Financial Analysis with Microsoft Excel 2016 8th edition Mayes Solutions Manual

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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

a) 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.

b) On another worksheet, create a statement of cash flows for 2017. All formulas should be linked directly to the source on previous worksheets.

c) Using Excel's outlining feature, create an outline on the balance sheet that, when collapsed, shows only the subtotals for each section.

2. Using the data from the previous problem:

a) 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.

b) 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.

Financial Analysis with Microsoft Excel 2016 8th edition Mayes Solutions Manual

3. Using the data presented below:

Square Corp.
Income Statement
For the Year Ended Dec. 31, 2017 ($ in 000's)

	2017	*2016*
Sales	7,250,000	6,750,000
Cost of Goods Sold	5,400,000	5,330,000
Gross Profit	***?***	***?***
Selling and G&A Expenses	965,000	632,000
Depreciation	?	550,000
EBIT	***335,000***	***?***
Interest Expense	?	110,000
Earnings Before Taxes	***205,000***	***?***
Taxes	?	?
Net Income	***133,250***	***79,100***
Notes:		
Tax Rate	?	?
Shares Outstanding	75,000	65,000
Earnings per Share	?	?
Dividends per Share	?	?
Addition to RE per Share	?	?
Dividend Payout Ratio		60%

Square Corp.
Balance Sheet
As of Dec. 31, 2017 ($ in 000's)

Assets	*2017*	*2016*
Cash	149,970	100,000
Accounts Receivable	370,000	347,000
Inventory	870,000	515,000
Total Current Assets	*?*	*?*
Plant & Equipment	6,570,000	5,010,000
Accumulated Depreciation	1,930,000	1,380,000
Net Fixed Assets	*?*	*?*
Total Assets	***?***	***?***
Liabilities and Owners' Equity		
Accounts Payable	420,000	321,440
Notes Payable	166,625	22,960
Total Current Liabilities	*?*	*?*
Long-term Debt	1,350,000	918,400
Total Liabilities	*?*	*?*
Common Stock	2,520,000	2,043,440
Additional Paid-in-Capital	772,000	551,040
Retained Earnings	734,720	734,720
Total Shareholder's Equity	*?*	*?*
Total Liab. and Owners' Equity	***?***	***?***

a) 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.

b) On another worksheet, create a statement of cash flows for 2017. Use formulas linked directly to the source on previous worksheets instead of numbers.

c) 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.

Financial Analysis with Microsoft Excel 2016 8th edition Mayes Solutions Manual

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.

a) 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.

Financial Analysis with Microsoft Excel 2016 8th edition Mayes Solutions Manual

CHAPTER 2: MULTIPLE CHOICE QUESTIONS

1. What custom category was used to format cell A2 using the data in cell A1?

	A
1	123456789.1
2	123,456.79

a) #,##0.00,
b) #,##0.00
c) #,###.00
d) #,##0,
e) #,##0

Solution: a

2. How would cell A1 appear after being formatted as "#,###.000,"?

	A
1	1234

a) 1.23
b) 1,234.56
c) 1.234
d) 1
e) 1,234

Solution: c

3. Which cells have the wrong formula to calculate some items associated with the cash flows from operations?

	A	B	C
1	***Assets***	***2017***	***2016***
2	Accounts Receivable	277,000	463,200
3	Inventory	527,000	633,400
4	***Liabilities and Owner's Equity***		
5	Accounts Payable	235,800	187,500
6	Other Current Liabilities	127,400	97,500
7	***Cash Flows from Operations***		
8	Change in Accounts Receivable	=C2-B2	
9	Change in Inventory	=B3-C3	
10	Change in Accounts Payable	=B5-C5	
11	Change in Other Current Liabilities	=C6-B6	

I. cell B8
II. cell B9
III. cell B10
IV. cell B11

a) I and III
b) II and IV
c) I, II, and III
d) II, III, and IV
e) I, II, III, and IV

Solution: b

4. 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?

	A	B	C
1	***Assets***	***2017***	***2016***
2	Accounts Receivable	277,000	463,200
3	Inventory	527,000	633,400
4	***Liabilities and Owner's Equity***		
5	Accounts Payable	235,800	187,500
6	Other Current Liabilities	127,400	97,500
7	***Cash Flows from Operations***		
8	Change in Accounts Receivable	?	
9	Change in Inventory	?	
10	Change in Accounts Payable	?	
11	Change in Other Current Liabilities	?	

a) =C2-B2, =C3-B3, =C5-B5,and =C6-B6
b) =C2-B2, =B3-C3, =B5-C5,and =C6-B6
c) =B2-C2, =B3-C3, =B5-C5,and =B6-C6
d) =C2-B2, =C3-B3, =B5-C5,and =B6-C6
e) =B2-C2, =C3-B3, =C5-B5,and =B6-C6

Solution: d

Financial Analysis with Microsoft Excel 2016 8th edition Mayes Solutions Manual

5. Which of the following is the correct formula for cell B8 to calculate the cash dividends paid to shareholders?

a) =-(B2+(B5-C5))
b) =-(B2-(B6-C6))
c) =B2-(B5-C5)
d) =-B2-(B5-C5)
e) =-(B2-(B5-C5))

Solution: e

	A	B	C
1		***2016***	***2015***
2	***Net Income***	***44.22***	***87.96***
3	***Liabilities and Owner's Equity***		
4	Common Stock	460.00	460.00
5	Retained Earnings	225.99	203.77
6	*Total Shareholder's Equity*	*685.99*	*663.77*
7	***Cash Flows from Financing***		
8	Cash Dividends Paid to Shareholders	?	

