrious during the program.

I wish his enrichment and best of luck.



Supervisor

Fatema Nusrat Chowdhury

Assistant Professor

Department of Business Administration

Faculty of Business & Entrepreneurship

Daffodil International University

## Acknowledgement

At first, I would like to express my inner gratitude to almighty God for giving me the caliber and patience to complete the document. I sense happy that I have completed this study within specific duration. Then I would really like to express my gratitude to all of them those who were involved in an indirect way inside the preparation of this document. I make an apology to them whose names that I have now not mentioned and their contribution is highly appreciated through me.

Firstly, I would like to convey my gratitude to my honorable Supervisor Fatema Nusrat Chowdhury, Assistant Professor Department of Business Administration, Faculty of Business & Entrepreneurship, Daffodil International University for her motivation, kind direction, valuable suggestions & advices during my internship period and to prepare this report.

This internship report may never be completed without many annual file, books, articles, web sites, and primary facts.

My gratefulness to the authority of Filament Engineering Ltd. to allow me to complete my internship at their organization. I would like to thanks the Deputy Manager and all the individuals of Filament Engineering Ltd. for their instruction, guidance and co-operation to complete my internship successfully.

Although I face some difficulties while doing this internship cause the environment was new for me but I enjoyed each and every moment of working in as an internee student.

I am pleased for the support and encouragement that I have received from all of my teachers, friends and students of Daffodil International University. I am also thankful to my parents for their support and inspiration.

## **Executive Summary**

Present days technology is everywhere, we using technologies and innovations to our industrial sites also to improve our globe. The technology-based industries we called engineering limited that nowadays also an active financial source for a country and global too. As a technology based financial organization their particular function to communicate amongst folks and correctly works as safeguard amongst them in this age globalization. This type of technology-based companies always needs evolution on their performance to grow and survive to the global market. To manage their performance, they take various kinds of steps. This report is based on Performance Evolution of Filament Engineering Ltd (muspana). Here used both primary and secondary sources of data. Personal observation and consultation with the concerned personnel is key sources of data. Risk is natural in all factors of a business operation, but for engineering and technology-based companies' evolution is most important and also a crucial issue that need to be controlled. Nowadays markets are all about competition and technology is the most unstable products means it needs evolution in every step whether it can cause greater risk.

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## **Chapter One:**

### **Introduction**

## **1.1 Introduction:**

Technology is a gift to the globe. To knowing the performance of an institution which is engineering based, first of all we need to have a proper take a look at engineering sector. Present days engineering is one of the most growing and leading institutions in our nation. Cause we are living in a developing country so, here the product of engineering s is more usable to the customers. It also gives financial coverage and the best economic support in a country's economic system and also an industry always creates many opportunities like more job, which are going to less the rate of unemployment and helping to growth of GDP. As an engineering company (FEL) it should be their primary goal to be at leading position and keep growing everywhere in the Bangladesh in a sound manner with the alternative other engineering companies as a competitor. Current situation Filament engineering limited importing raw materials from abroad and build a quality full product to serve its customer, their well-known products are solar panel, gas-stove, power-converter, lightning protection system etc. In cutting-edge age of science and generation the engineering institutions are everywhere in the world. Most of the time engineering companies are offers their products rather than service and it always plays an essential function to the monetary development of the country. Also engineering institution should preserve or maintain enough growth, research and evolution so that they can survive in a long period of time

## **1.2 Scope of the Study:**

As a student of B.B.A program of Daffodil international university, I have done three months internship from an engineering institution called Filament engineering limited. This report was prepared on my practical learnings at the daily company activities, conceptual enjoy and supervision of my inner guide in addition to my honorable supervisor Fatema Nusrat Chowdhury, Assistant Professor Department of Business Administration Faculty of Business & Entrepreneurship Daffodil International University.

## **1.3 Objectives of the Study:**

The study would focus on the following areas of Filament engineering Limited: operational performance of Filament engineering limited, Procedure for highlight its financial performance of Filament engineering limited, Organizational structures and responsibilities. Objective of the study to the performance evolution of Filament engineering Limited.

#### **1.4 Specific Objective:**

1. To know the operational performance by SWOT analysis.
2. To highlight the performance by using financial ratio analysis, common size income statements, Z-score test income, Dupont analysis of Filament engineering limited.
3. To find out some problems and its recommendation for development of FEL.

#### **1.5 Methodology of the study:**

The report has been prepared on during the period of internship and from where I collect all the necessary information. Which will prepare this report; To give numerical statistics, I used the annual file of 2019/2020/2021 of Filament engineering limited. I have offered my experience, knowledge and findings by the using of different table and charts. To prepare an authentic and informative report I studied all information of the company, its file, official website and other resources that are needed.

#### **1.6 Sources of Data:**

##### **(a)Primary Source:**

- Make conversation with the organization's officers and staffs.
- Different manuals of Filament engineering Limited.
- Personal Observation, while working inside the organization.
- Performance of practical activities.

##### **(b)Secondary Sources:**

I have used different types of secondary data in my research. Sources of secondary information's are as follows:

- Annual report (2019 to 2021) of Filament engineering Limited.
- Different files of FEL.
- Different text books
- Various balance sheet, documents and from web-browsing.

### **1.7 Limitations of the study:**

During composing the paper, I had some limitations also those are not an exception. The limitations of this internship file are given below:

1. Because of limitation of time, we look after just focused and selected items those are highly needed. To continue study in this type of huge paper are need enough deal of time. I don't have sufficient time to study all of, where I only had three months to compose the paper.

2. It is a manufacturing organization also have monetary operations to perform and the institution used to maintain their confidentiality about their precious information.

3. It was very tough to maintain the accuracy of the information. The information that are collected by me, were not being verified.

4. Filament engineering is a non-public business institution, they don't have enough time and could not able to give me actual information.

5. In this report secondary facts are used.

Though there were some limitations, I have given all of my excellent to collect valuable facts and records to compose the report.

**Chapter Two:**  
**Organization Profile of FEL**

## **2.1 Historical Background of FEL:**

Filament Engineering Limited with a brand name MUSPANA was established to electrify a dream of making a technology based, innovation oriented and environment friendly business.

