

An aerial photograph of a densely populated city, likely Dhaka, Bangladesh. The image shows a vast expanse of multi-story residential and commercial buildings packed closely together. In the foreground, a river or canal flows through the city, with some buildings and greenery along its banks. The sky is hazy, suggesting a clear day with some atmospheric haze.

COACHING CLASS ON

Management Accounting & Financial Management

Khaled Mahmud Raihan FCCA
Senior Vice President
Managing Director's Secretariat
Islami Bank Bangladesh Ltd.

Meet the Coach:



2012-Till to Date

Managing Director's Secretariat

Corporate Investment Division

Financial Administration Division as Divisional Head



2012

Head of Audit and Risk Rating

Risk Management Division



2006-2012

Chief Rating Officer (CRO)



2005-2006

Assistant Professor

School of Business



2003-2005

Lecturer

School of Business

Meet the Keynote Coach:



BBA, MBA (Major in Banking)

Department of Finance & Banking,
University of Dhaka



Fellow Member

Association of Chartered Certified Accountant



Fellow Member

Certified General Accountants of Bangladesh



Diplomat Associate

The Institute of Bankers, Bangladesh

Discussion Summary

- **Summary of Course Contents**
- **Exam Pattern**
- **Examiner's Review/Report**
- **Exchange of Views**
- **Understanding the Basics**
- **Problems and Solutions**

Statistics 1: Success Rate of Part-II Exams (November 2022)

Course	Subject	Candidates	Pass Rate
201	Investment Mgt.	541	56%
202	International Trade	664	49%
203	Ethics in Banking	500	58%
204	MA & FM	663	34%
205	E-Banking	451	66%
206	MF and Rural Banking	430	74%



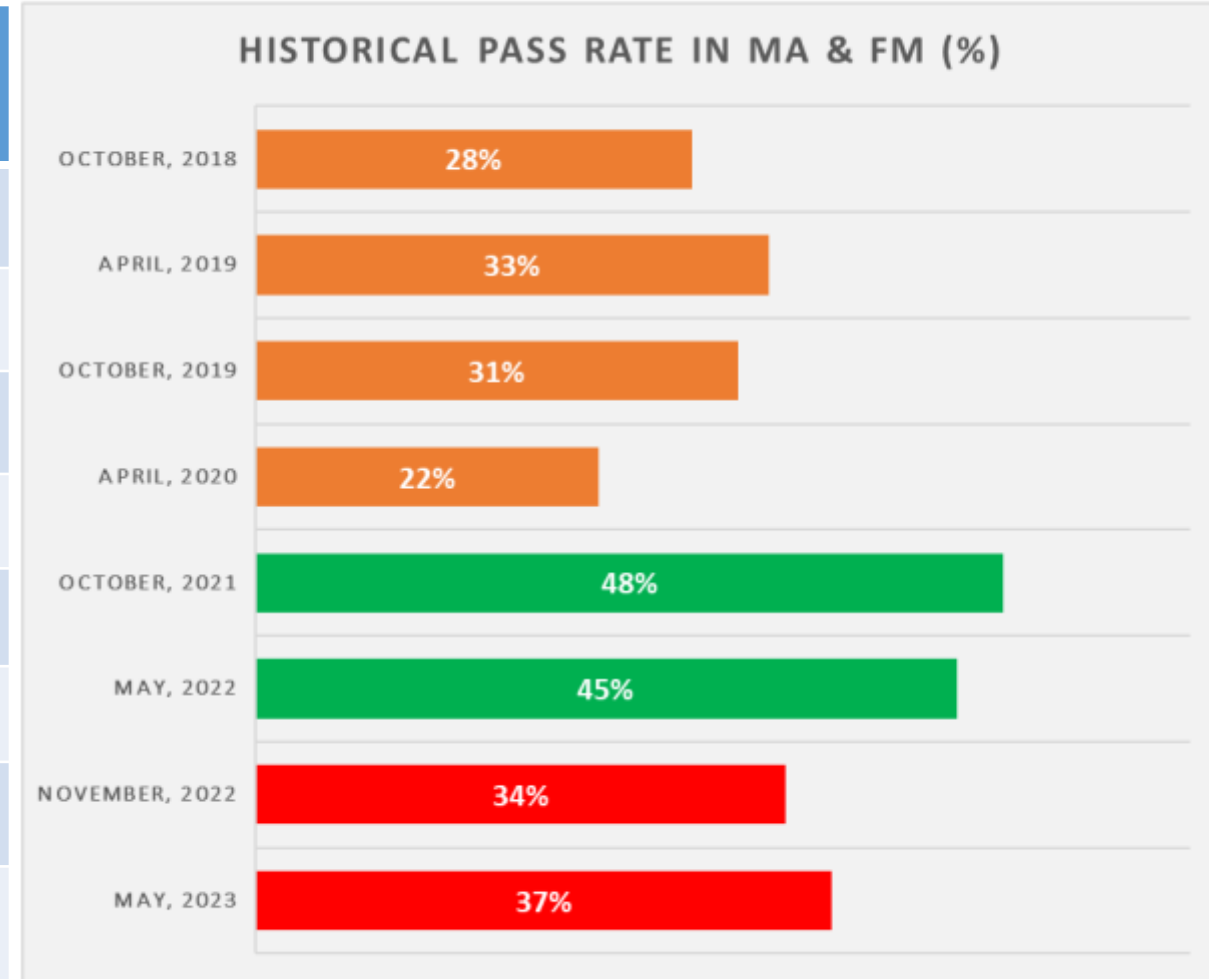
Statistics 1: Success Rate of Part-II Exams (May 2023)

Course	Subject	Candidates	Pass Rate
201	Investment Mgt.	393	53%
202	International Trade	510	42%
203	Ethics in Banking	389	41%
204	MA & FM	473	37%
205	E-Banking	347	49%
206	MF and Rural Banking	314	71%



Statistics 2: Historical Pass Rate of MA & FM Exam

Examination	No. of Candidates	Pass Rate (%)
May, 2023	473	37%
November, 2022	663	34%
May, 2022	683	45%
October, 2021	986	48%
April, 2020	655	22%
October, 2019	879	31%
April, 2019	517	33%
October, 2018	626	28%





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- Initiative
- Planning
- Risk Assessment & Mitigation

Execution



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- Determination
- Confidence
- Risk Taking Attitude





Passenger & Crew: 2,224
Fate: Sank on 15 April, 1912
Died: 1500
Sinking Time: 2 Hours 40
Minutes

