C521 CHAPTER 13 & REVIEW FOR MIDTERM FINANCIAL ACCOUNTING EXAM

What have we done in the course?

On a chapter by chapter basis, we primarily have examined specific transactions and the effect on financial statements. We want to know:

- The underlying economics of the transaction and the motivation for the transaction
- How to account for the transaction according to GAAP (i.e., the process, the rule)
- The effect of the transaction on financial statements and how it is reported (i.e., how is it reflected on the financial statement).
    - We generally sketched out the effect of the transaction on assets, liabilities, and equity.
    - Sometimes we showed the effects directly on financial statements.
- How to recognize the transaction in financial statements (i.e., the journal entry)

FOR MIDTERM EXAM

CHAPTER 10: BOND LIABILITIES

Bond issuance

- Premium/Discount

Effective interest method

- Compute *interest expense* and *interest payable*
- Amortize premium/discount
- Compute end of period carrying value

Reported at *carrying value*

- Face ± premium/discount
- On an interest payment date, the carrying value is present value of remaining cash flows using the historical effective interest rate.

Early retirement of debt

- Gain/loss reported as other income

CHAPTER 11 STOCKHOLDERS' EQUITY

No gains/losses on income statement for direct transactions with owners.

Issue stock

Repurchase and retire stock
- Economic gain/loss: compare repurchase price to original issue price
- No income statement effect; effect is in stockholders' equity

Treasury Stock. Repurchase stock temporarily, with intent to reissue.
- Economic gain/loss: compare reissue price to repurchase price.
- No income statement effect; effect is in stockholders' equity

Dividends
- Charged to retained earnings
- No income statement effect
- Types
  - Cash dividends (most common)
  - Stock dividends
    - Small (at fair value)
    - Large (at par value)
    - Retained earnings decreases, PIC increases

Stock splits
- No effect on stockholders' equity components
- Par value and number of shares adjust

Stock compensation
- Calculated on date of grant
- Allocated over benefit period
- Recognized as compensation expense, which affects net income

APPENDIX E: INVESTMENTS IN OTHER CORPORATIONS

Long-term bond investments, held to maturity

- Bond issuance
  - Premium/Discount
- Effective interest method
  - Compute *interest income* and *interest receivable*
  - Computed amortization of premium/discount
  - Compute end of period carrying value
- Reported at amortized cost
  - Face ± premium/discount
- Sale before maturity
  - Amortize premium/discount to date of sale
  - Gain/loss on sale reported as other income

Long-term bond investments, available for sale

Same as held to maturity, except

- The bonds are reported on the balance sheet at fair value rather than amortized cost
- Unrealized gain/loss reported in other comprehensive income (loss)
  - Does not affect net income (loss)
  - Does affect comprehensive income (loss)

Investments in common stock

- **Cost method** (no significant influence)
  - Dividends treated as income
  - If marketable, marked to market (reported at fair value) at period end. See Marketable securities.
  - This method was called the Fair Value method in the text.
- **Equity method** (significant influence)
  - Dividends treated as return of investment
  - *Prorata* (proportionate) share of investee net income and other comprehensive income recognized
- **Consolidation** (control)

Marketable securities

- Common stock *accounted for under the cost method*
    - What text calls fair value method
- ***Equity method investments and consolidated investments excluded***
- Other debt and equity security investments
- Classification
    - **Trading**
        - Management must designate as trading
        - Marked to market (reported at fair value)
        - Unrealized gain/loss reported as other income/expense on income statement
            - Affects net income (loss)
            - Does not affect other comprehensive income (loss)
            - Affects comprehensive income (loss)
    - **Available for sale (**AFS in text)
        - **DEFAULT Classification**
        - Marked to market (reported at fair value)
        - Unrealized gain/loss reported as *other comprehensive income (loss)* on the statement of comprehensive income (loss)
            - Does not affect net income (loss)
            - Affects comprehensive income (loss)
    - **Held to maturity**
        - Bonds only
        - Management must designate
        - Not marked to market. Reported as amortized cost (face ± premium/discount)
- **Goodwill**
    - Definition: Premium paid over the sum of the fair values of the net assets acquired in a business combination (consolidation)
    - Intangible asset, deemed to have indefinite life
    - Not amortized
    - Subject to impairment

CHAPTER 12: STATEMENT OF CASH FLOWS

- Prepare Statement of Cash Flows, Indirect Method
- Compute the direct cash effects.

