Study Guide for Midterm #1

Below are the materials we have reviewed so far in class. I am also providing a list of topics that I believe are the **most** important for your understanding. Please note that you might have questions on the exam not mentioned in the topics below, but if you master the following, you should do well on the exam.

- **Chapters 1 and 2 - Introduction**
  - Difference in financial reporting and financial statement analysis
  - Securities Act of 1933
  - Securities and Exchange Act of 1934
  - Intrinsic analysis/valuation vs multiples analysis.
  - How is price different from valuation?
  - What are the various reasons we see a disconnect between equity on a balance sheet and the market value of equity?
- **Chapter 3 – Income Statement**
  - Components of Income Statement – both understand what each of the below components captures and why they are important for understanding value of a firm
    - Revenue, net revenue, COGS, gross profit, Sales and Marketing, General/Admin, R&D, operating profit, interest expense, pre-tax profit, tax, net income.
    - Why do some companies have high COGS and low operating expenses? Why is it reverse for other companies? What would we expect to see with a company like Nike vs a cheaper shoe manufacturer?
  - Revenue recognition
    - Recognize disconnect between revenue and when cash exchanges hands
    - Understand basic Rev Recognition example on Vol-Data Analytics.
    - How do modifications work?
    - Why do we need a different example for the construction company? How is this "Percentage-of-Completion" methodology calculated?
    - Agent vs principal
  - COGS/Inventory
    - Be able to calculate based on LIFO/FIFO
    - Implications in inflation/deflation world?
  - Depreciation calculation
    - Straight line
    - Accelerated (i.e., diminishing balance)
    - Implications of different approaches on taxes/expenses?
  - Non-recurring items
    - How do we think about them from a long-term value perspective?
  - If I give you a specific change in an accounting standard, such as telling you that revenue can be recognized earlier (like with Microsoft subscription example), then what are implications to firm?
  - EPS

        - Why are we interested in EPS? Why do we need to do a separate calculation for diluted EPS? In calculating diluted EPS, why do we ignore securities that are anti-dilutive?
        - Calculate Diluted EPS for firms with the following security types:
            - Preferred Stock
            - Convertible Debt
            - Stock Options
    - Common size income statements
        - How to calculate?
    - Understand the profit margin ratios

- **<u>10-K overview</u>**
    - What information is in the following Items?
        - Business
        - MD&A
        - Financial statements (including Notes, letter from auditor)
- **<u>Chapter 4 – Balance Sheet</u>**
    - Understand use of major parts of balance sheet and their relationships (A=L+E)
    - Current assets, non-current assets (and liabilities)
    - Balance sheet elements/format – understand what is captured by the following line items and their importance for financial analysis
        - Cash and cash equivalents
        - Accounts receivable
        - Inventory
        - PP&E
        - Intangible assets
        - Accounts payable
        - Notes payable
        - Accrued expenses
        - Deferred income
        - Long-term debt
    - Calculate goodwill
    - (SHAREHOLDERS' EQUITY will not be on first midterm)
    - Liquidity, Solvency, asset efficiency ratios (see Bob's Baloney)
    - Common size balance sheet
- **<u>Bob's Baloney</u>**
    - Ratios – I provide several groups of ratios in the Bob's Baloney case. You're responsible for knowing the following groups for the first midterm:
        - Operating performance ratios
        - Liquidity ratios
        - Capital structure and solvency ratios
        - Asset utilization ratios

- (you are not responsible for the following groups of ratios for the first midterm: Return on Investment ratios, Decomposition of ROE. Please note, though, that you might have quiz questions on these ratios.)

- **Slido Questions**
  - Why do firms sometimes provide both EPS and a non-GAAP 'adjusted EPS' measure? As analysts, what should we think when we see this?
  - Assuming revenue and costs remain the same, would a company prefer higher or lower a) Accounts Receivable, b)Accounts Payable, c)Inventory? Why?
  - SMC reported the following: Net income $264,000. Tax rate: 30%. Common shares: 100k. Convertible preferred stock: 10k shares, paying $6 in dividends & convertible into 4 common shares each. Conv. Bonds: $1m face value at 8%. Convertible into 60k common.
  - Suppose a company purchases an asset for $5 million. It has a useful life of 10 years. Salvage value is $1 million. Using 2x accelerated depreciation, what is the depreciation expense for year 2?

