

# **Chapter 5**

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## **Financial Management of start-up ventures**

# Chapter **Outlines**

- ◆ **Sources of Capital for startup Ventures**
- ◆ **Start up costs**
- ◆ **Gross- and Net Profit**
- ◆ **Break-even Analysis**
- ◆ **Profit forecast**
- ◆ **Cash Flow Analysis**

# Micro and Small Enterprises

<b>Enterprise level</b>	<b>Sector</b>	<b>Hired labor</b>	<b>Capital [ETB]</b>
<b>Micro Enterprise</b>	<b>Manfg</b>	< 5	<100,000
	<b>Service</b>	< 5	<50,000
<b>Small</b>	<b>Manfg</b>	6-30	<1,500,000
	<b>Service</b>	6-30	<500,000

# Enterprise growth stages

## Micro enterprises

3. Maturity

2. Growth

1. Start up

## Small enterprises

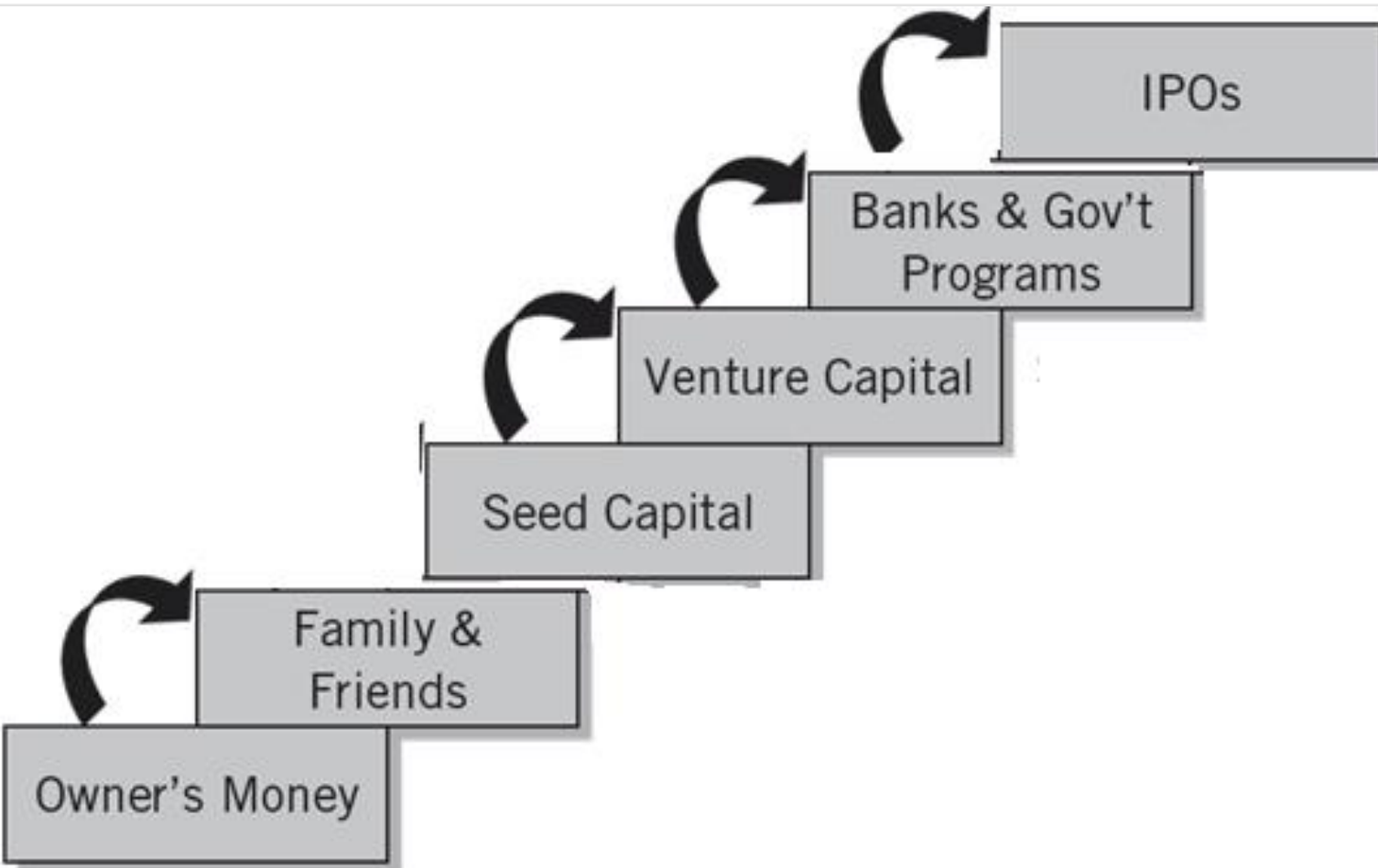
4. Emerging medium

3. Maturity

2. Growth

1. Start up

# Who Is Funding Entrepreneurial Start-Up Companies?



# Debt Versus Equity Financing

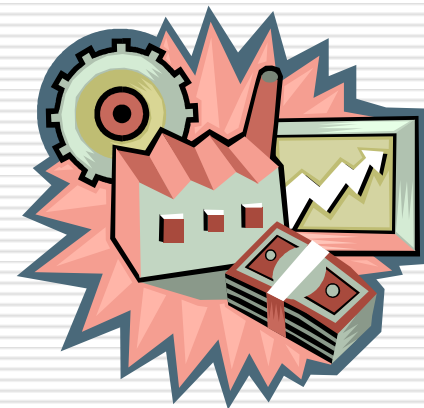
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## □ Debt Financing

- Secured financing of a new venture that involves a payback of the funds plus a fee (interest for the use of the money).

## □ Equity Financing

- Involves the sale (exchange) of some of the ownership interest in the venture in return for an unsecured investment in the firm.



# Debt Financing

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## Commercial Banks

- Make 1-5 year intermediate-term loans secured by collateral (receivables, inventories, or other assets).
- Questions in securing a loan:
  - What do you plan to do with the money?
  - How much do you need?
  - When do you need it?
  - How long will you need it?
  - How will you repay the loan?



# Debt Financing (cont'd)

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## □ Advantages

- No relinquishment of ownership is required.
- More borrowing allows for potentially greater return on equity.
- During periods of low interest rates, the opportunity cost is justified since the cost of borrowing is low.

## □ Disadvantages

- Regular (monthly) interest payments are required.
  - Continual cash-flow problems can be intensified because of payback responsibility.
  - Heavy use of debt can inhibit growth and development.
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# Equity Financing

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## □ Equity Financing

- Money invested in the venture with no legal obligation for entrepreneurs to repay the principal amount or pay interest on it.
  - Funding sources: public offering and private placement
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# Public Offerings

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## ❑ Public Offering

- ❑ “Going public” refers to a corporation’s raising capital through the sale of securities on the stock markets.

- ❑ Initial Public Offerings (IPOs): new issues of common stock

## ❑ Advantages

- Size of capital amount
- Liquidity
- Value
- Image

## ❑ Disadvantages

- Costs
  - Disclosure
  - Requirements
  - Shareholder pressure
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# START UP COSTS

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## Fixed and Variable costs.

**Fixed costs** remain constant in total (not per unit) regardless of the volume of production or sales, over a relevant range of production or sales.

