

CORPORATE FINANCE

HANDOUTS

MBA COMPULSORY SUBJECT

ZAGREB, SEPTEMBER 4 – 8, 2006

**EDUCATOR:
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TEXTBOOK: Brealey – Myers – Allen:

“Corporate Finance”. Eight edition
Mc. Graw – Hill International Edition, New York 2006

CONTENT: 2 sessions/day* 5 days = 10 sessions

4 in – class testing and evaluation

4 homework assignment/team and

in-class team presentation/team

EXAMINATION : 2 hours written test in November, 2006

CORPORATE FINANCE

— Guidelines —

- **Main objective:** Gives knowledge about formation a company in order to achieve the maximum shareholder's value on medium – and long-run.
(maximum shareholder's value \approx increased equity)
- **Viewpoint:** from the owner(s) of a (manufacturing) company through the eyes both the CEO and the financial manager.
- **Method:** the changes of wealth of the owner can be followed on the balance-sheet.
- **Essential tool:** the methods applied in corporate finance are useful for supporting any other decision-making tasks in the company.

SESSION 1

Timing: September 4, Monday, 9.00 – 10.30 a.m.

Objectives: (to acquire knowledge in connection of the topics)

1. The Scope of Corporate Finance
2. The Financial Manager
3. Time Value of Money

Resources:

1. Handout from László Kárpáti, subject educator

2. Textbook: Brealey – Myers – Allen:

“Corporate Finance”. Eight edition McGraw – Hill International Edition, New York 2006
(further: Book)

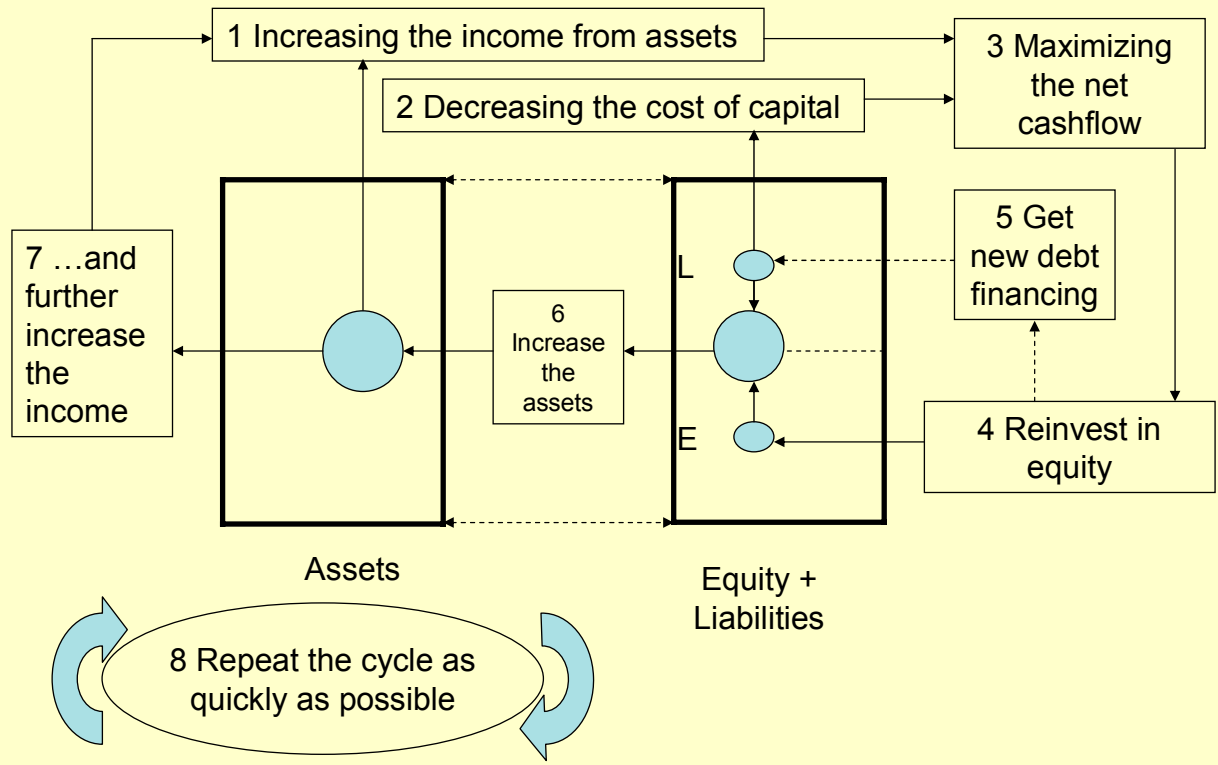
Chapters covered: Ch.1, Ch. 2.1, Ch. 2.2, Ch. 2.3.

