A Study of DuPont Model for Software Companies in India

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The DuPont Analysis is developed by a finance executive at E.I. Du Pont De Nemours and Co. The DuPont analysis is identified by profitability which is obtained by three different factors. 1. Efficiency in earnings 2. Ability of the asset to be turns it as profit. 3. Financial leverage. In this paper we consider selected software companies in India to test how well these companies are doing by calculating Return on equity (ROE).

Keywords: DuPont Analysis, ROE, Margin Ratios, Turn over Rations, Leverage Ratios

1. Introduction

The use of financial ratios by financial analysts, lenders, academic researchers, and small business owners has been widely acknowleged in the literature. Osteryoung & onstand (1992), Devine & Seaton (1995), or Burson (1998) the concepts of Return on Assets (ROA hereafter) and Return on Equity (ROE hereafter) are important for understanding the profitability of a business enterprise. Specifically, a "return on" ratio illustrates the relationship between profits and the investment needed to generate those profits. However, these concepts are often "too far removed from normal activities" to be easily understood and useful to many managers or small business owners. Slater and Olson (1996).

Objectives

- To test DuPont model for the software companies in India by using three factor testing.
- To test DuPont model for the software companies in India by using five factor testing

2. Data Sample & Methodology

This study is based on the listed 3 software companies in India. In this study software companies chosen was Infosys, Tech Mahindra and Oracle. For the study purpose we have taken three years financial statement viz 2014, 2015 and 2016 of 3 software companies Infosys, Tech Mahindra and Oracle. In this study we have applied three fact or Dupont analysis and 5 fact or Dupont Analysis for the Calculation of ROE.

Three Step DuPont Analysis Model

ROE = (Net Profit Margin x (Asset Turnover) x (Equity Multiplier) (1)

Where
Net profit margin shows operating efficiency
Asset turnover shows asset utilization efficiency
Equity multiplier shows financial leverage
Net Profit Margin = Net Income/Sales
Asset Turnover = Sales/Total Assets
Equity Multiplier = Total Assets/Shareholders Equity

Advanced Five Step DuPont Analysis Model

ROE = (Tax Burden) x (Interest Burden) x (Operating Margin) x (Asset Turnover) x (Equity Multiplier) (2)

Where
Tax burden is the proportion of profits retained after paying taxes
Tax Burden = Net Income/EBT
Interest Burden = EBT/EBIT
Operating income margin is the operating income per dollar of sales
Operating Income Margin= EBIT/Sales Asset turnover shows asset utilization efficiency
Asset Turnover = Sales/Total Assets
Equity multiplier shows financial leverage
Equity Multiplier = Total Assets/Shareholders Equity

Infosys Datasheet is given in Table 1, Oracle Datasheet is given in Table 2, Tech Mahindra datasheet is given in Table 3.

Table 1 *Infosys Datasheet for DuPont Analysis (Numbers are in Crores)*

Infosys	2016	2015	2014
Revenue	62,441.0	53,319.0	50,133.0
EBT	18,982.0	17,284.0	14,728.0
EBIT	13,681.0	12,373.0	10,656.0
Income Tax	5,301.0	4,911.0	4,072.0
Net Income	13,678.0	12,372.0	10,648.0
Total Assets	75,141.0	66,289.0	56,966.0
Shareholders' Equity	57,826.0	50,736.0	44,530.0

Table 2 *Oracle Datasheet for DuPont Analysis (Numbers are in Crores)*

Oracle	2016	2015	2014
Revenue	36,733.0	37,169.9	37,803.8
EBT	15,011.0	16,136.3	17,308.1
EBIT	9,287.5	10,580.2	11,483.7
Income Tax	5,722.5	5,556.1	5,824.4
Net Income	9,288.5	10,580.2	11,483.6
Total Assets	50,468.6	58,032.5	97,689.5
Shareholders' Equity	29,890.3	29,906.7	84,549.0