**Rent and salaries are typically fixed costs**

**Variable costs** fluctuate in total (not per unit) as the volume of production or sales fluctuates

▪ **Direct labour costs, Direct material costs used in production, and sales commissions are examples of variable costs.**

# Types of costs

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## Example: Cost items of a dress making factory

COSTS	FIXED	VARIABLE
Wages for the seamstress		
Telephone		
Salary for the secretary / receptionist		
Water and electricity		
Rent for the factory building		
Maintenance contract on the machines		
Raw material costs		

**Examples: Indirect materials and indirect labor**

**Example:**  
**The tires installed in an automobile**

**Example:**  
**Wages paid to automobile assembly workers**

**Materials used to support the production process.**  
**Examples:**  
lubricants and cleaning supplies

**Wages paid not directly involved in production work.**  
**Examples:**  
maintenance workers, janitors and guards.

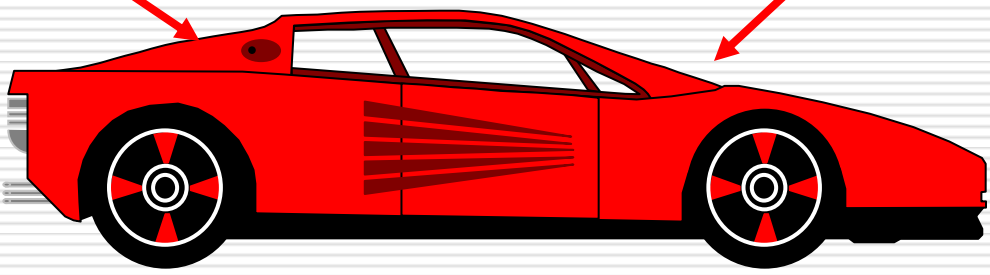
**Direct Materials**

**Direct Labor**

**Manufacturing Overhead**

**Administrative Costs**

**Other Costs**



**The Product**

All executive, organizational, and clerical costs.



- Selling and distribution
- Rent
- Utilities

Wro Addis was granted a (micro credit) loan of ETB 30,000.00 from Oromia Credit and Savings Share Company. The loan was utilised as follows:

Purchase of machines	ETB 24,000.00 (1 straight and 1 over locking machine)
Raw materials	<u>ETB 6,000.00</u>
Total	<u>ETB 30,000.00</u>

Interest is charged at a rate of 12 % per annum (simple average). The loan and interest is repayable in one year over 12 instalments, but Wro Addis expects, that she can use the machines for about 5 years. For profitability calculation she will therefore apply depreciation on the investment over 5 years.

Thanks to a very beautiful and innovative design, she has been offered an order for cultural dresses by retailers around Merkato in Addis Ababa at a price of ETB 700.00 each. To produce an average size dresses (size 34) the following are required:

Cloth	2 metres at	ETB 150.00 per meter
Buttons	20 pieces at	ETB 5.00 per button
Belt	1 metre at	ETB 50.00 per meter

The average monthly costs for packaging and other production materials (auxiliaries) are around ETB 700.00 (at full capacity). Genet, the seamstress, works 8 hours per day. Genet's monthly wage is ETB 2,000 with 20 working days per month, and she produces 2.5 dresses a day working on both machines.

Depreciation on machines:	Straight line method over a period of 5 years.
Building rent:	ETB 2,500 per month
Utilities (water and electricity)	ETB 400 per month
Selling and distribution cost	ETB 600 per month
Maintenance contract	ETB 200 per month
Administration expenses	ETB 400 per month
Wro Addis's salary	ETB 3,000 per month

# Calculate:

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- ❑ 1. The total costs per month at full capacity
  
- ❑ 2. The profit / loss that the business will make from this order

## THE TAILOR SHOP of Wro Addis - COST STRUCTURE

[Redacted]				Cost (ETB) per month
Direct material & expenses	$[(\text{Cloth } 2 \times 150 \text{ ETB}) + (\text{Button } 20 \times 5 \text{ ETB}) + (\text{Belt } 1 \times 50 \text{ ETB})]$ per unit	2.5 dresses per day x 20 days = <b>50 dresses per month</b>	$[2 \times 150 + 20 \times 5 + 1 \times 50] \times 50 =$	22500
<b>Variable cost</b>				<b>22,500</b> 68%
Monthly interest	$[\text{amount} \times \text{int. rate} \times \text{years}] / \text{month} = [\text{ETB } 30,000 \times 12 \% \times 1] / 12 =$			300
Depreciation:	$\text{ETB } 24,000 \div 60 \text{ months} =$			400
Auxiliary materials & packaging				700
Maintenance / repairs				200
Administration cost				400
Salaries (regular salaries in production)				2000
Salaries (Wro Addis)				3000
Rent				2500
Utilities				400
Selling expenses				600
<b>Total Fixed Cost</b>				<b>10,500</b> 32%
<b>Total cost (Variable + fixed)</b>				<b>33,000</b>