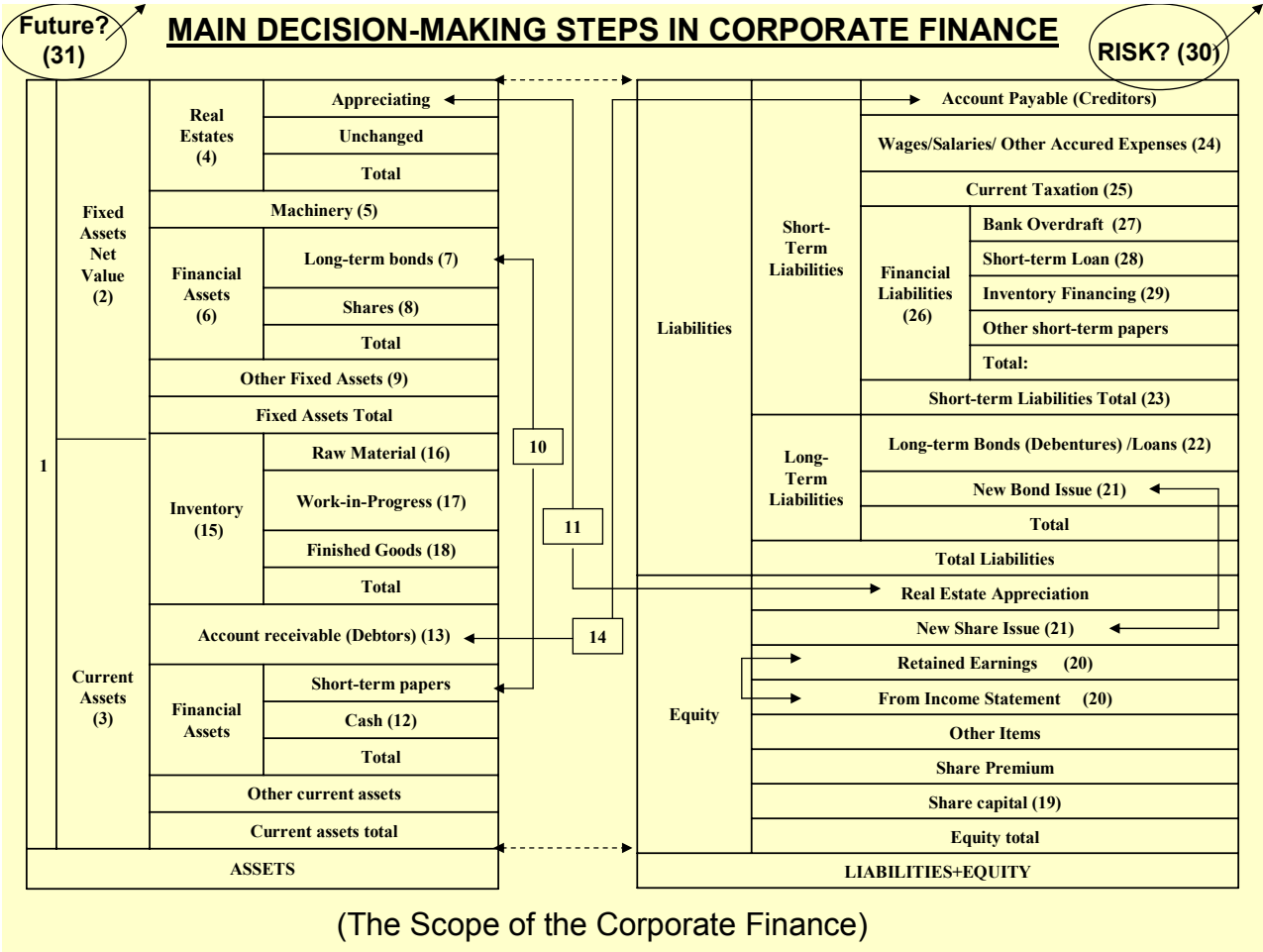
3. Student CD-ROM of the Book (further: CD).

Topics covered: CD PowerPoint presentations in connection with:
Ch. 1., Ch. 2.1, Ch 2.2 Ch. 2.3

- **Test:** No
- **Homework:** No

Basic Strategy of Creating a Successful Company by Financial Decisions





**REQUIREMENTS IN CONNECTION
WITH THE MAIN DECISION-MAKING STEPS**

STEP	QUESTION	REQUIREMENTS/SUGGESTIONS
1.		
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SESSION 2

Timing: September 4, Monday, 10.50 – 12.20 a.m.

Objectives:

1. Net Present Value
2. Annuity and Perpetuity
3. Compound Interest
4. Nominal and Real Rates

Resources:

Objective 1: Book Ch. 3.1
Objective 2: Book Ch. 3.2.
Objective 3: Book Ch. 3.3.
Objective 4: Book Ch. 3.4.

Objective 1-4: CD presentation Ch. 3.1. – 3.4.

Test: In-class CD test/team, Ch.1, Ch.2. and Ch.3.
In-class evaluation

Homework: Phone Company Investment Evaluation. Analysis for teams is based on the handout ant of the educator

(PowerPoint Figures)

- Objective 1: Chapter 3.1. p. 35-39 (5 pages)
 - Figures: Ch. 3. 1 – 13
- Objective 2: Chapter 3.2. p: 39-44 (5 pages)
 - Figures: Ch.3. 14 – 20
- Objective 3: Chapter 3.3. p. 44 – 48 (5 pages)
 - Figures: Ch.3. 21 – 25
- Objective 4: Chapter 3.4. p: 49 – 50 (2 pages)
 - Figures: Ch.3. 26 – 30

Total pages: 17 pages

Total figures: 30 figures

HOMEWORK 1
PHONE COMPANY INVESTMENT EVALUATION

Two Hungarian companies: “A” and “B” recognised the importance of the new generation mobile communicators and independently from each-other decided to invest in the development. Investment last for 1 year costs 800 Million HUF in both cares and guarantees the production for 5 years.

The expected results of firm “A” can be seen in the Table below:

Year	Sold piece	Sales million HUF	Cash costs million HUF	Net cash flow million HUF
1	10 000	1 000	700	
2	15 000	1 200	800	
3	20 000	1 400	900	
4	18 000	1 080	980	
5	12 000	600	600	
Total:				

The results of firm “B” is, as below:

Year	Sold piece	Sales million HUF	Cash costs million HUF	Net cash flow million HUF
1	5 000	600	500	
2	10 000	1 000	700	
3	15 000	1 200	1 000	
4	25 000	1 500	1 100	
5	20 000	1 000	700	
Total:				

The discount rate applied consists of:

- base rate: 6 %
- time premium: 1 %
- risk premium, consists of:
 - country risk: 6 %
 - industry risk: 7 %
 - no individual risk difference is calculated

Questions:

1. What are the respective NPV-s ?
2. What is the key of success for the company X?
3. What is the reason of failure for the company Y?
4. What should be done to remove the failure factor(s)?

