

Balance sheet and inventory



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Chapter 4 Discussion Questions | 4-1. | What are the basic benefits and purposes of developing pro forma statements and a cash budget? | | | | |

The pro-forma financial statements and cash budget enable the firm to determine its future level of asset needs and the | | associated financing that will be required. Furthermore, one can track actual events against the projections. Bankers | | and other lenders also use these financial

statements as a guide in credit decisions. | | | | | 4-2. | Explain how the collections and purchases schedules are related to the borrowing needs of the corporation. | | | | | The collections and purchase schedules measure the speed at which receivables are collected and purchases are paid. To | | | the extent collections do not cover purchasing costs and other financial requirements, the firm must look to borrowing | | | to cover the deficit. | | | | |

4-3. | With inflation, what are the implications of using LIFO and FIFO inventory methods? How do they affect the cost of | | | goods sold? | | | | | LIFO inventory valuation assumes the latest purchased inventory becomes part of the cost of goods sold, while the FIFO | | | method assigns inventory items that were purchased first to the cost of goods sold. In an inflationary environment, the | | | LIFO method will result in a higher cost of goods sold figure and one that more accurately matches the sales dollars | | | recorded at current dollars. | | | | | 4-4. | Explain the relationship between inventory turnover and purchasing needs. | | | | | The more rapid the turnover of inventory, the greater the need for purchase and replacement. Rapidly turning inventory | | | makes for somewhat greater ease in foreseeing future requirements and reduces the cost of carrying inventory. | | | | | 4-5. | Rapid corporate growth in sales and profits can cause financing problems. Elaborate on this statement. | | | | |

Elaborate on this statement. | | | | | Rapid growth in sales and profits is

often associated with rapid growth in asset commitment. A \$100, 000 increase in sales may cause a \$50, 000 increase in assets, with perhaps only \$10, 000 of the new financing coming from profits. It is very seldom that incremental profits from sales expansion can meet new financing needs.

4-6. Discuss the advantage and disadvantage of level production schedules in firms with cyclical sales. Level production in a cyclical industry has the advantage of allowing for the maintenance of a stable work force and reducing inefficiencies caused by shutting down production during slow periods and accelerating work during crash production periods. A major drawback is that a large stock of inventory may be accumulated during the slow sales period. This inventory may be expensive to finance, with an associated danger of obsolescence.

4-7. What conditions would help make a percent-of-sales forecast almost as accurate as pro forma financial statements and cash budgets?

The percent-of-sales forecast is only as good as the functional relationship of assets and liabilities to sales. To the extent that past relationships accurately depict the future, the percent-of-sales method will give values that reasonably represent the values derived through the pro-forma statements and the cash budget.

Chapter 4 Problems 1. Eli Lilly is very excited because sales for his nursery and plant company are expected to double from \$600, 000 to \$1, 200, 000 next year. Eli notes that net assets (Assets – Liabilities) will remain at 50 percent of sales. His firm will enjoy an 8 percent return on total sales. He will start the year with \$120, 000 in the bank and is bragging about the Jaguar and luxury townhouse he will buy.

Does his optimistic outlook for his cash position appear to be correct?

Compute his likely cash balance or deficit for the end of the year. Start with

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beginning cash and subtract the asset buildup (equal to 50 percent of the sales increase) and add in profit. 1 Solution: Eli Lilly Beginning cash \$120,000 — Asset buildup (300,000) (1/2 × \$600,000) Profit 96,000 (8% × \$1,200,000) Ending cash (\$84,000) Deficit No, he will actually end up with a negative cash balance. 2. In problem 1 if there had been no increase in sales and all other facts were the same, what would Eli's ending cash balance be? What lesson do the examples in problems 1 and 2 illustrate? 4-

2. Solution: Eli Lilly (continued) Beginning cash \$120,000 No asset buildup ----- Profit 48,000 (8% × \$600,000) Ending cash \$168,000 The lesson to be learned is that increased sales can increase the financing requirements and reduce cash even for a profitable firm. 3. Gibson Manufacturing Corp.

