**C214 Financial Management**

**Study Guide Problems**

With Solutions

09/06/19

The following questions are for practicing both calculations and concepts for C214 – Financial Management. Some of the questions have been used in Topic Reviews in the Financial Management e-text. This list of questions does not cover everything you may encounter in an assessment. They are in the same order as the topics presented in the e-text. For solutions, please see your Course Instructor.

***Overview of Finance***

1. Trading on the NYSE is executed without a specialist (i.e. a market maker).

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| True/False\*  2. Stocks and bonds are two types of financial instruments  \*True/False  3.  When revenue is matched with cost of sales in an income statement it is called:  Matching Principle  4. A high-quality customer just purchased $500,000 worth of product from your company. The contract calls for immediate delivery of the product with a cash payment of $300,000 today and $200,000 to be paid 60 days.  The expense associated with the product is $300,000, of which $100,000 has not been paid to your supplier. Under accrual based accounting system, you will most likely report:  Revenues of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Expenses of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Revenues 500,000 Expenses 300,000  ***Income Statement/Balance Sheet***  5. A firm reported retained earnings of $300 in 12/31/20x2. For 12/31/20x3, the firm reports retained earnings of $400 and pays dividends of $25.  What was net income in 20x3?  Beg RE = 300, **NI = 125**, Div = -25, End RE = 400  6. A basic equation for the balance sheet is:  Equity = Assets – Liabilities  7. Why is the Balance Sheet known as a permanent statement?  Because the other statements are reset at the end of the fiscal year  8. How do you calculate the change in Retained Earnings?  Net Income – Dividends  9. Sales minus Cost of Sales minus other expenses equals what?  Operating Income or EBIT  10.Name four accounts that are part of total assets?  Cash Accounts Receivable, Inventory, Long Term Assets  11. Name three accounts that are part of current assets?  Inventory, Cash, Accounts Receivable, Short Term Investments  12. Name four accounts that are part of Total Liabilities?  Bonds, Accounts Payable, Mortgage  ***Statement of Cash Flows***  13. Intel reported the following for 2014:  Net Income 100,000  Depreciation 20,000  Change in A/R 10,000  What is the cash flow from operating activities?  100 + 20 – 10 = 110  14. Name three accounts that are only included in Cash Flow from Financing (CFF)?    Common Stock, Dividends Paid, Bonds Payable  15.Define the Statement of Cash Flows:  Calculated for the same period of time as the Income Statement  Is calculated based on the Income Statement and the changes in the Balance Sheet  Is one of the three basic accounting statements  16. Intel reported the following for 2014:  Gross Equipment (1/1/14) 50,000  Gross Equipment (12/31/14) 65,000  Net income 100,000  Depreciation 20,000  What is the cash flow from investing activities for 2014?  (15,000) Depreciation is not counted when using Gross PPE  17. What is the Cash Flow from Operations given the following information?  Net Income 450,000  Change in Accounts Receivable 120,000  Change in Inventory - 90,000  Change in PP&E 60,000  Depreciation Expense 110,000  Change in Accounts Payable 50,000  Change in Accrued Expenses - 75,000  Change in Common Stock 300,000  450 + 110 Depn – 120 + 90 + 50 – 75 = 505,000  18. What is the Cash Flow from Investing?  Increase in Gross PP&E 125,000  Beginning Net PP&E 750,000  Ending Net PP&E 850,000  Depreciation Expense 25,000  Net End 850 less Net Beg 750 plus Depn 25 = 125 Outflow  (125,000)    19. What is the Cash Flow from Investing?  Beginning Net PP&E 250,000  Ending Net PP&E 300,000  Depreciation Expense 40,000  Change in Long Term Investments 100,000  Change in Short Term Investments 50,000  Net End 300 – Net Beg 250 + Depn 40 + LT Investments + 100 = 190 outflow  190,000 outflow    20. What is the Cash Flow from Financing?  