Class #8
“Detecting Earnings Management”

Recap: Why firms/managers "Cook the books?"

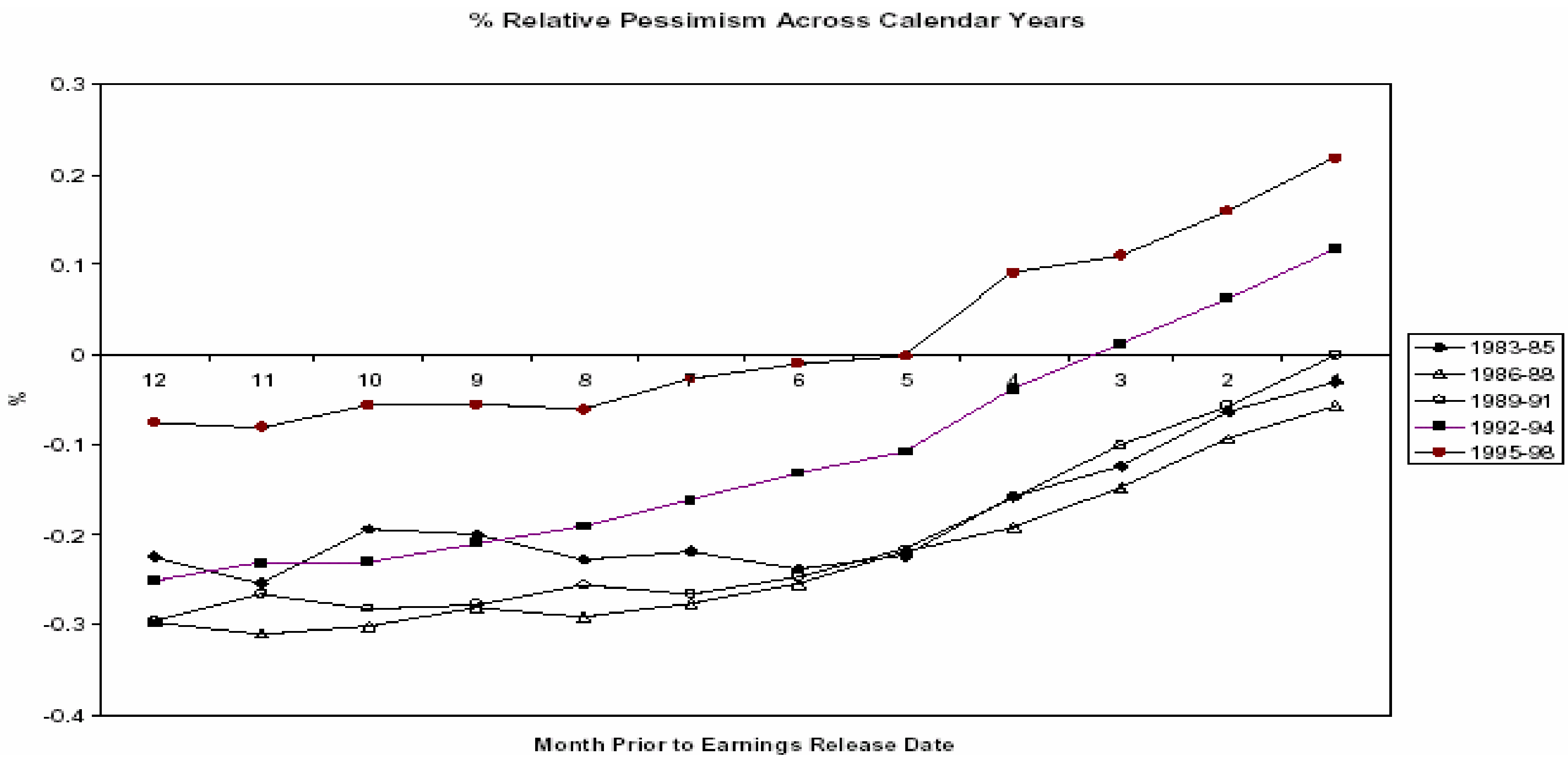
- Central theme: Firms & managers often have incentives to misstate earnings/balance sheet items:
  - Contracting incentives:
    - Avoid violating contracts
    - Maximize bonus (managers)
    - Avoid regulatory/government/union intervention
    - Avoid detection of managerial shirking
  - Stock market incentives: Meet analysts' targets

Why do we care about earnings management?