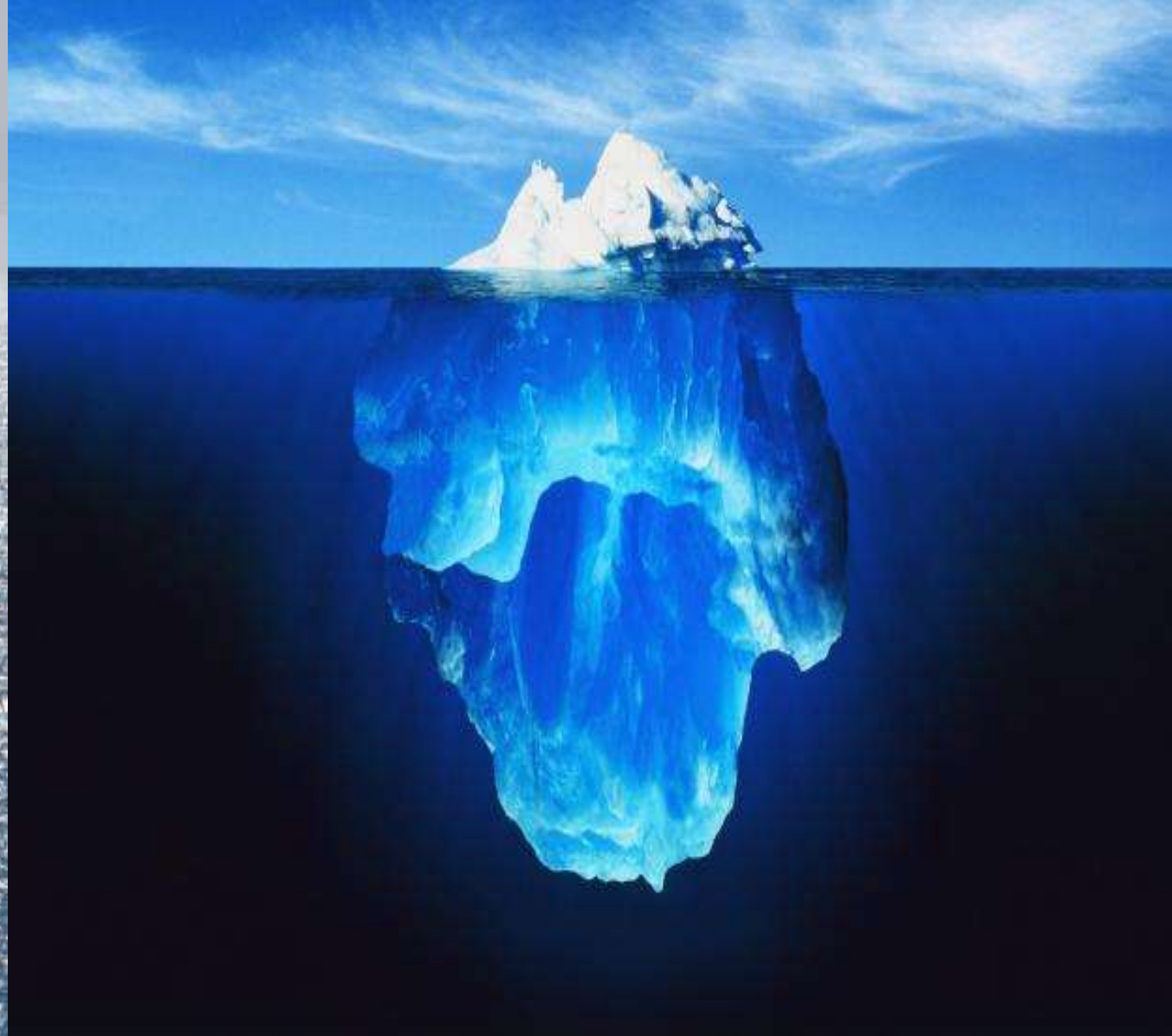
TITANIC

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Owner: White Star Line (UK)
Time to Complete: 3 years (1909-1912)
Cost: GBP 1.5 Million
Weight: 52,310 DWT
Port Registry: Liverpool, UK
Route: Southampton to New York City
Voyage 10 April, 1912



**Iceberg that was visible from the
Titanic**



Unseen Story of the Iceberg



Summary of Course Contents



Management Accounting:

1. Introduction:

Management Accounting, Financial Accounting, Cost Accounting: Their Relationship and Implications

2. Cost-Volume- Profit Analysis:

Break even Point (BEP): Units and Amount, Margin of Safety, Implications of Increase/decrease of Variable/Fixed costs on BEP

3. Financial Analysis and Planning:

Sources of Financial Information- Income Statement and Balance Sheet, Statement of Changes in Financial Position- Fund Flow and Cash Flow Statement - Ratio Analysis, Financial Spread Sheet

4. Absorption and Variable Costing:

Absorption Costing Vs. Variable Costing: Calculations, Implications, Advantages and Disadvantages and Reconciliations

5. Budgeting For Planning and Control:

Basic Framework of Budgeting: Master Budget & Cash Budget, Preparation of Cash and Flexible Budget

Summary of Course Contents

Financial Management:



1. Time Value of Money:

Concept of Present Value, Future Value, Annuity, Perpetuity, Islamic Concept of Time Value of Money

2. Capital Budgeting:

Non Discounted Cash flow Techniques: Accounting Rate of Return (ARR), Pay Back Period (PPB)

Discounted Cash flow Techniques: NPV, IRR, PI, Capital Rationing and their Applications on Business

3. Working Capital Management, Short, Medium and Long Term Finance:

Different Financing Mix: Short Term Financing Vs. Long Term Financing

4. Lease Financing :

Types of Lease Financing: Operating Lease Vs. Financial Lease, HPSM and their Implications

5. Cost of Capital and Dividend Policy:

Components of Cost of Capital: Cost of Common Stock, Cost of Preferred Stock and Cost of Debt

Weighted Average Cost of Capital, Marginal Cost of Capital, Cost of Capital in Islam

Types of Dividend Policy, Factors influencing Dividend Policy, Rationale of High and Low Pay-Out Ratio

Exam Pattern

- There are 8 (eight) questions having 4(four) questions each from Management Accounting Section and Financial Management Section.
- Each Question carry 20 (twenty) marks.
- You have to answer 5 (five) questions at least 2 (two) questions from each section.
- Generally, there is a full theory type question in Management Accounting Section which usually contains financial accounting, management accounting and cost accounting issues with implications in banking business
- There is a short note type question in Management Accounting Section where you have to answer 5 (five) short notes out of 8 (eight) short notes.
- Other 6(six) questions carry math/calculations with very low weighateg of theory



Examiner's Review & Tips



To Do:

- Plan for the exam. Make proper time management
- Give sufficient reading and planning time for the questions and take note of key points
- Start answering the questions which you are most confident
- Be very precise and specific in answering question. The examiner always wants to see the key words in your answer
- Follow all the procedures in solving problems. Give your examiner the impression that you know the solution
- Show your calculations and workings wherever required

Examiner's Review & Tips



Not to Do:

- Do not enter exam hall without preparation. You can not try your luck!!
- Do not start your answer with theory which might create negative impression on the examiner
- Do not write unnecessary and irrelevant remarks in your answer script. You should not consider your examiner a stupid !!
- Do not break the sequence in answering questions. If you are unable to answer a part of a specific question, keep a space to attempt it later
- Don't be stuck up in a particular problem. Leave it for a moment, attempt another question and come back to the question later

Why Understanding Basics?