Additional study guide questions:

- **Bob's Baloney:**
  - Is BB a healthy business? Why or why not?
  - Is Mino's displeasure in BB justified?
  - What messages on the operating performance of Bob's do you glean from an analysis of the financial information?
  - What should Spangler say to the committee?
  - Calculate profit margin over time. What are the profitability trends?
  - What is driving the decline in operating profit margin ('operating efficiency')?
  - How would you assess the company's liquidity situation? How has it changed over time?
  - How would you assess the company's asset turnover over time? PPE turnover?
  - A pro forma analysis suggests that a 10% increase in price (without a change in volume) would raise ROE to 18.6%. Discuss risks of implementing such a price hike.
  - Management has invested heavily in selling and general expenses in recent years. What would we expect to see as a result (that we're not seeing)?
  - The Green Hills facility cost $175m in 2017. What should we expect to see as a result of the expansion?
  - The company's Debt to equity ratio increased from 0.3x in 2015 to 1.5x in 2019. What does this say about the company's financial flexibility moving forward? Would it be easier or more difficult for the company to borrow money moving forward?

Chapter 1, 2

1. Which act primarily regulates the "primary market" (new issues of securities) and requires the filing of a registration statement?

A) Securities and Exchange Act of 1934

B) Securities Act of 1933

C) Sarbanes-Oxley Act

D) Investment Company Act of 1940

Answer: B

2. A company's Book Value of Equity is $50M, but its Market Cap is $500M. Which of the following is a likely reason for this disconnect?

A) The company has significant internally generated intangible assets (like brand or R&D).

B) The company uses LIFO in a deflationary environment.

C) The market believes the company's future growth prospects are negative.

D) The company recently issued a large amount of long-term debt.

Answer: A

3. What is the fundamental difference between Intrinsic Valuation and Multiples Analysis?

A) Intrinsic valuation uses the balance sheet; multiples use the income statement.

B) Multiples analysis determines what a firm is "worth" based on cash flows; intrinsic uses peer comparisons.

C) Intrinsic valuation (DCF) focuses on the present value of future cash flows; multiples analysis relies on relative pricing of similar assets.

D) There is no difference; both always yield the same result.

Answer: C

Chapter 3

4. A construction company uses the "Percentage-of-Completion" method. A project has a total contract price of $10M and estimated total costs of $8M. In Year 1, the firm incurs $2M in costs. How much revenue should be recognized in Year 1? Answer: $2.5m

5. Company A acts as an "Agent" rather than a "Principal" in a transaction. The company sells a third-party product for $1,000 and earns a $100 commission. How should this be recorded?

A) Revenue of $1,000; COGS of $900.

B) Revenue of $100; COGS of $0.

C) Revenue of $1,000; Operating Expense of $900.

D) No revenue is recorded until the cash is received by the third party.

Answer: B (Agents report net commission)

6. Why would a company like Nike have high Operating Expenses relative to COGS compared to a generic shoe manufacturer?

A) Nike has high labor costs.

B) Nike invests heavily in R&D and Marketing (S&M) to maintain brand premium.

C) Nike uses FIFO while generic brands use LIFO.

D) Nike's shoes are cheaper to produce.

Answer: B

7. In an environment of rising prices (inflation), which inventory method results in the highest Net Income?

A) LIFO

B) FIFO

C) Weighted Average Cost

D) Specific Identification

Answer: B (FIFO uses older, cheaper costs for COGS, leading to higher profit)

8. A machine costs $100,000 with a salvage value of $10,000 and a 5-year life. Calculate the Year 2 Depreciation expense using the Double-Declining Balance (DDB) method.

Answer: $24,000

9. If a company switches from Straight-Line to Accelerated Depreciation for tax purposes, what is the immediate impact on Cash Flow?

A) Cash flow decreases due to higher expenses.

B) Cash flow increases because the tax shield is larger in the early years.

C) No impact, as depreciation is a non-cash expense.

D) Net Income increases.

Answer: B

10. 10. Company X has 100,000 shares of common stock. It has 1,000 shares of convertible Preferred Stock paying dividends of $5 each. Net Income is $500,000. Calculate Basic EPS.

Answer: $4.95

11. Why do we ignore "anti-dilutive" securities when calculating Diluted EPS?

A) Because they are illegal under GAAP.

B) Because including them would artificially increase EPS, violating the principle of conservatism.

C) Because they only apply to the Balance Sheet.

D) Because they are not "in the money."

Answer: B

12. When calculating Diluted EPS for Convertible Debt using the "If-Converted" method, what adjustment is made to the numerator?

A) Subtract Preferred Dividends.

B) Add back the After-Tax Interest Expense saved.

C) Add back the Gross Interest Expense.

D) No adjustment is made to the numerator.

Answer: B

Balance Sheet and Ratios

13. A company acquires another for $1,000,000 cash. The target has Fair Value of Assets of $800,000 and Fair Value of Liabilities of $300,000. Calculate Goodwill.

Answer: $500,000

14. Which of the following is a "Solvency" ratio?

A) Current Ratio

B) Inventory Turnover

C) Debt-to-Equity

D) Days Sales Outstanding

Answer: C (Solvency looks at long-term debt; Liquidity looks at short-term)

15. If a company's Common Size Balance Sheet shows Inventory increasing from 10% to 20% of Total Assets while sales remain flat, what might this indicate?