SESSION 3

Timing: September 5, Tuesday, 9.00 – 10.30 a.m.

Objectives:

1. Discussion of the homework by teams
2. Internal Rate of Return
3. Bond Valuation
4. Stock Valuation

Resources:

Objective 1: educator's evaluation based on the teams presentation
Objective 2: Book Ch. 5.3.
Objective 3: Book Ch. 4.1.
Objective 4: Book Ch. 4.2., Ch. 4.3.
Objective 2-4: CD presentations, Ch. 4.1. – 4.3., Ch. 5.3.

Test: No

Homework: No

(PowerPoint figures)

Objective 1: Educator's Handout

Objective 2: Ch. 5.3. p. 91 – 99 (9 pages)
Figures: Ch.5.: 1-20

Objective 3: Ch. 4.1. p. 57 – 60 (4 pages)
Figures: Ch.4.: 1 – 6

Objective 4: Ch. 4.2. p: 60 – 61 (2 pages)
Ch. 4.3. p: 61 – 65 (5 pages)
Figures: Ch.4.: 7 – 26

Total pages: 20 pages

Total figures: 46 figures

SESSION 4

Timing: September 5, Tuesday, 10.50 – 12.20 a.m.

Objectives:

1. Risk Management
2. Portfolio Risk
3. Capital Assets Pricing Model
4. Arbitrage Pricing Theory

Resources:

Objective 1: Book Ch. 7.1., Ch. 7.2.
Objective 2: Book Ch. 7.4., Ch. 8.1.
Objective 3: Book Ch. 8.2.
Objective 4: Book Ch. 8.4.

Test: In-class CD test/team, Ch.4. and Ch.5.
In-class evaluation

Homework: Evaluation of Risk of an Investment.
Analysis for the teams, based on handout of the educator.

(PowerPoint figures)

Objective 1: Ch. 7.1. p: 147 – 154 (8 pages)
Ch. 7.2. p: 154 – 163 (10 pages)
Figures: Ch. 7. 1 – 17

Objective 2: Ch. 7.4. p: 167 – 171 (5 pages)
Ch. 8.1. p: 181 – 188 (8 pages)
Figures: Ch. 7. 20 – 24
Ch.8. 1 – 11 , 21 – 22

Objective 3: Ch. 8.2. p: 188 - 192 (5 pages)
Ch. 8.3. p: 192 – 197 (6 pages)
Figures: Ch.8. 24 – 31

Objective 4: Ch. 8.4. p: 197 – 204 (8 pages)
Figures: Ch.8. 33 – 36

Total pages: 54 pages

Total figures: 43 figures

HOMEWORK 2

EVALUATION OF RISK OF AN INVESTMENT

A 1 million EURO fund is expected to result in the following yields on money market, for 100 consecutive investments:

in case of 25 events: 0 %

in case of 50 events: 10 %

in case of 25 events: 20 %

Questions:

1. Calculate the expected yields for the whole investment period.
2. Calculate the risk by standard deviation.
3. Evaluate the risk of the investment period.
4. If the normal distribution can be accepted, what is the most probable range of yields in the majority of the cases?

SESSION 5

Timing: September 6, Wednesday, 9.00 – 10.30 a.m.

Objectives:

1. Discussion of the homework by teams
2. Cost of Equity
3. Cost of Debt
4. Cost of Financial Distress

Resources:

Objective 1: Educator's evaluation based on the teams' presentation
Objective 2: Book Ch. 9.2., Ch. 4.4.
Objective 3: Book Ch. 17.4.
Objective 4: Book Ch. 18.3.

Test: No

Homework: No

(PowerPoint figures)

Objective 1: Educator's handout
Ch. 9.1. p: 215 - 218 (4 pages)

Objective 2: Ch. 9.2. p: 219 - 222 (4 pages)
Ch. 4.4. p: 65 - 71 (7 pages)
Figures: Ch. 9.: 1 - 16
Figures: Educator's handout

Objective 3: Chapter 17.4. p: 461 - 462 (2 pages)
Figure: Ch. 17. 25 – 30

Objective 4: Chapter 18.3. p. 476 - 490 (15 pages)
Figure: Ch.18. 17 – 19, 25 – 26

Total pages: 32 pages

Total figures: 28 figures

SESSION 5

ESTIMATING THE COST OF EQUITY CAPITAL, based on the Gordon Model

The growing perpetuity formula is to be used:

$$T_E = \frac{DIV_1}{P_0} + g, \quad \text{where}$$

T_E = estimation of cost of the equity capital

DIV_1 = dividend payment/share at the end of the year

P_0 = present price of 1 share

g = expected long-term growth of the company

Estimation of g :

Basis 1: plowback ratio: $1 - \frac{DIV}{EPS}$, where

DIV = present dividend/share

EPS = earnings per share

Basis 2: $ROE = \frac{EPS}{\text{book equity / share}}$, where

ROE = return on equity

EPS = earnings per share

g = plowback ratio * ROE

Shareholders' value and company value according to the dividend payout ratio (based on the FINOPT Software)
 (Starting equity = 400 MEuro, starting profit after taxation = 280 MEuro, company tax rate = 30 %, personal tax rate = 50 %)

Dividend payout ratio (%)	Discount rate = 10 %		Discount rate 5 %		Equity	
	5 years shareholders' value	10 years shareholders' value	5 years shareholders' value	10 years shareholders' value	5 years	10 years
100	607	271	853	584	400	400
90	728	467	1006	930	557	766
80	870	780	1187	1469	756	1379
70	1035	1254	1391	2269	998	2359
60	1224	1968	1626	3451	1296	3903
50	1440	3017	1893	5165	1657	6280
40	1688	4540	2198	7625	2096	9898
30	1963	6684	2534	11046	2613	15234
20	2267	9671	2904	15760	3225	23018
10	2606	13772	3312	22172	3947	34219
0	2974	19318	3753	30961	4790	50106

SESSION 6

Timing: September 6, Wednesday, 10.50 – 12.20 a.m.