- Build your confidence level
- Immensely benefit you in your day to day banking affairs
- Help in understanding problems and finding solutions
- Increase the possibility of your success rate in the exam
- Increase your professional skill (Knowledge Vs. Degree)
- Help to grow your career



MANAGEMENT ACCOUNTING



Understanding the Basics



Management Accounting , Financial Accounting and Cost Accounting :

Management Accounting	Financial Accounting	Cost Accounting
Deals with collection of data and information, classification and analysis for helping the management to make managerial decision	Deals with preparation of Profit and Loss Account and Statement of Financial Position in a specific time interval	Deals with determination of cost of a product/services, cost control and analysis of cost/expenditure for helping management to make decision
It is related with present, past and future	It is only related with past thus it is like a postmortem report	It is a part of management accounting
There is no regulatory timeframe to prepare management accounting report	It is prepared in a regular interval and there is a regulatory requirement; like yearly, semiannually, quarterly etc.	It is prepared as and when required basis
It does not require auditing and mathematical accuracy is also not required	It requires mathematical accuracy and mandatory requirement for auditing	No such requirement of mathematical accuracy and auditing

Understanding the Basics



Costs and Cost Elements:

- Cost is the **amount of expenditure** which is **either incurred (actual)** or **notional (attributable)** relating to a specific thing or activity. Cost can be classified from different dimensions:

A. Natural Characteristics:

i. Raw Materials is the main component of production process.

Direct Raw Material- Fabric for Garments Industry, Wood for Furniture, Cotton for Spinning Industry etc.

Indirect Raw Material- Yarn, accessories for Garments Industry

ii. Labour includes both wages and salaries for workers and employees

Direct Labour- Directly related with production; like wages for workers

Indirect Labour –Not directly related with production; like salary of the factory employees

iii. Other Expenses includes costs other than raw materials and labour for conversion to finished goods

Direct Expenses-Electricity, gas, water, depreciation of machineries, maintenance relating to production

Indirect Expenses- Factory rent, depreciation of other machineries etc.

Understanding the Basics



Costs and Cost Elements:

B. Changes in the Level of Activity:

- i. **Fixed Cost** is the cost that does not change or remain unchanged at the change (increase/decrease) of the production level. Example- Factory Rent
- ii. **Variable Cost** is the cost that is proportionate to the change in production level. Example- Raw material
- iii. **Semi-Variable Cost** is the cost that changes with production level at a disproportionate rate. Example-Depreciation of machineries and maintenance cost etc.

C. Nature of Function:

- i. **Production Cost:** The costs that are directly related with production
=Direct Material+ Direct Labour+ Direct Expenses+ Other factory overheads
- ii. **Administrative Expenses:** All indirect expenses relating to administration and management.
Example-Salary and allowances of employees
- iii. **Selling & Distribution Expenses-** Advertisement cost, salary/commission of selling agent/employee
Freight out, Salary of distribution agent etc.

Understanding the Basics

Cost Accounting

Elements of Cost

-Material Direct?
-Labour Indirect?
-Overhead

Costs and Cost Elements: Cost Sheet

1. Prime Cost: Costs Directly Related with Production

(Direct Materials*+ Direct Labour+ Direct Expenses)

*Direct Materials= (a) Opening Stock Raw Materials

(+) Purchase of Raw Materials

(-) Purchase Discounts

(-) Purchase Returns

(+) Carriage in/ Freight In

(b) Cost of Purchase

(a)+(b) = Cost of Raw Materials Available for Use

(c) (-) Closing Stock of Raw Materials

(a)+(b)-(c) = Direct Materials Consumed

Understanding the Basics

Cost Accounting

Elements of Cost

-Material Direct?
-Labour Indirect?
-Overhead

Costs and Cost Elements: Cost Sheet

2. Total Manufacturing Cost: Prime Cost + Total Factory Overheads*

***Factory Overheads= All factory related costs that are not directly related with production**

(Indirect Materials, Indirect Labor, Factory Fuel and Power, Coal, Gas, Water, Factory Manager's Salary, Factory Rent & Taxes, Factory Lighting and Fighting, Factory Repairs, Worker's Welfare Expenses, Insurance Premium for Factory, Depreciation of Plant & Machineries)

3. Cost of Goods Manufactured = Total Manufacturing Cost (+) Beginning Work-in-Process (WIP) Inventory (-) Closing Work-in-Process (WIP) Inventory

4. Cost of Goods Sold (COGS) = Cost of Goods Manufactured (+) Beginning Finished Goods Inventory (-) Closing Finished Goods Inventory

5. Total Costs = Cost of Goods Sold+ Administrative Expenses+ Selling Expenses

Understanding the Basics

Costs and Cost Elements: Link with Income Statement Income Statement for the Year Ended 2020



Particulars	Amount in Tk.
Sales	****
Less: Cost of Goods Sold (COGS)	(***)
Gross Profit (a)	***
Less: Administrative Expenses	***
Less: Marketing & Selling Expenses	***
Total Operating Expenses (b)	(***)
Net Profit from Operation/Operating Profit [(a)-(b)]	***
Add: Non Operating Income	**
Earnings before Interest and Tax (EBIT)	**
Less: Interest/Profit paid to banks/FIs	(**)
Earnings Before Tax(EBT)	**
Less: Income Tax	(**)
Net Profit After Tax	**

Understanding the Basics

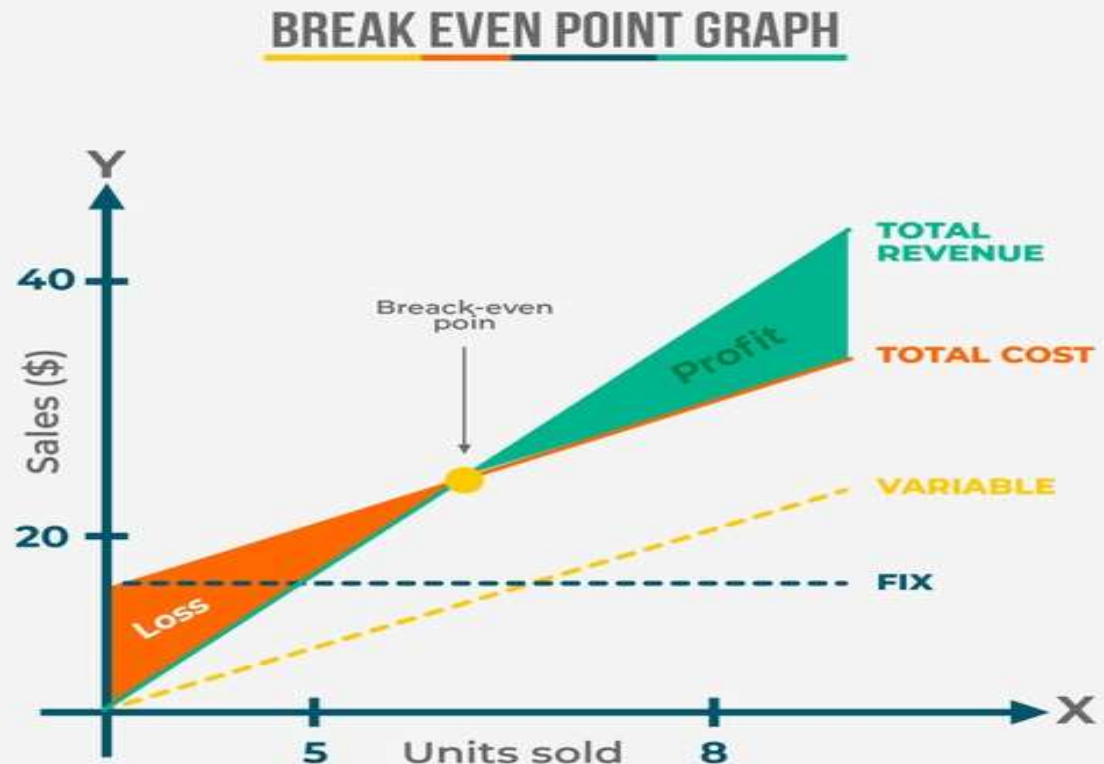


Contribution Margin, BEP and Margin of Safety

Breakeven Point:

In accounting, the breakeven point is the production level at which total revenues equal total expenses. That is, it is a no profit, no loss situation

- **Blue dotted line** indicates fixed cost
- **Yellow dotted line** indicates variable cost
- **Orange Line** shows total cost; i.e., variable cost+ Fixed Cost
- **Green Line** shows total revenue
- The Point at which total revenue line intersects with total cost line is the breakeven point



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Understanding the Basics



Contribution Margin (C/M), BEP and Margin of Safety

C/M = (Sales - Variable Cost) or C/M Per Unit = (Sales/unit - Variable Cost/unit)

C/M Ratio = (Sales - Variable Cost)/Sales [C/M Ratio is also known as Profit Volume (P/V) Ratio]

Break-even Sales in Tk. = Fixed Cost / Contribution Margin Ratio

Break-even Sales in Unit = Fixed Cost / C/M Per Unit

Margin of Safety (M/S) in Tk. = Sales - EBP Sales

Margin of Safety (M/S) Ratio = Margin of Safety / Sales

Required Sales (Value) for Desired Profit = (Fixed Cost + Desired Profit) / C/M Ratio

Required Sales (Unit) for Desired Profit = (Fixed Cost + Desired Profit) / C/M per unit

[Go Back](#)

Understanding the Basics



Costing: Absorption Costing Vs. Marginal/Variable Costing

Absorption Costing:

Absorption costing is a method for accumulating fixed and variable costs associated with the production process and apportioning them to individual products. Thus, a product may absorb a broad range of costs.

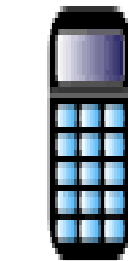
Absorption Costing Components:

Direct Materials: Those materials that are included in a finished product.

Direct Labour: The factory labor costs required to construct a product.

Variable Manufacturing Overhead: The costs to operate a manufacturing facility, which vary with production volume. Examples are supplies and electricity for production equipment.

Fixed manufacturing Overhead: The costs to operate a manufacturing facility, which do not vary with production volume. Examples are rent and insurance.



Absorption
Costing
Formula

=

(Direct Labor Cost + Direct Material Cost +
Variable Manufacturing Overhead Cost +
Fixed Manufacturing Overhead)

Number of Units Produced

Understanding the Basics



Costing: Absorption Costing Vs. Marginal/Variable Costing

Marginal/Variable Costing:

Variable costing is a concept used in managerial and cost accounting in which the fixed manufacturing overhead is excluded from the product-cost of production. It includes only the variable costs associated with the production process.


Variable Costing Components:

Direct Materials: Those materials that are included in a finished product.

Direct Labour: The factory labor costs required to construct a product.

Variable Manufacturing Overhead: The costs to operate a manufacturing facility, which vary with production volume. Examples are supplies and electricity for production equipment.

Fixed manufacturing Overhead: Excluded from Variable Costing Method


$$\text{Variable Costing Formula} = \frac{(\text{Direct Labour Cost} + \text{Direct Raw Material Cost} + \text{Variable Manufacturing Overhead})}{\text{Number of Units Produced}}$$


Understanding the Basics



Absorption Costing Vs. Marginal/Variable Costing: Differences

Areas of Differences	Marginal Costing/Variable Costing	Absorption Costing
Product Costing and Inventory Valuation	For product costing & inventory valuation, only variable cost is considered	For product costing & inventory valuation, both fixed & variable costs are considered.
Implication of Fixed Cost on Profitability of Products	Fixed cost is considered as period cost & profitability of different products is judged by Profit/Volume ratio (P/V ratio)	Fixed cost is charged to cost of production. A reasonable share of fixed cost is to be borne by each product & thereby subjective apportionment of fixed overheads influences the profitability of product.
Presentation of Data	The presentation of data is so oriented that total contribution & contribution from each product gets highlighted.	The presentation of cost data is on conventional pattern. After deducting fixed overhead, the net profit of each product is determined.
Implication of Opening and Closing Stock on unit cost of Production	The unit cost of production does not get affected by the difference in the magnitude of opening stock & closing stock.	Due to the impact of the related fixed overheads, the unit cost of production get affected by the difference in the magnitude of opening stock & closing stock.

Understanding the Basics



Effects of Opening & Closing Stock on Profit: Absorption Vs. Marginal Costing

1. The results under both the **methods will be same in situations where sales & production coincide** i.e., there is neither opening stock nor closing stock.
2. **Profit under absorption costing will be more than the profit under marginal costing, when closing stock is more than the opening stock (Example with Calculation in the Next Slide).** The reason behind this is that, under absorption costing, a portion of fixed overhead, instead of being charged to the current period, is charged to the closing stock & carried over to the next period.
3. **Profit shown under absorption costing will be lower than the profit shown under marginal costing, when closing stock is less than the opening stock.** The reason behind this is that, under absorption costing, to the current period, a portion of fixed cost related to previous year is charged.

Understanding the Basics

Effects on Profit: Absorption Vs. Marginal/Variable Costing



VS



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ABSORPTION COSTING			
Particulars	Qty	Per Unit	Amt (\$)
Revenue	600	100.00	60,000
Less: Cost of Goods Sold:			
Add Beginning Inventory	-	-	
Variable Manufacturing Costs	900	20.00	18,000
Allocated Fixed Manufacturing Costs	900	20.00	18,000
(\$18000/9000 Units of Production = 20)			
Cost of Goods Available for Sale		40.00	36,000
Deduct Ending Inventory	300	40.00	(12,000)
Cost of Goods Sold	600	40.00	24,000
Gross Margin	600	60.00	36,000
Variable Marketing Costs	600	16.50	9,900
Fixed Marketing Costs	600	23.33	14,000
Operating Income			12,100

VARIABLE COSTING				Reconcile
Particulars	Qty	Per Unit	Amt (\$)	
Revenue	600	100.00	60,000	-
Less: Variable Cost of Goods Sold:				
Add Beginning Inventory	-	-		
Variable Manufacturing Costs	900	20.00	18,000	-
			-	18,000
Cost of Goods Available for Sale		20.00	18,000	
Deduct Ending Inventory	300	20.00	(6,000)	(6,000)
Variable Cost of Goods Sold	600	20.00	12,000	
Variable Marketing Costs	600	16.50	9,900	(9,900)
Contribution Margin	600	63.50	38,100	
				9,900
Fixed Marketing Costs	600	23.33	14,000	
Fixed Manufacturing Costs			18,000	(18,000)
Operating Income			6,100	6,000

