

13. Financial Statement Analysis

- Financial Statements
 - Internal Uses: Evaluating performance, spotting trouble, projections
 - External Uses: Credit decisions, evaluating competitors and acquisitions
- Ratio Analysis
- Analyzing ROE
- Earnings and earnings quality
- Accounting Gimmicks
- Recent Events – Enron and Global Crossing

Financial Statements and Filings

- Financial Statements
 - Balance Sheet – Common Size (% of TA) vs Base year (% of base yr)
 - Income Statement – Common Size (% of Sales) vs Base year (% of base yr)
 - Statement of Cash Flows –

- Statement of Cash flows
 - Operating = NI + Dep + decrease in CA + increase in CL
 - Investing = Sale of plant, prop, equip + Sale of businesses
 - Financing = Sale of LT debt + Increase in N/P + Sale of C/S – Div paid

- Ratio analysis –

- Problems with Financial Statement Analysis
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Financial Ratios

Market Ratios

PE = Price/Earnings,
PB = Price/Book value
PS = Price/Sales

Liquidity

Current ratio = CA / CL
Quick ratio = $(CA - Inv) / CL$
Cash ratio = $Cash / CL$

Profitability

Net Profit Margin = $NI / Sales$,
ROA = $EBIT / TA$ (or NI / TA)
Operating profit margin = $Op Profit / Sales$
ROE = $NI / ComEquity$ (or $NI - preferred div$)

Management Skill

Total Asset Turnover = $Sales / TA$
Fixed Asset Turnover = $Sales / FA$
Inv Turnover = $COGS / Inv$
Working Cap Turnover = $Sales / (AR + Inv)$
Capital Spending Rate = $Cap Spend / Sales$

Leverage (Financial Risk)

Debt to Equity = D / E (Total debt or LTD)
Debt Ratio = D / TA
Debt / Capital (Capital = LTD + Equity)
Times Interest Earned = $Net Op Income / Int Exp$

Financial Ratios: Example (1)

Ratio	GM	F	DCX	TM (ADR)
Market	---	---		---
P/E		7.2		11.3
P/FCF		1.5		47.0
Liquidity / Leverage	---	---		---
Current		NA		1.3
TD/E		10.3		1.0
Interest Coverage		2.85		88.2
Mgt Skill (Dupont)	---	---		---
Net Profit Mg (MRQ/5-yr avg)		1.8% / 0.7		5.9% / 5.9
TA Turnover		0.57		0.80
ROE (MRQ / 5-yr avg)		18.7% / 4.9		13.7% / 11.3
ROA (MRQ / 5-yr avg)		1.0 %/ 0.4		4.8% / 4.0
Div Yield (MRQ / 5-yr avg)		3.9 / 4.8		1.3 / 1.1

Financial Ratios: Example (2)

- Dupont identity – analyze/forecast ROE and sustainable growth ($\sim b \cdot \text{ROE}$)
 - $\text{ROE} = (\text{NI/Sales}) (\text{Sales/TA}) (\text{TA/Eq})$
 - $\text{ROE} = (\text{Net Profit Margin}) \times (\text{TA Turnover}) \times (\text{Financial leverage})$

FIRM	NI/Sales	Sales/TA	TA/Eq	= ROE	ROA
F	1.80%	0.570	18.226	18.7%	1.0%
TM	5.90%	0.800	2.903	13.7%	4.7%

Firm	NI/Sales	Sales/TA	TA/Eq	= ROE	ROA
WMT	3.70%	2.650	2.376	23.3%	9.8%
COST	1.96%	3.200	1.977	12.4%	6.3%
TGT	4.10%	1.520	2.503	15.6%	6.2%

Earnings Quality and GAAP

- GAAP Premises
 - Going Concern and Consistency (similar transactions treated similarly)
 - Matching cost with cost-caused revenues; Conservatism; Full Disclosure
 - Huge variation in industry acting (Ely Lilly (LLY) vs US Steel (X))