In 2008, some young electrical and electronic engineers passed from BUET, started their own venture in the name of “Filament”. The main purpose to creating this organization is manufacture those technological devices which are imported from abroad but can easily be made in Bangladesh. From 2008 they are working as a local distributor of various electrical & electronic products, biomedical equipment. From 2009, they are also manufacturing and assembling various solar system equipment like solar charge controller, solar street light controller, inverter, battery charger, clean cook stove, LED light etc. Soon it attracts the technology lovers for its different business perspective which never happened earlier in Bangladesh. Filament Engineering Ltd. takes the challenge to become the pathfinder of a new horizon in technology field what never happened earlier in Bangladesh. They’ve invented their own products and after manufacturing in their well-equipped manufacturing plant transport, distribute and sell those to every corner of the country. In manufacturing they firmly keep a thought in mind of generating employment opportunities and socio-economic development. The wide range of world class and innovative products provide the customers a comprehensive selection of choices. Among all the products; especially they have been endowed with IDCOL (Infrastructure Development Company Limited). As a customer centric organization main aim is to satisfy customers by providing them utmost comfort from the end. To confirm it as well as manufacturing innovative environment friendly product also have four service points in Comilla, Sylhet, Chittagong and Dhaka with dedicated teams of highly experienced people. It was the first such unit in the industry and has achieved recognition from a number of multinational and national companies, institutions in the country. Great products, backed by prompt after sales service and as a leading professional firm Filament aims to reach the peak of development.

## 2.2 Profile of FEL:

Name of the Company	Filament Engineering Ltd
Company Type	Limited company by shares
Brand Name	Muspana
Establishment Year	January 02, 2009
Email	md.muspana@gmail.com
Website	www.muspana.com
Facebook Page	www.facebook.com/muspana
Product & Services	Street Light Solution, Lighting Protection system (LPS) Solar and Innovative Electricals, Professional Lights, Modern Cookstoves & Muspana Medico.
Customers	Government, Business Enterprise and Individuals.
Head office:	Filament Engineering Ltd. House 469 (6th Floor), Road 31 Mohakhali DOHS, Dhaka-1206

Table-1: Profile of FEL. Source: Website of FEL.



### 2.3 Management Style:

Inside an organization management style is actually a manager works to meet their goal and for any type of agency or institution control is the most essential resource. Control stand for planning, organizing, staffing, directing and controlling of all kind of economic or non-economic sources of the company.

### 2.4 Products & Services of FEL:

As a customer centric organization Filament Engineering Limited offers premium product and satisfied, hassle free customer service. Best in class products and services along with prompt customer support all over the Bangladesh by carrying its brand value. Products and Services FEL are being used by Top Industries and Government Entities of Bangladesh.

Products & Services
<ul style="list-style-type: none"><li>• Solar PV System Solutions.</li><li>• Streetlight Solutions.</li><li>• Lightning Protection Solutions.</li><li>• EPC Works.</li><li>• Clean Cooking Alliance.</li><li>• Maintenance Service &amp; Repair.</li></ul>

Table-2: Product & service of FEL. Source: Annual report of FEL.

### 2.5 Vision:

The visions of the Filament engineering are given below:

1. Be one of the best manufacturing company in Bangladesh.
2. To bring improved solutions for cooking, streetlight & electricity also to improve the rural areas of Bangladesh.
3. To envision eradicating the energy crisis of Bangladesh through bringing about continuous innovation in renewable energy sources and consumer electronics equipment.
4. Optimum utilization of resources.

## 2.6 Mission:

Filament engineering is creating a brand-value. They are committed to improve the rural lives by reducing the health risks and help lower income groups in the society to help fight for financial solvency by reducing the costs of fuel while mitigating the energy demands for electricity by solar system, cooking in a smart way, streetlight solutions for rural areas. FEL believes in lowering the respiratory problems and lung cancer patients among the underprivileged portion of our society and this will be done by aligning FEL's research and continuous improvement.

## 2.7 Goal of the bank:

To become the leader of the path.

- **Long term goal:** To maximize the wealth of its shareholders.
- **Short term goal:** To accomplish its going project with miniating their reputation and proper earning to perform operational activities.

## 2.8 Financial Performance:

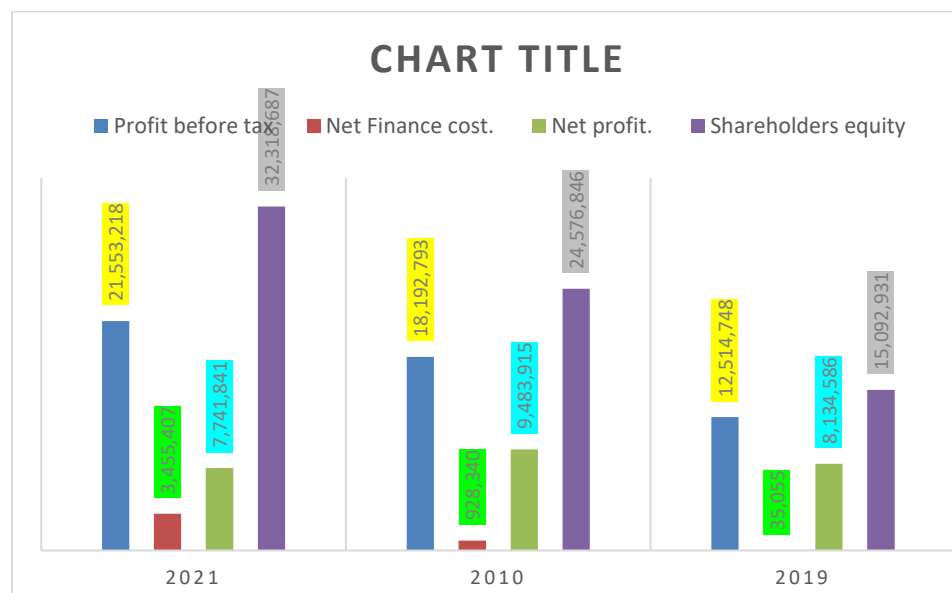


Figure-1: financial performance of FEL. Source: Annual report of FEL.