Understanding the Basics



Budget: Master, Fixed, Flexible Budget and Cash Budget

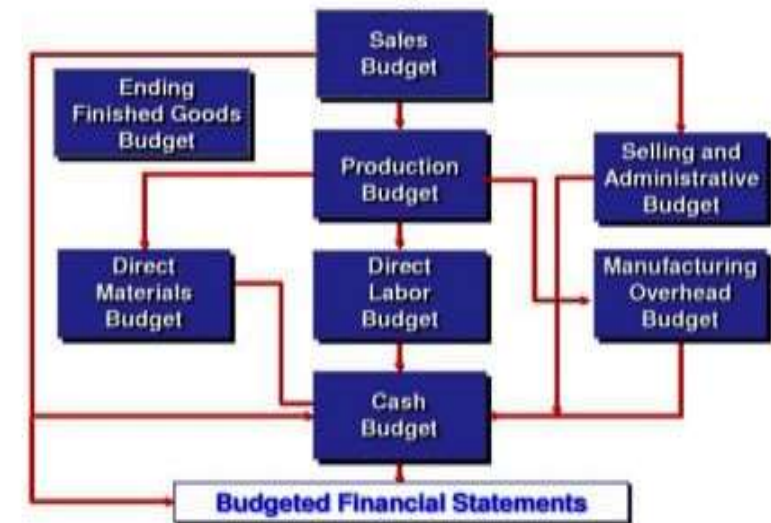
Budget:

A budget is a financial plan for a defined period, often for one year. It may also include planned sales volumes and revenues, resource quantities, costs and expenses, assets, liabilities and cash flow

What is a Master Budget?

The master budget is the aggregation of all lower-level [budgets](#) produced by a company's various functional areas, and also includes budgeted [financial statements](#), a cash forecast, and a financing plan.

The Master Budget: An Overview



Fixed Budget Vs. Flexible Budget:

A fixed budget is a budget that doesn't change due to any change in activity level or output level. The fixed budget is static and doesn't change at all.

The flexible budget is **a budget that changes as per the activity level or production of units.**

Understanding the Basics



Budget: Master, Fixed, Flexible Budget and Cash Budget

Cash Budget:

A cash budget is **an estimation of the cash inflows and outflows of a business over a specific period of time**. This could be for a weekly, monthly, quarterly, or annual budget. This budget is used to assess whether the entity has sufficient cash to continue operating over the given time frame.

Importance of Cash Budget:

- It allows a company to establish **the amount of credit that it can extend to customers without having problems with liquidity**.
- A cash budget helps avoid a shortage of cash during periods in which a company encounters a high number of expenses.

Components of Cash Budget:

The cash budget represents a detailed plan of future cash flows and is composed of **four elements**:

1. **Cash Receipts** (Cash Sales, Collection of Receivables, Other Income)
2. **Cash Payments** (Raw Materials, Payroll, Other Direct Expenses, Administrative and Selling Expenses, Plant and Equipment and other payments)
3. **Net Change in Cash for the Period and**
4. **New Financing Needed**

Understanding the Basics



Financial Statement Analysis

➤ Financial Statement Analysis:

- Financial statement analysis is the [process of analyzing a company's financial statements](#) for decision-making purposes.
- [External stakeholders](#) use it to [understand the overall health of an organization](#) as well as to evaluate [financial performance and business value](#).
- [Internal users](#) use it as a [monitoring tool for managing the finances](#) as well as [internal decision making](#).

➤ Techniques Used for Financial Statement Analysis:

1. **Horizontal Analysis** (Compares data horizontally, by analyzing values of line items across two or more years)
2. **Vertical Analysis** (Vertical analysis looks at the vertical affects line items have on other parts of the business and also the business's proportions)
3. **Ratio Analysis** (Ratio analysis uses important ratio metrics to calculate statistical relationships)

➤ Components of Financial Statements:

1. Balance Sheet
2. Profit & Loss Statement
3. Cash flow Statement

Understanding the Basics



Financial Statement Analysis

What is Ratio Analysis?

Ratio analysis is a quantitative method of gaining insight into a company's liquidity, operational efficiency, solvency and profitability by studying its financial statements such as the balance sheet and income statement.

Comparisons of Ratio Analysis:

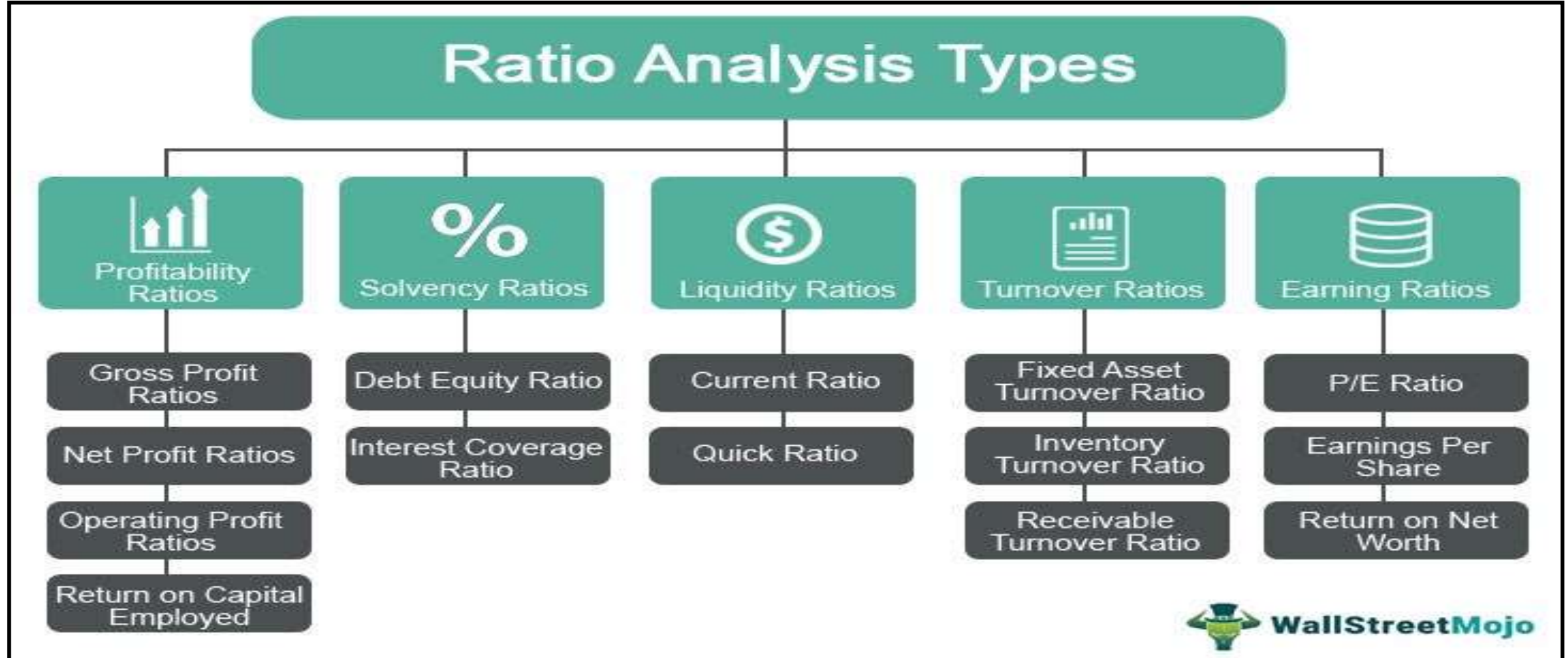
1. Internal Comparison: The analyst can compare a present ratio with past and expected future ratio for the same company. When financial ratios are arrayed over a period of years, the analyst can study the composition of change and determine whether there has been an improvement or deterioration in the firm's financial condition and performance over time.

