

Chapter 3

Cash Flow and Financial Planning

■ Learning Goals

1. Understand tax depreciation procedures and the effect of depreciation on the firm's cash flows.
2. Discuss the firm's statement of cash flows, operating cash flow, and free cash flow.
3. Understand the financial planning process, including long-term (strategic) financial plans and short-term (operating) plans.
4. Discuss the cash-planning process and the preparation, evaluation, and use of the cash budget.
5. Explain the simplified procedures used to prepare and evaluate the pro forma income statement and the pro forma balance sheet.
6. Evaluate the simplified approaches to pro forma financial statement preparation and the common uses of pro forma statements.

■ True/False

1. The depreciable life of an asset can significantly affect the pattern of cash flows. The shorter the depreciable life of an asset, the more quickly the cash flow created by the depreciation write-off will be received.
Answer: TRUE
Level of Difficulty: 2
Learning Goal: 1
Topic: Depreciation and Cash Flows
2. Non-cash charges are expenses that involve an actual outlay of cash during the period but are not deducted on the income statement.
Answer: FALSE
Level of Difficulty: 2
Learning Goal: 1
Topic: Depreciation and Cash Flows
3. Under the basic MACRS procedures, the depreciable value of an asset is its full cost, including outlays for installation.
Answer: TRUE
Level of Difficulty: 2
Learning Goal: 1
Topic: Depreciation and Cash Flows

-
4. Business firms are permitted to systematically charge a portion of the market value of fixed assets, as depreciation, against annual revenues.
Answer: FALSE
Level of Difficulty: 2
Learning Goal: 1
Topic: Depreciation and Cash Flows
5. Given the financial manager's preference for faster receipt of cash flows, a longer depreciable life is preferred to a shorter one.
Answer: FALSE
Level of Difficulty: 2
Learning Goal: 1
Topic: Depreciation and Cash Flows
6. For tax purposes, using MACRS recovery periods, assets in the first four property classes are depreciated by the double-declining balance (200 percent) method using the half-year convention and switching to straight line when advantageous.
Answer: TRUE
Level of Difficulty: 3
Learning Goal: 1
Topic: Depreciation and Cash Flows
7. The MACRS depreciation method requires use of the half-year convention. Assets are assumed to be acquired in the middle of the year and only one-half of the first year's depreciation is recovered in the first year.
Answer: TRUE
Level of Difficulty: 3
Learning Goal: 1
Topic: Depreciation and Cash Flows
8. Free cash flow (FCF) is the cash flow a firm generates from its normal operations; calculated as $EBIT - taxes + depreciation$.
Answer: FALSE
Level of Difficulty: 1
Learning Goal: 2
Topic: Free Cash Flow
9. The finance definition of operating cash flow excludes interest as an operating flow, whereas the accounting definition includes it as an operating flow.
Answer: TRUE
Level of Difficulty: 1
Learning Goal: 2
Topic: Operating Cash Flow
10. The net fixed asset investment (NFAI) is defined as the change in net fixed assets plus depreciation.
Answer: TRUE
Level of Difficulty: 1
Learning Goal: 2
Topic: Free Cash Flow

11. The net current asset investment (NCAI) is defined as the change in current assets minus the change in sum of the accounts payable and accruals.
Answer: TRUE
Level of Difficulty: 1
Learning Goal: 2
Topic: Free Cash Flow
12. In the statement of cash flows, the financing flows are cash flows that result from debt and equity financing transactions, including incurrence and repayment of debt, cash inflow from the sale of stock, and cash outflows to repurchase stock or pay cash dividends.
Answer: TRUE
Level of Difficulty: 2
Learning Goal: 2
Topic: Statement of Cash Flows
13. Cash flow from operations is equal to the firm's net profits after taxes minus all non-cash charges.
Answer: FALSE
Level of Difficulty: 2
Learning Goal: 2
Topic: Statement of Cash Flows
14. In the statement of cash flows, the operating flows are cash flows directly related to purchase and sale of fixed assets.
Answer: FALSE
Level of Difficulty: 2
Learning Goal: 2
Topic: Statement of Cash Flows
15. An increase in the firm's cash balance is an inflow of cash flow.
Answer: FALSE
Level of Difficulty: 2
Learning Goal: 2
Topic: Inflows and Outflows of Cash
16. Depreciation is considered to be an outflow of cash since the cash must be drawn from somewhere.
Answer: FALSE
Level of Difficulty: 2
Learning Goal: 2
Topic: Inflows and Outflows of Cash
17. The statement of cash flows allows the financial manager and other interested parties to analyze the firm's past and possibly future profitability.
Answer: FALSE
Level of Difficulty: 2
Learning Goal: 2
Topic: Statement of Cash Flows

18. To assess whether any developments have occurred that are contrary to the company's financial policies, the financial manager should pay special attention to both the major categories of cash flow and the individual items of cash inflow and outflow.
Answer: TRUE
Level of Difficulty: 2
Learning Goal: 2
Topic: Statement of Cash Flows
19. Because depreciation is treated as a separate source of cash, only net rather than gross changes in fixed assets appear on the statement of cash flows.
Answer: FALSE
Level of Difficulty: 2
Learning Goal: 2
Topic: Statement of Cash Flows
20. The strategic financial plans are planned long-term financial actions and the anticipated financial impact of those actions.
Answer: TRUE
Level of Difficulty: 1
Learning Goal: 3
Topic: Financial Planning Process
21. The financial planning process begins with short-run, or operating, plans and budgets that in turn guide the formulation of long-run, or strategic, financial plans.
Answer: FALSE
Level of Difficulty: 1
Learning Goal: 3
Topic: Financial Planning Process
22. Operating financial plans are planned short-term financial actions and the anticipated financial impact of those actions.
Answer: TRUE
Level of Difficulty: 1
Learning Goal: 3
Topic: Financial Planning Process
23. Generally, firms that are subject to high degrees of operating uncertainty, relatively short production cycles, or both tend to use a shorter planning horizon.
Answer: TRUE
Level of Difficulty: 2
Learning Goal: 3
Topic: Financial Planning Process
24. Cash budget is a statement of the firm's planned inflows and outflows of cash that is used to estimate its long-term cash requirement.
Answer: FALSE
Level of Difficulty: 1
Learning Goal: 4
Topic: Cash Planning Process

25. Cash planning involves the preparation of the firm's cash budget. Without adequate cash—regardless of the level of profits—any firm could fail.
Answer: TRUE
Level of Difficulty: 1
Learning Goal: 4
Topic: Cash Planning Process
26. Cash budgets and pro forma statements are useful not only for internal financial planning but also are routinely required by the Internal Revenue Service (IRS).
Answer: FALSE
Level of Difficulty: 1
Learning Goal: 4
Topic: Cash Planning Process
27. The sales forecast, cash budget, and pro forma financial statements are the key outputs of the short-run (operating) financial planning.
Answer: FALSE
Level of Difficulty: 1
Learning Goal: 4
Topic: Financial Planning Process
28. The cash budget gives the financial manager a clear view of the timing of the firm's expected profitability over a given period.
Answer: FALSE
Level of Difficulty: 1
Learning Goal: 4
Topic: Cash Planning Process
29. An internal sales forecast is based on the relationships that can be observed between the firm's sales and certain key economic indicators such as the gross domestic product, new housing starts, or disposable personal income.
Answer: FALSE
Level of Difficulty: 1
Learning Goal: 4
Topic: Cash Planning Process
30. Since depreciation and other non-cash charges represent a scheduled write-off of an earlier cash outflow, they should NOT be included in the cash budget.
Answer: TRUE
Level of Difficulty: 2
Learning Goal: 4
Topic: Cash Planning Process
31. In cash budgeting, the impact of depreciation is reflected in the level of cash outflow represented by the tax payments.
Answer: TRUE
Level of Difficulty: 2
Learning Goal: 4
Topic: Cash Planning Process

32. In cash budgeting, other cash receipts are cash receipts expected to result from sources other than sales. Items such as interest and dividends, proceeds from the sale of equipment, depreciation, and stock and bond sales proceeds are examples of other cash receipts.
Answer: FALSE
Level of Difficulty: 2
Learning Goal: 4
Topic: Cash Planning Process
33. A firm's net cash flow is the mathematical difference between the firm's beginning cash and its cash disbursements in each period.
Answer: FALSE
Level of Difficulty: 2
Learning Goal: 4
Topic: Cash Planning Process
34. The number and type of intervals in the cash budget depend on the nature of the business. The more seasonal and uncertain a firm's cash flows, the greater the number of intervals and the shorter time intervals.
Answer: TRUE
Level of Difficulty: 2
Learning Goal: 4
Topic: Cash Planning Process
35. The excess cash balance is the amount available for investment by the firm if the desired minimum cash balance is less than the period's ending cash.
Answer: TRUE
Level of Difficulty: 2
Learning Goal: 4
Topic: Cash Planning Process
36. The financial manager may cope with uncertainty and make more intelligent short-term financial decisions by preparing several cash budgets, each based on differing assumptions.
Answer: TRUE
Level of Difficulty: 2
Learning Goal: 4
Topic: Cash Planning Process
37. The required total financing figures in the cash budget refer to the monthly changes in borrowing.
Answer: FALSE
Level of Difficulty: 3
Learning Goal: 4
Topic: Cash Planning Process
38. If the net cash flow is less than the minimum cash balance, financing is required.
Answer: FALSE
Level of Difficulty: 3
Learning Goal: 4
Topic: Cash Planning Process

39. Required financing and excess cash are typically viewed as short-term. Therefore, required financing may be represented by notes payable and excess cash is assumed invested in a liquid, interest-paying vehicle such as marketable securities.
Answer: TRUE
Level of Difficulty: 3
Learning Goal: 4
Topic: Cash Planning Process
40. A positive external funds requirement would indicate that the firm's financing is in excess of its needs and that funds would therefore be available for repaying debt, repurchasing stock, or increasing the dividend to stockholders.
Answer: FALSE
Level of Difficulty: 2
Learning Goal: 5
Topic: Cash Planning Process
41. The pro forma statements provide the financial manager with the amount, if any, of external financing required to support a given level of sales as well as a basis for analyzing in advance the level of profitability and overall financial performance of the firm in the coming year.
Answer: TRUE
Level of Difficulty: 2
Learning Goal: 5
Topic: Pro Forma Analysis
42. Due to the no fixed costs assumption in the percent-of-sales method, the use of cost and expense ratios generally tends to understate profits when sales are increasing and overstate profits when sales are decreasing.
Answer: TRUE
Level of Difficulty: 3
Learning Goal: 5
Topic: Pro Forma Analysis
43. The best way to adjust for the presence of fixed costs when using a simplified approach for pro forma income statement preparation is to break the firm's historical costs into fixed, semi-variable, and variable components and make the forecast using this relationship.
Answer: FALSE
Level of Difficulty: 3
Learning Goal: 5
Topic: Pro Forma Analysis
44. One basic weakness of the simplified pro-forma approaches lies in the assumption that certain variables, such as cash, accounts receivable, and inventories, can be forced to take on certain "desired" values.
Answer: TRUE
Level of Difficulty: 3
Learning Goal: 6
Topic: Pro Forma Analysis

45. One basic weakness of the simplified pro-forma approaches lies in the assumption that the firm's past financial condition is an accurate indicator of its future.
Answer: TRUE
Level of Difficulty: 3
Learning Goal: 6
Topic: Pro Forma Analysis
46. It would be correct to define Operating Cash Flow (OCF) as net operating profit after taxes plus depreciation.
Answer: TRUE
Level of Difficulty: 2
Learning Goal: 2
Topic: Operating Cash Flow
47. It would be correct to define Operating Cash Flow (OCF) as net operating profit after taxes minus depreciation.
Answer: FALSE
Level of Difficulty: 2
Learning Goal: 2
Topic: Operating Cash Flow
48. Net operating profit after taxes (NOPAT) represents the firm's earnings before interest and after taxes.
Answer: TRUE
Level of Difficulty: 2
Learning Goal: 2
Topic: Operating Cash Flow
49. Net operating profit after taxes (NOPAT) represents the firm's earnings after deducting both interest taxes.
Answer: FALSE
Level of Difficulty: 2
Learning Goal: 2
Topic: Operating Cash Flow
50. The firm's free cash flow (FCF) represents the amount of cash flow available to investors (stockholders and bondholders) after the firm has met all operating needs and after having paid for net fixed asset investments and net current asset investments.
Answer: TRUE
Level of Difficulty: 2
Learning Goal: 2
Topic: Free Cash Flow
51. The firm's free cash flow (FCF) represents the amount of cash flow available to pay bank loans after the firm has met all operating needs and after having paid for net fixed asset investments and net current asset investments.
Answer: FALSE
Level of Difficulty: 2
Learning Goal: 2
Topic: Free Cash Flow

■ Multiple Choice Questions

1. Allocation of the historic costs of fixed assets against the annual revenue they generate is called
- (a) net profits.
 - (b) gross profits.
 - (c) depreciation.
 - (d) amortization.