## 2.9 SWOT Analysis:



Figure-2: SWOT analysis of FEL. Source: Calculated.

## 2.10 Strengths of the FEL:

Filament engineering limited was established to electrify a dream of making technology based, innovation oriented & environment friendly organization. One of their biggest strength is excellent relationship between employee & employer and this is the key reason behind their spectacular growth. Portfolio business are also their strength and their portfolio businesses are Medhakunja School & Academic care, energy equipped with Solar Charge Controller, Economy Inverter, Muspana Clean Cook Stove etc. Energy Conversion, Turnkey Solution, Professional Lighting, Power Generation Distribution & Transmission, IT & IT enabled services, Consultancy, Industrial Automation, & Biomedical Equipment. As it relates to strengths, firm also generate substantially high gross margins from their product and services.

### **2.11 Weakness of the FEL:**

FEL is one of the fast-growing organizations and they don't have that much noticeable weaknesses but they import raw-materials from foreign country to provide quality full product and service to their premium customers. They import their raw-materials through a process called LC, which is a lengthy process and importing cost is also high which could affect its revenues. Though LC or Letter of Credit is the safest payment method for an institution but currency fluctuation could raise its extra costing.

### **2.12 Opportunities of the FEL:**

FEL is mostly service based organization. They believe best in class products and services along with prompt customer support is the key for a great brand. They have already earned their customers loyalty by giving their quality full services so these could be their biggest opportunity to hold this or grab that. Their products and services are being used by top industries and government entities also being used in government project like Padma bridge. Top industries like "Daffodil International University" used their solar panel and on the Padma bridge they supply their one of the finest products LPS (Lightning Protection Solutions).

### **2.13 Threat of the FEL:**

FEL is technology-based organization and there is nothing major that can impact the business or could be consider as threat. The way as an engineering firm like FEL conducting their business, their biggest threat could be the rapidly changing technological landscape.

**Chapter three:**  
**Financial Analysis & Discussions**

### 3.1 Financial Ratio Analysis of FEL:

To measure the performance of an organization financial ratio is the most important and equivalent way. By the using of liquidity, debt and activity ratio help to measure the primary risk. Profitability ratio is using to measure the return but market ratio is using to measure the both risk and return.

For the financial analysis, we need some necessary information to prepare the financial ratio which will help to measure the firm's performance. Here, we will use the 2019-2021 annual reports information of Filament Engineering Limited (FEL) to present financial performance analysis.

#### Last three Years Financial Data Analysis of FEL:

Particulars	2021	2020	2019
Sales	245509959	245066200	231983012
Gross profit	30849612	27717285	25236531
EBIT	24923125	18563932	12514748
Profit before tax	21553218	18192793	12514748
Profit after tax	7741841	9483915	8134586
Shareholder's Equity	32318687	24576846	15092931
Total Assets	120335565	88689582	48612224
Total Current Assets	116705787	84733971	44327202
Total Current Liabilities	30469572	32525129	5988034
Total Liabilities	87993878	64112736	19,327,916
Interest expense	3,369,907	371,139	0

Table-3: financial data analysis. Source: Annual report of FEL.

### 3.2 Profitability Ratios:

In this report I measure the profitability ratios by the use of Common Size Income Statement.

- **Common-Size Income Statements:** Three profitability ratios that can be read directly from the common-size income statement are:
  1. The Gross Profit Margin.
  2. The Operating Profit Margin.
  3. The Net Profit Margin.

#### FEL's Common-Size Income Statements:

Particular	2021	2020	2019
Revenue	100%	100%	100%
(-) Cost of sales	(87.44%)	(88.69%)	(89.13%)
Gross profit:	12.56%	11.31%	10.87%
(+) Other income	0.01%	0.05%	0.01%
(-) Administrative expense	(0.98%)	(1.24%)	(1.70%)
(-) Selling & distribution expense	(2.29%)	(2.89%)	(3.94%)
(+) Foreign exchange (Gain/loss)	0.00%	0.00%	0.00%
Operating profit:	9.30%	7.20%	5.24%
(-) Net Finance cost	(1.40%)	(0.37%)	(0.015%)
Profit before tax:	7.90%	6.83%	5.22%
(-) Income tax expense	(4.75%)	(2.97%)	(1.72%)
Net profit:	3.15%	3.86%	3.50%

Table-4: Common size income statements. Source: Annual report of FEL

**(i) Gross Profit Margin:**

Gross Profit Margin is calculated as follows:

Particular	2021	2020	2019
Gross profit	30849612	27717285	25236531
Sales	245509959	245066200	231983012
Gross profit margin	12.56%	11.31%	10.87%

Table-5: Gross Profit Margin. Source: Annual report of FEL.

