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FINANCIAL RATIOS
RISK AND RETURN RELATIONSHIP
PORTFOLIO THEORY AND CAPITAL ASSET PRICING MODEL

Corporate Finance

Castellanza, 26th September & 1st October 2018

SUMMARY

- Financial Ratios
- Financial Structure and shareholders' return
- Financial structure and enterprise value
- Modigliani & Miller's Theory
- Trade-off Theory
- Pecking order Theory

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THE INCOME STATEMENT (PROFIT AND LOSS)

Sales

- Operating expenses

= EBITDA

- Depreciation and Amortization

= EBIT

- Net Financial Income

- Extraordinary items

= EBT

- Taxes

= Net Result

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THE BALANCE SHEET

Current Assets

Cash and Cash Equivalents

Deferred liquidity (commercial receivables [- bad debts provision], other current receivables, accruals & prepayments)

Inventories (raw materials, semi-processed, finished goods)

Fixed Assets

Tangible Assets [- depreciation]

Intangible Assets [- amortization]

Financial Assets

Financial Items - over 12 months

Current Liabilities

Short Term financial debt (bank overdrafts)

Other Current Liabilities (commercial payables, tax payables, other payables, accrued expenses)

Non-current Liabilities

ETP fund, risk funds, other long term non-financials liabilities

Bonds, bank loans, other long term financial debts

Shareholders Equity

Share Capital

Reserves

Net Result of the Year

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NET FINANCIAL POSITION

Medium – long term bank and other borrowings (bond issues, commitment under finance lease…)

+ Short-term bank or financial borrowings (discounted notes, bank overdrafts ….)

- Marketable securities

- Cash and cash equivalents

= **Net financial position**

- Net financial position can be either positive or negative.
- If it is negative, the company is said to have net cash.

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Financial Ratios

- Financial ratios are useful indicators of a company's performance and financial situation.
- Most ratios can be calculated from information provided by financial statements.
- Financial ratios can be classified according to the information they provide:
  1. **Profitability** ratios
  2. **Debt** management

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Financial Ratios

1. PROFITABILITY RATIOS	
MARGIN	**RETURN**
Gross Profit Margin	ROI
Operating Profit Margin	ROE
Net Profit Margin	

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Financial Ratios

1. Profitability ratios

They measure the overall performance of the company and its efficiency in managing investments.

- $$\text{Gross Profit Margin} = \frac{\text{Gross Income (EBT)}}{\text{Sales}}$$

- $$\text{Operating Profit Margin} = \frac{\text{Operating Profit}}{\text{Sales}} \quad \text{or} \quad \frac{\text{EBITDA}}{\text{Sales}}$$

It is a measure of overall operating efficiency.

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Financial Ratios

1. Profitability ratios

- Net Profit Margin = $\frac{\text{Net Profit}}{\text{Sales}}$

The profit margin ratio is a measure of a firm's ability to control the level of expenses related to generated revenues.

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FINANCIAL RATIOS

1. <u>Profitability ratios</u>

- Return on Investment (ROI)= $\frac{\text{EBIT}}{\text{Total Invested Capital}}$

The ratio measures the average rate of return on invested capital in the firm.

It represents a measure of how well a company uses all its funds to generate profits.

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FINANCIAL RATIOS

1. Profitability ratios

- Return on Equity (ROE)= $\frac{\text{Net Income}}{\text{Equity}}$

ROE is the amount of Net Income returned as a percentage of shareholders equity.

It represents a measure of how well a company uses shareholders' funds to generate profits.

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FINANCIAL RATIOS

1. Profitability ratios

Relationship between ROI & ROE

ROE= ROI + (ROI – i) x [DEBT / EQUITY]

where: ROE = net income / equity

ROI = ebit / total net invested capital

D/E = financial leverage

i = cost of debt (financial charges)

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FINANCIAL RATIOS

2. DEBT MANAGEMENT
AMOUNT OF DEBT
Debt to Capital Ratio
Debt to Assets Ratio
Debt to Equity Ratio

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Financial Ratios

2. Debt management

They measure the extent of the debt which is financing a firm, the relationship with equity and the firm's ability to cover fixed charges.

- The use of debt involves risk because debt carries fixed commitment (interest charges and principal repayment).
- But it also provides the potential for increased benefits to shareholders (leverage effect, seen before).

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Financial Ratios

2. Debt management – Amount of Debt

- Debt to Capital Ratio = $\frac{\text{Debt}}{(\text{Debt} + \text{Equity})}$
- Debt to Assets Ratio = $\frac{\text{Debt}}{\text{Total Assets}}$
- Debt to Equity Ratio = $\frac{\text{Debt}}{\text{Equity}}$ → Financial Leverage

"Debt" means only FINANCIAL debt!!!

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Financial Ratios

- The financial structure of a company can be synthetically indicated through the financial leverage ratio, which is the relationship between the total amount of financial debts (including quasi-equity) and equity.
- Through leverage, financial debt can be used to increase the expected return of the equity.
  - $D / E = 1$ neutral situation
  - $D / E > 1$ situation to be monitored
  - $D / E < 1$ unexpressed potential situation

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EXERCISE

Compute the following Financial Ratios for Company A:

a. Operating Profit Margin

b. Net Profits Margin

c. ROI

d. ROE

e. Debt to Capital Ratio

f. Financial Leverage

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