6. In the following income statement worksheet, which cell has an error?

a) B4
b) B8
c) B10
d) B12
e) None

Solution: b

	A	B
1		***2016***
2	Sales	3,850.00
3	Cost of Goods Sold	3,250.00
4	***Gross Profit***	***=B2-B3***
5	Selling and G&A Expenses	330.30
6	Fixed Expenses	100.00
7	Depreciation Expense	20.00
8	***EBIT***	***=B4-SUM(B4:B7)***
9	Interest Expense	76.00
10	***Earnings Before Taxes***	***=B8-B9***
11	Taxes	29.48
12	***Net Income***	***=B10-B11***

7. In the following worksheet of a balance sheet, which cell has an error?

a) B5
b) B8
c) B16
d) B19
e) B20

Solution: d

	A	B
1	***Assets***	***2016***
2	Cash and Equivalents	52.00
3	Accounts Receivable	402.00
4	Inventory	836.00
5	*Total Current Assets*	*=SUM(B2:B4)*
6	Plant & Equipment	527.00
7	Accumulated Depreciation	166.20
8	*Net Fixed Assets*	*=B6-B7*
9	***Total Assets***	***=B5+B8***
10	***Liabilities and Owner's Equity***	
11	Accounts Payable	175.20
12	Short-term Notes Payable	225.00
13	Other Current Liabilities	140.00
14	*Total Current Liabilities*	*540.20*
15	Long-term Debt	424.61
16	*Total Liabilities*	*=SUM(B14:B15)*
17	Common Stock	460.00
18	Retained Earnings	225.99
19	*Total Shareholder's Equity*	*=SUM(B16:B18)*
20	***Total Liabilities and Owner's Equity***	***=B16+B19***

Financial Analysis with Microsoft Excel 2016 8th edition Mayes Solutions Manual

8. Which of the following is the correct formula for cell B5 to calculate the earnings per share?

a) =B2-B3*B2/B4
b) =(B2-B3)/B4
c) =B2*(1-B3)/B4
d) =(B2+B3*B2)/B4
e) =B2*(1+B3)/B4

Solution: c

	A	B
1		***2017***
2	Earnings Before Taxes	$520,000
3	Tax Rate	30%
4	Shares Outstanding	70,000
5	Earnings per Share	?

9. Which of the following is the correct formula for cell B9 to calculate the net income?

a) =B2-(B3-B4-B5-B6)-B7-B8
b) =B2+(B3-B4-B5-B6)-B7-B8
c) =B2-B3-B4-B5-B6-B7+B8
d) =B2-SUM(B2:B8)
e) =B2-SUM(B3:B8)

Solution: e

	A	B
1		***2017***
2	Sales	$12,458,912
3	Cost of Goods Sold	2,356,478
4	SG&A Expense	1,478,963
5	Fuel Expense	2,147,981
6	Other Expenses	1,896,478
7	Interest Expense	489,521
8	Taxes	195,808
9	Net Income	?

10. Using only the information provided in the following worksheet, what is the correct formula to calculate the total cash flows from financing in B5?

a) =(B2-C2)-(B4+(B3-C3))
b) =(B2-C2)+(B4-(B3-C3))
c) =(B3-C3)-(B4-(B2-C2))
d) =(B2-C2)-(B4-(B3-C3))
e) =(B2+C2)-(B4+(B3+C3))

Solution: d

	A	B	C
1		***2017***	***2016***
2	Common Stock	1,235,000	1,079,000
3	Retained Earnings	572,000	487,000
4	Net Income	798,000	
5	Cash Flows from Financing	?	

11. Which formula will calculate depreciation in B7?

a) =(B5+B6)–(B8-B3)
b) =B4-SUM(B5:B6)-B8
c) =(B5+B6)–(B8+B3)
d) =(B5-B6)+(B8-B4)
e) =B5-B6-B8+B2

Solution: b

	A	B
1		***2016***
2	Sales	3,850.00
3	Cost of Goods Sold	3,250.00
4	***Gross Profit***	***?***
5	Selling and G&A Expenses	330.30
6	Fixed Expenses	100.00
7	Depreciation Expense	?
8	***EBIT***	***149.70***

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12. Which formula could be used to calculate taxes in B12?

a) =B8-B12
b) =(B10+B9)-B12
c) =B10-B12
d) =(B10-B8)+B12
e) None of the above

Solution: c

	A	B
1		***2016***
8	***EBIT***	***149.70***
9	Interest Expense	76.00
10	***Earnings Before Taxes***	***?***
11	Taxes	?
12	***Net Income***	***44.22***

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