Answer: C

Level of Difficulty: 1

Learning Goal: 1

Topic: Depreciation and Cash Flows

2. The Modified Accelerated Cost Recovery System (MACRS) is a depreciation method used for _____ purposes.
- (a) tax
 - (b) financial reporting
 - (c) managerial
 - (d) cost accounting

Answer: A

Level of Difficulty: 1

Learning Goal: 1

Topic: Depreciation and Cash Flows

3. A firm's operating cash flow is defined as
- (a) gross profit minus operating expenses.
 - (b) gross profit minus depreciation.
 - (c) EBIT – taxes + depreciation.
 - (d) EBIT + depreciation.

Answer: C

Level of Difficulty: 2

Learning Goal: 2

Topic: Operating Cash Flow

4. A corporation
- (a) must use the same depreciation method for tax and financial reporting purposes.
 - (b) must use different depreciation methods for tax and financial reporting purposes.
 - (c) may use different depreciation methods for tax and financial reporting purposes.
 - (d) must use different (than for tax purposes), but strictly mandated, depreciation methods for financial reporting purposes.

Answer: C

Level of Difficulty: 2

Learning Goal: 1

Topic: Depreciation and Cash Flows

5. All of the following are non-cash charges EXCEPT
- (a) depreciation.
 - (b) accruals.
 - (c) depletion.
 - (d) amortization.

Answer: B

Level of Difficulty: 3

Learning Goal: 2

Topic: Depreciation and Cash Flows

6. The depreciable value of an asset, under MACRS, is
- (a) the original cost (purchase price) only.
 - (b) the original cost minus salvage value.
 - (c) the original cost plus installation.
 - (d) the original cost plus installation costs, minus salvage value.

Answer: C

Level of Difficulty: 3

Learning Goal: 1

Topic: Depreciation and Cash Flows

7. Under MACRS, an asset which originally cost \$10,000 is being depreciated using a 5-year normal recovery period. What is the depreciation expense in year 3?
- (a) \$1,900
 - (b) \$1,200
 - (c) \$1,500
 - (d) \$2,100

Answer: A

Level of Difficulty: 3

Learning Goal: 1

Topic: Depreciation and Cash Flows

8. Under MACRS, an asset which originally cost \$100,000 is being depreciated using a 10-year normal recovery period. The depreciation expense in year 5 is _____.
- (a) \$10,000
 - (b) \$12,000
 - (c) \$21,000
 - (d) \$ 9,000

Answer: D

Level of Difficulty: 3

Learning Goal: 1

Topic: Depreciation and Cash Flows

9. Under MACRS, an asset which originally cost \$100,000 is being depreciated using a 10-year normal recovery period. The depreciation expense in year 11 is _____.
- (a) \$3,000
 - (b) \$4,000
 - (c) \$0
 - (d) \$6,000

Answer: B

Level of Difficulty: 3

Learning Goal: 1

Topic: Depreciation and Cash Flows

10. Given the financial manager's preference for faster receipt of cash flows,
- (a) a longer depreciable life is preferred to a shorter one.
 - (b) a shorter depreciable life is preferred to a longer one.
 - (c) the manager is not concerned with depreciable lives, because depreciation is a non-cash expense.
 - (d) the manager is not concerned with depreciable lives, because once purchased, depreciation is considered a sunk cost.

Answer: B

Level of Difficulty: 4

Learning Goal: 1

Topic: Depreciation and Cash Flows

11. The depreciable life of an asset is of concern to the financial manager. In general,
- (a) a longer depreciable life is preferred, because it will result in a faster receipt of cash flows.
 - (b) a shorter depreciable life is preferred, because it will result in a faster receipt of cash flows.
 - (c) a shorter depreciable life is preferred, because management can then purchase new assets, as the old assets are written off.
 - (d) a longer depreciable life is preferred, because management can postpone purchasing new assets, since the old assets still have a useful life.

Answer: B

Level of Difficulty: 4

Learning Goal: 1

Topic: Depreciation and Cash Flows

12. The depreciable value of an asset, under MACRS, is
- (a) the full cost excluding installation costs.
 - (b) the full cost minus salvage value.
 - (c) the full cost including installation costs.
 - (d) the full cost including installation costs adjusted for the salvage value.

Answer: C

Level of Difficulty: 4

Learning Goal: 1

Topic: Depreciation and Cash Flows

13. Under MACRS, an asset which originally cost \$100,000, incurred installation costs of \$10,000, and has an estimated salvage value of \$25,000, is being depreciated using a 5-year normal recovery period. What is the depreciation expense in year 1?
- (a) \$15,000
 - (b) \$12,750
 - (c) \$11,250
 - (d) \$22,000

Answer: D

Level of Difficulty: 4

Learning Goal: 1

Topic: Depreciation and Cash Flows

14. Which of the following is a source of cash flows?
- (a) Cost of goods sold.
 - (b) Depreciation.
 - (c) Interest expense.
 - (d) Taxes.

Answer: B

Level of Difficulty: 1

Learning Goal: 2

Topic: Depreciation and Cash Flows

15. _____ is an expense that is a legal obligation of the firm.
- (a) Labor expense.
 - (b) Interest expense.
 - (c) Salaries expense.
 - (d) Rent expense.

Answer: B

Level of Difficulty: 1

Learning Goal: 2

Topic: Statement of Cash Flows

16. The first step in preparing a statement of cash flows is to
- (a) calculate changes in income statement accounts.
 - (b) calculate changes in balance sheet accounts.
 - (c) calculate the depreciation expense.
 - (d) adjust retained earnings.

Answer: B

Level of Difficulty: 1

Learning Goal: 2

Topic: Statement of Cash Flows

17. When preparing a statement of cash flows, retained earnings adjustments are required so that which of the following are separated on the statement?
- (a) revenue and cost
 - (b) assets and liabilities
 - (c) depreciation and purchases
 - (d) net profits and dividends.

Answer: D

Level of Difficulty: 2

Learning Goal: 2

Topic: Statement of Cash Flows

18. The cash flows from operating activities of the firm include
- (a) interest expense.
 - (b) cost of raw materials.
 - (c) dividends paid.
 - (d) stock repurchases.

Answer: B

Level of Difficulty: 2

Learning Goal: 2

Topic: Statement of Cash Flows

19. The cash flows from operating activities of the firm include
- (a) labor expense.
 - (b) interest expense.
 - (c) taxes paid.
 - (d) dividends paid.

Answer: A

Level of Difficulty: 2

Learning Goal: 2

Topic: Statement of Cash Flows

20. Inputs to the statement of cash flows from the income statement include all of the following EXCEPT
- (a) net profits after tax.
 - (b) non-cash charges, such as depreciation.
 - (c) cash dividends.
 - (d) operating profit.

Answer: D

Level of Difficulty: 2

Learning Goal: 2

Topic: Statement of Cash Flows

21. The statement of cash flows includes all of the following categories EXCEPT
- (a) operating flows.
 - (b) investment flows.
 - (c) financing flows.
 - (d) equity flows.

Answer: D

Level of Difficulty: 2

Learning Goal: 2
Topic: Statement of Cash Flows

22. The statement of cash flows provides a summary of the firm's
- (a) cash flows from operations.
 - (b) cash inflows from financing.
 - (c) investment cash flows.
 - (d) changes in the cash and marketable security accounts.
 - (e) all of the above.

Answer: E

Level of Difficulty: 3

Learning Goal: 2

Topic: Statement of Cash Flows

23. All of the following are inflows of cash EXCEPT
- (a) a decrease in accounts receivable.
 - (b) net profits after taxes.
 - (c) dividends.
 - (d) an increase in accruals.

Answer: C

Level of Difficulty: 3

Learning Goal: 2

Topic: Inflows and Outflows of Cash

24. All of the following are outflows of cash EXCEPT
- (a) an increase in inventory.
 - (b) a decrease in cash.
 - (c) dividends.
 - (d) a decrease in notes payable.

Answer: B

Level of Difficulty: 3

Learning Goal: 2

Topic: Inflows and Outflows of Cash

25. Three important components of the statement of cash flows that must be obtained from the income statement include are all of the following EXCEPT
- (a) depreciation and any non-cash charges.
 - (b) interest expenses.
 - (c) net profits after taxes.
 - (d) cash dividends paid on both preferred and common stocks.

Answer: B

Level of Difficulty: 3

Learning Goal: 2

Topic: Statement of Cash Flows

26. Cash flows directly related to production and sale of the firm's products and services are called
- (a) operating flows.
 - (b) investment flows.
 - (c) financing flows.
 - (d) None of the above.
- Answer: A
Level of Difficulty: 3
Learning Goal: 2
Topic: Statement of Cash Flows
27. Cash flows associated with the purchase and sale of fixed assets and business interests are called
- (a) operating flows.
 - (b) investment flows.
 - (c) financing flows.
 - (d) None of the above.
- Answer: B
Level of Difficulty: 3
Learning Goal: 2
Topic: Statement of Cash Flows
28. Cash flows that result from debt and equity financing transactions, including incurrence and repayment of debt, cash inflows from the sale of stock, and cash outflows to pay cash dividends or repurchase stock are called
- (a) operating flows.
 - (b) investment flows.
 - (c) financing flows.
 - (d) None of the above.
- Answer: C
Level of Difficulty: 3
Learning Goal: 2
Topic: Statement of Cash Flows
29. Johnson, Inc. has just ended the calendar year making a sale in the amount of \$10,000 of merchandise purchased during the year at a total cost of \$7,000. Although the firm paid in full for the merchandise during the year, it has yet to collect at year end from the customer. The net profit and cash flow for the year are
- (a) \$3,000 and \$10,000, respectively.
 - (b) \$3,000 and -\$7,000, respectively.
 - (c) \$7,000 and -\$3,000, respectively.
 - (d) \$3,000 and \$7,000, respectively.
- Answer: B
Level of Difficulty: 4
Learning Goal: 2
Topic: Operating Cash Flows

30. A firm has just ended the calendar year by selling \$150,000 worth of merchandise that was purchased during the year at a cost of \$112,500. Although the firm paid in full for the merchandise during the year, it has yet to collect on the sale at year end. The net profit and cash flow for the year are
- (a) \$0 and \$150,000, respectively.
 (b) \$37,500 and – \$150,000, respectively.
 (c) \$37,500 and – \$112,500, respectively.
 (d) \$150,000 and \$112,500, respectively.