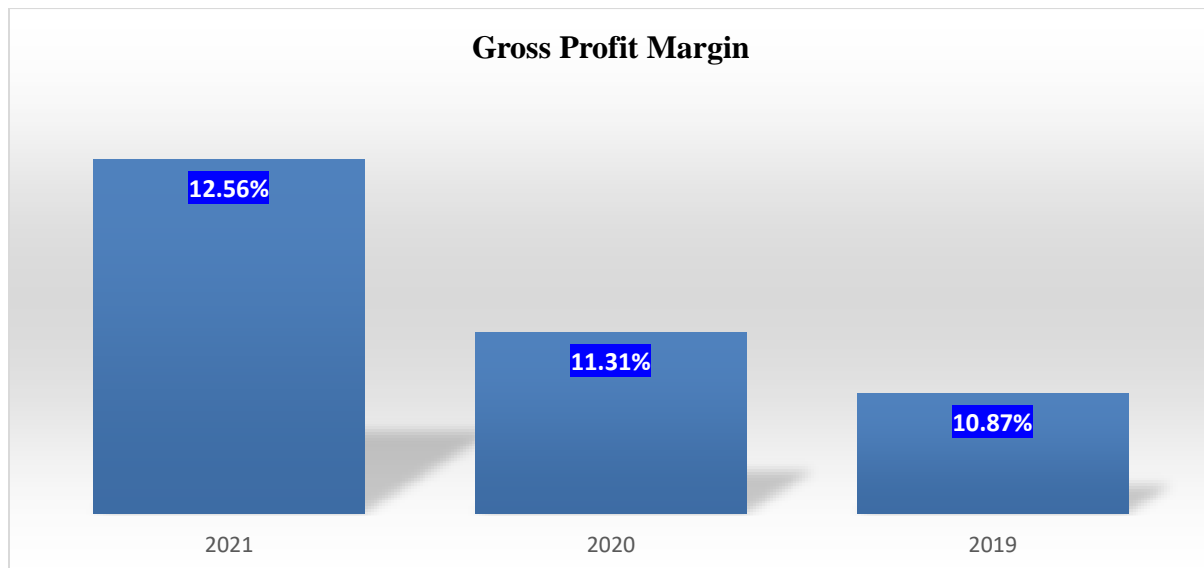


Figure-3: Chart of Gross Profit Margin. Source: Annual report of FEL.

**Interpretation:** From the chart, in 2019 FEL achieved 10.87%, 11.31% in 2020 and 12.56% in 2021. GPM (Gross profit margin) shows the actual revenue that a company generates. In 2019 the GPM was 1.87% which increased by 11.31% & 12.56% in last two years so increasing is Gross profit is good for a company.



**(ii) Operating Profit Margin:**

Operating Profit Margin is Calculated as follows:

Particular	2021	2020	2019
Operating Profit	22833121	17636174	12161091
Sales	245509959	245066200	231983012
Operating profit margin	9.30%	7.20%	5.24%

Table-6: Operating Profit Margin. Source: Annual report of FEL.

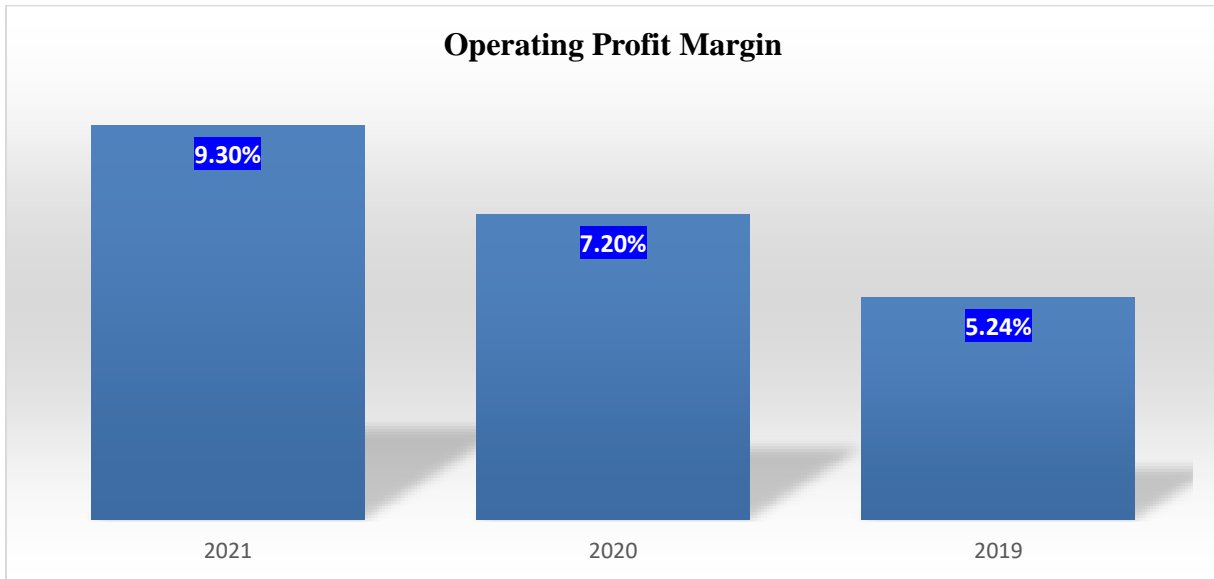


Figure-4: Operating Profit Margin. Source: Annual report of FEL.

**Interpretation:** Filament engineering is a growing company so higher OPM (Operating profit margin) is better for the organization. In 2019 the OPM rate was 5.24%, 7.20% is in 2020 and 9.30% in 2021 which increasing year by year. If we compare 2019 to 2021 it was an aggressive improvement on OPM and also a very good sign for the company.

**(iii) Net Profit Margin:**

Net Profit Margin is calculated as follows:

Particular	2021	2020	2019
Net Profit	7741841	9483915	8134586
Sales	245509959	245066200	231983012
Net profit margin	3.15%	3.86%	3.50%

Table-7: Net Profit Margin. Source: Annual report of FEL.