# Gross- and Net Profit

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## Turnover:

50 dresses per month x ETB 700.00 each =  
ETB 35,000 per month

SALES	ETB 35,000
- Cost of production	<u>ETB 22,500</u>
= Contribution ( <b>Gross Profit</b> )	<b>ETB 12,500</b>
- Overheads (fixed costs)	<u>ETB 10,500</u>
= <b>NET PROFIT</b>	<b>ETB 2,000</b>

# Mark-up % and Gross Profit %

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<b>MARK-UP %</b>	<b>= Contribution</b>	<b>÷ Production Cost</b>	<b>x 100</b>
	<b>= ETB 12,500</b>	<b>÷ ETB 22,500</b>	<b>x 100</b>
	<b>= 55.5 %</b>		

<b>CONTRIBUTION %</b>	<b>= Contribution</b>	<b>÷ sales</b>	<b>x 100</b>
	<b>= ETB 12,500</b>	<b>÷ ETB 35,000</b>	<b>x 100</b>
	<b>= 35.7 %</b>		

<b>NET PROFIT %</b>	<b>= Net Profit</b>	<b>÷ sales</b>	<b>x 100</b>
	<b>= ETB 2,000</b>	<b>÷ ETB 35,000</b>	<b>x 100</b>
	<b>= 5.7 %</b>		