Answer: C

Level of Difficulty: 4

Learning Goal: 2

Topic: Operating Cash Flows

Table 3.1

Ruff Sandpaper Co.			
Balance Sheets			
For the Years Ended 2002 and 2003			
		2003	2002
Assets			
Cash		800	600
Marketable securities		200	200
Accounts receivable		1,200	1,000
Inventories		2,000	1,800
Gross fixed assets	3,000		2,800
Less Accumulated Depreciation	<u>1,000</u>		<u>800</u>
Net fixed assets		<u>2,000</u>	<u>2,000</u>
Total assets		<u><u>6,200</u></u>	<u><u>5,600</u></u>
Liabilities			
Accounts payable		200	100
Notes payable		800	900
Accruals		100	100
Long-term debt		2,000	1,500
Stockholders' equity			
Common stock at par		500	500
Paid-in capital in excess of par		2,000	2,000
Retained earnings		<u>600</u>	<u>500</u>
Total liabilities and equity		<u><u>6,200</u></u>	<u><u>5,600</u></u>
Net profits after taxes for 2003: \$150.00			

31. The primary source of funds for the firm in 2003 is (See Table 3.1)
- (a) net profits after taxes.
 - (b) an increase in notes payable.
 - (c) an increase in long-term debt.
 - (d) an increase in inventory.
- Answer: C
Level of Difficulty: 4
Learning Goal: 2
Topic: Statement of Cash Flows
32. Common stock dividends paid in 2003 amounted to _____. (See Table 3.1)
- (a) \$100
 - (b) \$50
 - (c) \$600
 - (d) \$150
- Answer: B
Level of Difficulty: 4
Learning Goal: 2
Topic: Statement of Cash Flows
33. The firm may have increased long-term debts to finance (See Table 3.1)
- (a) an increase in gross fixed assets.
 - (b) an increase in current assets.
 - (c) a decrease in notes payable.
 - (d) an increase in current assets, an increase in gross fixed assets, and a decrease in notes payable.
- Answer: D
Level of Difficulty: 4
Learning Goal: 2
Topic: Statement of Cash Flows
34. Inflows of funds for 2003 totaled _____. (See Table 3.1)
- (a) \$600
 - (b) \$700
 - (c) \$800
 - (d) \$950
- Answer: D
Level of Difficulty: 4
Learning Goal: 2
Topic: Inflows and Outflows of Cash
35. The firm _____ fixed assets worth _____. (See Table 3.1)
- (a) purchased; \$0
 - (b) purchased; \$200
 - (c) sold; \$0
 - (d) sold; \$200
- Answer: B
Level of Difficulty: 4
Learning Goal: 2

Topic: Statement of Cash Flows

36. The firm's cash flow from operations is _____. (See Table 3.1)
- (a) \$350
 - (b) \$300
 - (c) \$150
 - (d) \$950
- Answer: A
Level of Difficulty: 4
Learning Goal: 2
Topic: Statement of Cash Flows
37. Outflows of funds for 2003 totaled (See Table 3.1)
- (a) \$600
 - (b) \$700
 - (c) \$800
 - (d) \$950
- Answer: D
Level of Difficulty: 4
Learning Goal: 2
Topic: Inflows and Outflows of Cash
38. The smallest outflow of funds for the firm in 2003 is (See Table 3.1)
- (a) a decrease in notes payable.
 - (b) an increase in inventory.
 - (c) dividends.
 - (d) a decrease in long-term debts.
- Answer: C
Level of Difficulty: 4
Learning Goal: 2
Topic: Inflows and Outflows of Cash
39. The depreciation expense for 2003 is _____. (See Table 3.1)
- (a) \$0
 - (b) \$200
 - (c) \$50
 - (d) \$1,000
- Answer: B
Level of Difficulty: 4
Learning Goal: 2
Topic: Statement of Cash Flows
40. A corporation sold a fixed asset for \$100,000, which was also its book value. This is
- (a) an investment cash flow and a source of funds.
 - (b) an operating cash flow and a source of funds.
 - (c) an operating cash flow and a use of funds.
 - (d) an investment cash flow and a use of funds.
- Answer: A
Level of Difficulty: 4
Learning Goal: 2

Topic: Statement of Cash Flows

41. A corporation raises \$500,000 in long-term debt to acquire additional plant capacity. This is considered
- (a) an investment cash flow.
 - (b) a financing cash flow.
 - (c) a financing cash flow and investment cash flow, respectively.
 - (d) a financing cash flow and operating cash flow, respectively.

Answer: C

Level of Difficulty: 4

Learning Goal: 2

Topic: Statement of Cash Flows

42. All of the following are financing cash flows EXCEPT
- (a) sale of stock.
 - (b) payment of stock dividends.
 - (c) increasing debt.
 - (d) repurchasing stock.

Answer: B

Level of Difficulty: 4

Learning Goal: 2

Topic: Statement of Cash Flows

43. All of the following are operating cash flows EXCEPT
- (a) net profit/earnings after tax.
 - (b) increase or decrease in current liabilities.
 - (c) increase or decrease in fixed assets.
 - (d) depreciation expense.

Answer: C

Level of Difficulty: 4

Learning Goal: 2

Topic: Statement of Cash Flows

44. For the year ended December 31, 2003, a corporation had cash flow from operating activities of -\$10,000, cash flow from investment activities of \$4,000, and cash flow from financing activities of \$9,000. The Statement of Cash Flows would show a
- (a) net decrease of \$3,000 in cash and marketable securities.
 - (b) net decrease of \$5,000 in cash and marketable securities.
 - (c) net increase of \$3,000 in cash and marketable securities.
 - (d) net increase of \$5,000 in cash and marketable securities.

Answer: C

Level of Difficulty: 4

Learning Goal: 2

Topic: Statement of Cash Flows

45. For the year ended December 31, 2003, a corporation had cash flow from operating activities of \$20,000, cash flow from investment activities of -\$15,000, and cash flow from financing activities of -\$10,000. The Statement of Cash Flows would show a
- (a) net increase of \$5,000 in cash and marketable securities.
 - (b) net decrease of \$5,000 in cash and marketable securities.
 - (c) net decrease of \$15,000 in cash and marketable securities.
 - (d) net increase of \$25,000 in cash and marketable securities.

Answer: B

Level of Difficulty: 4

Learning Goal: 2

Topic: Statement of Cash Flows

46. For the year ended December 31, 2003, a corporation had cash flow from operating activities of \$12,000, cash flow from investment activities of -\$10,000, and cash flow from financing activities of \$4,000. The Statement of Cash Flows would show a
- (a) net decrease of \$18,000 in cash and marketable securities.
 - (b) net decrease of \$6,000 in cash and marketable securities.
 - (c) net increase of \$6,000 in cash and marketable securities.
 - (d) net increase of \$2,000 in cash and marketable securities.

Answer: C

Level of Difficulty: 4

Learning Goal: 2

Topic: Statement of Cash Flows

47. A firm has just ended the calendar year making a sale in the amount of \$200,000 of merchandise purchased during the year at a total cost of \$150,500. Although the firm paid in full for the merchandise during the year, it has yet to collect at year end from the customer. One possible problem this firm may face is
- (a) low profitability.
 - (b) insolvency.
 - (c) inability to receive credit.
 - (d) high leverage.

Answer: B

Level of Difficulty: 4

Learning Goal: 2

Topic: Statement of Cash Flows

48. The financial planning process begins with _____ financial plans that in turn guide the formation of _____ plans and budgets.
- (a) short-run; long-run
 - (b) short-run; operating
 - (c) long-run; strategic
 - (d) long-run; short-run

Answer: D

Level of Difficulty: 1

Learning Goal: 3

Topic: Financial Planning Process

49. Short-run financial plans and long-run financial plans generally cover periods ranging from _____ years and _____ years, respectively.
- (a) one to two, two to ten
 - (b) two to ten, one to two
 - (c) one to five, five to ten
 - (d) one to three, three to five

Answer: A

Level of Difficulty: 1

Learning Goal: 3

Topic: Financial Planning Process

50. The key output(s) of the short-run financial planning process are a(n)
- (a) cash budget, pro forma income statement, and pro forma balance sheet.
 - (b) cash budget, sales forecast, and income statement.
 - (c) sales forecast and cash budget.
 - (d) income statement, balance sheet, and source and use statement.

Answer: A

Level of Difficulty: 1

Learning Goal: 3

Topic: Financial Planning Process

51. The key aspects of the financial planning process are
- (a) cash planning and investment planning.
 - (b) cash planning and financing.
 - (c) investment planning and profit planning.
 - (d) cash planning and profit planning.

Answer: D

Level of Difficulty: 1

Learning Goal: 3

Topic: Financial Planning Process

52. Pro forma statements are used for
- (a) cash budgeting.
 - (b) credit analysis.
 - (c) profit planning.
 - (d) leverage analysis.

Answer: C

Level of Difficulty: 1

Learning Goal: 3

Topic: Pro Forma Analysis

53. Which of the following would be the least likely to utilize pro forma financial statements or a cash budget?
- (a) Top management.
 - (b) Middle management.
 - (c) Investors.
 - (d) Lenders.

Answer: C

Level of Difficulty: 2

Learning Goal: 3

Topic: Financial Planning Process

54. _____ generally reflect(s) the anticipated financial impact of planned long-term actions.
- (a) A cash budget
 - (b) Strategic financial plans
 - (c) Operating financial plans
 - (d) A pro forma income statement

Answer: B

Level of Difficulty: 2

Learning Goal: 3

Topic: Financial Planning Process

55. The _____ is a financial projection of the firm's short-term cash surpluses or shortages.
- (a) operating financial plan
 - (b) cash budget
 - (c) strategic financial journal
 - (d) capital assets journal

Answer: B

Level of Difficulty: 2

Learning Goal: 3

Topic: Cash Planning Process

56. The primary purpose in preparing pro forma financial statements is
- (a) for cash planning.
 - (b) to ensure the ability to pay dividends.
 - (c) for risk analysis.
 - (d) for profit planning.

Answer: D

Level of Difficulty: 2

Learning Goal: 3

Topic: Pro Forma Analysis

57. The primary purpose in preparing a budget is
- (a) for profit planning.
 - (b) for cash planning.
 - (c) for risk analysis.
 - (d) to estimate sales.

Answer: B

Level of Difficulty: 2

Learning Goal: 3

Topic: Cash Planning Process

58. In general, firms that are subject to a high degree of _____, relatively short production cycles, or both tend to use shorter planning horizons.
- (a) profitability
 - (b) financial certainty
 - (c) operating uncertainty
 - (d) financial planning

Answer: C

Level of Difficulty: 2

Learning Goal: 3

Topic: Financial Planning Process

59. _____ consider proposed fixed-asset outlays, research and development activities, marketing and product development actions, and both the mix and major sources of financing.
- (a) Short-term financial plans
 - (b) Long-term financial plans
 - (c) Pro-forma statements
 - (d) Cash budgeting

Answer: B

Level of Difficulty: 2

Learning Goal: 3

Topic: Financial Planning Process

60. _____ forecast is based on the relationships between the firm's sales and certain economic indicators.
- (a) An internal
 - (b) An external
 - (c) A sales
 - (d) A pro forma

Answer: B

Level of Difficulty: 1

Learning Goal: 4

Topic: Financial Planning Process

61. Key inputs to short-term financial planning are
- (a) operating budgets.
 - (b) economic forecasts.
 - (c) sales forecasts, and operating and financial data.
 - (d) leverage analysis.

Answer: C

Level of Difficulty: 1

Learning Goal: 4

Topic: Financial Planning Process

62. Once sales are forecasted, _____ must be generated to estimate a variety of operating costs.
- (a) a production plan
 - (b) a cash budget
 - (c) an operating budget
 - (d) a pro forma statement

Answer: A

Level of Difficulty: 1

Learning Goal: 4

Topic: Cash Planning Process

63. The key input to any cash budget is
- (a) the sales forecast.
 - (b) the production plan.
 - (c) the pro forma balance sheet.
 - (d) the current tax laws.

