Chapter 1: Comparable Companies Analysis

1) All of the following are reasons why comparable companies analysis should be used in conjunction with other valuation methodologies EXCEPT:

I. Markets may be skewed due to investor sentiment
II. No two companies are the same
III. Valuation methods vary by sector
IV. Intrinsic valuation may be needed

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2) Which financial metric can help indicate a company's size?

A. ROIC
B. EV
C. DOL
D. FCF Yield

3) An 8-K or current report may be helpful for a comparable companies analysis as it contains which of the following?

A. Management discussion and analysis
B. Pro forma adjustments
C. Material corporate events or changes
D. A comprehensive company overview

4) A company's capital expenditures can be found on all of the following forms EXCEPT:

   A. 10-K
   B. 8-K
   C. Proxy Statement
   D. 10-Q

5) Calculate the share dilution using the TSM method given the following information:

- 100.0mm basic shares outstanding
- Current share price of $10.00
- 10.0mm options outstanding with an exercise price of $20.00

   A. 110.0mm
   B. 150.0mm
   C. 100.0mm
   D. 220.0mm

6) How should one adjust net income when using the If-Converted method for a comparable companies analysis?

   A. Adjust net income downward
   B. Adjust net income upward
   C. Make no adjustment to net income
   D. It depends

7) What is the equity value of the company given the following information?

- Current share price: $40.00
- Basic shares outstanding: 400.0mm
- 50.0mm options outstanding with an exercise price of $20.00

- 5.0mm warrants with an exercise price of $45.00

A. $1,600.0mm
B. $1,500.0mm
C. $1,700.0mm
D. $1,625.0mm

8) What happens to the enterprise value (EV) if a company issues equity and uses the proceeds to repay debt?

A. The EV goes up
B. The EV remains the same
C. The EV goes down
D. It depends

9) Given the following information, what, by itself, would cause the enterprise value to equal $1,300.0mm?

- Equity Value: $1,400mm
- Cash: $200mm
- Total Debt: $300mm

A. A $100mm decrease in debt
B. A $100mm increase in cash
C. A $200mm increase in debt
D. A $200mm increase in cash

10) Given the following information, calculate the gross profit margin.

- Revenue: $200.0mm
- COGS: $100.0mm
- Operating Expenses: $50.0mm

A. 40%
B. 50%
C. 25%
D. 10%

11) All of the following are reasons why EBITDA is an important metric when performing a comparable companies analysis EXCEPT:

I. It represents a more accurate look at a company's operating cash flow
II. It is free from differences resulting from capital structure
III. It represents the profit after all of a company's expenses have been netted out
IV. It is free from differences in tax expenses

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12) Which calculation measures the return generated by all capital provided to a company?

A. ROE
B. ROA
C. ROIC
D. ROI

13) Given the following information, calculate the dividend yield.

- Quarterly dividend: $0.50 per share
- Current share price: $20.00

A. 10%
B. 2.5%
C. 5%
D. 1%

14) Calculate the compounded annual growth rate (CAGR) if revenues grew from $50.0m in 2005 to $350.0m in 2012.

A. 32%
B. 24%
C. 55%
D. 18%

15) Calculate the debt-to-EBITDA ratio given the following information.

- EBIT: $100.0m
- D&A: $150.0m
- Cash: $50.0m
- Debt: $75.0m

A. 25%
B. 30%
C. 50%
D. 37.5%

16) Based on Moody's rating scale, what grade is Baa1 considered?

A. High quality
B. Highly speculative

C. Medium grade
D. Extremely speculative

17) What is the *difference* between 2011 YTD revenues and LTM revenues?

<u>Revenues:</u>

- Q1 2011: $200.0m
- Q2 2011: $150.0m
- Q3 2011: $220.0m
- Q4 2011: $175.0m
- Q1 2012: $250.0m
- Q2 2012: $175.0m

A. $75.0m
B. $50.0m
C. $175.0m
D. $100.0m

18) Which of the following is likely to be a non-recurring item on an income statement?

A. SG&A
B. Interest expense
C. Depreciation
D. Goodwill impairment

19) What is normalized net income given the following information?