2. External Comparisons and Sources of Industry Ratio: External comparison involves comparing the ratio of one firm with those of similar firms (peer) or with industry averages at the same point in time. Such a comparison gives insight into the relative financial condition and performance of the firm. It also helps us identify any significant deviations from any applicable industry average/peer average

Understanding the Basics

Financial Statement Analysis

Dimensions of Ratio Analysis:





Financial Statement Analysis

Dimensions of Ratio Analysis: Profitability

Profitability ratios measure a company's ability to generate income relative to revenue, balance sheet assets, operating costs, and equity.

Ratio	Formula	Desired	Interpretation
Gross Profit Margin (%)	Gross Profit / Net Sales	↑	Show how much profit a company makes from its net sales after paying its cost of goods sold
Operating Profit Margin (%)	Operating Profit/ Net sales	↑	Compares the operating income of a company to its net sales to determine operating efficiency
Net Profit Margin (%)	Net Profit/ Net Sales	↑	Compares net profit of the company to its net sales to determine the bottom line performance
Return of Assets (ROA) (%)	Net Profit/ Total Assets	↑	Measures how efficiently a company is using its assets to generate profit
Return on Equity (ROE) (%)	Net Profit/ Shareholders' Equity	↑	Measures how efficiently a company is using its equity to generate profit

Industry Average (NPM)

Industry	Net Profit Margin (%)
Spinning	5-7
Weaving	4-6
Composite Knitting	5-6
Woven Garments	4-6
Sweater	5-6
Home Textile	4-6
Cement	5-6
Real Estate- Construction	11-13
Jute Spinning	3-5
Pharmaceutical- Medicine	7-8
Steel Re-rolling	3-4
Power Generation	25-30



Financial Statement Analysis

Dimensions of Ratio Analysis: Liquidity

Liquidity ratios are financial ratios that measure a company's ability to repay short-term obligations. It indicates the short-term solvency of the company.

Ratio	Formula	Desired	Interpretation
Current Ratio (Times)	Current assets / Current liabilities	↑	Measures a company's ability to pay off short-term liabilities/obligations with current assets
Quick Ratio (Times)	(Current assets – Inventories) / Current liabilities	↑	Measures a company's ability to pay off short-term liabilities/obligations with quick assets
Cash Ratio (Times)	Cash and Cash equivalents / Current Liabilities	↑	Measures a company's ability to pay off short-term liabilities/obligations with cash and cash equivalents



Financial Statement Analysis

Dimensions of Ratio Analysis: Solvency

Solvency ratios are financial ratios that measure a company's ability to survive in the long run. It measures the company's leverage structure and its debt payment capacity

Ratio	Formula	Desired	Interpretation
Debt to Equity (Times)	Total Debt/ Shareholders Equity	↓	Assess the extent to which the firm is using borrowed money or external financing
Debt to Total Assets (%)	Total Debt/ Total Assets	↓	Relative importance of debt financing to the firm by showing the percentage of the firm's assets that is supported by debt financing.
Interest (Finance Cost) Coverage Ratio (Times)	Earnings Before Interest & Tax(EBIT)/Interest Expenses or Finance Cost	↑	Measure the firm's ability to meet its interest payments and thus avoid bankruptcy
Debt Service Coverage Ratio (Times)	Operating Profit/Total Debt Service	↑	Measure the firm's ability to meet its financial obligations from its operating profit

Industry Average (LR)

Industry	Leverage ratio (X)
Spinning	1.50-2.00
Weaving	1.60-1.75
Composite Knitting	1.75-2.00
Woven Garments	1.50-1.70
Sweater	0.75-1.00
Home Textile	1.75-2.00
Cement	1.00-1.50
Real Estate- Construction	3.50-3.75
Jute Spinning	1.00-1.50
Pharmaceutical- Medicine	0.75-1.00
Pharmaceutical- Infusion	2.50-2.75
Steel Re-rolling	2.50-2.75
Power Generation	1.00-1.25



Financial Statement Analysis

Dimensions of Ratio Analysis: Efficiency/Turnover Ratio

Efficiency ratios, also known as activity financial ratios, are used to measure how well a company is utilizing its assets and resources.

Ratio	Formula	Interpretation	Desired
Receivable Turnover (Times)	Annual Net Credit Sales/Receivable	Provides insight into the quality of the firm's receivables and how successful the firm is in its collections.	↑
Average Collection Period (Days)	(Receivables * No of Days in a Year)/Annual Net Credit Sales		↓
Inventory Turnover (Times)	Cost of Goods Sold/Inventory	Determine how effectively the firm is managing inventory	↑
Inventory Turnover in Days	(Inventory * No of Days in a year)/Cost of Goods sold		↓
Operating Cycle	Receivable Turnover in Days+ Inventory Turnover in Days		↓
Cash Cycle	Receivable Turnover in Days+ Inventory Turnover in Days- Payable Turnover in days		

Understanding the Basics

Financial Statement Analysis

Dimensions of Ratio Analysis: Earnings/Market Value Ratio

Market value ratios are used to evaluate the share price of a company's stock.



Ratio	Formula	Interpretation
Dividend Yield Ratio (%)	Dividend per share / Share price	The dividend yield ratio measures the amount of dividends attributed to shareholders relative to the market value per share
Earnings per Share Ratio (Tk.)	Net Profit After Tax/ No of Shares Outstanding	The earnings per share ratio measures the amount of net income earned for each share outstanding
Price-Earnings Ratio (Times)	Share Price / Earnings Per Share	The price-earnings ratio compares a company's share price to its earnings per share



**A problem well stated is a
problem half-solved.**

Charles Kettering



Identification of Problem is the Half of Solution

Problems & Solutions



1. Following data are collected from the record of a manufacturing concern:

Particulars	Amount in Tk.
Raw material used	25,000
Work in Process (01.06.2019)	40,000
Work in Process (30.06.2019)	60,000
Finished Goods (01.06.2019)	150,000
Finished Goods (30.06.2019)	75,000
Direct Wages	1,300 Hours @ Tk.30 per Hour
Direct Expenses	82,000
Factory Indirect Material	52,000
Factory Labour	80,000
Administrative Expense:	
Fixed	50,000
Variable	10% of Prime Cost
Selling Expenses:	
Fixed	30,000
Variable	5% of Cost of Goods Manufactured
Profit	10% on Sales

Requirements?