expects to sell the following number of units of steel cables at the prices indicated under three different scenarios in the economy. The probability of each outcome is indicated. What is the expected value of the total sales projection? Outcome Probability Units Price A 0.20 100 \$20 B 0.50 180 25 C

0.30 210 30 4-3. Solution: Gibson Manufacturing Corporation

| (1) | (2) | (3) | (4) | (5) | (6) | Expected | Total | Value | Outcome | Probability |
|----------------------|-------|-------|---------|-----|-----|----------|-------|---------|---------|-------------|
| Units | Price | Value | (2 × 5) | A | B | C | | | | |
| 100 | \$20 | 2,000 | 400 | 180 | 25 | 4,500 | 2,250 | 6,300 | A | 0.20 |
| 180 | \$25 | 4,500 | 2,250 | 210 | 30 | 6,300 | 1,890 | | B | 0.50 |
| 210 | \$30 | 6,300 | 1,890 | | | | | | C | 0.30 |
| Total expected value | | | | | | | | \$4,540 | | |

4. The Alliance Corp. expects to sell the following number of units of copper cables at the prices indicated, under three different scenarios in the economy. The probability of each outcome is indicated. What is the expected value of the total sales projection? Outcome Probability Units Price A 0.30 200 \$15 B 0.50 320 30 C 0.20 410 40 4-4.

Solution: Alliance Corporation

| (1) | (2) | (3) | (4) | (5) | (6) | Expected | Total | Value | Outcome | Probability |
|----------------------|-------|--------|---------|-----|-----|----------|-------|----------|---------|-------------|
| Units | Price | Value | (2 × 5) | A | B | C | | | | |
| 200 | \$15 | 3,000 | 1,200 | 320 | 30 | 9,600 | 2,880 | 12,480 | A | 0.30 |
| 320 | 30 | 9,600 | 2,880 | 410 | 40 | 16,400 | 6,560 | | B | 0.50 |
| 410 | 40 | 16,400 | 6,560 | | | | | | C | 0.20 |
| Total expected value | | | | | | | | \$19,040 | | |

|. 30 | 200 | \$15 | \$3,000 | 900 | | B |. 50 | 320 | \$30 | 9,600 | 4,800 | | C |. 20
| 410 | \$40 | 16,400 | 3,280 | | | Total expected value | \$8,980 | 5. ER

Medical Supplies had sales of 2,000 units at \$160 per unit last year. The marketing manager projects a 25 percent increase in unit volume this year with a 10 percent price increase. Returned merchandise will represent 5 percent of total sales. What is your net dollar sales projection for this year?

4-5. Solution: ER Medical Supplies | | Unit volume 2,000 \times 1.25 | 2,500 | |
| Price \$160 \times 1.10 | \$176 | | Total Sales | \$440,000 | | Returns (6%) |

22,000 | | Net Sales | \$418,000 | 6. Cyber Security Systems had sales of 3,000 units at \$50 per unit last year. The marketing manager projects a 20 percent increase in unit volume sales this year with a 10 percent price increase. Returned merchandise will represent 6 percent of total sales. What is your net dollar sales projection for this year? 4-6. Solution: Cyber Security

Systems | Unit volume 3,000 \times 1.20 | 3,600 | | Price \$50 \times 1.10 | \times —
\$55 | | Total Sales | \$198,000 | | Returns (6%) | 11,880 | | Net Sales | \$186,

120 | 7. Sales for Ross Pro's Sports Equipment are expected to be 4,800 units for the coming month. The company likes to maintain 10 percent of unit sales for each month in ending inventory. Beginning inventory is 300 units. How many units should the firm produce for the coming month? 4-7.

Solution: Ross Pro's Sports Equipment | + | Projected sales | 4,800 | units | +
| Desired ending inventory | 480 | (10% \times 4,800) | — | Beginning inventory

| 300 | | | Units to be produced | 4,980 | | | 8. Digitex, Inc., had sales of 6,000 units in March. A 50 percent increase is expected in April. The company will maintain 5 percent of expected unit sales for April in ending inventory.