Answer: A

Level of Difficulty: 1

Learning Goal: 4

Topic: Cash Planning Process

64. _____ forecast is based on a buildup, or consensus, of sales forecasts through the firm's own sales channels, adjusted for additional factors such as production capabilities.
- (a) An internal sales
 - (b) An external sales
 - (c) A sales
 - (d) A pro forma

Answer: A

Level of Difficulty: 1

Learning Goal: 4

Topic: Cash Planning Process

65. The firm's final sales forecast is usually a function of
- (a) economic forecasts.
 - (b) salesperson's estimates of demand.
 - (c) internal and external factors in combination.
 - (d) accounts receivable experience.

Answer: C

Level of Difficulty: 1

Learning Goal: 4

Topic: Cash Planning Process

66. In cash budgeting, the _____ seasonal and uncertain a firm's cash flows, the _____ the number of budgeting intervals it should use.
- (a) more, greater
 - (b) more, fewer
 - (c) less, greater
 - (d) less, fewer

Answer: A

Level of Difficulty: 2

Learning Goal: 4

Topic: Cash Planning Process

67. The key input to the short-run financial planning process is
- (a) the cash budget.
 - (b) the cash forecast.
 - (c) the sales forecast.
 - (d) the pro forma income statement.

Answer: C

Level of Difficulty: 2

Learning Goal: 4

Topic: Financial Planning Process

68. Of the following, generally the easiest to estimate are
- (a) cash sales.
 - (b) cash receipts.
 - (c) cash disbursements.
 - (d) month-to-month short-term borrowing.

Answer: C

Level of Difficulty: 2

Learning Goal: 4

Topic: Cash Planning Process

69. A firm has projected sales in May, June, and July of \$100, \$200, and \$300, respectively. The firm makes 20 percent of sales for cash and collects the balance one month following the sale. The firm's total cash receipts in July
- (a) are \$220.
 - (b) are \$200.
 - (c) are \$180.
 - (d) cannot be determined with the information provided.

Answer: A

Level of Difficulty: 2

Learning Goal: 4

Topic: Cash Planning Process

70. The most common components of cash receipts are
- (a) dividend income, cash sales, and accounts payable.
 - (b) cash sales, receivable collections, and miscellaneous receipts.
 - (c) accrual collections, cash sales, and interest income.
 - (d) retained earnings, dividends, and cash sales.

Answer: B

Level of Difficulty: 2

Learning Goal: 4

Topic: Cash Planning Process

71. The most common cash disbursement are
- (a) dividend income, cash sales, and accounts payable.
 - (b) cash purchases, dividends, and interest income.
 - (c) cash purchases, dividends, and accounts payable.
 - (d) cash sales, rent, and accounts payable.

Answer: C

Level of Difficulty: 2

Learning Goal: 4

Topic: Cash Planning Process

72. Cash disbursements may include all of the following EXCEPT
- (a) tax payments.
 - (b) rent payments.
 - (c) depreciation expense.
 - (d) fixed asset outlays.

Answer: C

Level of Difficulty: 2

Learning Goal: 4

Topic: Cash Planning Process

73. One way a firm can reduce the amount of cash it needs in any one month is to
- (a) slow down the payment of receivables.
 - (b) delay the payment of wages.
 - (c) accrue taxes.
 - (d) speed up payment of accounts payable.

Answer: B

Level of Difficulty: 2

Learning Goal: 4

Topic: Cash Planning Process

74. A projected excess cash balance for the month may be
- (a) financed with short-term securities.
 - (b) financed with long-term securities.
 - (c) invested in marketable securities.
 - (d) invested in long-term securities.

Answer: C

Level of Difficulty: 2

Learning Goal: 4

Topic: Cash Planning Process

75. If a firm expects short-term cash surpluses it can plan
- (a) long-term investments.
 - (b) short-term borrowing.
 - (c) short-term lending.
 - (d) leverage decisions.

Answer: C

Level of Difficulty: 2

Learning Goal: 4

Topic: Cash Planning Process

76. A firm has actual sales in November of \$1,000 and projected sales in December and January of \$3,000 and \$4,000, respectively. The firm makes 10 percent of its sales for cash, collects 40 percent of its sales one month following the sale, and collects the balance two months following the sale. The firm's total cash receipts in November
- (a) are \$1,000.
 - (b) are \$100.
 - (c) are \$700.
 - (d) cannot be determined with the information provided.

Answer: D

Level of Difficulty: 3

Learning Goal: 4

Topic: Cash Planning Process

77. A firm has actual sales in November of \$1,000 and projected sales in December and January of \$3,000 and \$4,000, respectively. The firm makes 10 percent of its sales for cash, collects 40 percent of its sales one month following the sale, and collects the balance two months following the sale. The firm's total expected cash receipts in January
- (a) are \$700.
 - (b) are \$2,100.
 - (c) are \$1,900.
 - (d) cannot be determined with the information provided.

Answer: B

Level of Difficulty: 3

Learning Goal: 4

Topic: Cash Planning Process

78. In April, a firm had an ending cash balance of \$35,000. In May, the firm had total cash receipts of \$40,000 and total cash disbursements of \$50,000. The minimum cash balance required by the firm is \$25,000. At the end of May, the firm had
- (a) an excess cash balance of \$25,000.
 - (b) an excess cash balance of \$0.
 - (c) required financing of \$10,000.
 - (d) required financing of \$25,000.

Answer: B

Level of Difficulty: 3

Learning Goal: 4

Topic: Cash Planning Process

79. In October, a firm had an ending cash balance of \$35,000. In November, the firm had a net cash flow of \$40,000. The minimum cash balance required by the firm is \$25,000. At the end of November, the firm had
- (a) an excess cash balance of \$50,000.
 - (b) an excess cash balance of \$75,000.
 - (c) required total financing of \$15,000.
 - (d) required total financing of \$5,000.

Answer: A

Level of Difficulty: 3

Learning Goal: 4

Topic: Cash Planning Process

80. In the month of August, a firm had total cash receipts of \$10,000, total cash disbursements of \$8,000, depreciation expense of \$1,000, a minimum cash balance of \$3,000, and a beginning cash balance of \$500. The ending cash balance for August totals
- (a) \$1,500.
 - (b) \$5,500.
 - (c) \$2,500.
 - (d) \$3,500.

Answer: C

Level of Difficulty: 3

Learning Goal: 4

Topic: Cash Planning Process

81. In the month of August, a firm had total cash receipts of \$10,000, total cash disbursements of \$8,000, depreciation expense of \$1,000, a minimum cash balance of \$3,000, and a beginning cash balance of \$500. The excess cash balance (required financing) for August is
- (a) required total financing of \$500.
 - (b) excess cash balance of \$5,500.
 - (c) excess cash balance of \$500.
 - (d) required total financing of \$2,500.

Answer: A

Level of Difficulty: 3

Learning Goal: 4

Topic: Cash Planning Process

82. _____ statements are projected financial statements.

- (a) Pro forma
- (b) Income
- (c) Cash
- (d) Balance sheet

Answer: A

Level of Difficulty: 1

Learning Goal: 5

Topic: Pro Forma Analysis

83. The key inputs for preparing pro forma income statements using the simplified approaches are the
- (a) sales forecast for the preceding year and financial statements for the coming year.
 - (b) sales forecast for the coming year and the cash budget for the preceding year.
 - (c) sales forecast for the coming year and financial statements for the preceding year.
 - (d) cash budget for the coming year and sales forecast for the preceding year.

Answer: C

Level of Difficulty: 1

Learning Goal: 5

Topic: Pro Forma Analysis

84. The percent-of-sales method of preparing the pro forma income statement assumes all costs are
- (a) fixed.
 - (b) constant.
 - (c) independent.
 - (d) variable.

Answer: D

Level of Difficulty: 1

Learning Goal: 5

Topic: Pro Forma Analysis

85. Under the judgmental approach for developing a pro forma balance sheet, the “plug” figure required to bring the statement into balance may be called the
- (a) cash balance.
 - (b) retained earnings.
 - (c) external financing required.
 - (d) accounts receivable.

Answer: C

Level of Difficulty: 1

Learning Goal: 5

Topic: Pro Forma Analysis

86. The _____ method of developing a pro forma income statement forecasts sales and values for the cost of goods sold, operating expenses, and interest expense that are expressed as a ratio of projected sales.
- (a) percent-of-sales
 - (b) accrual
 - (c) judgmental
 - (d) cash

Answer: A

Level of Difficulty: 2

Learning Goal: 5

Topic: Pro Forma Analysis

87. The best way to adjust for the presence of fixed costs when using the simplified approach for pro forma income statement preparation is
- (a) to proportionately vary the fixed costs with the change in sales.
 - (b) to adjust for projected fixed-asset outlays.
 - (c) to disproportionately vary the costs with the change in sales.
 - (d) to break the firm’s historical costs into fixed and variable components.

Answer: D

Level of Difficulty: 2

Learning Goal: 5

Topic: Pro Forma Analysis

88. The _____ method of developing a pro forma balance sheet estimates values of certain balance sheet accounts while others are calculated. In this method, the firm’s external financing is used as a balancing, or plug, figure.
- (a) percent-of-sales
 - (b) accrual
 - (c) judgmental
 - (d) cash

Answer: C

Level of Difficulty: 2

Learning Goal: 5

Topic: Pro Forma Analysis

89. A firm has prepared the coming year's pro forma balance sheet resulting in a plug figure in a preliminary statement—called the external financing required—of \$230,000. The firm should prepare to
- (a) repurchase common stock totaling \$230,000.
 - (b) arrange for a loan of \$230,000.
 - (c) do nothing; the balance sheet balances.
 - (d) invest in marketable securities totaling \$230,000.

Answer: B

Level of Difficulty: 2

Learning Goal: 5

Topic: Pro Forma Analysis

90. A firm has prepared the coming year's pro forma balance sheet resulting in a plug figure in a preliminary statement—called the external financing required—of negative \$250,000. The firm may prepare to
- (a) sell common stock totaling \$250,000.
 - (b) arrange for a loan of \$250,000.
 - (c) do nothing; the balance sheet balances.
 - (d) invest in marketable securities totaling \$250,000.

Answer: D

Level of Difficulty: 2

Learning Goal: 5

Topic: Pro Forma Analysis

91. The primary purpose in preparing pro forma financial statements is
- (a) for cash planning.
 - (b) to ensure the ability to pay dividends.
 - (c) for risk analysis.
 - (d) for profit planning.

Answer: D

Level of Difficulty: 3

Learning Goal: 5

Topic: Pro Forma Analysis

92. The percent-of-sales method to prepare a pro forma income statement assumes the firm has no fixed costs. Therefore, the use of the past cost and expense ratios generally tends to _____ profits when sales are increasing.
- (a) accurately predict
 - (b) overstate
 - (c) understate
 - (d) have no effect on

Answer: C

Level of Difficulty: 3

Learning Goal: 5

Topic: Pro Forma Analysis

93. In the next planning period, a firm plans to change its policy of all cash sales and initiate a credit policy requiring payment within 30 days. The statements that will be directly affected immediately are the
- (a) pro forma income statement, pro forma balance sheet, and cash budget.
 - (b) pro forma balance sheet and cash budget.
 - (c) cash budget and statement of retained earnings.
 - (d) pro forma income statement and pro forma balance sheet.

Answer: B

Level of Difficulty: 3

Learning Goal: 5

Topic: Pro Forma Analysis

94. A firm plans to retire outstanding bonds in the next planning period. The statements that will be affected are the
- (a) pro forma income statement, pro forma balance sheet, cash budget, and statement of retained earnings.
 - (b) pro forma balance sheet and cash budget.
 - (c) cash budget and statement of retained earnings.
 - (d) pro forma income statement and pro forma balance sheet.

Answer: A

Level of Difficulty: 3

Learning Goal: 5

Topic: Pro Forma Analysis

95. A firm plans to depreciate a five year asset in the next planning period. The statements that will be directly affected immediately are the
- (a) pro forma income statement, pro forma balance sheet, and cash budget.
 - (b) pro forma balance sheet, cash budget, and statement of retained earnings.
 - (c) cash budget and pro forma balance sheet.
 - (d) pro forma income statement and pro forma balance sheet.