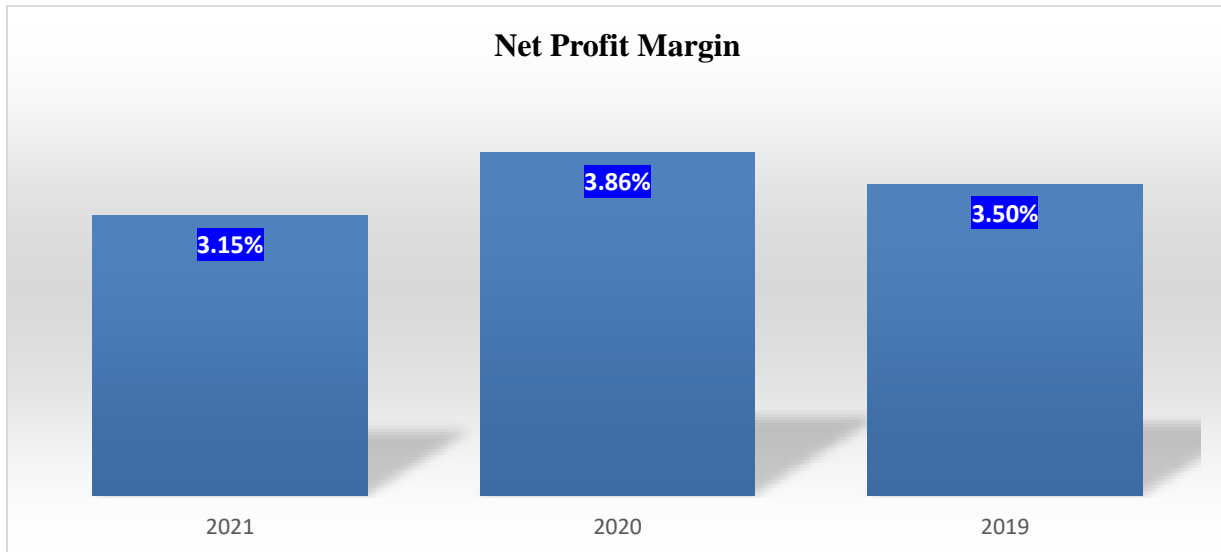


Figure-5: Net Profit Margin. Source: Annual report of FEL.

**Interpretation:** The chart shows that FEL has NPM (Net profit margin) 3.50% in 2019, 3.86% in 2020 and 3.15% in 2021. FEL generates high NPM is 3.86% in 2020 and 2021 is lowest which is 3.15%. After deducting all kind of expenses, they have decent NPM ratio, as a growing organization the overall net profit margin of FEL is acceptable. But higher NPM is good for the company.

**(iv) Return on Asset (ROA):**

Return on Asset is calculated as follows:

Particular	2021	2020	2019
Net income	7741841	9483915	8134586
Total Assets	120335565	88689582	48612224
ROA	6.43%	10.69%	16.73%

Table-8: Return on Total Assets. Source. Source: Annual report of FEL.

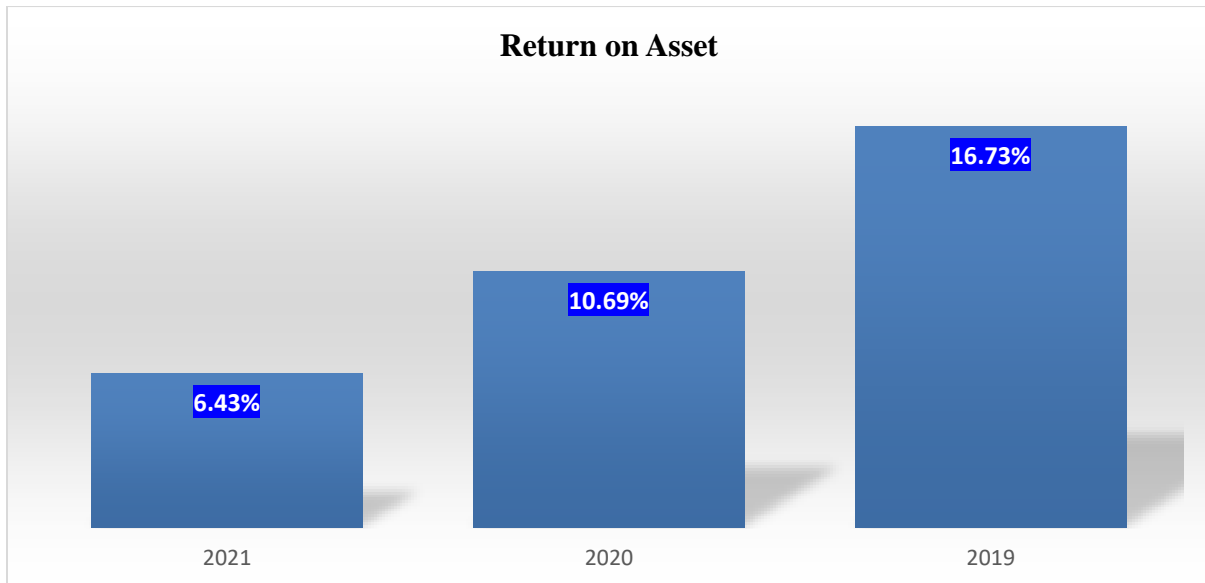


Figure-6: Chart of Return on Assets. Source: Annual report of FEL.

**Interpretation:** Here from the table we can say that in 2019 ROA was 16.73% which also highest ROA on record and that is very good rate of return on asset but in 2020, the ROA was decreased by 16.73% to 10.69% and which is average. In 2021 again, the company lose its ROA and is 2021 the return was 6.43% which below average for a company's ROA. Here 6.43% means FEL generates 6.43 TK by using Tk.1 assets. For a company, ROA more then 15% is good, ROA (10% to 15%) is also average but below 10% is alarming. So, FEL needs more revenue to raise its return on asset.

**(v) Return on Equity Ratio (ROE):**

Return on equity is calculated as follows:

Particular	2021	2020	2019
Net Income	7741841	9483915	8134586
Total Equity	32318687	24576846	15092931
ROE	23.95%	38.58%	53.90%

Table-9: Return on Equity. Source: Annual report of FEL.