Accounts Payable 100,000  Accrued Expenses 50,000  Increase in Mortgage Payable 300,000  Decrease in Bonds Payable 75,000  Dividends Paid 80,000  Inc Mort 300 – Dec Bonds 75 – Div Paid 80 = 145,000    21. When Fixed Assets increase what happens to Cash?  Cash decreases  22. Last year a firm recorded Net PP&E of $4,600 while this year the same firm recorded Net PP&E of $4,500. If the depreciation expense for last year and this year are $500 and $800 respectively, what is the CFI of the company? (assume no asset disposals)  PPE End 4500 – PPE Beg 4600 + Curr Yr Depn 800 = 700 increase/outflow  23. Which is the purpose of the statement of cash flows?  Explains the change in cash over the course of the specified timeframe  24. Financial data for Intel is given below for 2014:   * EBIT 1,000,000 * Depreciation 30,000 * Change in working capital (10,000) * Net capital expenditures 15,000 * Tax rate 40%   Compute the Free Cash Flow for 2014  FCFF = EBIT (1-t) + Depn – Inc NWC – CapEx  1000 \* (1-.4) + 30 + 10 – 15 = 625,000  ***Financial Ratios***  25. Suppose the inventory turnover of a company is higher than the industry.  Based on this observation, what likely happened?  The firm has too little inventory resulting in lost sales or stock-outs.  26. Intel provides the following data for 2014:   * A/R 600 * Inventory 800 * Fixed Assets 1,000 * A/P 500 * Long term debt 900 * Common Stock 400   What is the current ratio?  600 + 800 / 500 = 2.8  27. If a company wishes to obtain a bank loan, will it want to have a higher current ratio or a lower current ratio?  higher  28. A company has cash of 100, accounts receivable of 250, inventory of 300, and accounts payable of 300. What is the quick ratio?  100 + 250 / 300 = 1.17  29. A company has cash sales of 200 and credit sales of 750. It’s average accounts receivable is 90. What is the A/R turnover?  750 / 90 = 8.33  30. The OIROI (Operating Income Return on Investment) uses what elements on the income statement?  EBIT, Total Assets  31. Why would a company be interested in the TAT (Total Asset Turnover) ratio?  How efficient assets are at producing sales  32. If a company has current assets of 80 and fixed assets of 120, if Sales are 150 and EBIT is 35, what is the Fixed Asset Turnover?  150 / 120 = 1.25  33. If a company has current assets of 90 and fixed assets of 140, if it has debt of 125, what is its debt ratio?  (debt) 125 / 140 + 90 (total assets) = .5435  34. A company has sales of 300, expenses of 200 and interest expense of 25, what is its Times Interest Earned ratio?  EBIT / Int Exp (300 – 200) / 25 = 4  35. Suppose a firm has a financial leverage ratio of 2.50 which indicates the ratio that the firm’s assets are financed by debt.  What is percentage of the firm’s assets is financed by equity?  The ratio is 2.5 to 1. The amount financed by equity is a ratio of 1 to 2.5 or the inverse. 1 / 2.5 = .40  ***Time Value of Money – Perpetuities***  36. What is the present value of a stream of cash flows of $125,000 at a discount rate of 7%?  125,000 / .07 = 1,785,714  37. What is the discount rate of a stream of cash flows of 50,000 that have a present value of 450,000?  50,000 / 450,000 = 11.1%  38. What is the cash flow stream for a present value 1,000,000 at 5% paid in equal installments in the future?  1,000,000 \* .05 = 50,000  39. A woman has just found out that a rich great-aunt has bequeathed a trust fund that pays $50,000 to her and to her descendants forever. If the trust fund earns 3.5% interest, what is the amount of the trust fund?  $50,000 / .035 = PV or 1,428,571  ***Time Value of Money***  40. A couple wants to save up for a down payment on a house. They think they need to save 100,000 in five years. If the interest rate is 4% and they start at the end of the year when they both get bonuses from their employers, what do they have to put aside annually?  FV = 100,000, N = 5, I/Y = 4, PV = 0, Solve for PMT This is an END problem= $18,462.71  41. A person wants to put aside $500 at the beginning of each month for 10 years. If she estimates an interest rate of 5.5%, what will she have in her savings account at the end?  Hint: Make the calculator inputs consistent.  