Heading

Cash Flow From Operating Activities
Net Income
Add (Deduct) amounts to reconcile from net income to cash flow from operations
1a. Non-cash expenses: depreciation, depletion, amortization, asset impairments
1b. (Non-cash revenues) e.g., investment income for securities accounted for under the equity method
2a. Losses on sale of assets
2b. (Gains) on sale of assets
3. Changes in operational current assets and deferred income tax assets and operational current liabilities and deferred income tax liabilities
liabilities

Heuristic

- 3. If the change in the current asset or liability is a **debit**, then the adjustment in the SCF is a **credit**, i.e., deduction in the operating activities section.
- 3. If the change in the current asset or liability is a **credit**, then the adjustment in the SCF is a **debit**, i.e., addition in the operating activities section.

Net cash flow from operating activities

Cash Flow From Investing Activities
Add cash received from sales of assets
(Deduct cash paid to purchase investments, fixed assets, and intangible assets)
Net cash flow from investing activities

Cash Flow From Financing Activities
Add cash received from issuing debt or stock
(Deduct cash used to repurchase debt or retire stock)
(Deduct cash dividends paid)
Net cash flow from financing activities

Net increase (decrease) in cash
Beginning Cash Balance
Ending Cash Balance

Significant Noncash Financing and Investing Activities (This schedule must accompany the statement of cash flows)

EXAMPLES OF SCF ITEMS FOR CHAPTERS 10-12 & APPENDIX E

Cash Flows From Operating Activities		
Net Income		$ 76,000
Adjustments: Add (Subtract)		
Depreciation Expense	$17,000	
Gain on Sale of Plant & Equipment	(30,000)	
Gain on Retirement of Debt	(7,000)	
Increase in Net Accounts Receivable	(13,000)	
Decrease in Inventory	32,000	
Increase in Accounts Payable	28,000	
Increase in Commissions Payable	8,000	
Decrease in Interest Payable	(7,000)	
Decrease in Dividends Receivable (cost method, trading security)	5,000	
Increase in Interest Receivable	(3,000)	
Equity in Subsidiary Earnings	(10,000)	20,000
Net Cash Flow From Operating Activities		96,000
Cash Flows From Investing Activities		
Sale of Plant & Equipment	80,000	
Purchase, available for sale securities	(3,500)	
Purchase of Land	(21,500)	
Net Cash Flow From Investing Activities		55,000
Cash Flows From Financing Activities		
Sale of Stock	11,000	
Payment of Dividends	(37,000)	
Purchase of Treasury Stock	(20,000)	
Retirement of Bonds	(80,000)	
Net Cash Flow From Financing Activities		(126,000)
Net Increase (Decrease) in Cash		25,000
Beginning Cash Balance		50,000
Ending Cash Balance		$ 75,000
Significant Non-Cash Activities		
Issue Bonds in Exchange for Land		$ 30,000

CHAPTER 13: FINANCIAL STATEMENT ANALYSIS

- Ratios
- Horizontal and Vertical Analysis

Profitability Ratios

- ROE (**and its 3 component ratios**)
- Net Profit Margin
- Asset Turnover
- Financial Leverage
  Note: Net Profit Margin & Asset Turnover combine to create ROA

- ROA (**and its two component ratios, from Chapter 5**)
- Net Profit Margin
- Asset Turnover
- ROA (Chapter 13 definition)

Effect income tax rate	= income tax expense (1) ÷ income before income taxes

(1) Alternative title, Provision for Income Taxes

Note: Chapter 13 provides an alternative ROA definition than Chapter 5, in which the numerator is adjusted for interest expense net of tax. Compute the Chapter 13 Ratio, and then computed the Chapter 5 ratio and the two components.

UNDERSTANDING A COMPANY'S STRATEGY

Financial statement analysis involves more than just "crunching numbers." Before you start looking at numbers, you should know what you are looking for. While financial statements report on transactions, each of those transactions is the result of a company's operating decisions as it implements its business strategy.