Beginning inventory for April was 200 units. How many units should the

company produce in April? 4-8. Solution: Digitex, Inc. | + | Projected sales | 9,

000 | units (6, 000 $\bar{\text{A}}$ — 1. 5) | |+ | Desired ending inventory | 450 | units (5% $\bar{\text{A}}$ — 9, 000) | |— | Beginning inventory | 200 | units | | | Units to be produced | 9, 250 | units | 9. Hoover Electronics has beginning inventory of 22, 000 units, will sell 60, 000 units for the coming month, and desires to reduce ending inventory to 30 percent of beginning inventory. How many units should Hoover produce? 4-9. Solution: Hoover Electronics |+ | Projected sales | 60, 000 | units | |+ | Desired ending inventory | 6, 600 |(30% $\bar{\text{A}}$ — 22, 000) | |— | Beginning inventory | 22, 000 | units | | | Units to be produced | 44, 600 | units | 10. On December 31 of last year, Barton Air Filters had in inventory 600 units of its product, which costs \$28 per unit to produce. During January, the company produced 1, 200 units at a cost of \$32 per unit. Assuming Barton Air Filters sold 1, 500 units in January, what was the cost of goods sold (assume FIFO inventory accounting)? 4-10. Solution: Barton Air Filters | | Cost of goods sold on 1, 500 units | | | | | | Old inventory: | | | | Quantity (Units) | 600 | | | Cost per unit |\$ 28 | | | Total |\$ 16, 800 | | | | | | New inventory: | | | | Quantity (Units) | 900 | | | Cost per unit |\$ 32 | | | Total |\$28, 800 | | | Total Cost of Goods Sold |\$45, 600 | 11. On December 31 of last year, Wolfson Corporation had in inventory 400 units of its product, which cost \$21 per unit to produce. During January, the company produced 800 units at a cost of \$24 per unit. Assuming that Wolfson Corporation sold 700 units in January, what was the cost of goods sold (assume FIFO inventory accounting)? 4-11. Solution: Wolfson Corporation | Cost of goods sold on 700 units | | | | | Old inventory: | | | | Quantity (Units) | 400 | | Cost per unit |\$ 21 | | Total |\$ 8, 400 | | | | | New inventory: | | | | Quantity (Units) | 300 | | Cost per unit |\$ 24 | | Total |\$ 7, 200 | | Total Cost of Goods Sold |\$15, 600 | 12. At the end of January, Lemon Auto Parts had an inventory of 825 units, which cost

\$12 per unit to produce. During February the company produced 750 units at a cost of \$16 per unit. If the firm sold 1,050 units in February, what was its cost of goods sold? a. Assume LIFO inventory accounting. b. Assume FIFO

inventory accounting. 4-12. Solution: Lemon Auto Parts a. LIFO Accounting |

Cost of goods sold on 1,050 units | | | New inventory: | | | Quantity (Units) |

750 | | Cost per unit |\$ 16 | | Total |\$12,000 | | Old inventory: | | | Quantity

(Units) | 300 | | Cost per unit |\$ 12 | | Total |\$ 3,600 | | Total Cost of Goods

Sold |\$15,600 | b. FIFO Accounting | Cost of goods sold on 1,050 units | | |

Old inventory: | | | Quantity (Units) | 825 | | Cost per unit |\$ 12 | | Total |\$ 9,

900 | | New inventory: | | | Quantity (Units) | 225 | | Cost per unit |\$ 16 | |

Total |\$ 3,600 | | Total Cost of Goods Sold |\$15,600 | 13. Convex Mechanical

Supplies produces a product with the following costs as of July 1, 2009:

Material \$ 6 Labor 4 Overhead 2 \$12 Beginning inventory at these costs on

July 1 was 5,000 units. From July 1 to December 1, Convex produced 15,000

units. These units had a material cost of \$10 per unit. The costs for labor and

overhead were the same. Convex uses FIFO inventory accounting. Assuming

that Convex sold 17,000 units during the last six months of the year at \$20

each, what would gross profit be? What is the value of ending inventory? 4-

13. Solution: Convex Mechanical Supplies | | Sales (17,000 @ \$20) | | |\$340,

000 | | | Cost of goods sold: | | | | | Old inventory: | | | | | Quantity (units) |

5,000 | | | | | Cost per unit |\$ 12 | | | | | Total | |\$ 60,000 | | | | | New inventory:

| | | | | Quantity (units) | 12,000 | | | | | Cost per unit |\$ 16 | | | | | Total | |

\$192,000 | | | | | Total cost of goods | | | | | sold | | |\$252,000 | | | Gross

profit | | |\$ 88,000 | | | | | | | Value of ending | | | | | inventory: | | | | |

Beginning inventory | | | | | (5,000 (\$12) | |\$ 60,000 | | | | | + Total

production | | | | | (15,000 (\$16) | |\$240,000 | | | | | Total inventory | | | | |

available for sale | |\$300, 000 | | | |— Cost of good sold | |\$252, 000 | | | |

Ending inventory | |\$ 48, 000 | | | | or | | | | | | 3, 000 units (\$16 = \$48, 000 |

14. Assume in problem 13 that Convex used LIFO accounting instead of FIFO.

What would gross profit be? What is the value of ending inventory? 4-14.

Solution: Convex Mechanical Supplies (Continued) | | Sales (17, 000 @ \$20) |

| |\$340, 000 | | | Cost of goods sold: | | | | | | New inventory: | | | | | | Quantity

(units) | 15, 000 | | | | | Cost per unit |\$ 16 | | | | | Total | |\$240, 000 | |

| | Old inventory: | | | | | | Quantity (units) | 2, 000 | | | | | Cost per unit

|\$ 12 | | | | | Total | |\$ 24, 000 | | | | Total cost of goods | | | | | sold | |

|\$264, 000 | | | Gross profit | |\$ 76, 000 | | | | | | | Value of ending | | | |

| | inventory: | | | | | | Beginning inventory | | | | | |(5, 000 (\$12) | |\$ 60,

000 | | |+ | Total production | | | | | |(15, 000 (\$16) | |\$240, 000 | | | |

Total inventory | | | | | | available for sale | |\$300, 000 | | |— | Cost of

good sold | |\$264, 000 | | | | Ending inventory | |\$ 36, 000 | | | | OR | |

| | | | 3, 000 units (\$12 = \$36, 000 | 15. Jerrico Wallboard Co. had a

beginning inventory of 7, 000 units on January 1, 2008. The costs associated with the inventory were: Material \$9. 00 unit Labor 5. 00 unit Overhead 4. 10

unit During 2004, Jerrico produced 28, 500 units with the following costs:

Material \$11. 50 unit Labor 4. 80 unit Overhead 5. 20 unit Sales for the year

were 31, 500 units at \$29. 60 each. Jerrico uses LIFO accounting. What was

the gross profit? What was the value of ending inventory? 4-15. Solution:

Jerrico Wallboard Co. | | Sales (31, 500 @ \$29. 60) | | |\$932, 400 | | | Cost of

goods sold: | | | | | | New inventory: | | | | | | Quantity (units) | 28, 500 | | | | |

Cost per unit |\$ 22. 50 | | | | | Total | |\$641, 250 | | | | Old inventory: | | | | | |

Quantity (units) | 3, 000 | | | | | Cost per unit |\$ 18. 10 | | | | | Total | |\$ 54,

300 | | | | Total cost of goods | | | | | sold | | |\$695, 550 | | | Gross profit | | |