Objectives: 1. Cost of Capital
2. EBIT/EPS Analysis

Resources: Objective 1: Book Ch. 19.1.
Objective 2: Book Ch. 17.1.

Test: In-class CD test/team, Ch. 17 and Ch. 18
In-class evaluation

Homework: EBIT/EPS Analysis, team assignment, based on the handout of the educator

(PowerPoint figures)

Objective 1: Ch. 19.1., p. 503 – 507, (5 pages)

Figures: Ch. 19. 1 – 15

Objective 2: Ch. 17.1. p. 445 – 451 (7 pages)

Figures: Ch. 17. 1 – 4 , 12 , 19 – 25

EBIT/EPS Analysis. Homework, Educator's handout (3 pages)

Total pages: 15 pages

Total figures: 27 figures

HOMEWORK 3

EBIT/EPS Analysis

Let's suppose a company, where the equity only consists of 350 000 common shares with 1 Euro par value. The company decides to carry out an investment for development purposes, in order to market a brand new product. The investment and the introduction of the product has already been decided, the cost is 300 000 Euro. However, financing of this sum has not been decided yet. In this exercise we give advice for the company which financing plan should be chosen from the two alternatives below:

1. Development from own resources. In this case all the costs are covered from issuing new shares. According to the analysts the company can issue 150 000 shares with 2 Euro/piece par value with high probability of success.
2. Development from debt. In this case the company issue long-term bonds to cover fully the cost of the investment. The interest rate according to the analysts must be 10 % annually, and in this case the bond can be marketed successfully.

The expected EBIT of the development can be varied between 75 000 and 125 000 Euro annually. The corporate tax rate is 18 %.

Please give advice for the company, based on EBIT/EPS analysis.

For this reason, calculate:

1. EPS, as a function of EBIT (2 levels) in case of own financing.
2. EPS, as a function of EBIT (2 levels) in case of debt financing.
3. Please draw a graph based on the results above!
4. Formulate your advice based on the market situation!

SESSION 7

Timing: September 7, Thursday, 9.00 – 10.30 a.m.

Objectives: 1. Discussion of the homework by teams
2. Long-term financing
3. Securities

Resources: Objective 1. Educator's evaluation based on the teams' presentation
Objective 2. Handouts of the educator
Objective 3. Book Ch. 25.3.

Test: No

Homework: No

(Powerpoint Figures)

Objective 1: Educator's handouts

Objective 2: Educator's handouts

Figures: 14

Objective 3: Ch. 25.3. p. 673 – 675. (3 pages)
Educator's handout. 1 figure

Total pages: 3

Total figures: 15

SESSION 7 – Handout 1.

Objective 2: Long-term financing

Overview of financing of a company

Two main sources of financing

1. Ownership Sources

2. Debt Sources
 - 2.1. Short term (less than 1 year to maturity)

 - 2.2. Medium term (1 – 5 years)

 - 2.3. Long-term (longer than 5 years)

3. How to utilise the different sources in financing

1. Ownership sources of Financing

1.1. Ordinary Shares

- Par value
- Share premium

1.2. Preference Shares

- Fixed dividend = “quasi” interest
- Dividend is not a cost item
- No voting rights
- Special Preference shares:
 - Redeemable P.S. – limited life-span
 - Convertible P.S – changeable to ordinary Shares

1.3. Other paid – in capital

Owner’s payment by agreement

1.4. Venture Capital

Starting up business with special advantages for the venture – capitalist

1.5. Business Expansion Schemes

- Grant from Government/Agencies
- Grant from the EU

1.6. Retained earnings

- Basis: Income from operations (EBIT) – interest paid
- Taxation: Reduction by legal steps
- Net income after taxation
- Dividend policy: Pay – or not pay
 - Plowback ratio = share of net income after taxation which is not paid out, as a dividend
 - Advantages ↔ disadvantages of a low ↔ high plowback ratio.

1.7. New Issue of Shares

- Alternative to new bond issue, based on EBIT/EPS analysis
- Advantages ↔ disadvantages
- Ownership considerations

1.8. Real Estate Appreciation

- No “real” financing
- Cost of appreciation
- Advantages of the appreciation

2. Debt Financing

2.1. Short-term financing

2.1.1. Trade Credit

- Associated with raw material and service orders
- Credit or payment up to 180 days
- Balance sheet: account payable
- “Free financing”
- “Importance is important”

2.1.2. Accrued expenses

- Wages/salaries
- Social security
- Public utility/telephone
- Interest payment
- Insurance payment, etc.
- Useful, but relatively small items

2.1.3. Current taxation

- Company income tax
- VAT
- Local taxes, etc.
- Useful, but relatively small items

2.1.4. Bank overdraft

- Simple
- Expensive
- Relatively small amount

2.1.5. Short-term loan

- Based on negotiation with the bank
- Higher amount and less expensive

2.1.6. Inventory financing

- Based on inventory, especially the finished goods of the company, as a collateral
- Loans up to 80 percent in case of physical products
- Loans up to nearly 100 per-cent in case of physical product with public warehousing and stock-exchange transaction

2.1.7. Other short-term sources

- Bill of Exchange B/E
- Commercial Paper
 - Acceptance Credit or “Bank Bill of Exchange”
 - Factoring – del credere agents
 - Letter of Credit L/C
 - Insurance Premium Loans
 - Owners’ credit

2.2. Medium-term Financing

2.2.1. Medium-term Bond issue

- As an alternative against ownership financing
- Time and cost considerations

2.2.2. Median-term Loans

- As an alternative for Bond issue
- Advantages ↔ disadvantages

2.2.3. Operating leasing

- To obtain the use of an asset without ever gaining title to it
- Can be cancelled any time by the lessee
- In dynamically changing business environment