PMT = 500, N = 120, I/Y = 0.4583 (5.5/12), PV = 0, Solve for FV This is a BEGIN problem  $80,119.33  42. A ten-year-old girl can put aside $45 at the end of each month for her college education. If she has eight years before she starts higher education, how much will she have in her savings if she can get 5% interest?  N = 96 (monthly pmts), I/Y = .4167 (5/12), PMT = 45, PV = 0, Solve for FV (END problem)  $5298.32  43. A mother wants to help her child’s higher education fund. She wishes to have $15,000 available each year for six years. Her child starts college in 15 years and she can save 6% before school starts if she puts her end-of-year bonus into a trust fund and figures that the fund will earn 4% after her child begins her college education. What does she have to put aside annually if the money is withdrawn for college at the beginning of each year attending college? Hint: Two-Step problem.  Step 1: PMT = 15,000, I/Y = 4, N = 6, FV = 0, Solve for PV Begin mode PV = 81,777.34  Step 2: Take PV in Step 1 and use it as FV in Step 2. N = 15, I/Y = 6, PV = 0, Solve for PMT End problem = $3,513.38  44. A man has just inherited $250,000. If he invests the money at 4.5%, what can he expect to have at the end of 15 years when he retires?  PV = 250,000, I/Y = 4.5, N = 15, PMT = 0, Solve for FV No PMT, so it doesn’t matter what mode. = $483,820.61  ***Debt Valuation***  45. What annual interest will be paid for a zero coupon bond?  0%  46. What is the most significant characteristic of subordinated debt?  Senior debt is paid off first  47. If a company wants to increase its debt capital, how will they raise the funds?  sell bonds  48. What is the lowest level of investment- grade bonds?  BBB  49. A company wishes to issue 10 year bonds with a face value of $1,000 and a coupon rate of 5.5%. The market has shifted before the issuance and the bonds will sell at 94% of face value. What is the YTM of the bonds when they are sold?  N = 10 , I/Y = ? , PMT = 55 , PV = - 940 , FV = 1,000 I/Yr = 6.33%  50. You want to buy a semiannual bond that has 4 years left before maturity. It has a 6% coupon rate and the market yield is currently 5.2%. What is the price you are willing to pay?  N = 8 , I/Y = 2.6 , PMT = 30 , PV = ? , FV = 1,000 PV = -1028.56  51. What is the price of a 1- year $1,000 bond with a 3% coupon rate if the YTM is 5.2%?  N = 1, I/Y = 5.2, PMT = 30, FV = 1,000 = 979.09  52. A 5% semiannual $1,000 bond matures in 4 years. What is the YTM if the price is $1,069?  N = 8 , I/Y = ? , PMT = 25 , PV = - 1069 , FV = 1,000 I/Y = 1.5752 x 2 = 3.15%  53. What can cause the bond price to fluctuate?  A change in the bond rating, a change in the financial condition, general change in interest rates  54. You want to sell a bond for over $1,000. Can you do that if the coupon rate is 6.5% and the bond yield is 6.8%?  No. If the coupon rate is higher than the yield, the price will be above $1,000. If the coupon rate is lower than the yield (as in this case) the price will be below $1,000  55. A $1000 3% bond with a yield of 2.4% matures in 6 years. What is the price if the interest payments are made semiannually?  N = 12 , I/Y = 1.2 , PMT = 15 , PV = ? , FV = 1,000 PV = 1033.34  56. What is the price of a six-year $1,000 bond with a coupon rate of 7.4% and a YTM of 6.2%?  N = 6 , I/Y = 6.2 , PMT = 74.00 , PV = ? , FV = 1,000 PV = 1059.37  57. What does a company use as security for a bond?  Credit worthiness  58. A bond issued with a face value of $1,000 pays a 3% coupon rate and matures in seven years. If an investor wants a yield of 4%, what is the investor willing to pay for the bond?  N = 7, I/Y = 4, PMT = 30, FV = 1,000, PV = 939.98  59. An investor wants to know what the yield to maturity is for a $1,000 bond with a 5.5% coupon rate that matures in 5 years if the current market price is $955?  N = 5, PV = -955, PMT = 55, FV = 1,000, I/Y = 6.59  ***Debt Valuation – APR vs. APY***  60. Which of the following gives the largest effective rate (APY)  18.6% compounded monthly, or 18.6% compounded daily, or 18.6% compounded weekly or 18.6% compounded yearly?  18.6% compounded daily  61. Suppose that an investment will pay 24% APR for a year and the interest will be compounded monthly. What is the expected APY for the investment?  (1 + .24/12)^12 – 1 = 26.82%  ***Equity Valuation – Single Holding Period***  62. A stock sells for 87.00 one year from now giving a total return of 8%. What is the dividend if the stock was originally purchased for 82.00.  D = Vo \* (1+r) – V1 Dividend step by step: 82.00 \* 1.08 = 88.56, 88.56 -87.00 = 1.56 dividend  63. What does a stock have to sell for one year in the future, if it currently sells for $75, has a planned dividend of $1.87 a share and an expected return of 14%?  V1 = Vo \* (1+r) – D where Vo = stock price today, V1 = stock price in 1 yr, r = rate of return, D = dividend. Stock in the future step by step: 75 \* .14 = 10.50 10.50 – 1.87 = 8.63 75 + 8.63 = 83.63 stock price in one year  64. What would a dividend have to be if the investor buys a stock for $110, expects to sell the stock in a year for $120 and expects an annual return of 13%?  D = Vo \* (1+r) – V1 Dividend step by step: 110 \* 1.13 = 124.30 124.30 – 120.00 = 4.30  65. What would an investor be willing to pay for a stock today, if the value in a year would be $55 with a dividend of $2.24 per share and the investor wants to make 9% on the investment?  Vo = V1 + D / (1 + r)  Stock Price Today step by step: 55.00 + 2.24 = 57.24 57.24 / 1.09 = 52.51  66. What is the rate of return for a stock purchased for $89, sold in a year for $100, paying a dividend during that time period of $2.75?  R = (V1 + D) / Vo  Rate of return step by step: 100.00 + 2.75 = 102.75 / 89.00 = 1.1545 Less 1 = 15.45 %  ***Equity Valuation – Gordon Growth Model***  67. A company just paid a dividend of 2.30 to its shareholder. It estimates that future growth will be at 2%. What is the value of the stock if you are looking for an 8% return on your investment?  (2.30 \* 1.02) / (.08 - .02) = 39.10  68. If you are looking for a return of at least 10%, what would you invest in a company given that it just paid a dividend of 1.80, and estimates a growth rate of 3%?  Vo = ((1.80 \* 1.03) /(.10 - .03) = 26.49  69. You are interested in buying a preferred stock and want to know what the rate of return is. The stock is selling for $85.00 and pays a dividend today of $2.25. What is the rate of return?  2.25 / 85.00 = .0265 or 2.65% (preferred stock has no growth)  70. The company expected to pay a dividend of $13.85 at the end of the year. Management has estimated growth at 2.75% and the stock is currently selling for $290.00. What is the expected rate of the return for this investment?  (13.85 / 290) + .0275 = .0753 or 7.53%  71. One of your friends is recommending a stock if it sells for more than $165.00 per share. The growth rate is 4% and the latest dividend was $6.00. You are expecting an 11% return. Why is the calculated value of the stock?  (6.00 \* 1.04) / (.110 - .040) = $89.14  72. An investor wishes to know what the value of a common stock is if it pays a dividend of $6.00 today. The company’s growth rate is 4.5% and the investor wants expects the stock to earn 7%. What is the value?  (6 \* 1.045) / (.07 - .045) = 250.80  73. If a common stock is worth $75 and the growth rate is 5% with a dividend expected to pay $2.00 in a year’s time, what is the expected rate of return?  (2.00 / 75.00) + .05 = .0767  74. An investor wishes to know what the value of preferred stock, when the dividend is $3.00 per share and the expected rate of return is 6.5%?  3.00 / .065 = 46.15  ***CAPM – Expected Rate of Return in different Economic States***  75. What is the expected rate of return for a stock where there is a 60% chance of a recession and a 40% chance of an expansion? The stock would return 2% during a recession and 8% in an expansionary period.  Cycle Prob Stock  Recession 60% .02 .012  Expansion 40% .08 .032  .044  76. There are two economic states, expansion and recession. The probability of an expansion is 70%, the probability of a recession is 30%. What is the expected return of Alpha Company’s stock, if it has an expected return of 2% in a recession and 10% in an expansion?  Cycle Prob Stock  Recession 30% .02 .0060  Expansion 70% .10 .0700  .0760  ***Capital Asset Pricing Model and Risk***  77. Under the Efficient Market Hypothesis, what will companies endeavor to do?  