Session 6A: Post class test solutions

1.

Gross Margin =	15.49%	Gross Profit/ Revenues
Operating Margin =	4.39%	Operating Income/ Revenues
Effective tax rate =	16.73%	Taxes/ Earnings Before taxes
After-tax Operating Margin =	3.66%	Operating Income (1 - Effective tax rate) / Revenues
Net Margin =	1.92%	Net Income/Revenues

2.

Return on equity (starting book equity) =	21.08%	Net Income/ Shareholders Equity last year
Return on equity (average book equity) =	19.87%	Net Income/ ((Shareholders equity last year + this year)/2)
Invested capital (last year) =	$ 2,352.00	Book Equity + LT Debt + Leases + ST Debt + ST Leases - Cash - Goodwill
Invested capital (current) =	$ 4,672.00	Book Equity + LT Debt + Leases + ST Debt + ST Leases - Cash – Goodwill*
Invested capital (average) =	$ 3,512.00	(Invested Cap last year + Invested Cap this year)/2
ROIC (starting capital)	14.90%	Operating Income (1 - Effective tax rate) / Inv Cap last year
ROIC (average capital)	9.98%	Operating Income (1 - Effective tax rate) / Average Inv Cap

*I net out goodwill from invested capital with mixed feelings. If goodwill represents the value of growth potential in a target firm, it should be netted out. If it is overpayment or because the accounting book value is miststated, it should not be.

3.

Sales to Total Assets (starting)	1.22	Revenues/ Total Assets last year
Sales to Total Assets (average)	1.09	Revenues/ ((Total Assets last year + this year)/2)
Sales to Invested Capital (starting)	4.08	Revenues / Inv Cap last year
Sales to Invested Capital (average)	2.73	Revenues / Average Inv Cap

4.

Debt to Equity (Book)	489.79%	(LT Debt + Leases + ST Debt + ST Leases)/ Book Equity
Debt to Equity (Market)	149.84%	(LT Debt + Leases + ST Debt + ST Leases)/ Market Equity
Book value of capital	$ 5,774.00	LT Debt + Leases + ST Debt + ST Leases + Book Equity
Market value of capital	$ 7,995.00	LT Debt + Leases + ST Debt + ST Leases + Market Equity
Debt to Capital (Book)	83.04%	(LT Debt + Leases + ST Debt + ST Leases)/ Book Capital
Debt to Capital (Market)	59.97%	(LT Debt + Leases + ST Debt + ST Leases)/ Market Capital

5.

Interest coverage ratio (without financing)	1.85	(Operating Income- Financing Rev + Financing Op Exp)/ Int expense company
Interest coverage ratio (with financing)	1.54	Operating Income/ (Int exp financing + Int expense company)