1. Prime Cost
2. Factory Production Cost,
3. Cost of Goods Manufactured,
4. Cost of Goods Sold
5. Total Cost
6. Sales



Ref	Calculation of Cost	Amount in Tk.
1	Raw Material used	25,000
2	Direct Wages (1300*30)	39,000
3	Direct Expenses	82,000
4	A. Prime cost (1+2+3)	146,000
5	Factory Overheads	
6	Indirect Material	52,000
7	Factory Labour	80,000
8	Total Factory Overheads (6+7)	132,000
9	B. Total Manufacturing Cost (4+8)	278,000
10	+WIP (BB)	40,000
11	-WIP (CB)	60,000
12	C. Cost of Goods Manufactured (9+10-11)	258,000
13	+Finished Goods(BB)	150,000
14	-Finished Goods (CB)	75,000
15	D. Cost of Goods Sold (12+13-14)	333,000
16	Fixed Administrative Expenses	50,000
17	Variable (10% of Prime Cost)	14,600
18	Total Administrative Expenses (16+17)	64,600
19	Fixed Selling Expenses	30,000
20	Variable (5% of COGM)	12,900
21	Total Selling Expenses (19+20)	42,900
22	E. Total Cost (15+18+21)	440,500
23	F. Sales [Total Cost/(1-Profit Rate)]	489,444

Particulars	Amount in Tk.
Raw material used	25,000
Work in Process (01.06.2019)	40,000
Work in Process (30.06.2019)	60,000
Finished Goods (01.06.2019)	150,000
Finished Goods (30.06.2019)	75,000
Direct Wages	1,300 Hours @ Tk.30 per Hour
Direct Expenses	82,000
Factory Indirect Material	52,000
Factory Labour	80,000
Administrative Expense:	
Fixed	50,000
Variable	10% of Prime Cost
Selling Expenses:	
Fixed	30,000
Variable	5% of Cost of Goods Manufactured
Profit	10% on Sales

Problems & Solutions



2. a) What do the liquidity ratios indicate? Why acid-test ratio is considered as a better indicator of liquidity?
- b) Selected financial ratios for XYZ Company and the industry average are as follows:

Ratios	Firm	Industry
Current ratio	3.2x	2.5x
Acid-test ratio	1.75x	1.9x
Debt to assets	23%	33%
Inventory turnover	5.5x	8.7x
Average collection period	33 days	40 days
Net profit margin	3.80%	3.50%
Return on investment	11.50%	9.75%

Requirements:

1. Evaluate the overall health of the firm compared to industry under different broad dimensions (Liquidity, Solvency, Activity and Profitability) of financial statement analysis.
2. What other information do you require to make a comprehensive analysis?

2 (b) (1)

Indicators	Firm	Industry	Remarks
<u>A. Liquidity Dimension:</u>	Assesses the ability to repay short-term obligations		
1. Current Ratio	3.20x	2.5x	Company's position is better than the industry indicating higher capacity to meet short term obligations
2. Acid Test Ratio	1.75x	1.9x	It indicates that the firm maintains higher inventory than industry which might put pressure on cash mgt.
<u>B. Solvency Dimension:</u>	Measure the ability to survive in the long-run by analyzing capital structure and debt repayment capacity		
1. Debt to Assets Ratio	23%	33%	Leverage structure is better indicating relatively less reliance on external financing/borrowing
<u>C. Activity Dimension:</u>	Measure how well a company is utilizing its assets and resources		
1. Inventory Turnover	5.5x	8.7x	It indicates that the company maintains huge inventories
2. Average Collection Period	33 days	40 days	It indicates better receivable mgt. compared to industry
<u>D. Profitability Dimension:</u>	Ability to generate income relative to revenue, BS assets, operating costs and equity		
1. Net Profit Margin	3.80%	3.50%	Overall profitability dimension is good compared to industry. This might be due to less reliance on external borrowing (low finance cost), Operational efficiency etc.
2. Return on Investment	11.50%	9.75%	



2 (b) (2)

- Due to insufficiency of data, a good number of analysis could not be carried out.
- If we could calculate the gross profit margin and operating profit margin along with the peer/industry data, we would be able to identify the profitability strength of the company;
- Although, we have given debt to total assets ratio, it gives a partial view of the leverage structure of the firm. In order to get a complete structure, we need to calculate interest /finance cost service coverage ratio as well as debt service coverage ratio
- Some other activity ratio could be analyzed like, operating cycle, cash cycle etc. to get a complete idea about tied up period in working capital cycle.
- It is not clear whether the company is a listed one; if so, it is required to get earning ratio/market ratio which may include, but not limited to, dividend yield ratio, price-earning ratio, earning per share etc. to learn about the market perception.

This is not exhaustive list. You can add more points



Problems & Solutions



3. a) How do the following reflect in break-even volume and P/V (or C/M) ratio?

1. Increase in Fixed Cost;
2. Increase in Sales;
3. Decrease in Variable Cost per Unit;
4. Expansion of Factory Building;
5. Decrease in Selling Price per Unit

Particulars	Effects on Break-even Volume	Effects on P/V Ratio
Increase in Fixed Cost	BE Volume=Fixed Cost/CM per Unit Therefore, BE Volume will increase	P/V Ratio=Sales-VC No effect on P/V Ratio
Increase in Sales	No effect	No effect on P/V Ratio
Decrease in Variable Cost/unit	Increase the C/M; Therefore, BE Volume reduces	Increase in P/V Ratio
Expansion of Factory Building	Increase fixed cost, Thus increase BE Volume	No effect on P/V Ratio
Decrease in Selling Price/Unit	Decrease the C/M Therefore, BE Volume increases	Decreases in P/V Ratio



Problems & Solutions

3. (b) XYZ Company sells product 'X' at Tk.500 per unit. The variable cost per unit is Tk.200 while fixed cost is Tk.110,000 per month. Based on the above information, calculate the following:

1. Calculate the break-even point of sales units for a month;
2. Calculate the profit/(loss) for a month if 500 units are sold;
3. Calculate the sales revenue to earn a profit of Tk.5,000;
4. Calculate the Margin of Safety if 400 units are sold;
5. Calculate the break-even point of sales if the selling price is increased by 10%

[Slide-29](#)



3 (b)

1. Break-even Point Sales (Unit)

CM Per Unit=(Sales Per Unit-VC Per Unit)

$$= \text{Tk.}(500-200)=\text{Tk.}300$$

Break-even Point Sales (Unit)=Fixed Cost/CM Per Unit)

$$(110,000/300) \text{ Units}=\mathbf{366.67 \text{ Units or } 367 \text{ Units}}$$

2. Profit/Loss if 500 Units are sold

Profit=Sales- Variable Cost- Fixed Cost

$$=\text{Tk. } (500*500)-(500*200)-110,000$$

$$=\mathbf{TK.40,000}$$

3. Sales Revenue to Earn Profit of Tk. 5,000

$$=(\text{Fixed Cost} + \text{Desired Profit})/\text{CM Ratio}$$

CM Ratio= (Sales-VC)/Sales

$$=(500-200)/500$$

$$=0.60$$

Therefore, Sales Revenue to Earn Profit of Tk. 5,000

$$=(110,000+5000)/0.60$$

$$= \mathbf{\text{Tk. } 191,667}$$

4. Margin of Safety= Sales-Break-even Sales

$$(400*500)-(367*500) =\text{Tk. } 16,500$$

5. Break Even Sales if Selling Price is increased by 10%

Selling Price at 10% increase=TK.550

Revised Contribution Margin=(550-200)=Tk.350

$$\mathbf{\text{CM Ratio}=350/550=0.64}$$

Break-even Sales (Volume)=Fixed Cost/CM Ratio

$$= 110,000/0.64= \mathbf{\text{Tk.}171,875}$$



Problems & Solutions



4. You have been assigned with the responsibility to prepare a cash budget for XYZ Company to evaluate the cash requirements. The following data are available:

Months	Sales	Raw Materials	Wages	Overheads
January, 2021	100,000	50,000	10,000	22,000
February, 2021	110,000	60,000	11,000	22,000
March, 2021	120,000	70,000	12,000	25,000
April, 2021	130,000	80,000	13,000	28,000
May, 2021	140,000	90,000	14,000	30,000
June, 2021	150,000	100,000	15,000	33,000