Table 3 *Tech Mahindra Datasheet for DuPont Analysis (Numbers are in Crores)*

Tech Mahindra	2016	2015	2014
Revenue	209,698.0	191,627.0	189,444.0
EBT	39,233.0	28,692.0	38,147.0
EBIT	32,200.0	21,949.0	27,834.0
Interest Expense	533.0	479.0	299.0
Income Tax	7,033.0	6,743.0	10,313.0
Net Income	32,200.0	22,562.0	30,288.0
Total Assets	206,499.0	170,165.0	159,396.0
Shareholders' Equity	135,522.0	112,558.0	91,805.0

DuPont Testing Using 3 Factor Analysis for Infosys

Three-Step DuPont Model	2016	2015	2014
Net Profit Margin (Net Income ÷ Sales)	21.9%	23.2%	21.2%
Asset Turnover (Sales ÷ Total Assets)	0.83	0.80	0.88
Equity Multiplier (Total Assets ÷ Shareholders Equity)	1.30	1.31	1.28
Return on Equity	23.7%	24.4%	23.9%

DuPont Testing Using 3 Factor Analysis for Oracle

Three-Step DuPont Model	2016	2015	2014
Net Profit Margin (Net Income ÷ Sales)	25.3%	28.5%	30.4%
Asset Turnover (Sales ÷ Total Assets)	0.73	0.64	0.39
Equity Multiplier (Total Assets ÷ Shareholders Equity)	1.69	1.94	1.16
Return on Equity	31.1%	35.4%	13.6%

DuPont Testing Using 3 Factor Analysis for Tech Mahindra

Three-Step DuPont Model	2016	2015	2014
Net Profit Margin (Net Income ÷ Sales)	15.4%	11.8%	16.0%
Asset Turnover (Sales ÷ Total Assets)	1.02	1.13	1.19
Equity Multiplier (Total Assets ÷ Shareholders Equity)	1.52	1.51	1.74
Return on Equity	23.8%	20.0%	33.0%

DuPont Analysis Using 5 Factor Analysis for Infosys

Five-Step DuPont Model	2016	2015	2014
Tax Burden (Net Income ÷ EBT)	0.72	0.72	0.72
Interest Burden (EBT ÷ EBIT)	1.39	1.40	1.38
Operating Income Margin (EBIT ÷ Sales)	21.9%	23.2%	21.3%
Asset Turnover (Sales ÷ Total Assets)	0.83	0.80	0.88
Equity Multiplier (Total Assets ÷ Shareholders Equity)	1.30	1.31	1.28
Return on Equity	23.7%	24.4%	23.9%

DuPont Analysis Using 5 Factor Analysis for Oracle

Five-Step DuPont Model	2016	2015	2014
Tax Burden (Net Income ÷ EBT)	0.62	0.66	0.66
Interest Burden (EBT ÷ EBIT)	1.62	1.53	1.51
Operating Income Margin (EBIT ÷ Sales)	25.3%	28.5%	30.4%
Asset Turnover (Sales ÷ Total Assets)	0.73	0.64	0.39
Equity Multiplier (Total Assets ÷ Shareholders Equity)	1.69	1.94	1.16
Return on Equity	31.1%	35.4%	13.6%

DuPont Analysis Using 5 Factor Analysis for Tech Mahindra

Five-Step DuPont Model	2016	2015	2014
Tax Burden (Net Income ÷ EBT)	0.82	0.79	0.79
Interest Burden (EBT ÷ EBIT)	1.22	1.31	1.37
Operating Income Margin (EBIT ÷ Sales)	15.4%	11.5%	14.7%
Asset Turnover (Sales ÷ Total Assets)	1.02	1.13	1.19
Equity Multiplier (Total Assets ÷ Shareholders Equity)	1.52	1.51	1.74
Return on Equity	23.8%	20.0%	33.0%

3. Results and Conclusion

Testing of DuPont model either by three factor analysis and five factor analysis returns on equity remains the same for all the tested data. In conclusion, ROE is the most comprehensive measure of profitability of a firm. It considers the operating and investing decisions. Five factor DuPont model be a tool that all business owners, managers, and consultants have at their disposal when evaluating a firm and making recommendations for improvement.