Maximize profits for a given level of risk  78. What does the beta coefficient represent?  It is a statistically-derived measure of volatility  79. A stock has a beta of 2.1, a market premium of .14 where the market rate is .17. What is the expected rate of return?  E(r) = Rf + B (Rm – Rf) .17-.14 + 2.1 \* .14 = .324  80. The market rate is .14, Treasury bonds are returning .025. A stock has a beta of .75. What is that stock’s expected return?  .025 + ( .75 \* (.14 - .025) = .1113  81. A stock has a beta of 1.42. The stock market is returning .11 and treasury bills are trading at a rate of .014. What is the expected return?  .014 + 1.42 (.11 - .014) = .1503  82. The market rate is .09 and the risk-free rate is .015. If a stock has a beta of 1.92, what is the expected rate of return?  .015 + 1.92 (.09 - .015) = .1590  83. What is the Expected Rate of Return for a stock where treasury bills are returning 2.5% and the market as a whole, is returning 15%. The stock has a beta of 1.25?  E(R) = .025 + (1.25(.15 - .025)) = .18125  84. If an investor knows the idiosyncratic risk, the investor knows the:  Beta Coefficient  ***Weighted Average Cost of Capital***  85. Common stock is valued at 400,000, Long-term debt is valued at 250,000, and preferred stock is valued at 50,000. What is the WACC where common stock costs .16, long-term debt costs .08, and preferred stock costs .07? The tax rate is 40%.  (400/700 \* .16) + (250/700 \*.08 \* .6) + (50/700 \* .07 ) = .0914 + .0171 + .0050 = .1135  86. Common stock is valued at 1,000,000 and costs .20. Bonds are valued at 850,000 and costs .04, Preferred stock is valued at 500,000 and costs .06. The tax rate is 40%. What is the **pre-tax** WACC?  (1000/2350 \* .2) + (850/2350 \* .04) + (500/2350 \* .06) = .0851 + .0145 + .0128 = .1124  87. Capital is valued at 3,000,000 consisting of 1,600,000 of common stock, 1,000,000 of bonds, 400,000 of short-term debt. Cost of common stock is .135. Bonds before tax are .045. Short term debt costs .065. What is the after- tax WACC if the tax rate is 35%?  (1600/3000 \* .135) + (1,000/3,000 \* .045 \* .65) + (400/3,000 \* .065 \* .65) = .0720 + .0098 + .0056 = .0874  88. If a company has a capital structure of $100,000 common stock, $50,000 bonds and $10,000 preferred stock and the respective rates are 15% common stock, 3% bonds and 4% preferred stock, what is the Weighted Average Cost of Capital if the tax rate is 30%?  (.625 \* .15) + (.3125 \* .03\*.7) + (.0625 \* .04) = .0938 + .0066 + .0025 = .1029  89. If a company has a capital structure of $5 million common stock with a cost of 17%, $2 million bonds at 4%, $1 million of Short Term Debt with a cost of 7%, and $2 million preferred stock with a cost of 3%, what is the Weighted Average Cost of Capital? The company has a 40% tax rate.  (.50 \* .17) +( .20 \* .04 \* (1-t) or .6) + (.10 \* .07 \* .6) + (.2 \* .03) = .0850 + .0048 + .0042 + .0060 = .1000  ***Capital Budgeting***  90. What is the initial outlay given the following information:   * Equipment Price 375,000 * Installation 10,000 * Power Survey 30,000 * Shipping 8,000 * Working Capital 100,000 * Project Marketing Report 15,000   493,000    91. What is the initial outlay given the following when a new piece of equipment replaces an old one:   * Old equipment sells for 125,000 * Book value of old equipment 22,000 * Tax rate 40% * New equipment cost 800,000 * Site survey 18,000 * Installation cost 20,000   125,000 – 22000 = 103,000 \* .4 = 41,200  125,000 – 41,200 = 83,800 deducted from new equipment  800,000 + 20,000 - 83,800 = 736,200  92. What is the initial outlay from the following information?   * Old equipment sells for (net of taxes) 55,000 * New equipment at cost 190,000 * Installation and shipping 18,000 * Working Capital 62,000   190 + 18 – 55 + 62 = 215  93. A project has sales of 300,000, general expenses of 195,000 and depreciation expense of 25,000. The tax rate is 35%. What is the differential cash flow?  (300 – 195 – 25) \* (1 - .35) + 25 = 77  94. Why is depreciation expense taken out of the net income calculation, yet added back at the end?  