A) Increased efficiency.

B) Potential obsolescence or overstocking of products.

C) High asset turnover.

D) Improved liquidity.

Answer: B

<u>10-K and Qualitative Questions</u>

16. In which section of the 10-K would you find management's discussion on favorable or unfavorable trends in liquidity?

A) Item 1: Business

B) Item 7: MD&A

C) Item 8: Financial Statements

D) Auditor's Letter

Answer: B

17. How is "Deferred Income" (Unearned Revenue) classified on the Balance Sheet?

A) Current Asset

B) Non-current Asset

C) Liability

D) Equity

Answer: C (It is an obligation to provide a service in the future)

18. What is the impact of a "Non-recurring Item" (like a one-time legal settlement) on a firm's valuation?

A) It should be projected to occur every year in a DCF.

B) It should be excluded from "normalized" earnings to understand long-term value.

C) It is ignored because it doesn't affect cash.

D) It is added directly to Equity.

Answer: B

<u>More Diluted EPS</u>

19. Company A has net income of $500,000 and 100,000 common shares outstanding. It also has 10,000 stock options with an exercise price of $40. The average market price of the stock is $50. Calculate the number of incremental shares to be added to the denominator for Diluted EPS.

Answer: 2,000 shares

20. Company B reports Net Income of $200,000 and has 50,000 common shares. They have 5,000 shares of 6% **non-**convertible preferred stock ($100 par). What is the numerator for the **Diluted** EPS calculation?

(NOTE: $100 par is the face value on which the 6% dividend is calculated. In this example, each preferred share has a dividend of $6)

Answer: $170,000

21. Company C has $1,000,000 in 5% convertible bonds. The tax rate is 25%. If these bonds are converted into 20,000 common shares, what is the 'if-converted' adjustment to the numerator for Diluted EPS?

Answer: Add-back $37,500

22. Net Income is $100,000 with 40,000 shares outstanding. The company has 5,000 options with an exercise price of $25. The average market price is $20. How should these options be treated in the Diluted EPS calculation?

Answer: Ignored entirely. Since the exercise price is greater than market price, these options are out of the money and anti-dilutive

23. A firm has $400,000 Net Income and 100,000 common shares. It has convertible preferred stock (dividend of $40,000) convertible into 20,000 common shares. Basic EPS is $3.60. Calculate the Diluted EPS.

$3.33

24. Which of the following describes a situation where a convertible security is anti-dilutive?

a. The company reports a net loss

b. The exercise price of an option is lower than the market price

c. The tax rate increases

d. The if-converted EPS of the security is higher than the Basic EPS

Answer: D

25. Company D has Net Income of $600,000 and 200,000 shares. They have 10,000 options (Exercise $30, Market $60) and Convertible Bonds that would add $45,000 (after-tax) to income and 30,000 shares. Calculate Diluted EPS.

$2.74

26. If a company has a Net Loss for the year, how are stock options that are 'in-the-money' (Market > Exercise) treated for Diluted EPS?

a. Included because they are in-the-money
b. Included, but only half counted
c. Converted into a liability on balance sheet
d. Excluded because they are anti-dilutive

Answer: D. When a company has a loss, adding more shares to the denominator would reduce the loss per share, which is considered anti-dilutive

27. Given Basic EPS of $2.50, if a convertible preferred stock has an incremental EPS of $3.10, should it be included in the Diluted EPS calculation?

a. Yes, all convertible securities must be included

b. No, bc preferred dividends are not tax deductible

c. No, it’s anti-dilutive

d. Yes, but only the dividend part is added

Answer: C

28. Company F has 10,000 options with an exercise price of $50. During the year, the market price was $40 for the first 6 months and $80 for the last 6 months. What is the average market price to be used for the Treasury Stock Method?

Answer: $60

29. A firm has $1,000,000 in 10% Convertible Preferred Stock ($100 par), convertible into 5 shares of common for every 1 share of preferred. If Net Income is $1M and there are 500,000 common shares, calculate Basic EPS.

Answer: $1.80 (10% interest on $1,000,000 will be $100k dividends. Numerator is $900k. Denominator is $500k)

30. Using the data from the previous question (NI=$1M, CS=500k, Pref Div=$100k, Pref Shares=10k, Conversion=5:1), calculate Diluted EPS.

Answer: $1.80 (the calculation gets us $1.82. This is greater than basic EPS, therefore anti-dilutive)

31. Company G has Net Income of $100,000, 50,000 common shares, and two types of options: Set A (1,000 options, Exercise $10) and Set B (1,000 options, Exercise $50). Market price is $25. What is the total denominator for Diluted EPS?