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\$236, 850 | | | | | | | | Value of ending inventory: | | | | | | Beginning inventory
 | | | | | | (7, 000 (\$18. 10) | |\$126, 700 | | | |+ Total production | |\$641, 250 | |
 | | (28, 500 (\$22. 50) | | | | | | Total inventory | | | | | | available for sale | |
 \$767, 950 | | | |— Cost of good sold | |\$695, 550 | | | | Ending inventory | |\$
 72, 400 | | | | OR | | | | | | 4, 000 units (\$18. 10 = \$72, 400 | 16. J. Lo’s

Clothiers has forecast credit sales for the fourth quarter of the year as:
 September (actual) \$70, 000 Fourth Quarter October \$60, 000 November 55,
 000 December 80, 000 Experience has shown that 30 percent of sales are
 collected in the month of sale, 60 percent in the following month, and 10
 percent are never collected. Prepare a schedule of cash receipts for J. Lo’s
 Clothiers covering the fourth quarter (October through December). 4-16.

Solution: J. Lo’s Clothiers | | September | October | November | December | |
 Credit sales |\$70, 000 |\$60, 000 |\$55, 000 |\$80, 000 | | 30% Collected in
 month of sales | | | | | | | | 18, 000 | 16, 500 | 24, 000 | | 60% Collected in
 month after | | | | | | sales | | 42, 000 | 36, 000 | 33, 000 | | Total cash receipts
 | | | | | | |\$60, 000 |\$52, 500 |\$57, 000 |

17. Victoria’s Apparel has forecast credit sales for the fourth quarter of the year as: September (actual) \$50,
 000 Fourth Quarter October \$40, 000 November 35, 000 December 60, 000
 Experience has shown that 20 percent of sales are collected in the month of
 sale, 70 percent in the following month, and 10 percent are never collected.

Prepare a schedule of cash receipts for Victoria’s Apparel covering the fourth
 quarter (October through December). 4-17. Solution: Victoria’s Apparel | |
 September | October | November | December | | Credit sales |\$50, 000 |\$40,
 000 |\$35, 000 |\$60, 000 | | 20% Collected in month of sales| | | | | | | 8, 000
 | 7, 000 | 12, 000 | | 70% Collected in month after | | | | | | sales | | 35, 000 |
 28, 000 | 24, 500 | | Total cash receipts | | | | | | |\$43, 000 |\$35, 000 |\$36,

500 | 18. Pirate Video Company has made the following sales projections for the next six months. All sales are credit sales. March \$24, 000 June \$28, 000 April 30, 000 July 35, 000 May 18, 000 August 38, 000 Sales in January and February were \$27, 000 and \$26, 000, respectively. Experience has shown that of total sales, 10 percent are uncollectible, 30 percent are collected in the month of sale, 40 percent are collected in the following month, and 20 percent are collected two months after sale. Prepare a monthly cash receipts schedule for the firm for March through August. Of the sales expected to be made during the six months from March through August, how much will still be uncollected at the end of August? How much of this is expected to be collected later?

4-18. Solution: Pirate Video Company Cash Receipts Schedule

| | January | February | March | April | May | June | July | August |
|---|---------|-----------|-----------|----------|----------|----------|----------|----------|
| Forecasted unit sales | 4,000 | 10,000 | 8,000 | 6,000 | 15,000 | 12,000 | 9,000 | 6,000 |
| +Desired ending inventory | 15,000 | 12,000 | 9,000 | 6,000 | 15,000 | 12,000 | 9,000 | 6,000 |
| —Beginning inventory | 6,000 | 15,000 | 12,000 | 9,000 | 6,000 | 15,000 | 12,000 | 9,000 |
| Units to be produced | 13,000 | 7,000 | 5,000 | 13,000 | 7,000 | 5,000 | 13,000 | 7,000 |
| Cash Payments | | Feb | March | April | May | June | July | August |
| Materials (\$7/unit) month after production | | | | | | | | |
| Labor (\$3/unit) month of production | | | | | | | | |
| Fixed overhead | | | | | | | | |
| Dividends | | | | | | | | |
| Total Cash Payments | | \$105,000 | \$122,000 | \$88,000 | \$14,000 | \$14,000 | \$14,000 | \$14,000 |