Because depreciation expense is tax deductible  95. A project has net income of 750,000 including depreciation expense of 42,000. What is the differential cash flow?  750 + 42 = 792  96. A piece of equipment is to be sold at the end of the project. Its appraised value is 420,000. A company makes an offer for 350,000. The equipment has a book value of 75,000. The tax rate is 40%. What is the salvage value if the company accepts the offer?  350,000 - ((350,000 – 75,000) \* .4) = 240,000  97. A piece of equipment was sold at the end of the project. The project received 85,000 for the equipment that carried a book value of 75,000. The tax rate is 35%. What is the salvage value?  85,000 – ((85,000-75,000)\*.35) = 81,500  98. A project is closing. Equipment is sold for 50,000 even though the book value was 75,000. The tax rate is 30%. The project started with 100,000 in working capital. What is the terminal cash flow?  50,000 – ((50,000-75,000)\*.3) + 100,000 = 157,500  99. Equipment is scrapped at the end of the project and has a book value of 20,000. The tax rate is 35%. The projected started with 75,000 of working capital. What is the terminal cash flow?  (20,000 \* .35) + 75,000 = 82,000  100. Equipment is sold for 30,000 at the end of a project. The working capital return is 50,000. The tax rate is 40%. What is the terminal cash flow?  30,000 – (30,000 \* .4) + 50,000 = 68,000  101. Why would we reject project based on NPV?  The NPV is a negative number  102. Why would we reject this project based on the IRR?  The discount rate is higher than the IRR  103. What are two key elements of differential cash flow:  Depreciation expense  Net Income  104. From the following information, calculate the terminal cash flow.   * Proceeds from sale of equipment 100,000 * Book Value of equipment sold 50,000 * Year 3 Diff Cash Flow 225,000 * Tax rate 40% * Depreciation Yrs 1 to 5 125,000 * Working Capital Return 75,000   100,000 – 50,000 = 50,000 Net Realizable Value \* tax rate of .4 = 20,000 to be paid in taxes. 100,000 from buyer – taxes paid of 20,000 = 80,000 total salvage value + 75,000 in Working Capital Return = 155,000 Terminal Cash Flow  105. If the Investment is 140,000, then what is the Net Present Value, given a Total Present Value of 154,606?  154,606 – 140,000 = 14,606  106. Why is the NPV preferred over the IRR? Two answers  It measures the dollar value  It is more reliable  107. What is the IRR given the following: Investment is $250,000, Yr 1: 50,000, Yr 2 is 60,000, Yr 3 is 80,000, Yr 4 is 100,000, Yr 5 is 90,000, the terminal cash flow is 45,000?  Make sure to add the TCF to Yr5 for 135,000  17.213%  108. If a WACC of 15.00% is used to compute the NPV, what does the IRR computed in previous question above tell us about the project?  The project is acceptable  ***Financial Forecasting - Discretionary Financing Needed***  109. If Sales are $1,000,000, then what are the total current assets given the following:   * + - Cash 25% of Sales     - Accounts Receivable 13% of Sales     - Accounts Payable 10% of Sales     - Accrued Payroll 5% of Sales     - Cost of Goods Sold 50% of Sales     - Inventory 15% of Cost of Goods Sold   Cash 250,000 + A/R 130,000 + Inventory (.15 \* COST OF GOODS SOLD of 500,000) = 250 + 130 + 75 = 455  110. Mountain Inc. forecasts sales of 450 million. It has established the following percentages of spontaneous accounts: 5% of Cash, 17% of A/R, 11% of Inventory, 48% of PP&E, 18% of A/P. A mortgage of 30 million, bonds of 50 million, equity of 150 million and earnings of 35 million. What is the DFN?  **Assets Liabilities & Equity**  Cash 22.5 million Accounts Payable 81.0 million  Acct Rec 76.5 million Mortgage 30.0 milion  Inventory 49.5 million Bonds 50.0 million  PP&E 216.0 million Equity 150.0 million  Earnings 35.0 million  Total Assets 364.5 million Total Liab & Equity 346.0 million  DFN 364.5 – 346.0 = **18.5 million**  111. Dishwasher Heaven, Inc. forecasts sales of 750,000. Their financial department has developed the following forecast percentages based on historical averages: Cash 11%, A/R 8%, 13% for inventory and accounts payable of 14%. Property Plant and Equipment is 210,000. The company has long term debt of 120,000 and equity of 85,000. It estimates profits at 55,000. What is the DFN?  **Assets Liabilities & Equity**  Cash 82,500 A/P 105,000  A/R 60,000 Long Term Debt 120,000  Inventory 97,500 Equity 85,000  PP&E 210,000 Profits 55,000  Total Assets 450,000 Total Liab & Equity 365,000  DFN 450,000 – 365,000 = **85,000**  85,000  ***Financial Forecasting – Sustainable Growth Rate***  112. Dinosaur Chicken Co. had sales of 70,000,000, expenses of 50,000,000 and paid 40% in taxes. It has equity of 42,000,000. The board approved dividends totaling 4,500,000. What is the company’s Sustainable Growth Rate?  Net Income = 70 million – 50 million = 20 million \* (1-.40) = 12 million Net Income  ROE = 12 million / 42 million = .2857  Dividend payout ratio = 4.5 million / 12 million = .375  SGR = .2857 ( 1 - .375) = **.1786**  113. UltraGrunge, Inc. earned 25 million after tax in the last year. The company has 100 million in assets and 85 million in equity. It has a policy of paying 12% of earnings as dividends. What is the SGR of UltraGrunge?  ROE 25 million / 85 million = .2941 SGR = .2941 (1 - .12) = **.2588**  114. What is the increase in Retained Earnings given the following:   * + - Sales are $10 million     - Net Earnings pre-tax are $1 million     - Dividend payout ratio is .12     - Tax rate is 40%   1,000,000 – 400,000 in taxes = 600,000 .12 \* 600,000 = 72,000 600,000 – 72,000 = 528,000  Increase in Retained Earnings doesn’t need Beg RE or End RE, since it is only the increase between the years.  115. What is the Sustained Growth Rate given the following:   * + - Sales are 2.5 million     - Total Expenses (including cost of goods sold through taxes) 2.0 million     - Total Assets are 3.0 million     - Equity is 1.3 million     - Dividend payout ratio is .25   ROE = NI / Equity 2.5 – 2.0 = .5 in income divided by 1.3 in Equity for .3846 1 – Dividend Payout Ratio is 1 - .25 = .75 .3846 \* .75 = .2885  ***Capital Structure***  116. When a company uses more leverage as evidenced by a higher degree of either financial or operating leverage, what effect does it have on changes in profitability?  Higher leverage leads to higher profitability for a given sales level  117. A company has an EBIT of 700,000 and interest expense of 30,000. B company has EBIT of 1,500,000 and interest expense of 30,000. Which company has a higher degree of financial leverage?  Company A Co A: 700,000/670,000 = 1.04 Co B: 1,500,000/1,470,000 = 1.02  118. What is the operating leverage of the Company Y? How will that affect profits compared with Company Z that has an operating leverage of 5.25? Company Y has an EBIT of 3,000,000, Sales of 25,000,000 and variable expenses of 18,000,000  As sales increases, Y’s profits will rise slower than Z’s (25-18) / 3 = 2.33  119. What is the financial leverage of Company A? How will that leverage affect profits compared to Company B if sales decrease? For Company A, EBIT is 500,000, interest expense is 50,000, Sales are 4,500,000, and variable costs are 3,000,000.  Profits decrease more as leverage increases 500/(500 - 50) = 1.11  120. What is the degree of combined leverage when EBIT is 700,000, interest expense is 100,000, Sales is 3,500,000 and variable costs are 1,200,000?  (3,500-1,200) / (700-100) = 3.833  121. What is the Degree of Operating Leverage given Sales of 100,000. Variable Costs of 75,000 and EBIT of 10,000?  100,000 – 75,000 / 10,000 = 2.50  122. What does the Degree of Financial Leverage indicate?   1. The reliance on debt   123. If a company has a high degree of financial leverage, what does that tell us about the firm’s risk profile?  Financial leverage also means more financing is done through debt, not equity.   * 1. Higher profits to shareholders   ***Working Capital Management***  124. What is the cash cycle?  The amount of time to regenerate cash  125. Why is float important to understand?  To time cash expenditures  126. What should a company do to manage its working capital?  Collect quickly and pay slowly  127. Company A wishes to keep 20% of its assets as cash. Company B keeps its cash balance at 5% of assets. Which of the following statements apply?  Company B invests in more working current assets  128. Company A offers trade credit of 2% 10 / net 30 and Company B offers trade credit at net 30. What can be said about the relative credit policies of each company?  