Credit Terms:

- Period of credit allowed by material supplier-2 months
- Lag in payments of overheads- 1 month
- No Lag in payment of wages

Other Information:

- Plant to be installed in January at a cost of Tk.50,000 and will be paid on monthly @ Tk.10,000 from 01 February, 2021.
- Extensions to research department at a cost of Tk.10,000 will be completed on March and payment to be made in April.
- Quarterly Depreciation of Plant shall be charged for Tk. 5000 in June, 2021
- Cash sales is estimated at 50% of total sales. 20% of credit sales will be received in the month following sale and 20% of credit sale in the next month while rest 10% will not be recoverable.
- Payment of Tk. 10,000 is to be made under a hire purchase contract throughout the budgeted period
- Dividend from investment of Tk.50,000 is expected to be received in June, 2021
- Tax of Tk.100,000 is due on 30 June 2021
- Cash Balance on 01 April is Tk. 100,000

Requirement: Prepare a month-wise cash budget for quarter ended June, 2021

Ref	Cash Budget April-June 2021				
	Particulars	Apr-21	May-21	Jun-21	Total
1	Cash in Hand (OB)	100,000	83,000	71,000	100,000
2=3+4+5	Sales	111,000	120,000	129,000	360,000
3	50% Current Month	65,000	70,000	75,000	
4	20% Previous Month	24,000	26,000	28,000	
5	20% Before Previous Month	22,000	24,000	26,000	
6	Expenses:				
7	Raw Material (2 Months Credit)	60,000	70,000	80,000	210,000
8	Wages (No Lag in Payment)	13,000	14,000	15,000	36,000
9	Overheads (1 Month Lag in Payment)	25,000	28,000	30,000	83,000
10	Plant	10,000	10,000	10,000	30,000
11	Research Expenditure	10,000			10,000
12	Hire Purchase	10,000	10,000	10,000	30,000
13	Payment of Tax			100,000	100,000
14	Dividend Income			50,000	50,000
15=2+14	Total Cash Inflow	111,000	120,000	179,000	410,000
16=7 to 13	Total Cash outflow	128,000	132,000	245,000	505,000
17=1+15-16	Cash in Hand (OB+ Inflow-Outflow)	83,000	71,000	5,000	5,000



Credit Terms:

- Period of credit allowed by supplier-2 months
- Lag in payments of overheads- 1 month
- No Lag in payment of wages

Month	Sales	Raw Material	Wages	Overhead
January, 2021	100,000	50,000	10,000	22,000
February, 2021	110,000	60,000	11,000	22,000
March, 2021	120,000	70,000	12,000	25,000
April, 2021	130,000	80,000	13,000	28,000
May, 2021	140,000	90,000	14,000	30,000
June, 2021	150,000	100,000	15,000	33,000

Problems & Solutions

5. Daffodil company produces and sells a single product line, Wooden Toy Box, Selected cost and operating data relating to the products are given below:

Selling Price per Unit	50.00
Manufacturing Costs:	
Variable cost per unit produced:	
Direct materials	11.00
Direct labor	6.00
Variable overhead	3.00
Fixed Cost per year	120,000.00
Selling and Administrative costs:	
Variable per unit sold	5.00
Fixed per year	70,000.00

Units Details	Year 1	Year 2
Beginning inventory	-	2,000
Product produced during the year	10,000	6,000
Product sold during the year	8,000	8,000
Ending inventory	2,000	-

Requirements:

1. Compute an Income Statement for each year assuming that the company uses absorption costing
2. Compute an Income Statement for each year assuming that company is uses direct costing
3. Reconcile the direct costing and absorption costing net income figure



5 (1)

Income Statement: Using Absorption Costing

Particulars		Year 1		Year 2
Sales (8000 Units * Tk.50)		400,000		400,000
Cost of Goods Sold:				
Beginning Inventory	-		64,000	
+Cost of goods manufactured (10,000*20) [Y1] (6000*20)[Y2]	200,000		120,000	
+Fixed cost per year	120,000		120,000	
Cost of Goods Available for Sale	320,000		304,000	
-Ending Inventory	64,000		-	
Cost of Goods Sold		256,000		304,000
Gross Profit (Sales- COGS)		144,000		96,000
Less: Selling and administrative Costs				
Variable Sales and Admin (8000*5)	40,000		40,000	
Fixed cost per year	70,000		70,000	
		110,000		110,000
Net Profit		34,000		(14,000)

Ending inventory Calculation:

Variable Cost = $2,000 \times 20 = 40,000$

Proportionate fixed cost/unit = $120,000 / 10,000 = 12$; Fixed Cost = $2,000 \times 12 = 24,000$

Ending Inventory = $(2,000 \times 20) + (2,000 \times 12) = 40,000 + 24,000 = 64,000$



Selling Price per Unit	50.00
Manufacturing Costs:	
Variable cost per unit produced:	
Direct materials	11.00
Direct labor	6.00
Variable overhead	3.00
Fixed Cost per year	120,000.00
Selling and Administrative costs:	
Variable per unit sold	5.00
Fixed per year	70,000.00

Units Details	Year 1	Year 2
Beginning inventory	-	2,000
Product produced during the year	10,000	6,000
Product sold during the year	8,000	8,000
Ending inventory	2,000	-

5 (2)



Income Statement: Using Direct/Variable Costing				
Particulars		Year 1		Year 2
Sales (8000 Units * Tk.50)		400,000		400,000
Variable Expenses				
Beginning Inventory	-		40,000	
Cost of goods manufactured (10,000*20)[Y1] (6000*20)[Y2]	200,000		120,000	
(-)Ending Inventory (2,000*20)	(40,000)		-	
Cost of Goods Sold		160,000		160,000
Contribution Margin		240,000		240,000
(+)Variable Sales and Administrative (8,000*5)		40,000		40,000
Fixed Expenses:				
Fixed overhead cost	120,000		120,000	
Fixed Selling and admin Costs	70,000		70,000	
		190,000		190,000
Net Profit		10,000		10,000

Selling Price per Unit	50.00
Manufacturing Costs:	
Variable cost per unit produced:	
Direct materials	11.00
Direct labor	6.00
Variable overhead	3.00
Fixed Cost per year	120,000.00
Selling and Administrative costs:	
Variable per unit sold	5.00
Fixed per year	70,000.00

Units Details	Year 1	Year 2
Beginning inventory	-	2,000
Product produced during the year	10,000	6,000
Product sold during the year	8,000	8,000
Ending inventory	2,000	-

5 (3)

Reconciliation	Year 1	Year 2
Net Profit under Direct Costing	10,000	10,000
+Ending Inventory (64,000-40,000)	24,000	-
- Beginning Inventory	-	24,000
Income under Absorption Costing	34,000	(14,000)

Selling Price per Unit	50.00
Manufacturing Costs:	
Variable cost per unit produced:	
Direct materials	11.00
Direct labor	6.00
Variable overhead	3.00
Fixed Cost per year	120,000.00
Selling and Administrative costs:	
Variable per unit sold	5.00
Fixed per year	70,000.00

Units Details	Year 1	Year 2
Beginning inventory	-	2,000
Product produced during the year	10,000	6,000
Product sold during the year	8,000	8,000
Ending inventory	2,000	-



Q&A

Thank You!



to all!