Table 4 *DuPont Analysis of Infosys*

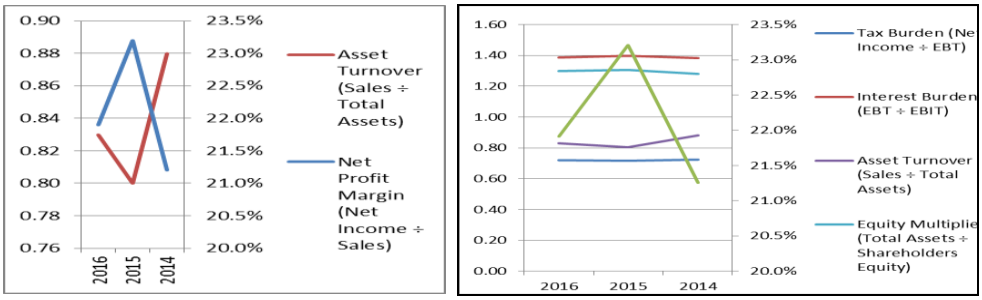


Table 5 *DuPont analysis of Oracle*

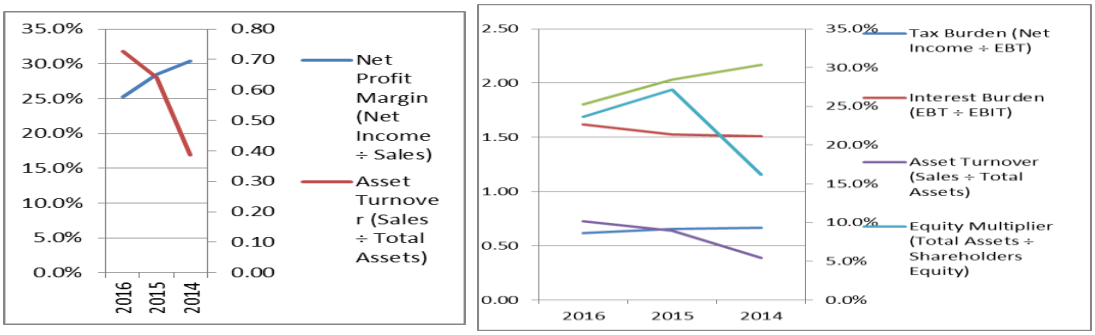
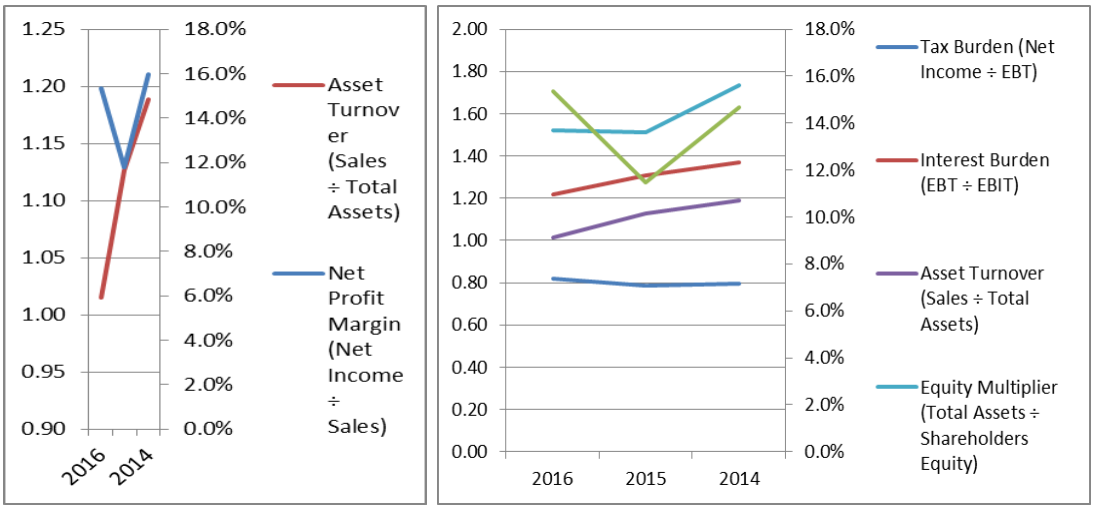


Table 6 *DuPont analysis of Tech Mahindra*



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