

# **MODULE 03: FINANCIAL ANALYSIS**

## **Lecture Title 04: ACCOUNTING RATIOS**

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**Undergraduate Diploma in  
Business Administration**

# What we covered in Lecture 03

- International Accounting Standards
- Statutory Financial Statements
- The Income Statement
- The Balance Sheet
- Cash vs Profitability
- The Cashflow Statement



# Financial Accounts

The financial accounts are:

- Legally required
- Focused on history (reports on the prior period)
- Are reported in a specific format
- Their rules are prescribed by standards
- Are defined to be reported annually, semi-annually, quarterly or even monthly
- Are mostly of monetary nature



# Income statement ... or profit & loss a/c ?

- Provides information on the results of the business activity for the particular period
- **Revenue**: Turnover; Sales of Goods; Provision of Services; Other Income
- **Cost of Sales**: Opening/Closing Stock; Purchases; Manufacturing Costs
- **GROSS PROFIT**
- **Expenses**: Marketing; Administration; Financial
- **Depreciation**
- **NET PROFIT** before TAX



# Balance sheet... or statement of financial position !

- Provides a SNAP SHOT of the status and position of the Business Organisation at a PARTICULAR moment in time, e.g. 31 December 2021
- 3 main sections:
  - ASSETS
  - LIABILITIES
  - EQUITY / RETAINED EARNINGS



# Importance of Profitability



Profitability represents the main measure of success within an organisation



Hence owners or shareholders will decide whether the business is sufficiently profitable for them to retain their investment



This decision is based upon the owners' cost of capital

# Cash Flow Statement Format

Cash flows from **OPERATING** activities

**PLUS** or **MINUS**

Cash flows from **INVESTING** activities

**PLUS** or **MINUS**

Cash flows from **FINANCING** activities

**EQUALS**

**NET** increase (or decrease) in **cash equivalents** over the period



# Today's Agenda



Financial Ratios



Profitability Ratios



Efficiency Ratios





# Ratio Analysis

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# Ratio Analysis

- Many people associate this with **interpretation**
- **Calculation** of ratios and statistics
- No agreed definition of ratios
- Variation in terminology
- Areas of analysis (profitability, liquidity, efficiency and investment)



# Interpreting Financial Information

- Ratios are used as a tool for interpreting financial information
- There is no generally accepted list of ratios to be applied to financial statements
- The ratios used depends on the needs of the user e.g. investor, employee, lenders
- There are various ways of calculating similar ratios
- Must be consistent in calculation of ratios for comparative purposes



# Use of Ratio Analysis

- Ratios are useful because:
  - Provide a quick and simple means of interpreting a business' financial information
  - Provide a picture of a company's financial health
  - They enable comparisons between companies that may differ in size (direct comparison of figures may be misleading)
  - Highlight financial strengths and weaknesses of the business



# Classifications of Ratios

Ratios may be grouped into the following categories:

- Profitability
- Efficiency
  
- Liquidity
- Financial gearing
- Investment



# Profitability Ratios

How successful is the business at using resources to make profit?

*Key ratios:*

- Return on capital employed (ROCE)
- Return on Equity
- Gross profit margin
- Operating profit margin



# Ratio Analysis and Profitability

- Profit before tax
- Compare to total capital employed
- Return on Capital Employed (ROCE)
- Return on Equity
- Basic calculation =  $\text{profit/capital employed} \times 100$



# Return on Capital Employed

- **Fundamental** measure of business performance
- Primary measure of profitability comparing inputs (capital invested) with outputs (operating profit)





**NAXXAR RETAIL COMPANY LIMITED**  
**INCOME STATEMENT**  
**FOR THE YEAR ENDED 31 DECEMBER 2022**

	€
<b>REVENUE</b>	
Sales - Clothing & Accessories	55,400
Sales - Shoes	26,645
<b>TOTAL REVENUE</b>	<b>82,045</b>
<b><u>COST OF SALES</u></b>	
Opening Stock	24,331
Purchases - Foreign	14,420
Purchases - Local	16,551
Closing Stock	- 19,445
<b><u>COST OF GOODS SOLD</u></b>	<b>35,857</b>
<b><u>GROSS PROFIT</u></b>	<b>46,188</b>
<b><u>EXPENSES</u></b>	
Accounting Fees	2,800
Bank Charges	921
Insurance	305
Legal Fees	5,500
Motor Expenses	1,960
Rent	1,560
Salaries and Wages	4,850
Sundry Expenses	806
Water & Electricity expenses	516
<b><u>TOTAL EXPENSES</u></b>	<b>19,218</b>
<b><u>NET PROFIT / (LOSS)</u></b>	<b>26,970</b>