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# Break-even Analysis

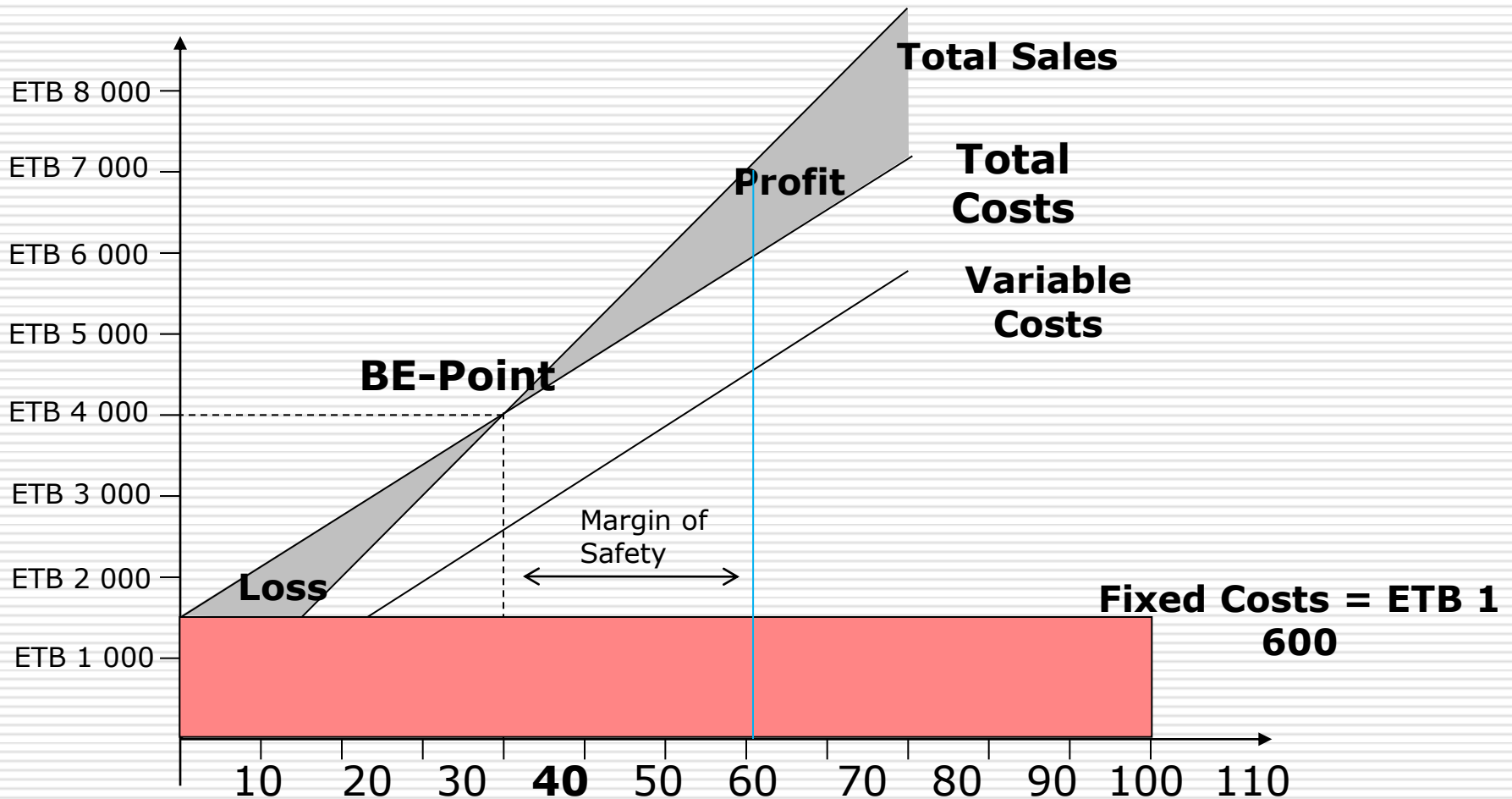
- ❑ "A firm Breaks Even if it doesn't make a profit or a loss"
- ❑ In other words profit = 0
- ❑ Total Revenue = Total Costs
- ❑ Total Revenue (TR) = Price per unit x Number of units sold
- ❑ Used to evaluate whether the organisation will be able to cover costs (break even) at a particular price

## Uses of break- even analysis

- ❑ It enables a business organization to:
  - Measure profit and loss at different levels of production and sales
  - To predict the effect of changes in price of sales
  - To analyse the relationship between fixed cost and variable cost
  - To predict the effect on profitability if changes in cost and efficiency

# Break-even

❑ The **break-even point** is the level of operations at **which** a company's revenues and expenses are equal.



# Break even analysis

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**The calculation is as follows:**

□ **Break- Even in unit** =  $\frac{\textit{Fixed costs}}{(\textit{Sales} - \textit{Variable costs})}$

□ **Break-Even in Birr** =  $\frac{\textit{Fixed costs}}{(\textit{Sales} - \textit{Variable costs}) / \textit{Sales}}$

