

Problem 7.1. Financial Accounting Overview. A review of Note 1 (Accounting Policies) of three chemical companies provides the following information:

	Du Pont	Dow	PPG
Revenue Recognition	Recognized when products are shipped & title & risk of loss transferred to customer	When risk & title transferred to customer, generally at time of shipment	When goods are shipped & title to inventory passes to customers
Marketable Securities	Held-to-maturity	Trading, held-to-maturity, or available-for-sale	Valued at cost
Inventory	LIFO & FIFO	LIFO, FIFO & Average	LIFO & FIFO
Property, Plant & Equipment	Recorded at cost, straight-line depreciation	Recorded at cost, straight-line depreciation	Recorded at cost, straight-line depreciation
Environmental Liabilities	Recorded as operating expenses when liability incurred & can be reasonably estimated	Recorded as operating expenses when probable	Probable that a liability has been incurred & amount of liability reasonably estimated
Hedging	Forward exchange contracts, interest rate swaps, commodities futures contracts	Interest rate swaps, foreign currency swaps, commodities futures, options & swaps	Commodity swaps and options, foreign currency and interest rates [swaps?]

Are there differences in accounting policies across these companies? Explain. Does this information suggest earnings management or the need for further analysis? Explain.

Dow's use of average cost depreciation in addition to LIFO and FIFO is different, this may indicate earnings management depending on the assets the depreciation method is applied to.

DuPont expenses their Environmental Liabilities. This has a direct impact on current financials and will not affect future financials like creating liabilities as Dow and PPG do.

Problem 7.2. EBIT and EBITDA. Given below are summary earnings numbers for the three chemical companies for 2001 (in millions):

	Du Pont	Dow	PPG
Net Income	\$4,339	\$-385	\$387
Income from Continuing Operations	4,328	-417	387
Provision for Income Tax	2,467	-228	247
Interest Expense	590	733	169
Depreciation and Amortization	1,754	1,773	447

- a. Based on this information, calculate EBIT and EBITDA and the percentage change over net income for EBIT ($[\text{Net Income} - \text{EBIT}]/\text{Net Income}$) and EBITDA ($[\text{Net Income} - \text{EBITDA}]/\text{Net Income}$).

	Du Pont	Dow	PPG
EBIT	\$7,385	\$88	\$803
EBIT % change from Net Income	70.2%	NM	107.5%
EBITDA	\$9,139	\$1,861	\$1,250
EBITDA % change from Net Income	110.6%	NM	223.0%

Supplementary information for the current year (in millions):

	Du Pont	Dow	PPG
Sales	\$24,726	\$27,805	\$8,169
Average Total Assets	39,872.5	35,753	8,788.5
Average Equity	13,875.5	10,916.5	3,088.5

- b. Calculate alternative profitability ratios.

Net Income	Du Pont	Dow	PPG
Return on Sales	17.6%	-1.38% RF	9.8%
Return on Total Assets	10.9	-1.1 RF	4.4
Return on Equity	31.3	-3.5 RF	12.5

EBIT	Du Pont	Dow	PPG
Return on Sales	29.9%	0.32%	9.8%
Return on Total Assets	18.5	0.25	9.19
Return on Equity	53.2	0.81	26.0

EBITDA	Du Pont	Dow	PPG
Return on Sales	37.0%	6.7%	15.3%
Return on total Assets	22.9	5.2	14.2
Return on Equity	65.9	17.0	40.5

- c. Based on the information above, evaluate the usefulness of EBIT and EBITDA as alternative earnings numbers.

Problem 7.3. Alternative Bottom Line Ratios for Du Pont. Given below is summary information from Du Pont's income statement for the last three years (in millions).

	2001	2000	1999
Sales	\$24,726	\$26,268	\$26,918
Income from Continuing Operations (ICO)	4,328	2,314	219
Gain from Disposal of Discontinued Business (sale of Conoco)			7,471
Net Income (NI)	4,339	2,314	7,690
Translation Adjustment	-19	-38	172
Minimum Pension Liability Adjustment	-16	4	76
Unrealized Gains on Marketable Securities	-24	-21	51
Comprehensive Income (CI)	4,254	2,259	\$7,989

- a. Calculate return on sales using (1) income from continuing operations (ICO / sales); (2) net income (NI / sales); and (3) comprehensive income (CI / sales).

	2001	2000	1999
ICO / Sales	17.50%	8.81%	0.81%
NI / Sales	17.55%	8.81%	28.57%
CI / Sales	17.20%	8.60%	29.68%

- b. In 2001 Du Pont sold Du Pont Pharmaceuticals for a gain of \$6,136 million (\$3,866 net of tax). This was recorded as a separate line item as part of continuing operations. How does this affect the analysis (note: consider recalculating profit excluding this transaction)? Is this an example of earnings management? Explain.