Business Strategy → **Operating Decisions** → **Transactions** → **Financial Statements**

The **DuPont model** helps us analyze the profitability of a business and demonstrates that a variety of strategies can result in high levels of profitability. The model follows:

$$\text{ROE} = \text{Net Profit Margin} \times \text{Asset Turnover} \times \text{Financial Leverage}$$

$$\frac{\text{Net Income}}{\text{Average Stockholders' Equity}} = \frac{\text{Net Income}}{\text{Net Sales}} \times \frac{\text{Net Sales}}{\text{Average Total Assets}} \times \frac{\text{Average Total Assets}}{\text{Average Stockholders' Equity}}$$

Profitability Ratios

- **Financial Leverage Percentage** (from chapter 13)
    - ROE – ROA (chapter 5 definition)
- **Quality of Income**
- **Profit Margin (ROS)**
- **Fixed Asset Turnover**
- In financial analysis
    - Compare across time
    - Compare to industry competitors and industry averages

Liquidity Ratios

- **Cash Ratio**
- **Current Ratio**
- **Quick Ratio**
- **Receivables Turnover**
- **Inventory Turnover**
- In financial analysis
    - Compare across time
    - Compare to industry competitors and industry averages

Solvency Ratios

- **Times Interest Earned**
- **Cash Coverage**
- **Debt-to-Equity**
- In financial analysis
    - Compare across time
    - Compare to industry competitors and industry averages

Market-Related Ratios

- **P/E**
- **Dividend Yield**
- In financial analysis
    - Compare across time
    - Compare to industry competitors and industry averages

On the Exam, <u>you will be expected to</u> <u>compute any ratio</u>.

EXHIBIT 13.3

Widely Used Accounting Ratios

Ratio	Basic Computation
Tests of Profitability	
1. Return on equity (ROE)	$\frac{\text{Net Income}}{\text{Average Stockholders' Equity}}$
2. Return on assets (ROA)	$\frac{\text{Net Income + Interest Expense (net of tax)}}{\text{Average Total Assets}}$
3. Financial leverage percentage	Return on Equity − Return on Assets
4. Earnings per share (EPS)	$\frac{\text{Net Income}}{\text{Average Number of Shares of Common Stock Outstanding}}$
5. Quality of income	$\frac{\text{Cash Flows from Operating Activities}}{\text{Net Income}}$
6. Profit margin	$\frac{\text{Net Income}}{\text{Net Sales Revenue}}$
7. Fixed asset turnover ratio	$\frac{\text{Net Sales Revenue}}{\text{Average Net Fixed Assets}}$
Tests of Liquidity	
8. Cash ratio	$\frac{\text{Cash + Cash Equivalents}}{\text{Current Liabilities}}$
9. Current ratio	$\frac{\text{Current Assets}}{\text{Current Liabilities}}$
10. Quick ratio	$\frac{\text{Quick Assets}}{\text{Current Liabilities}}$
11. Receivable turnover ratio	$\frac{\text{Net Credit Sales}}{\text{Average Net Receivables}}$
12. Inventory turnover ratio	$\frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$
Tests of Solvency	
13. Times interest earned ratio	$\frac{\text{Net Income + Interest Expense + Income Tax Expense}}{\text{Interest Expense}}$
14. Cash coverage ratio	$\frac{\text{Cash Flows from Operating Activities (before interest and taxes paid)}}{\text{Interest Paid}}$
15. Debt-to-equity ratio	$\frac{\text{Total Liabilities}}{\text{Stockholders' Equity}}$
Market Tests	
16. Price/earnings (P/E) ratio	$\frac{\text{Market Price per Share}}{\text{Earnings per Share}}$
17. Dividend yield ratio	$\frac{\text{Dividends per Share}}{\text{Market Price per Share}}$

Consolidated Statements of Operations (USD $)
[Dollars in Millions, except Per Share data]
Year Ended December 31