2.2.3. Financial leasing

- Lesser maintains ownership of the asset, the lessee regularly pays fee, as a cost
- At the end of the leasing period the asset will be owned by the lessee
- The lease cannot be cancelled
- “Lease or buy” should be based on financial calculations

2.2.4. Hire Purchase

- Not frequent in business

2.3. Long-term Financing

2.3.1. Long-term Bond issue

- See 2.2.1.
- Marketability is questioned

2.3.2. Debentures

- Long-term loan with specific maturity, interest and repayment provisions
- Types:
 - Unsecured
 - Mortgage – lender obtain a lien on real estate
 - Guaranteed
 - Convertible – into common shares
 - Subordinated/junior

2.3.3. Business Expansion Schemes

- See 1.5., but with loan repayment requirement only – or by a very low interest rate

2.3.4. Sale and Leaseback

- Selling real estates to banks/financial institutions for cash and pay it back as a leasing
- Advantages ↔ disadvantages

2.3.5. Project Financing

- In case of long and costly development targets (motorway, bridge, tunnel, mining, etc.)
- All the costs of the project is financed by a bank (consortium)
- Management is carried out by the project initiators
- High proportion of the net cash flow after operating the project goes to the lenders, as repayment
- Shareholders can exercise their right and get dividend just after the full repayment of the loan

3. How to utilise the different sources in financing?

Questions to be solved: what financial sources is to be used and for what purpose?

3.1. Conservative approach: asset life and financial source life must be similar, e.g: long-term assets should be financed by long-term resources

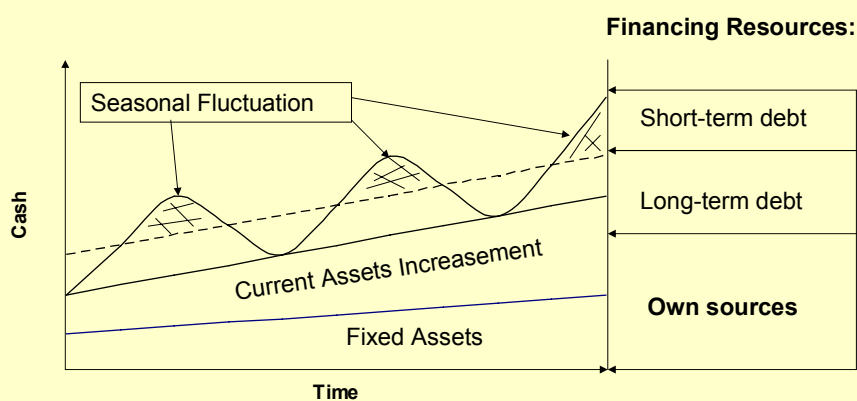
Or

- short term sources is to be used just to finance seasonal fluctuations.

3.2. New approach: financial resources must be used in an order of cost of capital, except own resources that should be used fully. In this approach short-term is considered as cheap financing.

3.3. The above strategies are illustrated as conservative, solid and aggressive financing strategies in the next 3 figures.

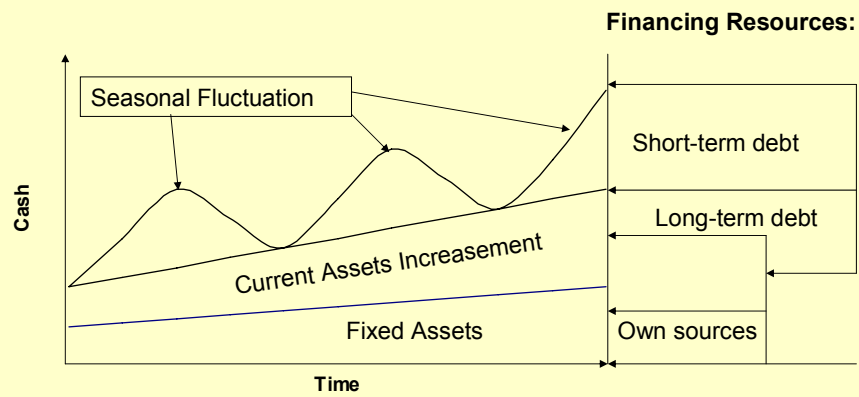
Conservative financing strategy



• Characteristics

• Advantages - Disadvantages

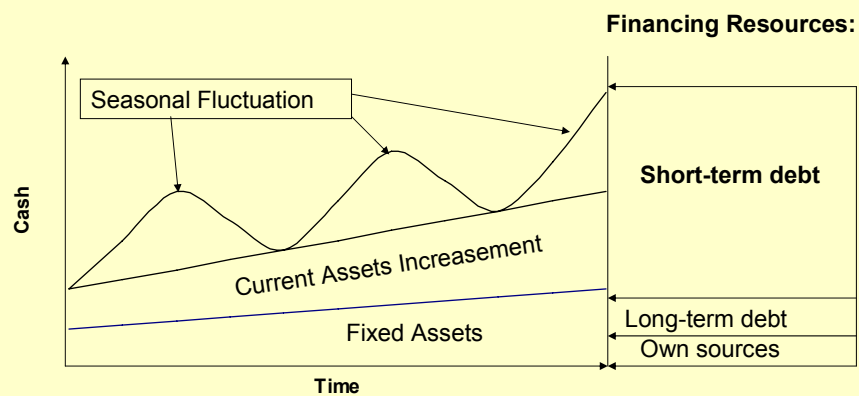
Solid financing strategy



• Characteristics

• Advantages - Disadvantages

(Very) Aggressive financing strategy



• Characteristics

• Advantages - Disadvantages

Note: Not the life-span of a financial source is important, but the cost!

