Enterprise Management and Entrepreneurship
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Financial Management

Lecture 3

Basic concepts of financial analysis

Financial analysis

- Study of organization's overall financial performance:

- Objective: Assessment of the economic and financial evolution of the company and its ability to generate profits and pay its liabilities.

Financial analysis

1. Understand the company, its macro and industry context
2. Systematize the financial analysis
   - Analysis of structure and evolution of income statement, balance sheet and cash-flow statement
   - Analysis of profitability
   - Analysis of efficiency / investment utilization
   - Financial stability
   - Liquidity

Financial analysis

1. Understand the macro and industry context
   - Macro environment→
     - Trends that can influence company's performance
       - GDP growth rate
       - Employment rate;
       - inflation;
       - Consumption rate;
       - ...
     - International trends;
   - The industry environment→ company's position and evolution:
     - Industry evolution
     - Company's position in the industry

Financial analysis

2. Systematize the information
   - Economic component
     - Capability to generate profits, operational capability of the company – income statement
   - Financial component
     - Capability to respond to pay its liabilities – liquidity and financial stability – balance sheet and cash-flow statement

Financial analysis

3. Structural, evolution and ratio analysis
   - Analysis of structure and evolution of income statement, balance sheet and cash-flow statement
   - Analysis of profitability
   - Analysis of efficiency / investment utilization
   - Liquidity
   - Financial stability

Analysis of structure and evolution of income statement

- Analyze the evolution of the revenue and cost structure
- Compare the revenue and cost structure with the industry

Home Improvement company example –Income statement 2011

	2011	2010	2009
Net sales	**$48.815**	**$47.220**	**$48.230**
Cost of goods sold	31.663	30.757	31.729
Gross Margin	**17.152**	**16.463**	**16.501**
Expenses			
Selling, general and admin	**12.006**	**11.737**	**11.176**
Depreciation	1.586	1.614	1.539
Interest	332	287	280
Total Expenses	13.924	13.638	12.995
Pre-tax earnings	3.228	2.825	3.506
Income tax	1.218	1.042	1.311
Net earnings	2.010	1.783	2.195

Balance sheet December 31st 2011

Assets	**2011**	**2010**	**2009**
Current assets			
Cash	652	632	245
Short-term investments	471	425	416
Merchandise inventory	**8.321**	**8.249**	**8.209**
Total current assets	9.697	9.732	9.190
Property (less accumulated deprec.)	**22.089**	**22.499**	**22.722**
Long-term investments	**1.008**	**277**	**253**
Other assets	635	497	460
Total assets	33.699	33.005	32.625

Balance sheet December 31st 2011

Liabilities and shareholders'equity	2011	2010	2009
Current liabilities			
Current portion of long-term debt	36	552	34
Short-term borrowings			987
Accounts payable	**4.351**	**4.287**	**4.109**
Accrued compensation and benefits	667	577	434
Deferred revenue	707	683	674
Other current liabilities	1.358	1.256	1.322
Total current liabilities	7.119	7.355	7.560
Long-term debt	**6.537**	**4.528**	**5.039**
Other liabilities	1.931	2.053	1.971
Total liabilities	15.587	13.936	14.570
Shareholders' equity	18.112	19.069	18.055
Total liabilities and shareholders' equity	33.699	33.005	32.625

Cash-flow statement 2011

Operations	2011	2010
Net earnings	**2.010**	**1783**
Depreciation and amortization	**1.586**	**1.614**
Var. Short-term investments	(46)	(9)
Var. Merchandise inventory	(72)	(40)
Var. Other current assets	(97)	(106)
Var. Accounts payable	64	178
Var. Accrued compensation and benefits	90	143
Var. Deferred revenue	24	9
Var. other current liabilities	102	(66)
Net cash-flow from operations	**3.661**	**3.506**

Cash-flow statement 2011

Financing	2011	2010
Var. Current portion of long-term debt	(516)	518
Var. Short-term borrowings		(987)
Var. Long-term debt	**2.009**	**(511)**
Var. Other liabilities	(122)	82
Var. Common stock	(47)	(277)
Dividends	**(2.946)**	**(525)**
Net Cash-flow from Financing	(1.622)	(1.700)

Cash-flow statement 2011

	2011	2010
Investing		
Net property purchases	**(1.176)**	**(1.391)**
Long-term investments	**(731)**	**(24)**
Other assets	(138)	(37)
Accumulated and other comprehensive income	26	33
Net cash-flow from from investing	**(2.019)**	**(1.419)**
Net cash-flow	**20**	**387**
Opening cash balance	632	245
Ending cash balance	652	632