					Common Percentages		
	2011	**2010**	**2009**		**2011**	**2010**	**2009**
Revenue	**$24,286.50**	$23,076	$21,836		100.00%	100.00%	100.00%
Cost of sales	**5,067.90**	4,366.20	4,247		20.87%	18.92%	19.45%
Research and development	**5,020.80**	4,884.20	4,326.50		20.67%	21.17%	19.81%
Marketing, selling, and administrative	**7,879.90**	7,053.40	6,892.50		32.45%	30.57%	31.56%
Acquired in-process research and development [Notes 3 and 4]	**388**	50	90		1.60%	0.22%	0.41%
Asset impairments, restructuring, and other special charges [Note 5]	**401.4**	192	692.7		1.65%	0.83%	3.17%
Other -- net, expense [Note 17]	**179**	5	229.5		0.74%	0.02%	1.05%
Cost of sales, operating expenses, and other-net	**18,937**	16,550.80	16,478.20		77.97%	71.72%	75.46%
Income before income taxes	**5,349.50**	6,525.20	5,357.80		22.03%	28.28%	24.54%
Income taxes [Note 13]	**1,001.80**	1,455.70	1,029		4.12%	6.31%	4.71%
Net income	**$4,347.70**	$5,069.50	$4,328.80		17.90%	21.97%	19.82%
Earnings per share - basic and diluted	**$3.90**	$4.58	$3.94		0.02%	0.02%	0.02%

Consolidated Balance Sheets (USD $)
Dollars in Millions, Shares in Thousands
December 31, 2011

				Common Percentages	
	2011	2010		2011	2010
Current Assets					
Cash and cash equivalents	5,922.50	5,993.20		17.60%	19.33%
Short-term investments	974.60	733.80		2.90%	2.37%
Accounts receivable, net of allowances of $110.1 (2011) and $79.9 (2010)	3,597.70	3,493.80		10.69%	11.27%
Other receivables	640.20	664.30		1.90%	2.14%
Inventories	2,299.80	2,517.70		6.83%	8.12%
Prepaid taxes	158.50	828.30		0.47%	2.67%
Prepaid expenses and other	654.90	608.90		1.95%	1.96%
Total current assets	14,248.20	14,840.00		42.33%	47.87%
Other Assets					0.00%
Investments	4,029.80	1,779.50		11.97%	5.74%
Goodwill and other intangibles - net	5,128.10	4,818.80		15.24%	15.54%
Sundry	2,493.40	1,622.40		7.41%	5.23%
Total other assets	11,651.30	8,220.70		34.61%	26.52%
Property and equipment, net	7,760.30	7,940.70		23.06%	25.61%
Total assets	**33,659.80**	**31,001.40**		**100.00%**	100.00%

	2011	2010		2011	2010
Current Liabilities					
Short-term borrowings	1,522.30	156.00		4.52%	0.50%
Accounts payable	1,125.20	1,072.20		3.34%	3.46%
Employee compensation	804.70	851.80		2.39%	2.75%
Sales rebates and discounts	1,771.30	1,372.60		5.26%	4.43%
Dividends payable	542.30	540.00		1.61%	1.74%
Income taxes payable	261.60	457.50		0.78%	1.48%
Other current liabilities	2,903.50	2,476.80		8.63%	7.99%
Total current liabilities	8,930.90	6,926.90		26.53%	22.34%
Other Liabilities					0.00%
Long-term debt	5,464.70	6,770.50		16.24%	21.84%
Accrued retirement benefit	3,068.50	1,887.40		9.12%	6.09%
Long-term income taxes payable	1,086.30	1,234.80		3.23%	3.98%
Other noncurrent liabilities	1,573.80	1,769.00		4.68%	5.71%
Total other liabilities	11,193.30	11,661.70		33.25%	37.62%
Shareholders' Equity					0.00%
Common stock	724.10	721.30		2.15%	2.33%
Additional paid-in capital	4,886.80	4,798.50		14.52%	15.48%
Retained earnings	14,897.80	12,732.60		44.26%	41.07%
Employee benefit trust	(3,013.10)	(3,013.20)		-8.95%	-9.72%
Deferred costs-ESOP	-	(52.40)		0.00%	-0.17%
Accumulated other comprehensive loss	(3,858.60)	(2,670.10)		-11.46%	-8.61%
Noncontrolling interests	(6.10)	(7.50)		-0.02%	-0.02%
Cost of common stock in treasury, 853 shares (2011) and 864 shares (2010)	(95.30)	(96.40)		-0.28%	-0.31%
Total shareholders' equity	13,535.60	12,412.80		40.21%	40.04%
Total liabilities and shareholders' equity	**33,659.80**	**31,001.40**		**100.00%**	100.00%