Income Statement	
Sales	$1,200
COGS	500
SG&A	100
Restructuring Charges	400
Operating Income	200
Interest Expense	50
Pre Tax Income	150
Income Taxes	45
Net Income	105

A. $505
B. $550
C. $385
D. $275

20) Calculate the EBITDA margin given the following information.

- EBITDA: $200.0m
- COGS: $200.0m
- Sales: $1,000.0m
- Net income: $150.0m

A. 20%

B. 15%

C. 40%

D. 25%

21) What is EBITDA a proxy for?

A. Sales

B. Growth

C. Cash flow

D. Debt

22) Which of the following is NOT included in calculating a company's capitalization ratio?

A. Debt

B. Preferred stock

C. Equity

D. EBITDA

23) What is a common multiple to use in a comparable companies analysis for a retail company?

A. EV / Subscribers

B. EV / Reserves

C. EV / Square footage

D. EV / Production

24) For what company would a valuation metric like EV / Sales be helpful?

A. A company with high gross margins

B. A company with no earnings

C. A company with low gross margins

D. A company with no debt

25) Which of the following is both a pro and a con of performing a comparable companies analysis?

A. It is quick to perform

B. It is current data

C. It is relative to other companies

D. It is market based

26) What happens to enterprise value if a company raises $100.0m debt and holds it on its balance sheet as cash?

A. EV remains the same

B. EV increases by $100.0m

C. EV decreases by $100.0m

D. EV decreases by $200.0m

27) Given the following information, calculate a company's EBITDA margin.

Operating income: $250.0m

Sales: $800.0m

D&A: $50.0m

Gross profit: $500.0m

A. 40.0%
B. 37.5%
C. 31.25%
D. 68.75%

28) Calculate COGS given the following information.

Sales: $800.0m

SG&A: $250.0m

EBITDA: $300.0m

D&A: $50.0m

A. $250.0m
B. $200.0m
C. $500.0m
D. $300.0m

CHAPTER 1 ANSWERS

1) C. While it's true that valuation methods may vary by sector, a comparable companies analysis focuses on a single sector.

2) B. EV is a financial metric that potential acquirers often use to measure a company's size, as it includes debt in its valuation.

3) C. An 8-K can be helpful when performing a comparable companies analysis, as it contains material corporate events or changes (e.g., earnings announcements, purchase/sale agreements, or capital markets transactions).

4) C. A proxy statement contains information regarding matters on which shareholders are expected to vote as well as a basic shares outstanding count that may be more current than what is on the latest 10-K or 10-Q. A company's capital expenditures can generally be found on the statement of cash flows included in the 10-K, 8-K, or 10-Q.

5) C. Under the TSM method, only *in-the-money* options and warrants are calculated toward share dilution. In this case the exercise price is $20.00; this is *higher* than the current share price, so the options are not counted toward share dilution. Therefore the share count remains unchanged at 100.0mm.

6) B. A cash-pay convertible bond is structured so that it can be exchanged for a defined number of shares of the issuer's common stock under certain circumstances. In accordance with the If-Converted method, when performing trading comps, in-the-money convertibles are converted into additional shares. To account for the forgone interest expense, net income must be adjusted higher.

7) C. Use the treasury stock method to calculate the diluted shares outstanding. First note that the options exercise price of $20.00 is lower than the current share price of $40.00, so these options are in-the-money and will be counted toward the diluted share count. The option holders must pay $1,000 to exercise their shares (50.0mm x $20.00). The company will take the proceeds and purchase 25.0mm new shares at the current share price ($1,000 / $40). Note that the exercise price of the warrants is $45.00, which is above the current share price; therefore the warrants are not counted in the diluted shares outstanding.

Equity value is the share price multiplied by the fully diluted shares outstanding number. The new shares calculated with the treasury stock method must be added to the basic shares outstanding number (25.0mm + 400.0mm). The equity value is $1,700.0mm ($40.00 x 425.0mm).