Selected financial ratios from the industry

	2010
Gross profit to sales	34,8%
Operation expenses to sales	32,6%
Net earnings to sales	1,0%
Current ratio	3,1
Acid test	0,9
Age of accounts receivable	20 days
Age of inventory	104,6 days
Age of accounts payable	22 days
Inventory turnover	3,5 times
Debt to equity	0,9
Interest coverage	2,8 times
Return on equity	6,8%
Return on assets	3,5%
Total assets turnover	2,2 times

Analysis of structure of income statement (vertical analysis)

Vertical analysis	2011	2010	2009	Industry
Sales	100%	100%	100%	
Gross profit	**35,1%**	**34,9%**	**34,2%**	**34,8%**
Operating expenses	27,8%	28,3%	26,4%	**32,6%**
Net earnings	**4,1%**	**3,8%**	**4,6%**	**1,0%**

Analysis of return

- To what extent are the company's activities, assets profitable? To what extent is the shareholders' equity profitable?
- Return on sales or production
  - Net earnings/ sales or net income / production
  - EBIT / sales or EBIT / production (operational return on sales)
- Return on assets
  - ROA = net earnings / total assets
  - ROA = EBIT / Total assets (operational return on assets)
- Return on equity (ROE)
  - ROE = net earnings/ equity

EBIT – Earning Before Interest and Taxes (resultado operacional)

Profitability ratios

Profitability ratios	2011	2010	2009	Industry
Return on sales	**4,1%**	**3,8%**	**4,6%**	**1,0%**
Return on assets	**6,0%**	**5,4%**	**6,7%**	**3,5%**
Return on equity	**11,1%**	**9,4%**	**12,2%**	**6,8%**

Measuring efficiency

- To what extent is the company managing its resources in an efficient way?
- Asset turnover
  - Asset turnover = sales or production / total assets
- Average inventory period
  - [Inventory/cost of goods sold]*365
- Average collection period
  - [accounts receivables / sales] *365
- Average payment period
  - [accounts payable/ purchases]*365

Efficiency / investment utilization ratios

Efficiency ratios	2011	2010	2009	Industry
Inventory turnover	3,8	3,7	3,9	**3,5**
Fixed asset turnover	2,1	2,0	2,1	
Total asset turnover	1,5	1,4	1,5	**2,2**
Age of inventory	94,6 d	96,6 d	93,1 d	**104,6 d**
Age of accounts payable	49,5 d	50,2 d	46,6 d	**22d**

*the company sells to final consumers (retailing), so average collection period is 0

Measuring liquidity

- To what extent is the company able to respond to its short-term liabilities
- Current ratio
  - Current assets/current liabilities
- Quick (acid test) ratio
  - [cash+marketable securities+receivables]/current liabilities
- Cash ratio
  - [cash+marketable securities]/current liabilities
- Working capital = current assets- current liabilities

cash+marketable securities+receivables=current assets-inventories

Liquidity ratios

Liquidity ratios	2011	2010	2009	Industry
Current ratio	1,4	1,3	1,2	**3,1**
Quick ratio (acid test)	0,2	0,2	0,1	**0,9**
Working capital (NFM)	$2.848	$2.377	$1.630	

NFM – necessidades de fundo de maneio

Measuring financial stability and leverage

- To what extent is the company able to respond to its long-term liabilities?
- Equity to assets ratio
  - Equity/total assets
- Debt to equity
  - Debt / equity
- Coverage of fixed investments
  - [Equity+long-term debt] / fixed assets
- Interest coverage
  - EBIT / interest

Stability ratios

Stability ratios	2011	2010	2009	Industry
Debt to assets	46,3%	42,2%	44,7%	
Equity to assets	53,7%	57,8%	55,3%	
Debt to equity	0,9	0,7	0,8	**0,9**
Interest coverage	10,7	10,8	13,5	

DuPont analysis

$$ROE = \frac{\text{net income}}{\text{equity}} = 11{,}1\% \text{ vs. } 6{,}8\% \text{ (industry)}$$

$$ROE = \frac{\text{net income}}{\text{sales}} * \frac{\text{sales}}{\text{assets}} * \frac{\text{assets}}{\text{equity}}$$

	profitability	asset turnover	financial leverage
Company	4,1%	1,5%	1,8
Industry	1,0%	2,2%	1,8

Financial analysis

- Enables the analysis of the firm's financial performance in the past and potential evolution
- Crucial to integrate the financial statements and ration analysis with information about the company

Financial perspective

- How does the design and implementation of the company’s strategy contributes to its growth, its profitability , and the company's value for shareholders?

Exercise 5