SESSION 7 -Handout 2.

SECURITY AND SENIORITY

Objective 3:

SECURITY AND SENIORITY

1. Short-term unsecured issues: notes
2. Long-term issues: debentures

Secured by:

- mortgage (real property collateral)
- equipment trust certificate (formal ownership of equipment)

3. Subordinated or junior bonds

Recovery rates on securities: (USA 1988 – 2002)

- Bank debt: 81.6 %
- Senior secured notes: 67.0 %
- Senior unsecured notes: 46.0 %
- Subordinated notes: 18.7 – 32.4 %

SESSION 7 - Handout 3.

Effect of own financing on the shareholder's value

(Based on the FINOPT software, discount rate = 10%)

Per cent of equity from the total capital employed	5 years shareholders' value	10 years shareholders' value
	% of the starting year	% of the starting year
100%	152	191
90%	165	220
80%	182	261
70%	204	323
60%	237	424
50%	288	605
40%	378	1003
30%	566	2166
20%	1139	8497
10%	5544	206349
5%	46044	15498264
1%	32170360	$\approx \infty$

SESSION 8

Timing: September 7, Thursday, 10.50 – 12.20 a.m.

Objectives:

1. Valuing Business Financially
2. Valuing Business: Other Methods

Resources:

Objective 1: Book Ch. 19.2.

Objective 2: Handouts of the educator

Test:

In-class CD-test/team, Ch. 19 and Ch. 25

In-class evaluation

Homework:

Rio Corporation evaluation, Book Ch. 19.2., and CD Excel file, based on different scenarios specified by the educator for the teams

(PowerPoint figures)

Objective 1: Chapter 19.2. p. 507 – 512 (6 pages)

Figure Ch. 19. : 16 – 26

Objective 2: Educator's handout (2 figures)

Total pages: 6 pages

Total figures: 13 figures

SESSION 8 – Handout 1.

Objective 2: Valuing Business: Other Methods (Overview of some non-NPV methods)

1. Earnings capitalization by using P/E ratio
2. Net book value of fixed and current assets
3. Fair value, by individually evaluating each important asset units
4. Comparative value, real market price of similar acquisitions
5. Market value of the company, based on the present share price, or a comparative company's price

Example: Earnings capitalization at P/E = 12 = 26.4
at P/E = 16 = 35.2

Net book value	21.0
Fair value	29.0
Comparative value range	26.4 – 35.2
Market value	35.0

Just for comparison, NPV values at given discount

rate of:	12 %	34.2
	14 %	30.4
	16 %	27.2

Final deal: 32 million USD cash for the acquisition of the company.

HOMEWORK 4

Review the Rio Corporation's evaluation in Chapter 19.2. of the textbook, pages 508 – 512. The Student CD contains the Excel file. Let's suppose changes in assumptions in the file and calculate the PV of the company based on that.

- Team 1: the task is to show the basic model in a detailed way.
- Team 2: consider a higher rate of sales in the future. Explain the assumption and the changes caused.
- Team 3: consider a higher increase in costs in the future. Explain the assumption and the changes caused.
- Team 4: Consider a decreased tax rate in the future. Explain the assumption and the changes caused.
- Team 5: Consider a higher WACC (Weighted Average Cost of Capital) from the beginning on. Explain the assumption and the changes caused.

SESSION 9

Timing: September 8, Friday, 9.00 – 10.30 a.m.

Objectives:

1. Discussion of the homework by teams
2. Working Capital Ratios

Resources:

Objective 1: Educator's evaluation based on the team's presentation

Objective 2: Handouts of the educator

Test: No

Homework: No

(PowerPoint figures)

Objective 1: Educator's handout

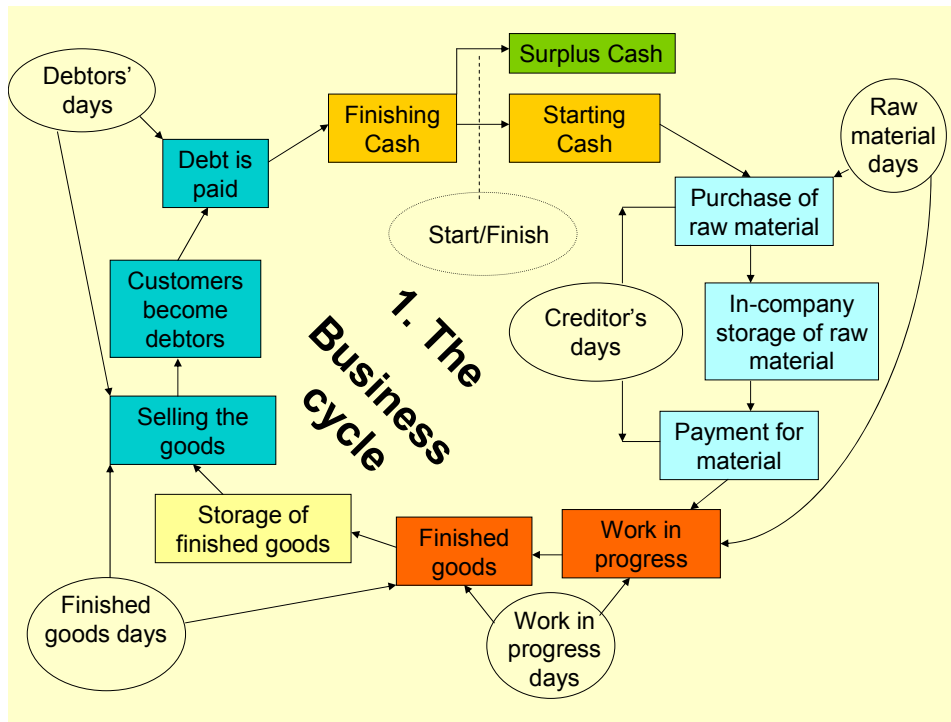
Objective 2: Educator's handout (12 figures)

Total pages: 0 pages

Total figures: 12 figures

Session 9. – Handout

1. The Business cycle



2. Inventory Turnover Days (ITD)

$$\frac{365}{\frac{\text{Cost of goods sold}}{\text{Average Inventory}}}$$

3. Decomposition of ITD

Decomposition of ITD is based upon the share of the raw material, work-in-progress and finished goods in the inventory. In this case the calculation of raw material days (RMD), work-in-progress days (WD) and finished goods days' (FGD) can be established, as $ITD = RMD + WD + FGD$.