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## □ **Example**

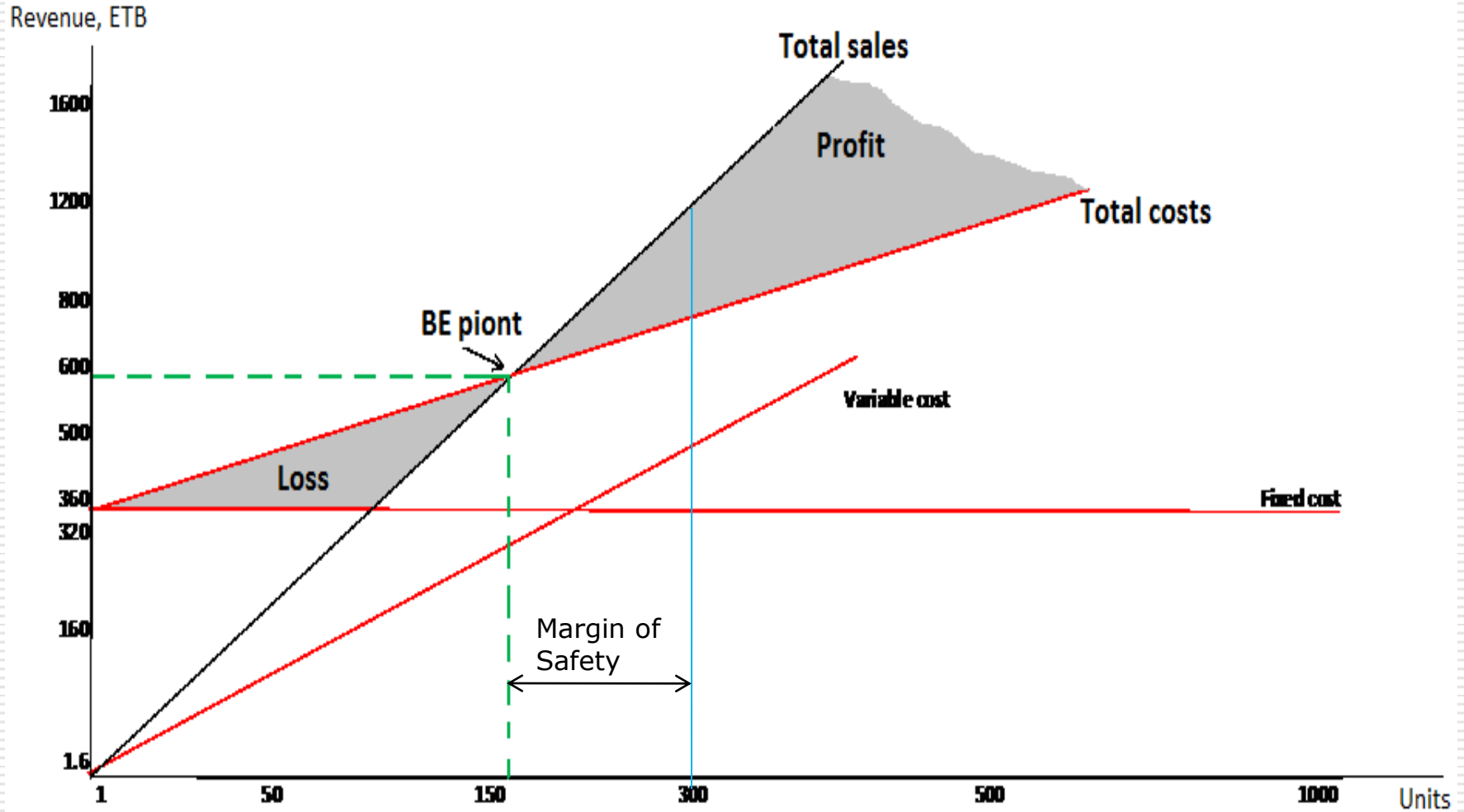
- A small street side cafe offers fresh traditional coffee to the general public. Total variable costs per coffee (including coffee beans, water, firewood, sugar) amount to ETB 1.60 per cup. The cafe has fixed costs per week of ETB 360.00, being the rental of the place. The selling price is ETB 4.00.

## **Solution**

- From the problem
- Total Fixed costs = 360ETB/week and Total Variable costs = 1.6ETB / cup
- Calculate sales = 4ETB/cup

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- ❑ **Break- Even in unit = [fixed costs / (Sales-variable cost)]**
  - ❑  $= [360 / (4 - 1.6)] = 150 \text{ units}$
  - ❑ Therefore, the business must sell 150 cups of coffee (per week!) in order to break-even. Let us put it to the test:
  - ❑ Sales  $150 \times \text{ETB } 4.00 = \text{ETB } 600$
  - ❑ Variable costs  $150 \times \text{ETB } 1.60 = \text{ETB } 240$
  - ❑ Fixed costs = ETB 360
  - ❑ Profit / loss = Sales - (fixed + variable) costs =  $600 - (360 + 240) = 0$
  - ❑ **Break-Even in Birr =  $\frac{\text{Fixed costs}}{(\text{Sales} - \text{Variable costs}) / \text{Sales}}$**   
 $= (360 / [(4 - 1.6) / 4]) = 600 \text{ or } 150 * 4 = 600$
  - ❑ Once break-even point has been reached, a business enjoys greater flexibility when setting prices or offering discounts.

