



Universidad del Desarrollo
Universidad de Excelencia

Finance I

Fall 2012

Session 16:

Financial Analysis

DuPont system



1. Recap

2. DuPont System

3. Financial Planning

4. Closing

- ▶ **What are the most commonly used financial statements?**

- ▶ **Ratios can be constructed to analyze de financial and operational information of a company, typically in 4 main areas:**
 - Financial condition (Debt)
 - Liquidity
 - Efficiency
 - Profitability
 - Book mentions a fifth, regarding Market value (only for traded companies)

- ▶ **Is it meaningful to calculate a ratio with no point of comparison?**

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2. DuPont System

- ▶ **Guess what company invented/first used it?**
- ▶ **It is simply the decomposition of ratios into other ratios, generally the ROA and ROE**
- ▶ **It helps to analyze deeper into companies with seemingly equal ROA/ROE**
- ▶ **It helps to analyze the sources (where does the value come from) of returns**

2. DuPont System (ROA)

$$ROA = \frac{EBIT - Tax}{Assets} \text{ or } \frac{Net\ Income}{Assets}$$

$$= \frac{Sales}{Assets} \times \frac{EBIT - Tax}{Sales} = \text{sales to assets} \times \text{profit margin}$$

2. DuPont System (ROE)

$$ROE = \frac{EBIT - Tax - Interest}{Equity} = \frac{Net\ Income}{Equity}$$

$$ROE = \frac{Net\ Income}{Assets} \times \frac{Assets}{Equity} = ROA \times Leverage$$

2. DuPont System (ROE)

$$ROE = \frac{\text{Net Income}}{\text{Equity}}$$

$$ROE = \frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Equity}}$$

$$= \text{Net profit margin} \times \text{Sales to Assets} \times \text{Leverage}$$

2. DuPont System (ROE)

$$ROE = \frac{EBIT - Tax - Interest}{Equity}$$

$$ROE = \frac{Assets}{Equity} \times \frac{Sales}{Assets} \times \frac{EBIT - Tax}{Sales} \times \frac{EBIT - Tax - Interest}{EBIT - Tax}$$

= Leverage x Sales to Assets x Profit margin x Interest Burden

2. DuPont System

- ▶ Remember that it's a system, so you can use it with other ratios following the same procedure

- ▶ Example:

Company	ROE =	Net Profit Margin	Sales to Assets	Leverage
Lucky	1.66%	1.11%	0.95	1.58
Clover	1.62%	1.13%	0.93	1.54

- ▶ Which company has a higher return on equity?
- ▶ Which company has higher profit on sales?
- ▶ Which company is more efficient?
- ▶ Which company has a higher level of debt?
- ▶ If you were a manager of Clover, what could you do to improve ROE?

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3. Financial Planning

- ▶ **Procedure to forecast and plan future financial statements**
- ▶ **Starts with the future business plan**
- ▶ **Assuming the business plan is correct, we construct future financial statements**
 - Full of assumptions
 - Basic (sales, costs, debt, investments)
 - Medium (Inventories, receivables, payables, etc.)
 - Advanced (Cost structure, client defaults, investment delays, etc.)
- ▶ **In turn, the financial statements and their analysis should provide feedback for business decisions**
 - Since it's a forecasted scenario, some of the assumptions are controllable (Management expenses can be reduced), therefore the business plan can be modified (realistically) to achieve expected/required results

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▶ Next week: chapter 30

▶ Next Monday: Group Videos

- CD, pendrive or link at the beginning of class
- Videos will be posted on Wednesday

▶ Midterm based on 10, 18, 29 and 30

- Saturday 26 at 10:00 at room 307
- Bring calculator. Cellphones and sharing calculators will not be allowed