4. Debtors' (Account Receivable) Days (DD)

$$\frac{365}{\frac{\text{Sales}}{\text{Average Account Receivable}}}$$

5. Creditors' (Account Payable) Days (CD)

$$\frac{365}{\frac{\text{Purchases}}{\text{Average Accounts Payable}}}$$

If purchase figure is not available, then non-material costs should be subtracted from the cost of goods sold, then a closing stocks is added and the opening stock is subtracted from the sum.

6. Full Business Cycle Days

Full business cycle (FBCD) can be calculated, as:

$$\text{FBCD} = \text{ITD} + \text{DD}$$

Number of business cycles/year is calculated, as:

$$\frac{365}{\text{FBCD}}$$

7. Business Cash Cycle Days

Business Cash Cycle Days (BCCD) can be calculated, as:

$$BCCD = FBCD - CD, \text{ that is}$$

$$BCCD = ITD + DD - CD$$

However, 1 DD is not equal 1 CD in money terms, the most realistic calculation is, that “real creditor’s” day (RDD)” is equal to: $CD * \frac{Purchases}{Sales}$

“Real ITD (RITD)” can be calculated in similar fashion: $RITD = ITD * \frac{cost\ goods\ sold}{sales}$

In this way the Real Business Cash Cycle Days (RBCCD) can be calculated, as:

$$RBCCD = RITD + DD - RCD$$

Number of business cash cycles/year is calculated as:

$$\text{- Nominal cash cycles} = \frac{365}{BCCD}$$

$$\text{- Real cash cycles} = \frac{365}{RBCCD}$$

8. Optimizing the working capital

Based on the financial and marketing function of the certain elements of the working capital, the following items should be maximized / minimized:

- max. → Finished goods days (FGD), Account receivable days (DD), and Account payable days (CD)
-
- min. → Raw material days (RMD), work – in – progress days (WD) as well as cash and short-term papers stock.

9. Example

Balance Sheet and Income statement of the First United Works is shown below, expressed in million Euro.

9.1. Balance sheet

	2005	2004
Fixed Assets total:	327.4	314.4
Current Assets:		
- Inventory: - Raw Material:	86.9	84.6
- Work-in-Progress:	59.8	62.4
- Finished Goods:	<u>180.0</u>	<u>121.5</u>
- Inventory Total:	326.4	268.5
- Account receivable:	405.6	362.7
- Account receivable:	405.6	362.7
- Cash and equivalents:	<u>0.4</u>	<u>0.7</u>
Current Assets Total:	732.4	631.9
Fixed+Current Assets Total:	1059.8	946.3
Current Liabilities:		
- Accounts payable:	305.3	0239.6
- Bank overdraft:	67.8	86.1
- Short-Term Loan:	83.0	76.5
- Current Taxation:	13.4	8.1
- Current Liabilities Total:	469.5	410.3
Long term liabilities (Debentures):	98.5	125.0
Equity:		
Common shares (355 th * 1 th parvalue) :	335.0	335.0
Share Premium:	25.0	25.0
Retained earnings :	122.6	41.4
Other items:	9.2	9.6
Equity Total:	491.8	411.0
Liabilities+Equity Total:	1059.8	946.3

9.2. Income Statement

	2005	2004
Sales:		
- Cost of Goods Sold:		
- Stocks of Finished Goods		
- January 1:	121.5	112.3
- December 31:	180.0	121.5
- Changes in Stocks:	+ 58.5	+ 9.2
- Stocks of Raw Material:		
- January 1:	84.6	71.3
- December 31:	86.9	84.6
- Changes in Stocks:	+ 2.3	+ 13.3
- Stocks of Work-in-Progress:		
- January 1:	62.4	49.6
- December 31:	59.5	62.4
- Changes in Stocks:	- 2.9	+ 12.8
- Inventory changes total:	+ 57.9	+ 35.3
- Purchases:	+ 741.1	712.5
- Factory wages + Social Security:	360.6	324.3
- Works overhead:	78.3	64.8
- Cost of Goods Sold total (-Changes):	1122.1	1066.3
- Gross profit:	297.2	234.5
- Less expenses total:	210.8	170.4
- Income before taxation:	86.4	64.1
- Tax payment (-extraordinary items):	5.2	0.2
- After Tax income:	81.2	63.9
- Dividend payment:	0	0
- Retained earnings:	81.2	63.9

9.3. Inventory Turnover Days (ITD) Calculation for 2005.

$$\frac{365}{\frac{\text{Cost of goods sold}}{\text{Average inventory}}}$$

$$\frac{365}{\frac{1122.1}{(326.4 + 268.5)/2}} = \frac{365}{\frac{1122.1}{297.45}} = 97 \text{ days}$$

1 plus day inventory time costs: $297.45/97 = 3.07$ Million Euro/day

9.4. Decomposition of ITD

			Million Euro	Proportion %
Inventory composition:		Raw Material:	86.9	26.6
		Work-in-progress:	59.5	18.2
		Finished Goods:	180.0	55.2
		Total Inventory:	326.4	100
(RMD)	Raw material days:	$97 * 26.6 \% =$	26 days	
(WD)	Work-in-Progress days:	$97 * 18.2 \% =$	18 days	
(FGD)	Finished Goods:	$97 * 55.2 \% =$	53 days	
Inventory Total:			97 days	