Answer: D

Level of Difficulty: 3

Learning Goal: 5

Topic: Pro Forma Analysis

The financial analyst for Sportif, Inc. has compiled sales and disbursement estimates for the coming months of January through May. Historically, 75 percent of sales are for cash with the remaining 25 percent collected in the following month. The ending cash balance in January is \$3,000. Prepare a cash budget for the months of February through May to answer the following multiple choice questions.

Table 3.2

Month	Sportif, Inc.	
	Sales	Disbursements
January	\$ 5,000	\$6,000
February	6,000	\$7,000
March	10,000	\$4,000
April	10,000	\$5,000
May	10,000	\$5,000

96. The total cash receipts for April are (See Table 3.2)
- (a) \$5,000.
 - (b) \$7,500.
 - (c) \$9,250.
 - (d) \$10,000.
- Answer: D
 Level of Difficulty: 3
 Learning Goal: 5
 Topic: Cash Planning Process
97. The net cash flow for February is (See Table 3.2)
- (a) -\$1,250.
 - (b) -\$1,000.
 - (c) \$5,750.
 - (d) \$750.
- Answer: A
 Level of Difficulty: 3
 Learning Goal: 5
 Topic: Cash Planning Process
98. The firm has a negative net cash flow in the month(s) of (See Table 3.2)
- (a) January, February, and March.
 - (b) February and March.
 - (c) January and February.
 - (d) February.
- Answer: D
 Level of Difficulty: 3
 Learning Goal: 5
 Topic: Cash Planning Process

99. The ending cash balance for March is (See Table 3.2)
- (a) \$ 250.
 - (b) \$6,750.
 - (c) \$2,500.
 - (d) \$ 500.

Answer: B
Level of Difficulty: 3
Learning Goal: 5
Topic: Cash Planning Process

100. The ending cash balance for February is (See Table 3.2)
- (a) \$ 750.
 - (b) \$1,750.
 - (c) \$2,500.
 - (d) -\$1,000.

Answer: B
Level of Difficulty: 3
Learning Goal: 5
Topic: Cash Planning Process

101. At the end of May, the firm has an ending cash balance of (See Table 3.2)
- (a) \$9,000.
 - (b) \$16,750.
 - (c) \$14,250.
 - (d) \$12,000.

Answer: B
Level of Difficulty: 3
Learning Goal: 5
Topic: Cash Planning Process

102. The firm has a total financing requirement of _____ for the period from February through May. (See Table 3.2)
- (a) \$ 0
 - (b) \$1,750
 - (c) \$1,250
 - (d) \$ 750

Answer: A
Level of Difficulty: 3
Learning Goal: 5
Topic: Cash Planning Process

103. If a pro forma balance sheet dated at the end of May was prepared from the information presented, the accounts receivable would total (See Table 3.2)
- (a) \$2,500.
 - (b) \$7,500.
 - (c) \$10,000.
 - (d) \$1,750.
- Answer: A
 Level of Difficulty: 3
 Learning Goal: 5
 Topic: Pro Forma Analysis

104. If a pro forma balance sheet dated at the end of May was prepared from the information presented, the marketable securities would total (See Table 3.2)
- (a) \$9,000.
 - (b) \$9,500.
 - (c) \$12,000.
 - (d) \$16,750.
- Answer: D
 Level of Difficulty: 3
 Learning Goal: 5
 Topic: Pro Forma Analysis

Use the percent-of-sales method to prepare a pro forma income statement for the year ended December 31, 2004, for Hennesaw Lumber, Inc. Hennesaw Lumber, Inc. estimates that its sales in 2000 will be \$4,500,000. Interest expense is to remain unchanged at \$105,000 and the firm plans to pay cash dividends of \$150,000 during 2004. Hennesaw Lumber, Inc.'s income statement for the year ended December 31, 2003 is shown below. From your preparation of the pro forma income statement, answer the following multiple choice questions.

Table 3.3

Income Statement Hennesaw Lumber, Inc. For the Year Ended December 31, 2003	
Sales Revenue	\$4,200,000
Less: Cost of goods sold	<u>3,570,000</u>
Gross profits	\$ 630,000
Less: Operating expenses	<u>210,000</u>
Operating profits	\$ 420,000
Less: Interest expense	<u>105,000</u>
Net profits before taxes	\$ 315,000
Less: Taxes (40%)	<u>126,000</u>
Net profits after taxes	\$ 189,000
Less: Cash dividends	<u>120,000</u>
To: Retained earnings	\$ 69,000

105. The pro forma cost of goods sold for 2004 is (See Table 3.3)
- (a) \$3,500,000.
 - (b) \$3,750,000.
 - (c) \$3,825,000.
 - (d) \$4,000,000.

Answer: C

Level of Difficulty: 3

Learning Goal: 5

Topic: Pro Forma Analysis

106. The pro forma operating expenses for 2004 are (See Table 3.3)
- (a) \$150,000.
 - (b) \$200,000.
 - (c) \$210,000.
 - (d) \$225,000.

Answer: D

Level of Difficulty: 3

Learning Goal: 5

Topic: Pro Forma Analysis

107. The pro forma net profits after taxes for 2004 are (See Table 3.3)
- (a) \$202,500.
 - (b) \$207,000.
 - (c) \$52,500.
 - (d) \$57,000.

Answer: B

Level of Difficulty: 3

Learning Goal: 5

Topic: Pro Forma Analysis

108. The pro forma accumulated retained earnings account on the balance sheet is projected to (See Table 3.3)
- (a) increase \$52,500.
 - (b) decrease \$52,500.
 - (c) increase \$57,000.
 - (d) decrease \$57,000.

Answer: C

Level of Difficulty: 3

Learning Goal: 5

Topic: Pro Forma Analysis

A financial manager at General Talc Mines has gathered the financial data essential to prepare a pro forma balance sheet for cash and profit planning purposes for the coming year ended December 31, 2004. Using the percent-of-sales method and the following financial data, prepare the pro forma balance sheet in order to answer the following multiple choice questions.

- (a) The firm estimates sales of \$1,000,000.
- (b) The firm maintains a cash balance of \$25,000.
- (c) Accounts receivable represents 15 percent of sales.
- (d) Inventory represents 35 percent of sales.
- (e) A new piece of mining equipment costing \$150,000 will be purchased in 2004. Total depreciation for 2004 will be \$75,000.
- (f) Accounts payable represents 10 percent of sales.
- (g) There will be no change in notes payable, accruals, and common stock.
- (h) The firm plans to retire a long term note of \$100,000.
- (i) Dividends of \$45,000 will be paid in 2004.
- (j) The firm predicts a 4 percent net profit margin.

Table 3.4

Balance Sheet General Talc Mines December 31, 2003	
Assets	
Cash	\$ 25,000
Accounts receivable	120,000
Inventories	<u>300,000</u>
Total current assets	\$ 445,000
Net fixed assets	<u>\$ 500,000</u>
Total assets	<u>\$ 945,000</u>
Liabilities and stockholders'	
equityAccounts payable	\$ 80,000
Notes payable	350,000
Accruals	<u>50,000</u>
Total current liabilities	\$ 480,000
Long-term debts	<u>150,000</u>
Total liabilities	\$ 630,000
Stockholders' equity	
Common stock	180,000
Retained earnings	<u>135,000</u>
Total Stockholders' equity	<u>\$ 315,000</u>
Total liabilities and stockholders' equity	<u>\$ 945,000</u>

109. The pro forma total current assets amount is (See Table 3.4)
- (a) \$470,900.
 - (b) \$500,000.
 - (c) \$525,000.
 - (d) \$575,000.
- Answer: C
Level of Difficulty: 4
Learning Goal: 5
Topic: Pro Forma Analysis
110. The pro forma net fixed assets amount is (See Table 3.4)
- (a) \$500,000.
 - (b) \$575,000.
 - (c) \$600,000.
 - (d) \$650,000.
- Answer: B
Level of Difficulty: 4
Learning Goal: 5
Topic: Pro Forma Analysis
111. The pro forma current liabilities amount is (See Table 3.4)
- (a) \$400,000.
 - (b) \$450,000.
 - (c) \$475,000.
 - (d) \$500,000.
- Answer: D
Level of Difficulty: 4
Learning Goal: 5
Topic: Pro Forma Analysis
112. The pro forma total liabilities amount is (See Table 3.4)
- (a) \$500,000.
 - (b) \$550,000.
 - (c) \$700,000.
 - (d) \$650,000.
- Answer: B
Level of Difficulty: 4
Learning Goal: 5
Topic: Pro Forma Analysis
113. The pro forma accumulated retained earnings amount is (See Table 3.4)
- (a) \$90,000.
 - (b) \$175,000.
 - (c) \$140,000.
 - (d) \$130,000.
- Answer: D
Level of Difficulty: 4
Learning Goal: 5
Topic: Pro Forma Analysis

114. The external financing required in 2004 will be (See Table 3.4)
- (a) \$230,000.
 - (b) \$240,000.
 - (c) \$0.
 - (d) \$195,000.

Answer: B

Level of Difficulty: 4

Learning Goal: 5

Topic: Pro Forma Analysis

115. General Talc Mines may prepare to (See Table 3.4)
- (a) arrange for a loan equal to the external funds requirement.
 - (b) eliminate the dividend to cover the needed financing.
 - (c) cancel the retirement of the long term note to cover the needed financing.
 - (d) repurchase common stock equal to the external funds requirement.

Answer: A

Level of Difficulty: 4

Learning Goal: 5

Topic: Pro Forma Analysis

116. The external funds requirement results primarily from (See Table 3.4)
- (a) the payment of dividends.
 - (b) the retirement of debt and purchase of new fixed assets.
 - (c) low profit margin.
 - (d) high cost of sales.

Answer: B

Level of Difficulty: 4

Learning Goal: 5

Topic: Pro Forma Analysis

117. If General Talc Mines cannot raise the external financing required through traditional credit channels, the firm may (See Table 3.4)
- (a) increase sales.
 - (b) purchase additional fixed assets to raise productivity.
 - (c) sell common stock.
 - (d) factor accounts receivable.

Answer: C

Level of Difficulty: 4

Learning Goal: 5

Topic: Pro Forma Analysis

118. A weakness of the percent-of-sales method to preparing a pro forma income statement is
- (a) the assumption that the values of certain accounts can be forced to take on desired levels.
 - (b) the assumption that the firm faces linear total revenue and total operating cost functions.
 - (c) the assumption that the firm's past financial condition is an accurate predictor of its future.
 - (d) ease of calculation and preparation.

Answer: C

Level of Difficulty: 3

Learning Goal: 6

Topic: Pro Forma Analysis

119. For firms with high fixed costs, the percent-of-sales approach for preparing a pro forma income statement tends to
- (a) overestimate profits when sales are increasing.
 - (b) underestimate profits when sales are increasing.
 - (c) be an accurate predictor of profits.
 - (d) be a difficult model to apply.

Answer: B

Level of Difficulty: 3

Learning Goal: 6

Topic: Pro Forma Analysis

120. Utilizing past cost and expense ratios (percent-of-sales method) when preparing pro forma financial statements will tend to
- (a) understate profits when sales are decreasing.
 - (b) understate profits when sales are increasing.
 - (c) overstate profits when sales are increasing.
 - (d) neither understate nor overstate profits.

Answer: B

Level of Difficulty: 3

Learning Goal: 6

Topic: Pro Forma Analysis

121. Utilizing past cost and expense ratios (percent-of-sales method) when preparing pro forma financial statements will tend to
- (a) understate profits when sales are decreasing and overstate profits when sales are increasing.
 - (b) understate profits, no matter what the change in sales, as long as fixed costs are present.
 - (c) understate profits when sales are increasing and overstate profits when sales are decreasing.
 - (d) overstate profits, no matter what the change in sales, as long as fixed costs are present.