Theoretically, this item should not be a part of Income from Continuing Operations, instead should be reported net of tax after NI from Continuing Ops. before bottom-line. NI from Continuing Ops should be recalculated, but the bottom-line Net Income would remain unaffected.

Problem 7.4. Comprehensive Income. Given are summaries of comprehensive income tables for three chemical companies for 2001 (in millions):

	Du Pont	Dow	PPG
Net Income	\$4,339	\$-385	\$387
Unrealized Gains & Losses- Marketable Securities	-24	27	10
Foreign Currency Translation Gains & Losses	-38	-148	-131
Pension Liability Adjustment	-16	-21	-20
Other	6	-45	-51
Comprehensive Income	\$4,254	-572	238
Comprehensive Income / Net Income	98.04%	NM	61.50%

Calculate comprehensive income as a percent of net income (comprehensive income / net income) for these companies. Is this new information useful? Explain. Is it a better measure of the bottom line than net income? Explain.

This new information is useful. Regardless of its placement on the Statement of Stockholders' Equity, Comprehensive Income affects Earnings on the balance sheet. This ratio can calculate the affect the "dirty-surplus" has on asset growth of the company.

Problem 7.5. Contingencies. Given are highlights from contingency footnotes of three chemical companies.

Du Pont (Note 25, 2001 Annual Report): Lawsuits outstanding alleging property damage from Benlate fungicide. Approximately 110 cases pending, Du Pont denies claims. Environmental liability—company accrued \$385 million in 2001, potential liability may be higher.

Dow (Note P, 2001 Annual Report): Breast implant litigation settlement from 1994 (for subsidiary Dow Corning—now bankrupt). Company still defendant in 14,000 breast implant product liability cases. Company considers further liability remote. Pesticide lawsuits (dibromochloropropane) primarily for ground water contamination/ Company considers further liability remote. Environmental liability—company accrued a total \$444 million through 2001 (including Superfund). Asbestos claims through Union Carbide subsidiary, litigation accruals of \$233 million.

PPG (Note 11, 2001 Annual Report): Lawsuits & claims on product liability, contract, patent, environmental, antitrust & other. Lawsuit for fixing prices on auto refinish & glass products; personal injury from exposure to asbestos (about 116,000 asbestos claims pending involving several companies). Company claims a successful defense and no responsibility. Trial court found PPG liable in 2002 in Texas, but PPG will appeal. Lost a lawsuit to Marvin Windows on breach of warranty. PPG will appeal. Environmental contingencies: PPG accrued \$29 million in 2001 where liability probable as reserves (total reserves of \$94 million). Possible environmental loss contingencies of \$200-400 million considered reasonably possible (but unreserved).

Do these disclosures change your viewpoint on these companies as potential investments? Explain. How do these disclosures fit into (1) evaluation of earnings management, (2) red flag potential, and (3) reevaluation or restatement of financial statements?

Problem 7.6. Cash flow analysis. The following information is given below for fiscal year 2001 (millions):

	Du Pont	Dow	PPG
Cash flow from operations (CFO)	\$2,419	\$1,789	\$1,060
Cash Flows from investments (CFI)	6,220*	-2,674	-245
Cash flows from financing (CFF)	-4,043	831	-816
Total Liabilities	23,443	25,522	5,250
Number of Shares Outstanding	1,089	981	168
Net Income	4,339	-385	387
Basic earnings per share (EPS)	4.18	-0.46	2.30
Stock Price, 5/01/02	44.63	31.49	52.22

* Includes proceeds from sale of Du Pont Pharmaceuticals for \$7,798

a. Calculate the following:

	Du Pont	Dow	PPG
Free Cash Flows (FCF)	\$8,639	\$-885	\$815
CFO / Total Liabilities	10.32%	7.01%	20.19%
CFO per Share	\$2.22	\$1.82	\$6.31
Price/ CFO per Share	\$20.09	\$17.27	\$8.28
PE	10.677	NM	22.704

The following additional information is given:

	Du Pont	Dow	PPG
CFO, 2000	\$5,070	\$1,214	\$870
CFO, 1999	4,840	2,992	902
Capital Expenditures, 2001	1,296	1,587	291
Capital Expenditures, 2000	1,925	156	561
Capital Expenditures, 1999	2,055	115	490
Inventory Additions, 2001	-362*	34	-187*
Inventory Additions, 2000	727	-489*	92
Inventory Additions, 1999	384	79	7
Cash Dividends, 2001	1,501	1,162	276
Cash Dividends, 2000	1,465	783	276
Cash Dividends, 1999	1,511	771	264

* Indicates decrease in inventory for the year

b. Calculate cash flow adequacy ratios:

	Du Pont	Dow	PPG
Cash Flow Adequacy	1.17	1.43	1.37

c. Analyze cash flows for Du Pont relative to Dow and PPG.