- <u>Avoid being fooled!</u>:
  - Earnings used in deriving numbers for DCF and multiples (P/E, PEG, etc) valuation analysis.
    - Use the wrong numbers & you will misvalue the firm
  - Earnings (and other accounting #'s) to determine financial health and the ability of the firm to pay obligations:
    - Employees
    - Creditors
    - Suppliers
    - Etc
- What is the outcome when accounting misstatement is detected?
  - Stock price reaction and legal recourse is immediate!

Watch Out for “Expectations Management” of Analysts!

Forecast Error= (Actual EPS – Forecast EPS)



Methods for Detecting Earnings Management

- Compare volatility of accrual income measures with underlying volatility of sales and CFO:

$$\frac{\text{Vol(Op Inc)}}{\text{Vol(Sales)}} = \frac{\text{stdev(Op Inc over 5 years)/average (Op Inc over 5 years)}}{\text{stdev(Sales over 5 years)/average (Sales over 5 years)}}$$

$$\frac{\text{Vol(Op Inc)}}{\text{Vol(CFO)}} = \frac{\text{stdev(Op Inc over 5 years)/average (Op Inc over 5 years)}}{\text{stdev(CFO over 5 years)/average (CFO over 5 years)}}$$

$$\frac{\text{Vol(NI)}}{\text{Vol(CFO)}} = \frac{\text{stdev(NI over 5 years) / average (NI over 5 years)}}{\text{stdev(CFO over 5 years)/average (CFO over 5 years)}}$$

Analysis: Shared Medical Systems

– Perform quality of sales analysis

– Test for Earnings Smoothing

AR/SALES	25.2%	26.4%	27.4%	28.0%	29.9%
% Growth in AR		23.9%	22.2%	19.6%	34.8%
% Growth in Sales		18.2%	17.9%	16.9%	26.1%
Vol(Op Inc) = Std(Op Inc)/Avg(Op Inc)		24.20%			
Vol(CFO) = Std(CFO)/Avg(CFO)		32.64%			
Vol(Op Inc)/Vol(CF0)		74.13%			

Team Project: Methods for Detecting Earnings Management

– What you **must** calculate for Part I of your Project:
  - Compare % growth in sales with the % growth in AR over the past 5 years (quarters).
  - Calculate the ratio of the scaled standard deviation of Operating Income over the past 5 years to the scaled standard deviation of CFO over the past 5 years. Also, calculate this same ratio for two of the firm's competitors and then make a relative comparison of these ratios.

– Other things you might look at (depending on your industry):
  - Compare change in NI to change in Basic EPS (Is firm "managing" the EPS number by adjusting number of shares outstanding?)
  - Check list of Diagnostics from last class.

Where Next?

- **Quiz #1 in Class on Thursday.**
  - Open notes. No laptop computers/PDAs/cellphones, pagers!
  - Bring a calculator
  - 50 minutes long.
  - Priority for review:
    - Review sample questions
    - Review class notes
    - Review all class handouts
    - Skim over selected reading assigned in class
- **Review Session this evening in this room.**

Team Project

- Part 1 of your Team Project:
  - I answer more questions in class on Thursday (after quiz).
  - **Report is due by noon on Friday, March 7.**
  - Please ensure that the names of all team members are on team's report.
  - Your complete report should merged into one file (either PDF or MS Word format).
  - This file must be e-mailed to both Professor Wysocki and to 2 members of your corresponding Due Diligence Team by noon on Friday.