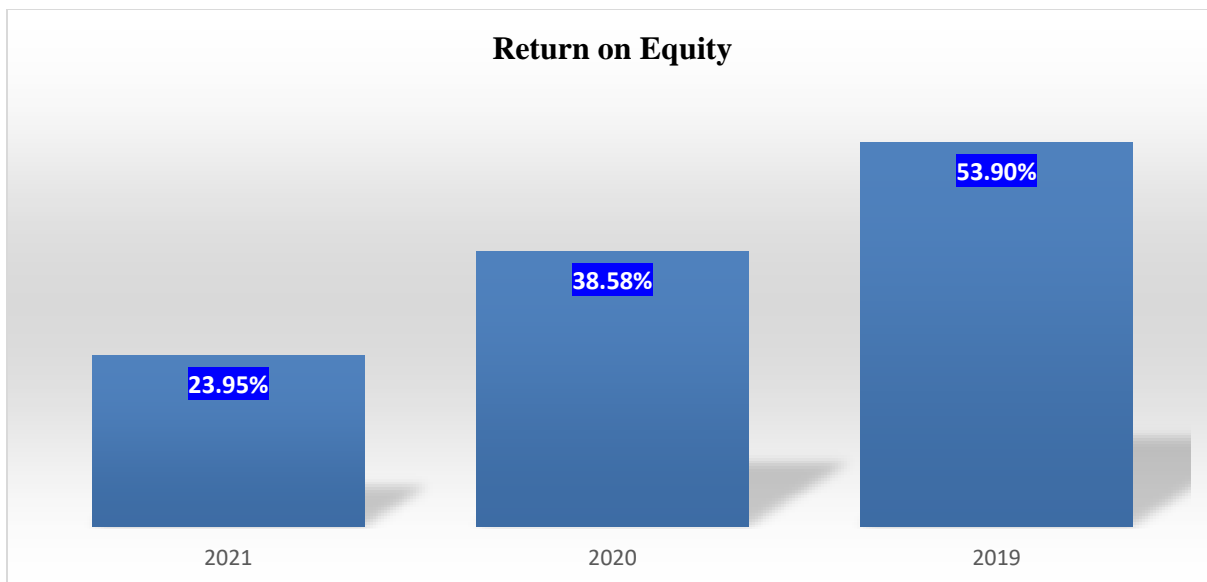


Figure-7: Chart of Return on Equity. Source: Annual report of FEL.

**Interpretation:** From the Chart we can see that Return on equity is decreasing year by year because of the company's net income is decreasing and which is not good for the organization. In 2019 the firm generates high ROE 53.90% which is good but in 2021 the ROE is lowest 23.95% and because of they are losing their net income from previous year also increasing its equity capital in same year which is the latest. So, this is a bad sign for FEL, they need to minimize their equity capital on the other hand they have to increase their net income.

### 3.3 Debt Ratio:

#### (i) Debt Ratio:

Debt ratio is calculated as follows:

Particular	2021	2020	2019
Total Liabilities	87993878	64112736	19327916
Total Asset	120335565	88689582	48612224
Debt Ratio	73.12%	72.28%	39.76%

Table-10: Debt Ratios. Source: Annual report of FEL.

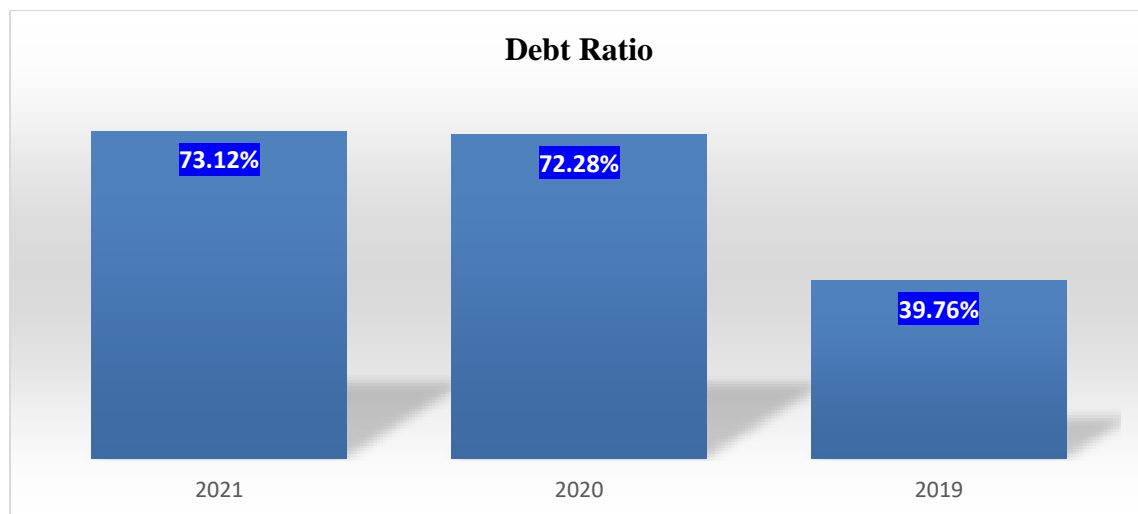


Figure-8: Chart of Debt Ratio. Source: Annual report of FEL.

**Interpretation:** FEL is technology-based engineering company and they have short-term and long-term debt. From the chart we can see that FEL's Debt ratio is high in 2021 which is 73.12% and lowest in 2019, 39.76%. We know Debt ratio more than 50% means high financial risk, if the ratio is in (30% to 50%) it means moderately financial risk and less than 30% indicates low financial risk but less than 10% is also not good for the company. So, as per latest year 2021 FEL is carrying very high (73.12%) Debt ratio, which indicates high financial risk and in 2019 the risk was moderate which year carries lowest Debt ratio.

**(ii) Times Interest Earned Ratio:**

The times interest earned ratio is calculated as follows:

Particular	2021	2020	2019
EBIT	24923125	18563932	12514748
Interest Expense	3,369,907	371139	0
Time Interest Earned Ratio	7.40	50.01	12514748

Table-11: Time Interest Earned Ratio. Source: Annual report of FEL.