21. Dina's Lamp Company has forecast its sales in units as follows:

| Month | January | February | March | April | May | June | July |
|-------|---------|----------|-------|-------|-------|-------|-------|
| Units | 1,000 | 800 | 900 | 1,400 | 1,550 | 1,800 | 1,400 |

Dina's always keeps an ending inventory equal to 120 percent of the next month's expected sales. The ending inventory for December (January's beginning inventory) is 1,200 units, which is consistent with this policy. Materials cost \$14 per unit and are paid for in the month

after purchase. Labor cost is \$7 per unit and is paid in the month the cost is incurred. Overhead costs are \$8,000 per month. Interest of \$10,000 is scheduled to be paid in March, and employee bonuses of \$15,500 will be paid in June. Prepare a monthly production schedule and a monthly summary of cash payments for January through June. Dina produced 800 units in

December. 4-21. Solution: Dina's Lamp Company Production Schedule | | Jan.

| Feb. | March | April | May | June | July | | Forecasted unit sales | 1,000 | |

900 | 1,400 | 1,550 | 1,800 | 1,400 | | + Desired ending inventory | 960 | 1,

080 | 1,680 | 1,860 | 2,160 | 1,680 | | | — Beginning inventory | 1,200 | 960

| 1,080 | 1,680 | 1,860 | 2,160 | | | = Units to be produced | 760 | 920 | 1,

500 | 1,580 | 1,850 | 1,320 | | | Summary of Cash Payments | | | Dec. | Jan. |

Feb. | March | April | May | June | | Units produced | 800 | 760 | 920 | 1,500 |

1,580 | 1,850 | 1,320 | | | Material cost (\$14/unit) month after purchase | | | |

| | | | | \$11,200 | \$10,640 | \$12,880 | \$21,000 | \$22,120 | \$25,900 | | Labor

cost (\$5/unit) month incurred | | | | | | | | | 5,320 | 6,440 | 10,500 | 11,

060 | 12,950 | \$9,240 | | Overhead cost | | 8,000 | 8,000 | 8,000 | 8,000 |

8,000 | 8,000 | | Interest | | | | 10,000 | | | | Employee bonuses | | | | | |

15,500 | | Total Cash Payments | | \$24,520 | \$25,080 | \$41,380 | \$40,060 |

\$43,070 | \$58,640 | 22. Graham Potato Company has projected sales of \$6,

000 in September, \$10,000 in October, \$16,000 in November, and \$12,000

in December. Of the company's sales, 20 percent are paid for by cash and 80

percent are sold on credit. Experience, shows that 40 percent of accounts

receivable are paid in the month after the sale, while the remaining 60

percent are paid two months after. Determine collections for November and

December. Also assume Graham's cash payments for November and

December are \$13,000 and \$6,000, respectively. The beginning cash

balance in November is \$5, 000, which is the desired minimum balance.

Prepare a cash budget with borrowing needed or repayments for November and December. (You will need to prepare a cash receipts schedule first.) 4-

22. Solution: Graham Potato Company Cash Receipts Schedule | | September | October | November | December | | Sales |\$6, 000 |\$10, 000 |\$16, 000 |\$12, 000 | | Credit sales (80%) | 4, 800 | 8, 000 | 12, 800 | 9, 600 | | Cash sales (20%) | 1, 200 | 2, 000 | 3, 200 | 2, 400 | | Collections in month after | | | | | sales (40%) | | | 3, 200 | 5, 120 | | Collections two months | | | | | after sales (60%) | | | 2, 880 | 4, 800 | | Total cash receipts | | | | | |\$9, 280 |\$12, 320

| Graham Potato Company (Continued) Cash Budget | | November | December | | Cash receipts |\$ 9, 280 |\$12, 320 | | Cash payments | 13, 000 | 6, 000 | | Net Cash Flow |(3, 720) | 6, 320 | | Beginning Cash Balance | 5, 000 | 5, 000 | | Cumulative Cash Balance | 1, 280 | 11, 320 | | Monthly Loan or (Repayment) | 3, 720 |(3, 720) | | Cumulative Loan Balance | 3, 720 |-0- | | Ending Cash Balance |\$ 5, 000 |\$ 7, 600 |