9.5. Debtors (Account Receivable) Days (DD) Calculation for 2005

$$\frac{365}{\frac{\text{Sales}}{\text{Average Account Receivable}}}$$

$$\frac{365}{\frac{1419.3}{(405.6 + 362.7)/2}} = \frac{365}{\frac{1419.3}{384.15}} = 99 \text{ days}$$

9.6. Creditors' (Account Payable) Days (CD) Calculation for 2005.

$$\frac{365}{\frac{\text{Purchases}}{\text{Average Account Payable}}}$$

$$\frac{365}{\frac{741.1}{(305.3 + 239.6)/2}} = \frac{365}{\frac{741.1}{272.45}} = 134 \text{ days}$$

9.7. Calculation of the Full Business Cycle Days (FBCD) for 2005.

$$\text{FBCD} = \text{ITD} + \text{DD} = 97 + 99 = 196 \text{ days}$$

$$\text{Number of business cycles/year} = \frac{365}{\text{FBCD}} = \frac{365}{196} = 1.86 \text{ times/year}$$

9.8. Calculation of the Business Cash Cycle Days (BCCD) for 2005.

$$\text{BCCD} = \text{ITD} + \text{DD} - \text{CD}$$

$$\text{BCCD} = 97 + 99 - 134 = 62 \text{ days}$$

$$\text{Number of Business Cash Cycles/year} = \frac{365}{\text{BCCD}} = \frac{365}{62} = 5.88 \text{ times/year}$$

9.9. Calculation of Real Business Cash Cycle Days (RBCCD) for 2005.

$$\text{RITD} = \text{ITD} * \frac{\text{cost of goods sold}}{\text{sales}} = 97 * \frac{1122.1}{1419.3} = 97 * 0.791 = 78 \text{ days}$$

$$\text{RCD} = \text{CD} * \frac{\text{Purchases}}{\text{Sales}} = 134 * \frac{741.1}{1419.3} = 134 * 0.522 = 70 \text{ days}$$

$$\text{RBCCD} = \text{RITD} + \text{DD} - \text{RITD}$$

$$\text{RBCCD} = 78 + 99 - 70 = 107 \text{ days}$$

$$\text{Number of Real Business Cash Cycles/year} = \frac{365}{107} = 3.4/\text{times/year}$$

9.10. Optimization Opportunities for the Company's Working Capital

Starting position:

Finished goods days (FGD):	53 days
Account Receivable (DD):	99 days
Account Payable (CD):	134 days
Raw material days (RMD):	26 days
Work-in-Progress days (WD):	18 days
Cash and short-term papers' stock:	0.4 Million Euro
Business Cash Cycle Days (BCCD):	62 days

Opportunity for maximization:

FGD: from 53 to 60 days
DD: from 99 to 100 days
CD: 134 days too, no change suggested

Opportunity for minimization:

RMD: from 26 to 20 days (better purchase organization)
WD: from 18 to 10 days (better organization in the company)
Cash level is very low no change suggested

New Business Cash Cycle Days:

$$\text{BCCD} = \text{FGD} + \text{RMD} + \text{WD} + \text{DD} - \text{CD} = 60 + 20 + 10 + 200 - 134$$
$$\text{BCCD} = 56 \text{ days, that is } 56/62 = 90 \% \text{ of the starting phase}$$

The - 6 days financing means about: $\frac{6}{365} * 1419.3 = 23.3$ Million Euro capital savings

SESSION 10

Timing: September 8, Friday, 10.50 – 12.20 a.m.

Objectives: 1. Short-term Financial Planning
2. Course overview and examination consultation

Resources: Objective 1: Book Ch. 31.1., 31.2., 31.3., 31.4., 31.5.
Objective 2: Handout of the educator, Consultation

Test: No

Homework: No

(PowerPoint figures)

Objective 1: Ch. 31.1. p: 841 – 843 (3 pages)
Ch. 31.2. p: 843 – 849 (7 pages)
Ch. 31.3. p: 849 – 852 (4 pages)
Ch. 31.4. – 31.5. p: 852 – 861 (10 pages)

Figures: Ch. 31. 1 – 6
Ch. 31.12 - 22

Objective 2: Educator's handout (3 figures)

Total pages: 24 pages

Total figures: 20 figures

SESSION 10 handout

Objective 2: Course overview and examination consultation

Overview of the topics covered

1. The Scope of Corporate Finance.
2. Financial structure of a company
3. Main decision-making steps
4. The financial manager
5. Time Value of Money
6. Net Present Value
7. Annuity and Perpetuity
8. Compound Interest
9. Nominal and Real Rates
10. Investment evaluation by NPV
11. Internal Rate of Return
12. Bond valuation
13. Stock valuation
14. Risk management
15. Portfolio risk
16. Capital Assets Pricing Model
17. Arbitrage Pricing Theory
18. Risk calculation
19. Cost of Equity
20. Cost of Debt
21. Cost of financial distress
22. “Optimal” debt rate
23. Cost of capital
24. EBIT/EPS analysis
25. EBIT/EPS calculation
26. Financing a company
27. Long-term financing
28. Securities
29. Valuing a business financially
30. Valuing business: Other methods
31. Factors influencing business value
32. Business cycle
33. Working capital ratio
34. Short-term financial planning

EXAMINATION

- Examination takes place at University of Zagreb in written form. Examination sheets are provided by the educator.
- Timing: November, 2006, the exact date and the supervision is to be specified later.
- Length of the examination: 2 hours.
- Evaluation: by the educator, according to the Student handbook.
- Topics: Chapters of the textbook, assigned in the curriculum
- Parts of the Student CD covered in the class
- Handouts of the educator
- Homeworks
- All the topics that is overviewed during Session 10.