Answer: 50,600 shares. Set A is included bc it's dilutive. Set B is anti-dilutive and ignored

More Ratio Questions

A company has Current Assets of $200k (including $50k in Inventory) and Current Liabilities of $100k. Calculate the Quick Ratio.

Answer: $1.50 ($200k-$50k)/$100k

1. Which of the following would improve a company's Current Ratio but have no effect on its Quick Ratio?

A) Selling equipment for cash.

B) Paying off Accounts Payable with cash.

C) Purchasing inventory on credit (Accounts Payable).

D) Collecting Accounts Receivable.

Answer: C (Inventory increases Current Assets, but is excluded from the Quick Ratio numerator)

2. Company X has Total Assets of $1M, Total Liabilities of $600k, and Interest Expense of $40k. If EBIT is $200k, calculate the Times Interest Earned (TIE) ratio. (aka, interest coverage ratio)

Answer: 5.0x

3. What is the primary concern for a creditor if a firm's Debt-to-Equity ratio increases significantly year-over-year?

A) The firm is becoming more liquid.

B) The firm's financial risk and probability of default are increasing.

C) The firm is using too much of its own money.

D) Asset turnover is slowing down.

Answer: B

4. If a firm has a Current Ratio of 0.8, what does this mathematically imply about its Net Working Capital?

A) Net Working Capital is positive.

B) Net Working Capital is exactly zero.

C) Net Working Capital is negative.

D) The firm is highly profitable.

Answer: C (Current Assets < Current Liabilities)

5. A firm has Sales of $1.2M and Average Total Assets of $800k. Calculate the Total Asset Turnover.

Answer: 1.5x

6. Which of the following is an "Operating Performance" ratio?

A) Debt-to-Asset

B) Quick Ratio

C) Operating Profit Margin

D) Average Collection Period

Answer: C

7. How does the use of "Operating Leases" (prior to recent accounting changes) affect the Debt-to-Equity ratio?

A) It artificially lowers the ratio by keeping debt "off-balance-sheet."

B) It increases the ratio.

C) It has no effect on the ratio.

D) It increases equity.

Answer: A

8. Calculate Inventory Turnover: COGS = $600k; Inventory = $100k

Answer: 6.0x

9. Why do we use COGS instead of Sales when calculating Inventory Turnover?

A) Because Sales includes a markup (profit) and Inventory is recorded at cost.

B) Because Sales is found on the Balance Sheet.

C) Because COGS is always higher than Sales.

D) Because it is required by the SEC.

Answer: A

10 A "high" Accounts Payable Turnover ratio generally suggests:

A) The firm is taking advantage of lenient supplier credit terms.

B) The firm is paying its suppliers quickly (perhaps to get discounts).

C) The firm is unable to pay its bills.

D) Inventory is moving slowly.

Answer: B

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11. Calculate Gross Profit Margin: Revenue = $500k, COGS = $300k, Operating Expenses = $100k.

Answer: 40%

12. If a company's Operating Margin is shrinking while its Gross Margin remains stable, what might this suggest?

A) Production costs (labor/materials) are increasing.

B) The company is losing control of its indirect costs (S&M, G&A, or R&D).

C) The tax rate has increased.

D) The company has taken on too much debt.

Answer: B

13. Common Size Income Statements express every line item as a percentage of:

A) Net Income

B) Total Assets

C) Gross Profit

D) Net Revenue (Sales)

Answer: D

14. Which ratio helps determine how much "cushion" a company has before it can no longer cover its interest payments with its operating profits?

A) Debt-to-Equity

B) Times Interest Earned

C) Fixed Asset Turnover

D) Defensive Interval

Answer: B

15. If a firm's Fixed Asset Turnover is much higher than the industry average, it could mean the firm is highly efficient, OR it could mean:

A) The firm's assets are old and heavily depreciated (low book value).

B) The firm has too much cash.

C) The firm is over-leveraged.

D) The firm is about to go out of business.

Answer: A

16. Why would an analyst look at "Pre-tax Margin" instead of "Net Margin"?

A) To ignore the effects of different tax jurisdictions or one-time tax items.

B) Because interest expense is not important.

C) Because taxes are not a real cash flow.

D) Because Gross Profit is too volatile.

Answer: A

17. In a "Common Size Balance Sheet," if Accounts Receivable as a % of Assets increases from 5% to 15%, what should the analyst investigate?

A) A decrease in sales.

B) A change in credit policy or potential bad debt.

C) An increase in depreciation.

D) A decrease in inventory.

Answer: B

18. Which ratio group evaluates how "intensively" a firm uses its plant and equipment?

A) Liquidity

B) Asset Utilization

C) Solvency

D) Profitability

Answer: B

19. True or False: A Current Ratio of 10.0 is always better than a Current Ratio of 2.0.

- *Answer: False (Extremely high liquidity may suggest the firm is inefficiently holding idle cash or has too much tied up in slow-moving inventory).*