# DIAGRAMMATIC PRESENTATION



# CALCULATION OF BREAK-EVEN

$$\text{Break-Even Sales (units)} = \frac{\text{Fixed Costs}}{\text{Unit Contribution Margin}}$$

Fixed costs	\$90,000
Unit selling price	\$25
Unit variable cost	\$15
Unit contribution margin	\$10

$$\text{Break Even sales (units)} = \$90,000/10 = 9000 \text{ units}$$

$$\text{Break-Even Sales (dollars)} = \frac{\text{Fixed Costs}}{\text{Contribution Margin Ratio}}$$

$$\text{Contribution margin ratio} = \frac{\text{Unit CM}}{\text{Unit Selling price}}$$

# Break-Even Example: BAMBOO CHAIR MAKER

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## Per month data

- ❑ Selling price per unit ETB 750
- ❑ Manufacturing cost per unit ETB 450
- ❑ Maximum capacity (chairs per month) 60 units
- ❑ Fixed costs (including rent, fixed salaries)  
ETB 6,000

1. Observe the number of units to break-even.
2. What is the break-even % of production capacity?

## Break-Even Example:

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New Wave Technology Inc. manufactures and sells two products, MP3 players and satellite radios. The fixed costs are \$300,000, and the sales mix is 40% MP3 players and 60% satellite radios. The unit selling price and the unit variable cost for each product are as follows:

Products	Unit Selling Price	Unit Variable Cost
MP3 players	\$ 60.00	\$45.00
Satellite radios	100.00	60.00

- I. Compute the break-even sales (units) for the overall product,
- II. How many units of each product, MP3 players and satellite radios, would be sold at the break-even point?

# Demerits of Break Even analysis

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- ❑ It is only a forecast!
- ❑ Assumes all products are made AND sold
- ❑ Assumes that sales prices are constant at all levels of output
- ❑ Costs may change
- ❑ It can only apply to single product or single mix of products

# Margin of Safety

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- Is if a firm is producing AND selling more than the break even level of output then a profit is being made
- This is effectively a “safety net”, and can be calculated as:
- Actual Sales - Break Even Level
- From the previous example (coffee house)
- If Actual sales = 300 units/week
- Break Even level = 150 units/week
- $MoS = 300 - 150 = 150$  units /week

# ***PROFIT FORECAST***

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- ❑ Profit forecast tells you how much profit/loss you make in a period
- ❑ Profit and Loss is also essential in providing information for Inland Revenue for Taxation purposes

# Profit Forecast Calculations

<b>SALES</b>			<b>ETB</b>
<b>- COST OF PRODUCTION / SALES</b>			<b>ETB</b>
Production wages		ETB	
Production materials		ETB	
<b>Opening stock</b>	ETB		
<b>+ Purchases of materials</b>	ETB		
<b>- Work in progress</b>	ETB		
<b>- Closing stock</b>	ETB		
<b>MANUFACTURING (gross) PROFIT</b>			<b>ETB</b>
<b>- EXPENSES</b>			<b>ETB</b>
<b>Equipment rental</b>	ETB		
<b>Salaries</b>	ETB		
<b>Rental</b>	ETB		
<b>Other</b>	ETB		
<b>PROFIT (before tax)</b>			<b>ETB</b>
<b>Income TAX</b>			<b>ETB</b>
<b>Net Profit</b>			<b>ETB</b>

