

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



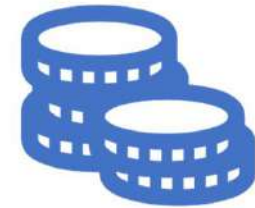
Today's Agenda



Financial Ratios



Profitability Ratios



Efficiency Ratios



Ratio Analysis

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 = $\text{profit} / \text{capital employed} \times 100$



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		
		€
REVENUE		
Sales - Clothing & Accessories		55,400
Sales - Shoes		26,645
TOTAL REVENUE		82,045
<u>COST OF SALES</u>		
Opening Stock		24,331
Purchases - Foreign		14,420
Purchases - Local		16,551
Closing Stock		- 19,445
<u>COST OF GOODS SOLD</u>		35,857
<u>GROSS PROFIT</u>		46,188
<u>EXPENSES</u>		
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
<u>TOTAL EXPENSES</u>		19,218
<u>NET PROFIT / (LOSS)</u>		26,970

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

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Return on Capital Employed

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

23.65%

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

	26,970		X 100
	114,049		

Return on Equity

RETURN ON EQUITY			
Net Profit for the year			X 100
Capital			

134.85%

<u>TOTAL EXPENSES</u>	19,218
<u>NET PROFIT / (LOSS)</u>	26,970
<u>EQUITY</u>	
Share Capital	20,000
Retained Earnings	35,521
Profit for the Year	26,972
<u>TOTAL EQUITY</u>	82,493

	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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GROSS PROFIT	46,188

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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COST OF GOODS SOLD	35,857
GROSS PROFIT	46,188

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

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

$$\frac{82,045}{65,460}$$

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)
2

9,155

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

Net Profit for the year	X 100
Equity + Liabilities	

RETURN ON EQUITY

Net Profit for the year	X 100
Capital	

Gross Profit

Sales Revenue

X 100

Gross Profit

Cost of Sales

X 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	