23. Juan's Taco Company has restaurants in five college towns. Juan wants to expand into Austin and College Station and needs a bank loan to do this. Mr. Bryan, the banker, will finance construction if Juan can present an acceptable three-month financial plan for January through March. Following are actual and forecasted sales figures: | Actual | Forecast | Additional | | | Information | | November |\$120, 000 | January |\$190, 000 | April forecast |\$230, 000 | | December | 140, 000 | February | 210, 000 | | | | | March | 230, 000 | | | Of Juan's sales, 30 percent are for cash and the remaining 70 percent are on credit. Of credit sales, 40 percent are paid in the month after sale and 60 percent are paid in the second month after the sale. Materials cost 20 percent of sales and are paid for in cash. Labor expense is 50 percent of sales and is also paid in the

month of sales. Selling and administrative expense is 5 percent of sales and is also paid in the month of sales. Overhead expense is \$12, 000 in cash per month; depreciation expense is \$25, 000 per month. Taxes of \$20, 000 and dividends of \$16, 000 will be paid in March. Cash at the beginning of January is \$70, 000, and the minimum desired cash balance is \$65, 000. For January, February, and March, prepare a schedule of monthly cash receipts, monthly cash payments, and a complete monthly cash budget with borrowings and repayments.

4-23. Solution: Juan's Taco Company Cash Receipts Schedule | |
 November | December | January | February | March | April | | Sales |\$120, 000
 |\$140, 000 |\$190, 000 |\$210, 000 |\$230, 000 |\$230, 000 | | Credit sales
 (70%) | 84, 000 | 98, 000 | 133, 000 | 147, 000 | 161, 000 | 161, 000 | | Cash
 sales (30%) | 36, 000 | 42, 000 | 57, 000 | 63, 000 | 69, 000 | 69, 000 | |
 Collections (month after credit sales) | | | | | | | 40% | | 33, 600 | 39, 200 |
 53, 200 | 58, 800 | 64, 400 | | Collections (two months after credit | | | | | | |
 sales) 60% | | | 50, 400 | 58, 800 | 79, 800 | 88, 200 | | Total Cash Receipts | |
 |\$146, 600 |\$175, 000 |\$207, 600 | | 4-23. (Continued) Juan's Taco Company

Cash Payments Schedule | | January | February | March | | Payments for
 Material Purchases (20% of current month's sales) |\$ 38, 000 |\$ 42, 000 |
 \$46, 000 | | Labor Expense (50% of sales) | 95, 000 | 105, 000 | 115, 000 | |
 Selling and Admin. Exp. (5% of sales) | 9, 500 | 10, 500 | 11, 500 | |
 Overhead | 12, 000 | 12, 000 | 12, 000 | | Taxes | | | 20, 000 | | Dividends | | |
 16, 000 | | Total Cash Payments* |\$154, 500 |\$169, 500 |\$220, 500 | *The
 \$25, 000 of depreciation is excluded because it is not a cash expense. 4-23.

(Continued) Juan's Taco Company Cash Budget | | January | February | March
 | | Total Cash Receipts |\$146, 600 |\$175, 000 |\$207, 600 | | Total Cash
 Payments | 154, 500 | 169, 500 | 220, 500 | | Net Cash Flow |\$(7, 900) | 5, 500

|(12, 900) | | Beginning Cash Balance | 70, 000 | 65, 000 | 67, 600 | |
 Cumulative Cash Balance | 62, 100 | 70, 500 | 54, 700 | | Monthly Loan or
 (repayment) | 2, 900 |(2, 900) | 10, 300 | | Cumulative Loan Balance | 2, 900
 |-0- | 10, 300 | | Ending Cash Balance |\$ 65, 000 |\$ 67, 600 |\$ 65, 000 | 24.

