# Chapter 2: The Basic Financial Statements

## Instructor’s Manual Problem Set

Solutions can be found in the accompanying Excel files. Note that if you wish to see all of the formulas at once, you may use the CTRL+` (Control plus grave accent) shortcut key to toggle them on or off.

1. Using the data presented below for Blue Sky Inc.:

|  |  |  |
| --- | --- | --- |
|  | **2017** | **2016** |
| Sales | $7,550,000 | $6,150,000 |
| Cost of Goods | 5,750,000 | 4,550,000 |
| Depreciation | 120,000 | 100,000 |
| Selling and G&A Expenses | 820,000 | 730,000 |
| Fixed Expenses | 200,000 | 200,000 |
| Lease Expense | 150,000 | 150,000 |
| Interest Expense | 350,000 | 300,000 |
| Tax Rate | 40.00% | 40.00% |
| Shares Outstanding | 100,000 | 80,000 |
| Cash | 108,000 | 50,000 |
| Marketable Securities | 150,000 | 100,000 |
| Accounts Receivable | 450,000 | 350,000 |
| Inventory | 1,250,000 | 850,000 |
| Prepaid Expenses | 120,000 | 40,000 |
| Plant & Equipment | 5,350,000 | 4,800,000 |
| Accumulated Depreciation | 410,000 | 290,000 |
| Long Term Investments | 450,000 | 360,000 |
| Accounts Payable | 420,000 | 380,000 |
| Notes Payable | 150,000 | 100,000 |
| Accrued Expenses | 150,000 | 100,000 |
| Other Current Liabilities | 200,000 | 180,000 |
| Long-term Debt | 2,900,000 | 2,500,000 |
| Common Stock | 2,500,000 | 2,000,000 |
| Additional Paid-in-Capital | 600,000 | 500,000 |
| Retained Earnings | 548,000 | 500,000 |

1. Create Blue Sky’s income statement and balance sheet using formulas wherever possible. Each statement should be on a separate worksheet. Improve the readability of the data by using the format explained on page 49, so that Excel will display the numbers as if they had been divided by 1,000. Make the appropriate note on the heading of each financial statement.
2. On another worksheet, create a statement of cash flows for 2017. All formulas should be linked directly to the source on previous worksheets.
3. Using Excel’s outlining feature, create an outline on the balance sheet that, when collapsed, shows only the subtotals for each section.
4. Using the data from the previous problem:
5. Create a common-size income statement and balance sheet for 2017 and 2016. These statements should be created on a separate worksheet with all formulas linked directly to the income statement and balance sheet.
6. Using the common-size income statement for 2017, create a forecasted income statement for 2018 assuming that each item is expected to remain in the same proportion as in 2017. The forecasted sales for 2018 are $8,500,000.
7. Using the data presented below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Square Corp.** | | |  | **Square Corp.** | | |
| **Income Statement** | | |  | **Balance Sheet** | | |
| **For the Year Ended Dec. 31, 2017 ($ in 000's)** | | |  | **As of Dec. 31, 2017 ($ in 000's)** | | |
|  | ***2017*** | ***2016*** |  | ***Assets*** | ***2017*** | ***2016*** |
| Sales | 7,250,000 | 6,750,000 |  | Cash | 149,970 | 100,000 |
| Cost of Goods Sold | 5,400,000 | 5,330,000 |  | Accounts Receivable | 370,000 | 347,000 |
| ***Gross Profit*** | ***?*** | ***?*** |  | Inventory | 870,000 | 515,000 |
| Selling and G&A Expenses | 965,000 | 632,000 |  | *Total Current Assets* | *?* | *?* |
| Depreciation | ? | 550,000 |  | Plant & Equipment | 6,570,000 | 5,010,000 |
| ***EBIT*** | ***335,000*** | ***?*** |  | Accumulated Depreciation | 1,930,000 | 1,380,000 |
| Interest Expense | ? | 110,000 |  | *Net Fixed Assets* | *?* | *?* |
| ***Earnings Before Taxes*** | ***205,000*** | ***?*** |  | ***Total Assets*** | ***?*** | ***?*** |
| Taxes | ? | ? |  | ***Liabilities and Owners' Equity*** |  |  |
| ***Net Income*** | ***133,250*** | ***79,100*** |  | Accounts Payable | 420,000 | 321,440 |
|  |  |  |  | Notes Payable | 166,625 | 22,960 |
| **Notes:** |  |  |  | *Total Current Liabilities* | *?* | *?* |
| Tax Rate | ? | ? |  | Long-term Debt | 1,350,000 | 918,400 |
| Shares Outstanding | 75,000 | 65,000 |  | *Total Liabilities* | *?* | *?* |
| Earnings per Share | ? | ? |  | Common Stock | 2,520,000 | 2,043,440 |
| Dividends per Share | ? | ? |  | Additional Paid-in-Capital | 772,000 | 551,040 |
| Addition to RE per Share | ? | ? |  | Retained Earnings | 734,720 | 734,720 |
| Dividend Payout Ratio |  | 60% |  | *Total Shareholder's Equity* | *?* | *?* |
|  |  |  |  | ***Total Liab. and Owners' Equity*** | ***?*** | ***?*** |

1. Recreate the income statement and balance sheet by filling in the question marks with formulas. Each statement should be on a separate worksheet. Try to duplicate the formatting exactly. Note that in 2016, 60% of earnings were paid to shareholders as dividends.
2. On another worksheet, create a statement of cash flows for 2017. Use formulas linked directly to the source on previous worksheets instead of numbers.
3. Create a common-size income statement and balance sheet for 2017 and 2016. These statements should be created on a separate worksheet with all formulas linked directly to the income statement and balance sheet.
4. Dragon Telecommunications Inc. wants to create forecasted financial statements for 2018 based on its accounting data in 2017.   
     