Answer: C

Level of Difficulty: 3

Learning Goal: 6

Topic: Pro Forma Analysis

122. The weakness of the judgmental approach to preparing a pro forma balance sheet is
- (a) the assumption that the values of certain accounts can be forced to take on desired levels.
 - (b) the assumption that the firm faces linear total revenue and total operating cost functions.
 - (c) the assumption that the firm's past financial condition is an accurate predictor of its future.
 - (d) ease of calculation and preparation.

Answer: A

Level of Difficulty: 3

Learning Goal: 6

Topic: Pro Forma Analysis

123. In a period of rising sales, utilizing past cost and expense ratios (percent-of-sales method) when preparing pro forma financial statements will tend to
- (a) overstate costs and overstate profits.
 - (b) overstate costs and understate profits.
 - (c) understate costs and overstate profits.
 - (d) understate costs and understate profits.

Answer: B

Level of Difficulty: 4

Learning Goal: 6

Topic: Pro Forma Analysis

124. In a period of rising sales utilizing past cost and expense ratios (percent-of-sales method), when preparing pro forma financial statements and planning financing, will tend to
- (a) understate retained earnings and understate the additional financing needed.
 - (b) overstate retained earnings and overstate the additional financing needed.
 - (c) understate retained earnings and overstate the financing needed.
 - (d) overstate retained earnings and understate the financing needed.

Answer: C

Level of Difficulty: 4

Learning Goal: 6

Topic: Pro Forma Analysis

125. Calculate net operating profit after taxes (NOPAT) if a firm has sales of \$1,000,000, operating profit (EBIT) of \$100,000, interest expense of \$50,000, and a tax rate of 30 percent.
- (a) \$35,000.
 - (b) \$700,000.
 - (c) \$70,000.
 - (d) none of the above.

Answer: C

Level of Difficulty: 3

Learning Goal: 2

Topic: Free Cash Flow (Equation 3.2)

126. Calculate a firm's free cash flow if it has net operating profit after taxes of \$100,000, net fixed asset investment requirement of \$40,000, a net current asset requirement of \$30,000 and a tax rate of 30 percent.
- (a) \$0.
 - (b) \$30,000.
 - (c) -\$30,000.
 - (d) none of the above.
- Answer: A
Level of Difficulty: 3
Learning Goal: 2
Topic: Free Cash Flow (Equation 3.5)
127. NICO Corporation had net fixed assets of \$2,000,000 at the end of 2006 and \$1,800,000 at the end of 2005. In addition, the firm had a depreciation expense of \$200,000 during 2006 and \$180,000 during 2005. Using this information, NICO's net fixed asset investment for 2006 was
- (a) \$20,000.
 - (b) \$0.
 - (c) \$380,000.
 - (d) \$400,000.
- Answer: D
Level of Difficulty: 4
Learning Goal: 2
Topic: Free Cash Flow (Equation 3.6)
128. NICO Corporation had net current assets of \$2,000,000 at the end of 2006 and \$1,800,000 at the end of 2005. In addition, NICO had net spontaneous current liabilities of \$1,000,000 in 2006 and \$1,500,000 in 2005. Using this information, NICO's net current asset investment for 2006 was
- (a) \$700,000.
 - (b) -\$300,000.
 - (c) \$300,000.
 - (d) -\$700,000.
- Answer: B
Level of Difficulty: 4
Learning Goal: 2
Topic: Free Cash Flow (Equation 3.7)
129. During 2006, NICO Corporation had EBIT of \$100,000, a change in net fixed assets of \$400,000, an increase in net current assets of \$100,000, an increase in spontaneous current liabilities of \$400,000, a depreciation expense of \$50,000, and a tax rate of 30 percent. Based on this information, NICO's free cash flow is
- (a) -\$630,000.
 - (b) -\$50,000.
 - (c) \$650,000.
 - (d) -\$30,000.
- Answer: D
Level of Difficulty: 4
Learning Goal: 2
Topic: Free Cash Flow (Equation 3.5)

■ Essay Questions

1. Darling Paper Container, Inc. purchased several machines at a total cost of \$300,000. The installation cost for this equipment was \$25,000. The firm plans to depreciate the equipment using the MACRS 5-year normal recovery period. Prepare a depreciation schedule showing the depreciation expense for each year.

Answer:

Depreciation Schedule			
Year	Depreciation Expense		
1	(\$300,000 + \$25,000)	×	0.20 = \$ 65,000
2	\$325,000	×	0.32 = 104,000
3	\$325,000	×	0.19 = 61,750
4	\$325,000	×	0.12 = 39,000
5	\$325,000	×	0.12 = 39,000
6	\$325,000	×	0.05 = 16,250

Level of Difficulty: 2

Learning Goal: 1

Topic: Depreciation and Cash Flows

2. Given the financial data for New Electronic World, Inc. (NEW), compute the following measures of cash flows for the NEW for the year ended December 31, 2005
- (a) Operating Cash Flow.
- (b) Free Cash Flow.

For the year ended December 31,		
	2004	2005
Depreciation		\$ 3,000
EBIT		30,000
Interest Expenses		3,000
Taxes		8,000
Cash	\$21,000	24,000
Accounts Receivable	39,000	45,000
Inventory	27,000	30,000
Net fixed assets	22,000	24,000
Accounts payable	25,000	30,000
Notes payable	50,000	40,000
Accruals	1,000	2,000

Answers:

$$(a) \text{ OCF} = \text{EBIT} - \text{Taxes} + \text{Depreciation}$$

$$\text{OCF} = \$30,000 - \$8,000 + \$3,000 = \$35,000$$

$$(b) \text{ FCF} = \text{OCF} - \text{Net fixed asset investment (NFAI)} - \text{Net current asset investment (NCAI)}$$

$$\text{NFAI} = \text{Change in net fixed assets} + \text{Depreciation}$$

$$= (24,000 - 22,000) + 3,000 = \$5,000$$

$$\text{NCAI} = \text{Change in current assets} - \text{change in (Accounts payable} + \text{Accruals)}$$

$$= (99,000 - 87,000) - (32,000 - 26,000)$$

$$= \$6,000$$

$$\text{FCF} = 35,000 - 5,000 - 6,000 = \$24,000$$

Level of difficulty: 4

Learning Goal: 2

Topic: Operating Cash Flows and Free Cash Flows (Equation 3.4 and 3.5)

3. Identify each expense or revenue as a cash flow from operating activities (O), a cash flow from investment activities (I), or a cash flow from financing activities (F).

Administrative expenses

Rent payment

Interest on a note payable

Interest on a note receivable

Sale of equipment

Dividend payment

Stock repurchase

Sale of finished goods

Labor expense

Sale of a bond issue

Repayment of a long-term debt

Selling expenses

Depreciation expense

Sale of common stock

Purchase of fixed assets

Answer:

Administrative expenses.....	O
Rent payment.....	O
Interest on a note payable.....	F
Interest on a note receivable.....	F
Sale of equipment.....	I
Dividend payment.....	F
Stock repurchase.....	F
Sale of finished goods.....	O
Labor expense.....	O
Sale of a bond issue.....	F
Repayment of a long-term debt.....	F
Selling expenses.....	O
Depreciation expense.....	O
Sale of common stock.....	F
Purchase of fixed assets.....	I

Level of difficulty: 4

Learning Goal: 2

Topic: Statement of Cash Flows

4. Calculate the change in the key balance sheet accounts between 2002 and 2003 and classify each as a source (S), a use (U), or neither (N), and indicate which type of cash flow it is: an operating cash flow (O), and investment cash flow (I) or a financing cash flow (F).

ABC Corp.
Balance Sheet Changes and Classification
of Key Accounts between 2004 and 2005

Account	2004	2005	Change	Classification	Type
Long-term debts	\$ 960	\$ 800			
Accounts receivable	640	500			
Common stock	200	200			
Cash	640	500			
Retained earnings	960	800			
Accruals	50	200			
Inventory	840	600			
Accounts payable	1,150	1,000			
Net fixed assets	1,800	2,000			

Answer:

**ABC Corp.
Balance Sheet Changes and Classification
of Key Accounts between 2004 and 2005**

Account	2004	2005	Chng.	Classif.	Type
Long-term debts	\$ 960	\$ 800	+160	S	F
Accounts receivable	640	500	+140	U	O
Common stock	200	200	0	N	F
Cash	640	500	+140	U	O
Retained earnings	960	800	+160	S	O/F
Accruals	50	200	-150	U	O
Inventory	840	600	+240	U	O
Accounts payable	1,150	1,000	+150	S	O
Net fixed assets	1,800	2,000	-200	S	I

Level of difficulty: 4

Learning Goal: 2

Topic: Statement of Cash Flows

Table 3.5

Magna Fax, Inc. Income Statement For the Year Ended December 31, 2005	
Sales revenue	\$150,000
Cost of goods sold	<u>117,500</u>
Gross Profits	\$32,500
Selling expense	4,500
General and administrative expense	4,000
Depreciation expense	<u>4,000</u>
Operating profits	\$ 20,000
Interest expense	<u>2,500</u>
Net profit before taxes	\$ 17,500
Taxes (40%)	<u>7,000</u>
Net profit after taxes	<u>\$ 10,500</u>

Magna Fax, Inc.
Balance Sheet
For the Years Ended December 31, 2004 and 2005

	2004	2005
Assets		
Cash	\$24,000	\$21,000
Accounts receivable	45,000	39,000
Inventory	30,000	27,000
Gross fixed assets	\$42,000	\$40,000
Acc. Depreciation	<u>22,000</u>	<u>18,000</u>
Net fixed assets	<u>20,000</u>	<u>22,000</u>
Total assets	\$119,000	\$109,000
Liabilities and Equity		
Accounts payable	\$25,000	\$30,000
Notes payable	50,000	40,000
Accruals	1,000	2,000
Long-term debts	10,000	8,000
Common stock at par	1,000	1,000
Paid-in capital in excess of par	4,000	4,000
Retained earnings	<u>28,000</u>	<u>24,000</u>
Total liabilities and equity	\$119,000	\$109,000

5. The credit manager at First National Bank has just received the income statement and balance sheet for Magna Fax, Inc. for the year ended December 31, 2005. (See Table 3.5.) The bank requires the firm to report its earnings performance and financial position quarterly as a condition of a loan agreement. The bank's credit manager must prepare two key financial statements based on the information sent by Magna Fax, Inc. This will be passed on to the commercial loan officer assigned to this account, so that he may review the financial condition of the firm.
- Prepare a statement of retained earnings for the year ended December 31, 2005.
 - Prepare a summary of cash inflows and cash outflows for the year ended December 31, 2005.
 - Prepare a statement of cash flows for the year ended December 31, 2005, organized by cash flow from operating activities, cash flow from investment activities, and cash flow from financing activities.