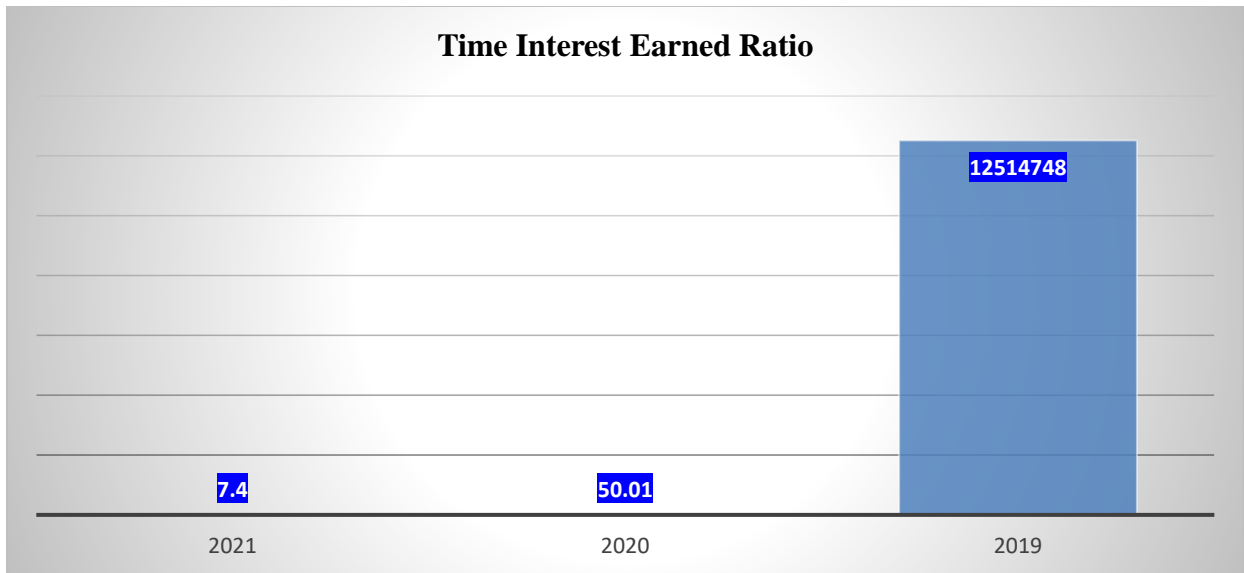


Figure-9: Chart of Time Interest Earned Ratio. Source: Annual report of FEL.

**Interpretation:** The ratio measures a company's ability to continue to service its Debt. In 2019 the company had no other loans; no loan means no interest expense and higher ratio rate indicates better Debt handling. But in 2021 the time interest earned ratio is 7.4% which is also good. For any financial industries below 1.0% is alarming but above 1.0% means the company has the ability to continue to service its Debt. So, Filament engineering is in safe side and they have the ability to honor its Debt payments.

### 3.4 Z- Score Test of FEL for 2021:

Z-score is a model or formula for measuring, calculating whether a manufacturing company is in good condition or going to fall down another word knowing the company is headed for bankruptcy or not.

**From Annual report of Filament Engineering Limited,**

**Given that,**

Sales = 245509959

Total Asset = 120335565

Current Asset = 116705787

Current Liabilities = 30469572

Accumulated Retained earning = 774184

Authorized Market Price = 100

No of Share = 10000

Sales = 245509959

EBIT = 24923125

Total liabilities = 87993878

Market Value of Equity= (Number of shares × Market Price)

$$= 10,000 \times 100$$

$$= 1,000,000$$

Net Working Capital = (Current Asset - Current Liabilities)

$$= 116705787 - 30469572$$

$$= 86236215$$

We know,

$Z = 1.2 (\text{Working capital} / \text{Total assets}) + 1.4 (\text{Retained earning} / \text{Total assets}) + 3.3 (\text{EBIT} /$

$\text{Total assets}) + 0.6 (\text{Market value of equity} / \text{Total assets}) + 1.0 (\text{Sales} / \text{Total assets})$

$= 1.2 (86236215/120335565) + 1.4 (774184/120335565) + 3.3 (24923125/120335565) + 0.6$

$(1000000/120335565) + 1.0 (245509959/120335565)$

$$= (0.85995 + 0.00900 + 0.68347 + 0.00498 + 2.04021)$$

$$= 3.60$$

Decision: -

- If,  $Z < 1.80$  – It signals the company is likely headed for bankruptcy Chance to bankrupt.
- If,  $Z > 3$  – It signals that the company is not likely to bankrupt.

So, Filament Engineering Limited performance is in good position where the score is  $Z = 3.60$ . From Z-score model we know that,  $Z =$  above 3 or  $Z > 3$  are good and they had no chance of bankruptcy. So FEL is in good position and they had no chance of bankruptcy.

### **3.5 Three Factors DuPont Analysis for 2021:**

DuPont analysis shows a company's return on equity, represented as a product of three other ratios (profit margin, total asset turnover and equity multiplier. It shows a complete picture of a company's overall financial condition and performance.

**From Annual report of Filament Engineering Limited,**

**Given that,**

Sales = 245509959

Net profit = 7741841

Total assets = 120335565

Total equity = 32318687

**Here,**

**Net profit margin = (Net profit / Sales)**

$$= (7741841 / 245509959)$$



$$= 3.1533$$

**Total asset turnover = (Sales / Total assets)**

$$= (245509959 / 120335565)$$

$$= 2.0402$$

**Equity multiplier = (Total assets / Total equity)**

$$= (120335565 / 32318687)$$

$$= 3.7234$$

**We know that,**

**ROE = (Net profit Margin \* Total asset turnover \* Equity turnover)**

$$= (3.1533 * 2.0402 * 3.7234)$$

$$= 23.95\%$$

**Interpretation:** Generally high ROE is good a company but only when the ROE increase's for Net profit margin & Total asset turnover. If ROE increase's for high Equity multiplier then it's a problem the company that means the company is increasing its Debt portion. So, here FEL Company year 2021, ROE is high and generally its good for the company but their Debt portion means Equity multiplier is also high and they need to minimize this.

**Chapter Four:**  
**Findings of FEL**

## **Findings:**

Based on observation, analysis of performance of Filament engineering Limited following findings are discovered:

### **4.1 Operational performance:**

FEL is one of the fast-growing engineering company now a days. The engineering company also expanding their business in other segments and they are doing fantastic. Their connection and communication between customer and employee are good and their services are very promising. Government entities, well-known private industries like “Daffodil International University” are their customers. FEL imports their raw-materials from abroad but because of inflation and fluctuating dollar rate the expected costing are getting higher. Due to increased cost of raw-materials the company has to charge more. Due to this high rate, the company can't attract more customers. Unavailability of information about the customer. Also, there is a lack of proper advertisement for different product and other segments. It makes the customer ignorant about the company's product and service. Working environment of the advance section is good but they need to expand their business to be a trusted and well-known organization to satisfactory enough to attract interested candidates those who are looking for a smart job with security, trust and friendly work environment.