8) B. The formula for enterprise value is Equity Value + Total Debt + Preferred Stock + Non-controlling interest – Cash. In this case the value remains the same despite the change in capital structure. The increase in equity value is offset by the decrease in debt.

9) D. The formula for enterprise value is Equity Value + Total Debt + Preferred Stock + Non-controlling interest – Cash. In this case the enterprise value is $1,500.0mm (1,400 – 200 + 300). A $200mm increase in cash would bring the enterprise value down to $1,300.0mm (1,400 – 400 + 300).

10) B. Gross margin is calculated as gross profit (revenue – COGS) divided by revenue. Gross profit of $100.0mm (200 – 100) divided by revenues is 50% (100.0mm / 200.0mm). Operating expenses have no effect on the gross profit margin.

11) C. EBITDA is an important financial measure that is widely used as a proxy for operating cash flow, as it adjusts for depreciation and amortization, which are both non-cash items. EBITDA is also free from differences in capital structure, as it doesn't take interest or tax expenses into account.

12) C. ROIC is a valuable measure, as it is a good indication of how a company is utilizing its productive assets.

$$\text{ROIC} = \frac{\text{EBIT}}{\text{Average Net Debt + Equity}}$$

13) A. The following is the formula for calculating the dividend yield:

$$\text{Implied Dividend Yield} = \frac{\text{Most Recent Quarterly Dividend Per Share} \times 4}{\text{Current Share Price}}$$

14) A. CAGR is calculated as follows: (Ending value / Beginning value) ^ (1/Ending Year – Beginning Year) – 1) So, (350 / 50) ^ (1/ (2012 – 2005)) – 1)

15) B. EBITDA is calculated as EBIT plus D&A. The debt to EBITDA ratio is calculated as Debt / EBITDA (75 / 250).

16) C. Baa1 is considered medium grade according to Moody's rating scale.

17) A. First calculate 2011 YTD revenues by adding each quarter's revenues ($745). Calculate the "current stub" or the revenues for 2012 so far ($425). Then calculate the "prior stub" or the revenues you want to replace with the more recent quarters (Q1 2011 and Q2 2011) ($350). Finally, add the current stub to 2011 revenues and subtract the prior stub: $745 + $425 – $350 = $820.0m. Subtract 2011 revenue from LTM revenue: $820 – $745.

18) D. Irregular charges on an income statement are referred as non-recurring items. Goodwill impairment is an example of a non-recurring item.

19) C. Normalized net income adjusts for non-recurring items like a restructuring charge. Normalized net income is calculated as follows.

Income Statement	
Sales	$1,200
COGS	500
SG&A	100
Operating Income	600
Interest Expense	50
Pre Tax Income	550
Income Taxes	165
Net Income	**385**

20) A. The EBITDA margin is calculated as (EBITDA / Sales).

21) C. EBITDA is considered a proxy for a company's cash flow.

22) D. A company's capitalization ratio is calculated as follows: (Debt + Preferred Stock + Noncontrolling interest +Equity).

23) C. Many sectors employ specific valuation multiples in addition to, or instead of, the traditional metrics. A common metric for retail is EV / Square footage.

24) B. When a company has no earnings, EV / Sales can be a meaningful reference point for valuation.

25) D. Because a comparable companies analysis is market based, information is based on actual public market data, reflecting the market's growth and risk expectations. However, during periods of irrational market behavior, valuations could be skewed.

26) A. Theoretically, enterprise value is considered independent of capital structure, meaning that changes in a company's capital structure do not affect its enterprise value. For example, if a company raises additional debt that is held on the balance sheet as cash, its enterprise value remains constant because the new debt is offset by the increase in cash.

27) B. EBITDA margin is calculated as follows: Add D&A back to operating income to arrive at EBITDA ($250.0m plus $50.0m). Divide EBITDA by sales ($300.0m / $800.0m).

28) D. To determine COGS, work backwards. Subtract D&A from EBITDA to get operating income ($300.0m minus $50.0m). Next add SG&A to operating income to get a gross profit number ($250.0m plus $250.0m). Finally, subtract the gross profit from sales to arrive at COGS ($800.0m minus $500.0m).