Answers:

(a)

Magna Fax, Inc.
Statement of Retained Earnings
For the Year Ended December 31, 2005

Retained Earnings Balance (December 31, 2004)	\$24,000
Net profits after taxes	+ 10,500
Dividends	<u>-6,500</u>
Retained Earnings Balance (December 31, 2005)	<u>\$28,000</u>

(b)

Magna Fax, Inc.
Statement of Cash Flows
For the Year Ended December 31, 2005

Cash Inflows		Cash Outflows	
Net profits		Dividends paid	\$6,500
after taxes	\$10,500	Inc. in cash	3,000
Depreciation	4,000	Inc. in acct. Rec	6,000
Inc. in Notes Payable	10,000	Inc. in Inventory	3,000
Inc. in LT debts	2,000	Inc. in Fixed Asset	2,000
		Dec. in Acct Pay.	5,000
		Dec. in accruals	1,000
Total Inflows	\$26,500	Total Outflows	\$26,500

(c)

Magna Fax, Inc.
Statement of Cash Flows
For the Year Ended December 31, 2005

Cash flow from operating activities:		
Net profits after taxes	\$10,500	
Depreciation	4,000	
Inc. in Accounts Receivable	-6,000	
Inc. in Inventory	-3,000	
Dec. in Accounts Payable	-5,000	
Dec. in Accruals	-1,000	
		-\$ 500
Cash flow from investment activities:		
Inc. in gross fixed assets	-2,000	
Changes in business interest	<u>0</u>	
		-\$2,000
Cash flow from financing activities:		
Inc. in notes payable	\$10,000	
Inc. in long-term debts	2,000	
Changes in S.E.	0	
Dividends paid	-6,500	
		\$5,500
Net increase in cash & marketable sec.		\$3,000

Level of difficulty: 4

Learning Goal: 2

Topic: Statement of Cash Flows

6. Gerry Jacobs, a financial analyst for Best Valu Supermarkets, has prepared the following sales and cash disbursement estimates for the period August through December of the current year.

Month	Sales	Cash Disbursements
August	\$400	\$300
September	500	500
October	500	700
November	600	400
December	700	500

90 percent of sales are for cash, the remaining 10 percent are collected one month later. All disbursements are on a cash basis. The firm wishes to maintain a minimum cash balance of \$50. The beginning cash balance in September is \$25. Prepare a cash budget for the months of October, November, and December, noting any needed financing or excess cash available.

Answer:

A Cash Budget for Best Valu Supermarkets				
	Sept.	Oct.	Nov.	Dec.
Cash receipts				
Sales (cash 90%)	\$450	\$450	\$540	\$630
Sales Collected (1 mo. lag 10%)	<u>40</u>	<u>50</u>	<u>50</u>	<u>60</u>
Total cash receipts	\$490	\$500	\$590	\$690
Total cash disbursements	<u>500</u>	<u>700</u>	<u>400</u>	<u>500</u>
Net cash flow	(10)	(200)	190	190
Beg. cash balance	<u>25</u>	<u>15</u>	<u>(185)</u>	<u>5</u>
Ending cash balance	15	(185)	5	195
Minimum balance	<u>50</u>	<u>50</u>	<u>50</u>	<u>50</u>
Required financing	35	235	45	
excess cash				145

Best Valu Supermarkets should arrange for a line of credit for at least \$235 during the four month period.

Level of difficulty: 3

Learning Goal: 4

Topic: Cash Flow Analysis

7. Terrel Manufacturing expects stable sales through the summer months of June, July, and August of \$500,000 per month. The firm will make purchases of \$350,000 per month during these months. Wages and salaries are estimated at \$60,000 per month plus 7 percent of sales. The firm must make a principal and interest payment on an outstanding loan in June of \$100,000. The firm plans a purchase of a fixed asset costing \$75,000 in July. The second quarter tax payment of \$20,000 is also due in June. All sales are for cash.

- (a) Construct a cash budget for June, July, and August, assuming the firm has a beginning cash balance of \$100,000 in June.
- (b) The sales projections may not be accurate due to the lack of experience by a newly-hired sales manager. If the sales manager believes the most optimistic and pessimistic estimates of sales are \$600,000 and \$400,000, respectively, what are the monthly net cash flows and required financing or excess cash balances?

Answers:

Multiple Cash Budgets			
	June		
	Pessimistic	Most Likely	Optimistic
Sales (cash)	\$400,000	\$500,000	\$600,000
Less: Cash Disbursements			
Purchases	350,000	350,000	350,000
Wages & Salaries	60,000	60,000	60,000
Variable portion (W&S)	28,000	35,000	42,000
Principal & Interest	100,000	100,000	100,000
Purchase of fixed assets			
Tax payment	20,000	20,000	20,000
Total cash disbursement	<u>\$558,000</u>	<u>\$565,000</u>	<u>\$572,000</u>
Net cash flow	(158,000)	(65,000)	28,000
Add: Beg. cash	<u>100,000</u>	<u>100,000</u>	<u>100,000</u>
Ending cash	(58,000)	35,000	128,000
Less: Min cash			
Required financing	58,000		
Excess cash		35,000	128,000
July			
	Pessimistic	Most Likely	Optimistic
Sales (cash)	\$400,000	\$500,000	\$600,000
Less: Cash Disbursements			
Purchases	350,000	350,000	350,000
Wages & Salaries	60,000	60,000	60,000
Variable portion (W&S)	28,000	35,000	42,000
Principal & Interest			
Purchase of fixed assets	75,000	75,000	75,000
Tax payment			
Total cash disbursement	<u>\$513,000</u>	<u>\$520,000</u>	<u>\$527,000</u>
Net cash flow	(113,000)	(20,000)	73,000
Add: Beg. cash	<u>(58,000)</u>	<u>35,000</u>	<u>128,000</u>
Ending cash	(171,000)	15,000	201,000
Less: Min cash			
Required financing	<u>171,000</u>	—	—
Excess cash		15,000	201,000

	August		
	Pessimistic	Most Likely	Optimistic
Sales (cash)	\$400,000	\$500,000	\$600,000
Less: Cash Disbursements			
Purchases	350,000	350,000	350,000
Wages & Salaries	60,000	60,000	60,000
Variable portion (W&S)	28,000	35,000	42,000
Principal & Interest			
Purchase of fixed assets			
Tax payment			
Total cash disbursement	<u>\$438,000</u>	<u>\$445,000</u>	<u>\$452,000</u>
Net cash flow	(38,000)	(55,000)	148,000
Add: Beg. cash	171,000	15,000	201,000
Ending cash	<u>(209,000)</u>	<u>70,000</u>	<u>349,000</u>
Less: Min cash			
Required financing	209,000		
Excess cash		70,000	349,000

If the most pessimistic sales figure (\$400,000) materializes, the financial manager should expect a financing requirement of \$209,000 and should arrange for a line of credit to cover the firm’s cash deficit. However, if the most optimistic estimate materializes, the financial manager will need to arrange for investing a total of \$349,000 over the three month period.

Level of difficulty: 4

Learning Goal: 4

Topic: Cash Flow Analysis

8. In preparation for the quarterly cash budget, the following revenue and cost information have been compiled. Prepare and evaluate a cash budget for the months of October, November, and December based on the information shown below.

Month	Sales	Purchases
August (actual)	\$3,000,000	\$3,500,000
September (actual)	\$4,500,000	\$2,000,000
October (forecast)	\$1,000,000	\$ 500,000
November (forecast)	\$1,500,000	\$ 750,000
December (forecast)	\$2,000,000	\$1,000,000

- The firm collects 60 percent of sales for cash and 40 percent of its sales one month later.
- Interest income of \$50,000 on marketable securities will be received in December.
- The firm pays cash for 40 percent of its purchases.
- The firm pays for 60 percent of its purchases the following month.
- Salaries and wages amount to 15 percent of the preceding month’s sales.
- Sales commissions amount to 2 percent of the preceding month’s sales.
- Lease payments of \$100,000 must be made each month.
- A principal and interest payment on an outstanding loan is due in December of \$150,000.

- The firm pays dividends of \$50,000 at the end of the quarter.
- Fixed assets costing \$600,000 will be purchased in December.
- Depreciation expense each month of \$45,000.
- The firm has a beginning cash balance in October of \$100,000 and maintains a minimum cash balance of \$200,000.

Answer:

Month	Cash Budget				
	August	September	October	November	December
Sales	\$3,000,000	4,500,000	1,000,000	1,500,000	2,000,000
Cash (60%)	1,800,000	2,700,000	600,000	900,000	1,200,000
1 mo. (40%)		1,200,000	1,800,000	400,000	600,000
Interest					50,000
Total Receipts		3,900,000	2,400,000	1,300,000	1,850,000
Purchase	3,500,000	2,000,000	500,000	750,000	1,000,000
Cash(40%)	1,400,000	800,000	200,000	300,000	400,000
1 mo.(60%)		2,100,000	1,200,000	300,000	450,000
Salaries & Wages		450,000	675,000	150,000	225,000
Sales Commission		60,000	90,000	20,000	30,000
Lease Payments		100,000	100,000	100,000	100,000
Princ & Interest Pay					150,000
Cash dividends					50,000
Fixed assets purchase					600,000
Total Disbursements		3,510,000	2,265,000	870,000	2,005,000
Net cash flow		390,000	135,000	430,000	(155,000)
Add: Beg. Cash			100,000	235,000	665,000
Ending cash			235,000	665,000	510,000
Less: Min Cash			200,000	200,000	200,000
Required Fin.					
Excess Cash			35,000	465,000	310,000

The firm has excess cash during the three month period and can invest the excess cash in marketable securities.

Level of difficulty: 4

Learning Goal: 4

Topic: Cash Flow Analysis

- Harry's House of Hamburgers (HHH) wants to prepare a cash budget for months of September through December. Using the following information, prepare the cash budget schedule and interpret the results.
 - Sales were \$50,000 in June and \$60,000 in July. Sales have been forecasted to be \$65,000, \$72,000, \$63,000, \$59,000, and \$56,000 for months of August, September, October, November, and December, respectively. In the past, 10 percent of sales were on cash basis, and the collection were 50 percent in the first month, 30 percent in the second month, and 10 percent in the third month following the sales.

- Every four months (three times a year) \$500 of dividends from investments are expected. The first dividend payment was received in January.
- Purchases are 60 percent of sales, 15 percent of which are paid in cash, 65 percent are paid one month later, and the rest is paid two months after purchase.
- \$8,000 dividends are paid twice a year (in March and September).
- The monthly rent is \$2,000.
- Taxes are \$6,500 payable in December.
- A new hamburger press will be purchased in October for \$2,300.
- \$1,500 interest will be paid in November.
- \$1,000 loan payments are paid every month.
- Wages and salaries are \$1,000 plus 5 percent of sales in each month.
- August's ending cash balance is \$3,000.
- HHH would like to maintain a minimum cash balance of \$10,000.

Answer:

Cash Budget							
Month	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Sales	\$50,000	60,000	65,000	72,000	63,000	59,000	56,000
Cash sales(10%)	5,000	6,000	6,500	7,200	6,300	5,900	5,600
Collections of A/R:							
1 mon(50%)		25,000	30,000	32,500	36,000	31,500	29,500
2 mon(30%)			15,000	18,000	19,500	21,600	18,900
3 mon(10%)				5,000	6,000	6,500	7,200
Dividend income			500				
Total cash receipts				\$63,200	67,800	65,500	61,200
Purch.	\$30,000	36,000	39,000	43,200	37,800	35,400	33,600
Cash purchases(15%)	4,500	5,400	5,850	6,480	5,670	5,310	5,040
Payments of A/P:							
1 mon(65%)		19,500	23,400	25,350	28,080	24,570	23,010
2 mon(20%)			6,000	7,200	7,800	8,640	7,560
Dividend Payment				8,000			
Rent				2,000	2,000	2,000	2,000
Taxes							6,500
New Asset						2,300	
Interest						1,500	
Loan Payment				1,000	1,000	1,000	1,000
Wages & Salaries				4,600	4,150	3,950	3,800
Total cash disbursements				\$54,630	51,000	46,970	48,910

Net cash flow	\$ 8,570	16,800	18,530	12,290
Add: Beg. cash	3,000	11,570	28,370	46,900
Ending cash	11,570	28,370	46,900	59,190
Less: Min. cash	10,000	10,000	10,000	10,000
Required total financing Excess cash	1,570	18,370	36,900	49,190

No financing required. The company may invest the excess cash in marketable securities.

Level of difficulty: 4

Learning Goal: 4

Topic: Cash Flow Analysis

10.