- Quality of Earnings (FASB) - normal, recurring, cash flow generating earnings from operations, reflecting the need to replace depreciating assets

- Risk factors on earnings quality –
 - Accounting policies not conservative and stable.
 - Poor disclosures on segments, acquisitions, neg factors, material uncertainties.
 - Related party transactions.
 - Mgt –
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What did UC do? (1/2)

UC Condensed Income Statement

Revenues:

Loan sale gains	\$265,122
Finance income, fees earned and other loan income	145,639
Investment income	24,230
Other	5,820
Total	440,811

Expenses:

Personnel	132,164
Interest	60,812
Other operating	121,928
Total	314,904
Income from continuing operations	\$80,581

What did UC do? (2/2)

UC Cash flows from continuing operating activities:	
Income from continuing operations	\$80,581
Adjustments to reconcile income from continuing operations to net cash provided by continuing operating activities:	
Increase in accrued interest receivable	(23,890)
Decrease (increase) in other assets	(12,284)
Increase (decrease) in other liabilities	32,985
Increase in interest-only and residual certificates – net	(277,642)
Increase in capitalized mortgage servicing rights	(34,226)
Amortization of capitalized mortgage servicing rights	9,272
Investment losses	--
Loan loss provision on owned loans	3,462
Amortization and depreciation	7,382
Deferred income taxes	45,465
Proceeds from sales and principal collections of loans held for sale	3,113,870
Originations and purchases of loans held for sale	(3,205,180)
Decrease (increase) from trading securities	17,418
Net cash used by continuing operating activities	(242,787)
Cash flows from discontinued operating activities:	(5,537)

Earnings Quality and Fraud

- Revenues – book when high probability of pymt and “PV reasonably discernable”.
 - Shipping method; production method; percent completed method.

- Revenue Manipulations
 - Speed revenue recognition (stuff channel) – increase A/R and decrease inv
 - Sell large assets – realize one time gains (IBM, MSFT).
 - Conceal losses/assets in unconsolidated subsidiary (SPE - Enron).
 - Slow revenue recognition – reserves (MSFT; FRE); clean house; max bonus.

- Expense Manipulations
 - Reduced managed costs – advertising; physical investment; R&D; inventories; maintenance; reserves for losses (warrantees, bad loans).
 - Deprecation acctg – lengthen asset life / capitalize expenses (WCOM \$11B?).
 - Inventory acctg – During inflation, use FIFO. If running down, use LIFO.
 - Pension expenses – assumptions on return, future liabilities.

Some Big Scandals

- Enron - In 2000, one of 20 largest companies in US. Bankrupt in 2001.
 - “Hard to describe” what Enron does. (Traded elec, broadband, etc..)
 - Conceals losses and debt in subsidiaries (SPEs). How??
 - Unconsolidated SPEs should operate at “arms-length”.
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- Global Crossing – established in 1997 to ring world with fiber optic cable.
 - Raised lots of \$\$ in IPO. Fails swiftly and spectacularly.
 - Swap fiber capacity (broadband)
Global sold EPIK \$40M of access to fiber (operating lease).
Global paid EPIK \$40M for “future” access to fiber (capital lease).

- More
 - Swaps –
 - Related party transactions –
 - Acquisitions –

Tips for the Savvy Investor on Financial Statements

- Accounting / ratio data on web
 - Full service brokerage firms do lots of “research”
 - May be hard to find mis-priced securities from accounting data
 - Accounting data can be misleading
- Statement of Cash flows may identify problems
 - Although selling assets may inflate CF from operations
- Earnings quality metrics may raise some red flags
 - Earnings manipulation
 - Expense manipulation
- Millennium Scandals
 - Worldcom, Tyco, Enron, Anderson, Dynegy
 - Wall St: CSFB, Merrill, Morgan Stanley, JP Morgan