Module 2

The Language and Tools of Financial Analysis

Profitability Measures 1 (When is good really good?)

Presenter: Paul Kofman

THE UNIVERSITY OF MELBOURNE

BNY MELLON

Profitability ratios

The income statement is the obvious starting point of the analysis.

But the level of net/operating income is not particularly insightful without accounting for the scale of production or the amounts invested in the firm.

Profitability ratios – on sales

Firm owners (shareholders) start with an analysis of firm profitability:

$$\text{Gross Margin (GM)} = \frac{\text{Gross Profit}}{\text{Sales}}$$

$$\text{Operating Margin (OM)} = \frac{\text{Operating Income}}{\text{Sales}}$$

Measuring the firm's ability to sell product for more than the direct (GM) plus indirect (OM) cost of production.

Profitability ratios – on sales

Kellogg's (2014):

$$\text{Gross Margin} = \frac{(14{,}580 - 9{,}517)}{14{,}580} = 0.35 = 35\%$$

$$\text{Operating Margin} = \frac{1{,}024}{14{,}580} = 0.07 = 7\%$$

Kellogg's (2013):

$$\text{Gross Margin} = \frac{(14{,}792 - 8{,}689)}{14{,}792} = 0.41 = 41\%$$

$$\text{Operating Margin} = \frac{2{,}837}{14{,}792} = 0.19 = 19\%$$

Profitability ratios – on sales

When we compare these measures across firms, we get a picture of their relative efficiency of operations:

$$\text{Net Profit Margin (Kellogg's, 2014)} = \frac{632}{14{,}580} = 0.043 = 4.3\%$$

$$\text{Net Profit Margin (Kraft, 2014)} = \frac{1{,}043}{18{,}205} = 0.057 = 5.7\%$$

.. but it is just one piece of the puzzle!

Profitability ratios – investment returns

Alternatively, shareholders would want to know their return on investment in the firm:

$$\text{Return on Equity} = \text{ROE} = \frac{\text{Net Income}}{\text{Book Value of Equity}}$$

ROE is a ratio that reflects returns on past investments in the firm.

Profitability ratios – investment returns

Is that correct?

$$\text{Return on Equity} = \text{ROE} = \frac{\text{Flow measure}}{\text{Stock measure}}$$

Maybe better:

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

Take the BV(Equity) End of Financial Year (EOFY) 2014 add BV(Equity) EOFY 2013 and divide by 2!

Profitability ratios – investment returns

Past investments not only consist of equity, but also include debt:

$$\text{Return on Assets} = \text{ROA} = \frac{\text{Net Income}}{\text{Average Book Value of Assets}}$$

Analysts prefer ROA over ROE as it is not as sensitive to the firm's choice of leverage.

Profitability ratios – investment returns

	KELLOGG'S		KRAFT	
	2014	*2013*	*2014*	*2013*
Net Profit Margin	4.3%	12.2%	5.7%	14.9%
ROE	19.6%	60.0%	21.8%	62.0%
ROA	4.1%	11.8%	4.5%	11.7%

Source list

- Additional overlay images sourced from: ©iStock.com/nmlfd; ©iStock.com/Rawpixel Ltd; ©iStock.com/AUDINDesign