

Homework #2

| Income Statement | |
|-------------------------|-------------|
| (\$ millions) | 2017 |
| Revenues | 800 |
| Operating Costs | 300 |
| Depreciation | 100 |
| Amortization | <u>0</u> |
| EBIT | 400 |
| Interest Expense | <u>180</u> |
| EBT | 220 |
| Taxes (40%) | <u>88</u> |
| Net Income | \$ 132 |
| Dividends | 12 |
| Add to RE | 120 |
| Balance Sheet | |
| Cash | \$ 100 |
| Receivables | 200 |
| Inventories | <u>150</u> |
| Current Assets | 450 |
| Net Fixed Assets | <u>100</u> |
| Total Assets | 550 |
| Accounts Payable | 50 |
| Notes Payable | 10 |
| Accruals | <u>30</u> |
| Current Liabilities | 90 |
| Bonds | 110 |
| Common Stock | 150 |
| Retained Earnings | <u>200</u> |
| Total Liab & Eq | \$ 550 |

1. Find the following ratios for 2013 and comment on each:

| | Ind Avg | Ratio | Comment |
|----------------------|---------|-------|----------|
| current ratio | 3.5 X | 5x | good |
| inventory turnover | 5.1 X | 5.93x | OK |
| DSO | 62 days | 91.25 | Not good |
| Fixed asset turnover | 6 X | 8x | good |
| total asset turnover | 1.2 X | 1.45x | ok |
| debt ratio | 41% | 36.4% | OK |
| TIE | 1.8 X | 2.2x | OK |
| profit margin | 15.1 % | 16.5% | OK |
| ROA | 18.1 % | 24% | good |
| ROE | 30.7 % | 37.7% | good |

Extended DuPont equation

$$ROE = 16.5\% \times 1.45 \times \frac{500}{350} = 37.6\%$$

$$REP = .20 = \frac{EBIT}{1,000,000} \quad EBIT = 200,000$$

2.
ALL EQUITY
DEBT 0
EQ 1m

Central City Construction Company, which is just being formed, needs \$1 million of assets, and it expects to have a basic earning power ratio of 20 percent. Central City will own no securities, so all of its income will be operating income. If it chooses to, Central City can finance up to 50 percent of its assets with debt, which will have an 8 percent interest rate. Assuming a 40 percent federal-plus-state tax rate on all taxable income, what is the difference between its expected ROE if Central City finances with 50 percent debt versus its expected ROE if it finances entirely with common stock?

TA 1m

TR 1m

| | |
|-------|---------|
| EBIT | 200,000 |
| Int | 0 |
| EBT | 200,000 |
| TAXES | 80,000 |
| N.I | 120,000 |

$$ROE = \frac{120,000}{1,000,000}$$

$$ROI = 12\%$$

$$ROE = \frac{96,000}{1,000,000} = 9.6\%$$

DEBT .5m
EQ .5m

| | |
|------|---------|
| EBIT | 200,000 |
| Int | 40,000 |
| EBT | 160,000 |
| TAX | 64,000 |
| N.I | 96,000 |