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<b>NAXXAR RETAIL COMPANY LIMITED</b>		
<b>BALANCE SHEET</b>		
<b>AS AT 31 DECEMBER 2022</b>		
		<b>€</b>
<b><u>FIXED ASSETS</u></b>		
Buildings		58,000
Shop Fixtures		3,960
Motor Vans		3,500
<b><u>TOTAL FIXED ASSETS</u></b>		<b><u>65,460</u></b>
<b><u>INVESTMENTS</u></b>		
Investments in Shares of Other Companies		15,000
<b><u>CURRENT ASSETS</u></b>		
Stock at End of Year		19,445
Debtors		11,810
Prepayments		1,200
Bank Balances		1,134
<b><u>TOTAL CURRENT ASSETS</u></b>		<b><u>33,589</u></b>
<b><u>TOTAL ASSETS</u></b>		<b><u>114,049</u></b>
REPRESENTED BY:		
<b><u>EQUITY</u></b>		
Share Capital		20,000
Retained Earnings		35,521
Profit for the Year		26,972
<b><u>TOTAL EQUITY</u></b>		<b><u>82,493</u></b>
<b><u>LONG-TERM LIABILITIES</u></b>		
Bank Loans (over 12 months repayments)		26,000
<b><u>CURRENT LIABILITIES</u></b>		
Creditors		3,250
Accruals		2,306
<b><u>TOTAL CURRENT LIABILITIES</u></b>		<b><u>5,556</u></b>
<b><u>TOTAL EQUITY &amp; LIABILITIES</u></b>		<b><u>114,049</u></b>



# Return on Capital Employed

RETURN ON CAPITAL EMPLOYED	
Net Profit for the year	X 100
Equity + Liabilities	

**23.65%**

<b>TOTAL EXPENSES</b>	<b>19,218</b>
<b>NET PROFIT / (LOSS)</b>	<b>26,970</b>
<b>TOTAL EQUITY &amp; LIABILITIES</b>	<b>114,049</b>

26,970	X 100
114,049	



# Return on Equity

RETURN ON EQUITY	
Net Profit for the year	X 100
Capital	

**134.85%**

<b>TOTAL EXPENSES</b>	<b>19,218</b>
<b>NET PROFIT / (LOSS)</b>	<b>26,970</b>
<b>EQUITY</b>	
Share Capital	20,000
Retained Earnings	35,521
Profit for the Year	26,970
<b>TOTAL EQUITY</b>	<b>82,493</b>

	26,970	X 100
	20,000	



# Gross Profit Margin

Measure of profitability ....

in buying or producing and selling goods or services ....  
before any other expenses are taken into account

Gross Profit	X 100
Sales Revenue	



# Gross Profit Margin

Gross Profit	X 100
Sales Revenue	

46,188	X 100
82,045	

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FOR THE YEAR ENDED 31 DECEMBER 2022	
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56.3%

# Gross Mark-Up

Measure of profitability ....

as a ratio over the **Cost of Sales** ....

before any other expenses are taken into account

Gross Profit	X 100
Cost of Sales	



# Gross Profit Mark-Up

Gross Profit	X 100
Cost of Sales	

46,188	X 100
35,857	

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128.8%





# Ratio Analysis and Efficiency

- **Efficient** management of assets and liabilities
- Measuring **productivity** of assets by comparing asset values to sales revenue
- Measuring stock turnover/receivables collection/payables payment



# Asset Turnover

$$\frac{\text{Sales}}{\text{Net Assets}}$$

$$\frac{82,045}{114,049 - 26,000 - 5,556}$$

$$\frac{82,045}{82,493}$$

99.5%

Naxxar Retail Co. Ltd is just meeting its Net Assets Value at 99.5%. Efficient ??



# Fixed Asset Turnover

$$\frac{\text{Sales}}{\text{Fixed Assets}}$$

82,045
65,460

125.3%

Naxxar Retail Co. Ltd is generating revenue at 1.25 times.