### **4.2 Financial Performance of FEL by Ratio Analysis:**

To measure a company's financial performance there are so many ratios. But there are some well-known and short ratios that we use to measure financial performance of an organization and the ratios are ROA, ROE, liquidity analysis (Current ratio, Quick ratio and Cash ratio), the Inventory turnover, the Debt equity ratio, Z-score and DuPont analysis. This are the key ratios to calculate financial performance of a company. There are also so many important ratios and with them we can measure the performance of a company too. Financial performance analysis is basic and very important for a company to make an investment here all the positive and negative finding can be Observed. The findings that we observed from above ratio analysis of FEL.

### **4.3 Profitability Ratio:**

We have calculated three years data of FEL it shows Gross Profit Margin is increasing year by year and last year's GPM was highest, which is good. Operating Profit Margin also shows increasing trends and here last year's OPM is highest, that indicates positive sign and better for the organization. Net Profit Margin shows fluctuating value, though last year's NPM decreased but it is in positive site and which is also not bad. Return on Total Assets shows decreasing trends, though it was positive but it is alarming. They need to increase their net income to raise its ROA. Return on Equity also shows same results means decreasing trends. First year ROE is satisfiable but than the company losing its ROE rate, though the values were positive. Which is also not good for the organization.

### **4.4 Debt Ratios:**

Debt Ratio is not good, because it shows fluctuating values and last two-year Debt ratios is very high, it is bringing the organization in red zone means high financial risk. Though first year's ratio was good but last year it increased. FEL use more debt instead of Equity. Time Interest Earned Ratio is also decreasing year by year though it is acceptable but it should be improved.

### **4.5 Solvency:**

Z-score generally being used to measure the present condition of a company. From the calculation of Z-score we can say that the Filament engineering Limited performance is good. Because we calculated Z-score value of FEL is  $Z = 3.60$ ; which is greater than 3. So, the company had no chance of bankruptcy.

We have also calculated DuPont analysis of Filament engineering limited. Though it shows a satisfied percentage 23.95% but it was not good for the company cause the high percentage of value was for higher equity multiplier. So, they need to minimize their equity multiplier and on the other hand have to increase their Net profit margin and Total asset turnover.

### **4.6 Problems Related with FEL's Management & Performance:**

Filament engineering limited is a manufacturing company and they don't have that much problem beside shortage of work force, imported product with low price, lack of quality raw materials, technological adaptation and lack of advertisement. FEL is a growing company and they worked with several product also. They are working with well-known industries and also government

projects so for their more growth they need more work force to complete its customers' requirements but FEL is new organization and they don't have enough work force to mitigate extra. Because of world Inflation and fluctuating dollar rate imported product are highly risky but they have to deliver their customer a quality full product for their brand value. So, they have to import products from abroad with their own risk. Technological adaptation and lack of quality full raw materials can cause a big problem for FEL. Engineering company like FEL, needs quality full raw materials to create better product but what if they aren't able to find quality raw material? It will cause a big problem for them. Engineering is a part of technology, if the company don't have adaptation capabilities then it also can be a problem for them. Advertisement and customer recognition is the most important thing in today's competitive market.

**Chapter Five:**  
**Recommendations & Conclusion of FEL**

## 5.1 Recommendations:

The recommendations given below are only suggestions to improve the performance of Filament engineering Limited to fulfill the customer's satisfaction. Recommendations are given below:

- ✚ To solve the problem of lack of raw materials for delivery the quality product to the customers.
- ✚ The management of FEL should have an expert to monitoring the system and their adaptability.
- ✚ Taking sessions or training of employees for better and as much as practical in customer management system.
- ✚ Primary goal of a business is making profit. But beside that they should take some steps like aggressive pricing, better and unique products to attract more customers.
- ✚ The management of the FEL could make some provision so that the customer is been informed about their service and different facility.
- ✚ The organization needs to develop their own networking system to connect more customer and to create a brand image.
- ✚ To their better growth, they should move forward to better advertisement and they could engage more expert people in this particular sector to improve their advertising and marketing sector.

## **5.2 Conclusion:**

Filament engineering limited is a technology based private organization. They need funds to perform their financial and operational performance and they also had their different portfolio businesses. They have to manage their Debt InControl, the failure of this type of institution mainly occurs due to Bad Debt and if the growing loans were not been controlled then it can cause bankruptcy, this occurs from inefficient management of the loans and advances portfolio business that FEL had if they unbale to utilize their portfolio business. Therefore, they can use their portfolio business as their strength and by the using these portfolios they can raise their fund also. Everything is changing very fast so they also need more research to improve their performance or they have to do evolutionary research to evaluate their performance more. May the Management system be working for present days but may not enough for the future. The fast changing, dynamic global economy and the increasing pressure of globalization and liberalization. Though the organization has strong management system but it is necessary for Filament engineering limited to keep the system in update and evaluate their performance.

From the discussion in this report, we can say that the performance evaluation is an ongoing process and therefore, this type of technology-based institutions must take a serious approach in addressing these issues. They have to take necessary steps to be up to date in following with all the procedures that be required and must need to recruit experts who have the ability to deal with these types of complex motive. FEL also need to work on their Networking system cause in these modern days it is essential for an organization.



## **Bibliography**

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- ✓ [www.investopedia.com/terms/t/tie.asp](http://www.investopedia.com/terms/t/tie.asp)
- ✓ Published article on engineering Department information.
- ✓ [cleancooking.org/sector-directory/filament-engineering-limited](http://cleancooking.org/sector-directory/filament-engineering-limited)

## **APPENDICES**

### **APPENDIX- 1**

### **APPENDIX-2**

#### **Appendix-1:**

- ❖ Filament Engineering Limited's annual report 2019-2021.
- ❖ Library of Daffodil International University.
- ❖ Internet browsing.
- ❖ [www.muspana.com](http://www.muspana.com)
- ❖ [www.google.com](http://www.google.com)

## **Appendix-2:**

✚ Annual report

✚ Income statement

✚ Cash flow of statement