Income Statement
Huddleston Manufacturing Company
For the Year Ended December 31, 2005

Sales	\$2,800,000
Less: Cost of goods sold	<u>1,820,000</u>
Gross profits	\$ 980,000
Less: Operating expenses	<u>240,000</u>
Operating Profits	\$ 740,000
Less: Interest expense	<u>70,000</u>
Net profits before taxes	\$ 670,000
Less: Taxes (40%)	<u>268,000</u>
Net profits after taxes	\$ 402,000
Less: Cash Dividends	<u>132,000</u>
To: Retained earnings	\$ 270,000

Huddleston Manufacturing estimates its sales in 2006 will be \$3 million. Interest expense is expected to remain unchanged at \$70,000, and the firm plans to pay cash dividends of \$140,000 during 2006. Use the percent-of-sales method to prepare a pro forma income statement for the year ended December 31, 2006, based on the 2005 income statement shown above.

Answer:

**Pro Forma Income Statement
Huddleston Manufacturing Company
For the Year Ended December 31, 2006**

Sales	\$3,000,000
Less: Cost of goods sold (65%)	1,950,000
Gross profits	<u>\$1,050,000</u>
Less: Operating expenses (8.57%)	257,142
Operating Profits	\$ 792,858
Less: Interest expense	<u>70,000</u>
Net profits before taxes	\$ 722,858
Less: Taxes (40%)	<u>289,143</u>
Net profits after taxes	\$ 433,714
Less: Cash Dividends	<u>140,000</u>
To: Retained earnings	<u>\$ 293,714</u>

Level of difficulty: 3

Learning Goal: 5

Topic: Pro Forma Analysis

Table 3.6

**Income Statement
Ace Manufacturing, Inc.
For the Year Ended December 31, 2005**

Sales	\$2,000,000
Less: Cost of goods sold	<u>1,200,000</u>
Gross profit	\$800,000
Less: Selling expense	200,000
General & administrative expense	60,000
Less: Depreciation	<u>40,000</u>
Operating profit	\$ 500,000
Less: Interest	<u>80,000</u>
Earnings before taxes	\$ 420,000
Less: Taxes (40%)	<u>168,000</u>
Net profit after taxes/EACS	\$ 252,000
Common stock dividends	<u>\$ 100,000</u>

11. Ace Manufacturing, Inc., is preparing pro forma financial statements for 2006. The firm utilized the percent-of-sales method to estimate costs for the next year. Sales in 2005 were \$2 million and are expected to increase to \$2.4 million in 2006. The firm has a 40 per cent tax rate.
- (a) Given the 2005 income statement in Table 3.6, estimate net profit and retained earnings for 2006.
 - (b) If \$200,000 of the cost of goods sold and \$40,000 of selling expense are fixed costs; and the interest expense and dividends are not expected to change, what is the dollar effect on net income and retained earnings? What is the significance of this effect?

Answers:

(a)

Pro forma income statement: December 31, 2006

Sales	\$2,400,000
Less: Cost of goods sold	<u>1,440,000</u>
Gross profit	960,000
Less: Selling expense	240,000
General & administrative expense	72,000
Less: Depreciation	<u>48,000</u>
Operating profit	\$ 600,000
Less: Interest	<u>96,000</u>
Earnings before taxes	\$ 504,000
Less: Taxes (40%)	<u>201,600</u>
Net profit after taxes/EACS	\$ 302,400
Common stock dividends	<u>120,000</u>
Retained earnings	<u>\$ 182,400</u>

(b)

Sales	\$2,400,000
Less: Cost of goods sold (0.50)	1,200,000
fixed	<u>200,000</u>
Gross profit	1,000,000
Less: Selling expense (0.08)	192,000
fixed	40,000
General & administrative expense	72,000
Less: Depreciation	<u>48,000</u>
Operating profit	\$ 648,000
Less: Interest	<u>80,000</u>
Earnings before taxes	\$ 568,000
Less: Taxes (40%)	<u>227,200</u>
Net profit after taxes/EACS	\$ 340,800
Common stock dividends	<u>100,000</u>
Retained earnings	<u>\$ 240,800</u>

Net profit after tax is understated by \$38,400 and retained earnings by \$58,400, using the percent-of-sales method. In planning the addition of assets (current or fixed) and the financing of those assets, the straight percent-of-sales method understates net profit and retained earnings. This, therefore, overstates additional financing needed to add those assets. The judgmental approach allows the firm to obtain a more accurate estimate of the line of credit or long-term financing that will be necessary in the next planning period.

Level of difficulty: 4

Learning Goal: 5

Topic: Pro Forma Analysis

The income statement and balance sheet for the ZZZ Mattress Co. for the year ended December 31, 2005 follow.

Table 3.7

Income Statement	
ZZZ Mattress Company	
For the Year Ended December 31, 2005	
Sales	\$300,000
Less: Cost of goods sold	<u>195,000</u>
Gross profit	\$105,000
Less: Selling expense	40,000
General and administrative expense	11,000
Less: Depreciation	<u>10,000</u>
Operating profit	\$ 44,000
Less: Interest	<u>12,000</u>
Net profit before taxes	\$ 32,000
Less: Taxes (40%)	<u>12,800</u>
	<u>\$ 19,200</u>

Balance Sheet	
ZZZ Mattress Company	
December 31, 2005	
Assets	
Cash	\$1,500
Accounts receivable	60,000
Inventory	<u>95,000</u>
Total current assets	\$156,500
Net plant and equipment	<u>150,000</u>
Total assets	<u>\$306,500</u>

Liabilities and Equities	
Accounts payable	\$ 45,500
Notes payable	55,000
Accruals	<u>5,000</u>
Total current liabilities	\$105,500
Long-term debt	\$55,000
Stockholders' equity:	
Common stock	\$71,000
Retained earnings	<u>75,000</u>
Total liabilities and equities	<u>\$306,500</u>

12. The ZZZ Mattress Co. has been requested by the 1st National Bank, a major creditor, to prepare a pro forma balance sheet for the year ending, December 31, 2006. Using the percent-of-sales method and the following financial data, prepare the pro forma income statement and balance sheet and discuss the resulting external financing required. (See Table 3.7)
- 2006 sales are estimated at \$330,000.
 - Accounts receivable represent 20 percent of sales.
 - A minimum cash balance of \$1,650 is maintained.
 - Inventory represents 32 percent of sales.
 - Fixed-asset outlays in 2006 are \$20,000. Total depreciation expense for 2006 will be \$15,000.
 - Accounts payable represents 15 percent of sales.
 - Notes payable and accruals will remain the same.
 - No long-term debt will be retired in 2004.
 - No common stock will be repurchased in 2006.
 - The firm will pay dividends equal to 50 percent of its earnings after taxes.

Answer:

Income Statement	
ZZZ Mattress Company	
For the Year Ended December 31, 2006	
Sales	\$330,000
Less: Cost of goods sold (65%)	<u>214,500</u>
Gross profit	\$115,500
Less: Selling expense (13.3%)	44,000
General and administrative expense (3.67%)	12,100
Less: Depreciation	<u>15,000</u>
Operating profit	\$ 44,400
Less: Interest (4%)	<u>13,200</u>
Net profit before taxes	\$ 31,200
Less: Taxes (40%)	<u>12,480</u>
	<u>\$ 18,720</u>

Balance Sheet
ZZZ Mattress Company
December 31, 2006

Assets	
Cash	\$ 1,650
Accounts receivable	66,000
Inventory	105,600
Total current assets	\$173,250
Net plant and equipment	155,000
Total assets	\$328,250
Liabilities and Equities	
Accounts payable	\$ 49,500
Notes payable	55,000
Accruals	5,000
Total current liabilities	\$109,500
Long-term debt	55,000
Stockholders' equity:	
Common stock	71,000
Retained earnings	84,360
Total liabilities and equities	\$328,250

A 10 percent growth rate in sales cannot be supported by the firm's internally generated funds. A larger line of credit or a request for a long-term loan for the additional \$8,390 is necessary to finance operations.

Level of difficulty: 4

Learning Goal: 5

Topic: Pro Forma Analysis

Table 3.8

Income Statement Wirl Wind Company	
Sales revenue	\$3,028,500
Less: Cost of goods sold	
Fixed costs	1,350,000
Variable costs	1,260,600
Gross profits	\$417,900
Less: Operating expenses	
Fixed expenses	4,500
Variable expenses	85,840
Operating profits	\$327,560
Less: Interest expense	82,150
Net profits before taxes	\$245,410
Less: Taxes (40%)	98,164
Net profits after taxes	\$147,246
Less: Dividend	50,000
Increased retained earnings	\$ 97,246

Balance Sheet
Wirl Wind Company

Assets	
Current assets	
Cash	\$625,000
Marketable securities	298,000
Accounts receivable	580,000
Inventories	<u>496,000</u>
Total current assets	\$1,999,000
Land and building	\$625,000
Machinery & equip	765,000
Fixtures & Furn	<u>110,000</u>
Total gross fixed assets	\$1,500,000
Less: Accumulated Depreciation	<u>30,000</u>
Net fixed assets	<u>\$1,470,000</u>
Total assets	<u>\$3,469,000</u>
Liabilities and Stockholders' Equity	
Current liabilities	
Accounts payable	\$267,000
Notes payable	135,000
Accruals	<u>288,000</u>
Total current liabilities	\$690,000
Total Long-term debt	<u>1,200,000</u>
Total liabilities	\$1,890,000
Stockholders' equity	
Preferred stock	79,000
Common stock	750,000
Paid-in-capital	601,000
Retained earnings	<u>149,000</u>
Total stockholders' equity	\$1,579,000
Total liabilities and stockholders equity	<u>\$3,469,000</u>

13. The Wirl-Wind Company of America is trying to plan for the next year. Using the current income statement and balance sheet given in Table 3.8, and the additional information provided, prepare the company's pro forma statements.
- Sales are projected to increase by 15 percent.
 - Total of \$75,000 in dividend will be paid.
 - A minimum cash balance of \$650,000 is desired.
 - A new asset for \$50,000 will be purchased.

- Depreciation expense for next year is \$50,000.
- Marketable securities will remain the same.
- Accounts receivable, inventory, accounts payable, notes payable, and accruals will increase by 15 percent.
- \$30,000 new issue of bond will be sold.
- No new stock will be issued.

Answer:

Pro Forma Income Statement	
Wirl Wind Company	
Sales revenue	\$3,482,775
Less: Cost of goods sold	
Fixed costs	1,350,000
Variable costs (42%)	1,462,766
Gross profits	\$670,009
Less: Operating expenses	
Fixed expenses	4,500
Variable expenses (2.8%)	97,518
Operating profits	\$567,991
Less: Interest expense (2.7%)	94,035
Net profits before taxes	\$ 473,956
Less: Taxes (40%)	189,582
Net profits after taxes	\$ 284,374
Less: Dividend	75,000
Increased retained earnings	\$ 209,374

Pro Forma Balance Sheet	
Wirl Wind Company	
Assets	
Current assets	
Cash	\$ 650,000
Marketable securities	298,000
Accounts receivable	667,000
Inventories	570,400
Total current assets	\$2,185,400
Land and building	
Machinery & equip.	
Fixtures & Furn.	
Total gross fixed assets	
Less: Accumulated Depreciation	
Net fixed assets	\$1,470,000
Total assets	\$3,655,400

Liabilities and Stockholders' Equity	
Current liabilities	
Accounts payable	\$ 307,050
Notes payable	155,250
Accruals	<u>331,200</u>
Total current liabilities	\$793,500
Long-term debts	<u>1,230,000</u>
Total liabilities	\$2,023,500
Stockholders' equity	
Preferred stock	79,000
Common stock	750,000
Paid-in-capital	601,000
Retained earnings	<u>358,374</u>
Total stockholders' equity	\$1,788,374
Excess cash	<u>-156,474</u>
Total liabilities and stockholders equity	\$3,655,400

The Wirl Wind Company of America will have an excess cash of \$156,474 which can be used to pay debt.

Level of difficulty: 4

Learning Goal: 5

Topic: Pro Forma Analysis