

Lecture #4

Financial Ratios

Three questions:

1. How does it compare versus last year
2. How does it compare versus their peers / Competition
3. How does it compare versus expectations

Definition

Trend Analysis Ratios

Revenue Growth

Stock one-year Return

Liquidity Ratios

Current Ratio

CA/CL

Quick ratio

(Cash + A/R) / CL

Accounts Receivable Turnover (ART)

Revenue/Avg AR

Accounts Receivable Days

365 / ART

Solvency Ratios

Debt/Equity Ratio

LTD / Equity

LTD / Total Capitalization

LTD / (LTD + Equity)

EBITDA / Interest (Coverage Ratio)

EBITDA / Interest

EBIT / Interest

EBIT / Interest

Fixed Charge Coverage Ratio

(EBITDA-Capex)/(Int+ST+ LT Pmts)

Cash Avail.for Debt Service / Debt Svce

(CABFA + int.) / (Int. + ST+LT Pmts)

LTD / EBITDA (Leverage Ratio)

LTD / EBITDA

Activity Ratios / Operating Ratios

Inventory Ratio (IR)

Cost of Revenues/Avg Inventory

Inventory Ratio - Days

365 / IR

Fixed Asset Turnover Ratio

Rev / Avg of FA

Asset Turnover Ratio

Rev / Avg of Total Assets

Profitability Ratios

Gross Margin

Gross Margin / Revenues

EBITDA Margin

EBITDA / Revenue

EBIT Margin

EBIT / Revenue

Return on Assets (ROA)

NI / Avg Assets

Gross Return on Assets

EBIT / Avg Assets

Return on Equity (ROE)

NI / Avg Equity

Market Ratios

Stock Price

Total Shares Outstanding

Market Value of Equity

Market-to-Book

Earnings Per Share (EPS)
Price Earnings Ratio (PE)
EV / EBITDA

NI / Avg Shares Outstanding
Market Price / EPS
(MVE + LTD + STD - Cash) / EBITDA

Other Ratios

Altma's Z-score

Z Formula

$$Z = 1.2x (WC/TA) + 1.4x(RE/TA)+3.3x(EBIT/TA)+0.6x(MVE/Liabilities) + 0.99x(Sales/TA)$$

WC = Working Capital

TA=Total Assets

RE=Retained Earnings

MVE=Market Value of Equity

<u>Z-Score</u>	<u>Bankruptcy</u>
1.8x or less	Likely
Between 1.8 - 3.0	Uncertain
3.0 or above	Not likely

Celerity Technogy Company ("CTC")

Financial Statement Analysis

Ratio Analysis

	2008	2009	Definition
<u>Trend Analysis Ratios</u>			
Revenue Growth		15.6%	This Year's Revenue / Last Year's Revenue - 1
Stock one-year Return (HPR)		25.0%	This Year's SP/ Last Year's SP -1
<u>Liquidity Ratios</u>			
Current Ratio	1.75x	2.56x	CA/CL
Quick ratio	1.23x	1.91x	(Cash + A/R) / CL
Accounts Receivable Turnover (ART)		21.14x	Revenue/Avg AR
Accounts Receivable Days		17.26	365 / ART
<u>Solvency Ratios</u>			
Debt/Equity Ratio	68.7%	61.5%	LTD / Equity
LTD / Total Capitalization	40.7%	38.1%	LTD / (LTD + Equity)
EBITDA / Interest (Coverage Ratio)	2.96x	3.61x	EBITDA / Interest
EBIT / Interest	2.50x	3.07x	EBIT / Interest
Fixed Charge Coverage Ratio		1.72x	(EBITDA-Capex)/(Int+ST+ LT Pmts)
Cash Avail.for Debt Service / Debt Svce		0.97x	(CABFA + int.) / (Int. + ST+LT Pmts)
LTD / EBITDA (Leverage Ratio)	3.12x	2.73x	LTD / EBITDA
<u>Activity Ratios / Operating Ratios</u>			
Inventory Ratio (IR)		12.92x	Cost of Revenues/Avg Inventory
Inventory Ratio - Days		28.24	365 / IR
Fixed Asset Turnover Ratio		0.407x	Rev / Avg of FA
Asset Turnover Ratio		0.36x	Rev / Avg of Total Assets
<u>Profitability Ratios</u>			
Gross Margin	64.1%	62.2%	Gross Margin / Revenues
EBITDA Margin	40.1%	39.0%	EBITDA / Revenue
EBIT Margin	33.9%	33.2%	EBIT / Revenue
Return on Assets (ROA)		4.8%	NI / Avg Assets
Gross Return on Assets		11.8%	EBIT / Avg Assets
Return on Equity (ROE)		8.1%	NI / Avg Equity
<u>Market Ratios</u>			
Stock Price	\$ 40.00	\$ 50.00	
Total Shares Outstanding	55,000	60,000	
Market Value of Equity	2,200,000	3,000,000	
Market-to-Book	1.26x	1.56x	
Earnings Per Share (EPS)		\$ 2.59	NI / Avg Shares Outstanding
Price Earnings Ratio (PE)		19.32x	Market Price / EPS
EV / EBITDA	8.75x	9.52x	(MVE + LTD + STD - Cash) / EBITDA
<u>Other Ratios</u>			
Altma's Z-score	2.15x	2.67x	

Z Formula

$$Z = 1.2x(WC/TA) + 1.4x(RE/TA)+3.3x(EBIT/TA)+0.6x(MVE/Liabilities) + 0.99x(Sales/TA)$$

WC = Working Capital

TA=Total Assets

RE=Retained Earnings

MVE=Market Value of Equity

Z-Score

1.8x or less
Between 1.8 - 3.0
3.0 or abpve

Bankruptcy

Likely
Uncertain
Not likely