# Efficiency Ratios

Used to assess how successfully the various resources of the business are managed

*Key ratios:*

- Average **inventories** turnover period
- Average **receivables** settlement period
- Average **payables** settlement period



# Average Inventories Turnover Period

- Measures the average period for which inventories are being held

$$\frac{(\text{Opening Stock} + \text{Closing Stock}) / 2}{(\text{Cost of Sales}) / 365}$$

- Average inventories held can be calculated as a simple average of opening and closing inventories for the year



# Average Inventories Turnover Period

$$\frac{(\text{Opening Stock} + \text{Closing Stock}) / 2}{(\text{Cost of Sales}) / 365}$$

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## Average Inventories Turnover Period

$$\frac{(\text{Opening Stock} + \text{Closing Stock}) / 2}{(\text{Cost of Sales}) / 365}$$

$$(24,331 + 19,445) / 2$$

$$35,857 / 365$$

**222.8 days**



# Average Receivables Settlement Period

- Calculates how long, on average, credit customers take to pay the amounts that they owe to the business

Average trade receivables	X 365
Credit Sales revenue	

- Average trade receivables held can be calculated as a simple average of opening and closing trade receivables for the year

Opening Trade Receivables + Closing Trade Receivables
2





# Average Receivables Settlement Period

Average trade receivables	X 365
Credit Sales revenue	

- Opening Receivables = ??????
- Closing Receivables = € 11,810
- Credit Sales Revenue = € 82,045

Opening Trade Receivables + Closing Trade Receivables
2

## Assumption 1

- Opening Receivables = € 13,500



# Average Receivables Settlement Period

Average trade receivables	X 365
Credit Sales revenue	

Opening Trade Receivables + Closing Trade Receivables
2

Assumption 1

- Opening Receivables = € 13,500

(13,500 + 11,810)
2

12,655



# Average Receivables Settlement Period

Average trade receivables	X 365
Credit Sales revenue	

12,655	X 365
82,045	

56.3 days

# Average Receivables Settlement Period

Average trade receivables	X 365
Credit Sales revenue	

Opening Trade Receivables + Closing Trade Receivables
2

Assumption 2

- Opening Receivables = € 6,500

$(6,500 + 11,810)$	9,155
2	

# Average Receivables Settlement Period

Average trade receivables	X 365
Credit Sales revenue	

9,155	X 365
82,045	

40.7 days

# Average Receivables Settlement Period

Average trade receivables	X 365
Credit Sales revenue	

Assumption 1: Op Receivables €13,500

12,655	X 365
82,045	

56.3 days

Assumption 2: Op Receivables €6,500

9,155	X 365
82,045	

40.7 days

The lower the Receivables ... The lower the Credit days

# Average Payables Settlement Period

- Measures how long, on average, the business takes to pay those who have supplied goods and services on credit

Average trade payables	X 365
Cost of Sales	

- Average trade payables held can be calculated as a simple average of opening and closing trade payables for the year

Opening Trade Payables + Closing Trade Payables
2



# Average Payables Settlement Period

Average trade payables	X 365
Cost of Sales	
Opening Trade Payables + Closing Trade Payables	
2	

Assumption 3

- Opening Payables = € 5,000

(5,000 + 3,250)
2

4,125



# Average Payables Settlement Period

Average trade payables	X 365
Cost of Sales	

4,125	X 365
35,857	

42 days



To recap.....



# Profitability Ratios

## RETURN ON CAPITAL EMPLOYED

$$\frac{\text{Net Profit for the year}}{\text{Equity + Liabilities}} \times 100$$

## RETURN ON EQUITY

$$\frac{\text{Net Profit for the year}}{\text{Capital}} \times 100$$

$$\frac{\text{Gross Profit}}{\text{Sales Revenue}} \times 100$$

$$\frac{\text{Gross Profit}}{\text{Cost of Sales}} \times 100$$

# Efficiency Ratios

Sales	Sales
Net Assets	Fixed Assets

$$\frac{(\text{Opening Stock} + \text{Closing Stock}) / 2}{(\text{Cost of Sales}) / 365}$$

Average trade receivables	X 365
Credit Sales revenue	

Average trade payables	X 365
Cost of Sales	





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