Company A can attract more customers  129. Which of the following characterizes increased collection float  Increased float indicates slower processing time  130. Company A’s inventory is larger than Company B. Both companies are competitors and are about the same size. What does this difference mean from a working capital management standpoint?  Company B might have higher inventory turnover  131. In regards to Accounts Payable balances, what is a good policy:  Paying off A/P on the last day due is good policy  ***Firm Valuation***  132. Ajax, Inc. is seeking to sell the company, but it is a private company with no sales of stock to determine its market value. It has Earnings of $1,200,000 on 350,000 shares. Epsilon Manufacturing is a direct competitor and of equal size and profitability. Its stock sells for $21 per share and has earnings per share of $3.80. What is value of Ajax?  1,200,000/350,000 = 3.4286 earnings per share 21 / 3.80 = 5.5263 mulitple  $3.4286 \* 5.5263 \* 350,000 = $6,631,615  133. Ham Corp. is seeking to buy Eggs, Inc. Eggs is a private company. Eggs had an EPS of 2.80 last year and has 125,000 shares outstanding. Ham Corp. stock sells for $43.00 and has an EPS of 5.00. Ham is larger than Eggs, but sees both companies as operating in similar markets. What is the value of Eggs?  43.00 \* 5.00 = 8.60 PE Ratio 8.6 PE \* 2.8 EPS \* 125,000 Shares O/S = 3,010,000  134. What would be a source of information to determine Replacement Cost?  Building Appraisal  135. What is the company valuation given the following:  Cash Flows: Yr 1 $80,000, Yr 2 $100,000, Yr 3 $95,000, Yr 4 $80,000 Discount Rate 7%  N FV I/Y PV  1 80000 7 74,766  2 100000 7 87,344  3 95000 7 77,548  4 80000 7 61,032  300,690  136. What is the Discounted Cash Flow of the company with the following Cash Flows:  Cash Flows: Yr 1 $100,000, Yr 2 $150,000, Yr 3 $150,000, Future Forecasted Annual Cash Flows $100,000. Discount Rate 5% Hint: the forecasted annual cash flows is a perpetuity.  N FV I/Y PV  1 100,000 5 95,238  2 150000 5 136,054  3 150000 5 129,576  Infin 100000 -- Perpetuity: 100,000 / .05 = 2,000,000  3 2,000,00 5 1,727,675 Find PV using same int rate and last yr of annual values  2,088,543  137. If two companies have earnings of $2,000,000, and Company X has a multiple of 1.2 and Company Z has a multiple of 2.0, what can we estimate about the relative value of Company Z?  The value of Company Z is higher  138. Calculate the Free Cash Flow given the following information:   * + Net Working Capital increases by 20,000   + Tax Rate is .40   + EBIT is 250,000   + Capital Expenditures are 10,000   + Depreciation is 15,000   250,000 (1-.40) + 15,000 – 20,000 – 10,000 = 135,000  139. If a company has a constant growth rate estimated at 5% and a Free Cash Flow of 150,000, what is its estimated valuation (terminal value)?  150,000 / .05 = 3,000,000  \* a. 3,000,000  ***Government Regulation***  140. Dodd-Frank regulates which segment of the U.S. Economy?  Banking Industry  141. What is the regulatory body that oversees the systematic risk in banking?  Financial Stability Oversight Council  142. The SEC Securities & Exchange Commission requires companies to do the following: (pick two)  Register all public offerings  Regulates stock sales  Ensures transparency through uniform reporting  143. What does the Sarbanes-Oxley Act require companies to do?  Have internal control audits, Sr Mgt signs off on statements, restrictions on auditors  144. FINRA (Financial Industry Regulatory Authority) does the following:  Licenses stock brokers, audits brokerage firms  ***Global Financing***  145. If a product is made 100% domestically, what can affect its domestic market?  International competition  146. If a company makes its product in a foreign country where labor costs are much lower, what happens?  Profits go up and domestic employment decreases.  147. If the value of a dollar increases, the price of imports:  Decreases  148. Why would a farmer buy a hedge when he signs a contract to sell produce overseas?  To reduce currency risk |
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