   In 2017 total revenue was $1,550,000; cost of goods sold was $1,250,000; selling and G&A expenses were $110,000; depreciation expense was $15,000; interest expense was $25,000; the average tax rate was 35%, and the number of shares outstanding was 80,000.   
     
   Also, in 2017 Dragon had cash of $20,000; accounts receivable of $120,000; inventory of $220,000; plant & equipment of $1,150,000 with an accumulated depreciation of $250,000. Accounts payable, notes payable, long-term debt, common stock, additional paid-in-capital, and retained earnings represented 7%, 0.5%, 20%, 44.5%, 12%, and 16% of total assets, respectively.   
     
   For 2018, Dragon expects a 25% increase in total revenue, while cost of goods sold and selling and G&A expenses are expected to remain at the same proportion of total revenue as in 2017. Both total plant and equipment and depreciation expense will increase by 12%. Similarly, long-term debt is forecasted and interest expense will increase by 20%, but the tax rate and the number of shares outstanding will remain constant.   
     
   Additionally accounts receivable, inventory, accounts payable, and notes payable are expected to increase 15%, while common stock and paid-in-capital will increase by 25%. The dividend policy in 2018 will be based on a dividend payout ratio of 50%. In other words, 50% of forecasted earnings will be paid to shareholders as dividends.
5. Using these projections, create the forecasted 2018 income statement, balance sheet, and statement of cash flows for Dragon Telecommunications Inc. Each statement should be on a separate worksheet.

# Chapter 2: Multiple Choice Questions

|  |  |
| --- | --- |
| 1. What custom category was used to format cell A2 using the data in cell A1? |  |
| 1. #,##0.00, 2. #,##0.00 3. #,###.00 4. #,##0, 5. #,##0 |
| *Solution: a* |  |

|  |  |
| --- | --- |
| 1. How would cell A1 appear after being formatted as “#,###.000,”? |  |
| 1. 1.23 2. 1,234.56 3. 1.234 4. 1 5. 1,234 |
| *Solution: c* |  |

|  |  |
| --- | --- |
| 1. Which cells have the wrong formula to calculate some items associated with the cash flows from operations?   I. cell B8  II. cell B9  III. cell B10  IV. cell B11 |  |
| 1. I and III 2. II and IV 3. I, II, and III 4. II, III, and IV 5. I, II, III, and IV |
| *Solution: b* |

|  |  |
| --- | --- |
| 1. Which of the following are the correct formulas to calculate the change in accounts receivable, inventories, accounts payable, and other current liabilities for cells B8, B9, B10, and B11, respectively? |  |
| 1. =C2-B2, =C3-B3, =C5-B5,and =C6-B6 2. =C2-B2, =B3-C3, =B5-C5,and =C6-B6 3. =B2-C2, =B3-C3, =B5-C5,and =B6-C6 4. =C2-B2, =C3-B3, =B5-C5,and =B6-C6 5. =B2-C2, =C3-B3, =C5-B5,and =B6-C6 |
| *Solution: d* |

|  |  |
| --- | --- |
| 1. Which of the following is the correct formula for cell B8 to calculate the cash dividends paid to shareholders? |  |
| 1. =-(B2+(B5-C5)) 2. =-(B2-(B6-C6)) 3. =B2-(B5-C5) 4. =-B2-(B5-C5) 5. =-(B2-(B5-C5)) |
| *Solution: e* |

|  |  |
| --- | --- |
| 1. In the following income statement worksheet, which cell has an error? |  |
| 1. B4 2. B8 3. B10 4. B12 5. None |
| *Solution: b* |

|  |  |
| --- | --- |
| 1. In the following worksheet of a balance sheet, which cell has an error? |  |
| 1. B5 2. B8 3. B16 4. B19 5. B20 |
| *Solution: d* |

|  |  |
| --- | --- |
| 1. Which of the following is the correct formula for cell B5 to calculate the earnings per share? |  |
| 1. =B2-B3\*B2/B4 2. =(B2-B3)/B4 3. =B2\*(1-B3)/B4 4. =(B2+B3\*B2)/B4 5. =B2\*(1+B3)/B4 |
| *Solution: c* |  |

|  |  |
| --- | --- |
| 1. Which of the following is the correct formula for cell B9 to calculate the net income? |  |
| 1. =B2-(B3-B4-B5-B6)-B7-B8 2. =B2+(B3-B4-B5-B6)-B7-B8 3. =B2-B3-B4-B5-B6-B7+B8 4. =B2-SUM(B2:B8) 5. =B2-SUM(B3:B8) |
| *Solution: e* |

|  |  |
| --- | --- |
| 1. Using only the information provided in the following worksheet, what is the correct formula to calculate the total cash flows from financing in B5? |  |
| 1. =(B2-C2)-(B4+(B3-C3)) 2. =(B2-C2)+(B4-(B3-C3)) 3. =(B3-C3)-(B4-(B2-C2)) 4. =(B2-C2)-(B4-(B3-C3)) 5. =(B2+C2)-(B4+(B3+C3)) |
| *Solution: d* |  |

|  |  |
| --- | --- |
| 1. Which formula will calculate depreciation in B7? |  |
| 1. =(B5+B6)–(B8-B3) 2. =B4-SUM(B5:B6)-B8 3. =(B5+B6)–(B8+B3) 4. =(B5-B6)+(B8-B4) 5. =B5-B6-B8+B2 |
| *Solution: b* |  |

|  |  |
| --- | --- |
| 1. Which formula could be used to calculate taxes in B12? |  |
| 1. =B8-B12 2. =(B10+B9)-B12 3. =B10-B12 4. =(B10-B8)+B12 5. None of the above |
| *Solution: c* |  |