# Example: Block Enterprise

Suppose you are the owner of hollow blocks manufacturing enterprise. Hollow blocks are sold for ETB 850 per 100 blocks. The monthly cost structure of your enterprise looks the following

<b>Salaries</b>	<b>ETB 3,000 per month</b>
<b>Production Labour</b>	<b>ETB 50 per 100 blocks</b>
<b>Rent</b>	<b>ETB 3,000 per month</b>
<b>Cement, sand and stone</b>	<b>ETB 500 per 100 blocks</b>
<b>Machine credit payment</b>	<b>ETB 1,000 per month</b>
<b>Delivery costs</b>	<b>ETB 50 per 100 blocks</b>
<b>Telephone / Communication</b>	<b>ETB 500 per month</b>

## Budgeted production and sells

	<b>September</b>	<b>October</b>	<b>November</b>
<b>Blocks</b>	<b>5,000</b>	<b>6,500</b>	<b>7,000</b>

- Prepare a profit forecast, for the months September, October and November

<b>Hollow Block Making Enterprise - PROFIT FORECAST</b>			
	<b>September</b>	<b>October</b>	<b>November</b>
<b>Income from Sales</b>			
<b>- Material Cost</b>			
<b>- Production Labor</b>			
<b>Contribution</b>			
<b>Salaries</b>			
<b>Rent</b>			
<b>Machine Rent</b>			
<b>Delivery Expense</b>			
<b>Telephone</b>			
<b>-Total Expense</b>			
<b>Profit Before Tax</b>			

## Sales forecast (profit forecast)

**850 birr / 100 unit blocks**

		August	Sept.	Oct.	Nov.
Forecasted Sales amount ( units)			5000	6500	7000
Forecasted Sales revenue (income)		30,000	42,500	55250	59500
Description (Expenses)	costs (ETB)		Sept	Oct	Nov
F.C	salaries	3000	3000	3000	3000
V.C	labour cost (Wage)	50birr/100 unit	2500	3250	3500
F.C	rent	3000	3000	3000	3000
V.C	material (cement, sand..)	500 birr/100unit	25000	32500	35000
F.C	machine credit payment	1000	1000	1000	1000
V.C	delivery cost	50birr/100 unit	2500	3250	3500
F.C	communication	500	500	500	500
<b>Total expences</b>			<b>37500</b>	<b>46500</b>	<b>49500</b>
<b>PBT</b>			<b>5000</b>	<b>8750</b>	<b>10000</b>

# **Business Profit Tax [Ethiopia]**

- ❑ Corporate businesses are required to pay 30% flat rate of business income tax.
- ❑ For unincorporated or individual businesses the business income tax ranges from 10% - 35%.

## **Schedule 'C'**

<b>Taxable Business Income/Net Profit/ /per year/</b>		<b>Tax Rate (in %)</b>	<b>Deduction (in Birr)</b>
<b>Over Birr</b>	<b>To Birr</b>		
0	1,800	Exempt threshold	
1,801	7,800	10	180.00
7,801	16,800	15	570.00
16,801	28,200	20	1410.00
28,201	42,600	25	2520.00
42,601	60,000	30	4950.00
Over 60,000		35	7950.00

# Cash flow

<b>Cash flow</b>				
Period	Description	Income	Expence	Balance (I-E)
August		30,000	0	30,000
September		72,500	37500	35,000
October		90,250	46500	43,750
November		103,250	49500	53,750
PBT				53,750
PAT(15%)				8,062.50
Net Profit				45,687.50

	<b>August</b>	<b>September</b>	<b>October</b>	<b>November</b>
Opening bank		ETB 25,000	ETB 17,500	ETB 13,500
Money IN		ETB 30,000	ETB 42,500	ETB 55,250
Less Money OUT		- ETB 37,500	- ETB 46,500	- ETB 49,500
<b>Closing bank</b>	<b>ETB 25,000</b>	<b>ETB 17,500</b>	<b>ETB 13,500</b>	<b>ETB 19,250</b>