Hickman Avionics's actual sales and purchases for April and May are shown here along with forecasted sales and purchases for June through September.

| | April (actual) | May (actual) | June (forecast) | July (forecast) | August (forecast) | September (forecast) |
|-----------|----------------|--------------|-----------------|-----------------|-------------------|----------------------|
| Sales | \$410, 000 | 400, 000 | 380, 000 | 360, 000 | 390, 000 | 420, 000 |
| Purchases | \$220, 000 | 210, 000 | 200, 000 | 250, 000 | 300, 000 | 220, 000 |

The company makes 10 percent of its sales for cash and 90 percent on credit. Of the credit sales, 20 percent are collected in the month after the sale and 80 percent are collected two months later. Hickman pays for 40 percent of its purchases in the month after purchase and 60 percent two months after. Labor expense equals 10 percent of the current month's sales. Overhead expense equals \$15, 000 per month. Interest payments of \$40, 000 are due in June and September. A cash dividend of \$20, 000 is scheduled to be paid in June. Tax payments of \$35, 000 are due in June and September. There is a scheduled capital outlay of \$300, 000 in September. Hickman Avionics's ending cash balance in May is \$20, 000. The minimum desired cash balance is \$15, 000. Prepare a schedule of monthly cash receipts, monthly cash payments, and a complete monthly cash budget with borrowing and repayments for June through September. The maximum desired cash balance is \$50, 000. Excess cash (above \$50, 000) is used to buy marketable securities. Marketable securities are sold before borrowing funds in case of a cash shortfall (less than \$15, 000). 4-24. Solution: Hickman Avionics Cash Receipts Schedule | | April | May

| June | July | Aug. | Sept. | | Sales |\$410, 000 |\$400, 000 |\$380, 000 |\$360, 000 |\$390, 000 |\$420, 000 | | Credit Sales (90%) | 369, 000 | 360, 000 | 342, 000 | 324, 000 | 351, 000 | 378, 000 | | Cash Sales (10%) | 41, 000 | 40, 000 | 38, 000 | 36, 000 | 39, 000 | 42, 000 | | Collections (month after sale) 20% | | | | | | | 73, 800 | 72, 000 | 68, 400 | 64, 800 | 70, 200 | | Collections (second month after sale) 80% | | | | | | | | | | | | | | | | | 295, 200 | 288, 000 | 273, 600 | 259, 200 | | Total Cash Receipts | | |\$405, 200 |\$392, 400 |\$377, 400 |\$371, 400 | 4-24. (Continued) Hickman Avionics Cash Payments

Schedule | | April | May | June | July | Aug. | Sept. | | Purchases |\$220, 000 | \$210, 000 |\$200, 000 |\$250, 000 |\$300, 000 |\$220, 000 | | Payments (month after purchase-40%) | | | | | | | | | 88, 000 | 84, 000 | 80, 000 | 100, 000 | 120, 000 | | Payments (second month after purchase-60%) | | | | | | | | | | | | | | | | | | | 132, 000 | 126, 000 | 120, 000 | 150, 000 | | Labor Expense | | | | | | | | | (10% of sales) | | | 38, 000 | 36, 000 | 39, 000 | 42, 000 | | Overhead | | | 15, 000 | 15, 000 | 15, 000 | 15, 000 | | Interest Payments | | | 40, 000 | | | 40, 000 | | | Cash Dividend | | | 20, 000 | | | | Taxes | | | 35, 000 | | | 35, 000 | | Capital Outlay | | | | | 300, 000 | | Total Cash Payments | | |\$364, 000 |\$257, 000 |\$274, 000 |\$702, 000 | 4-24. (Continued) Hickman Avionics Cash

Budget | | June | July | August | September | | Cash Receipts |\$405, 200 | \$392, 400 |\$377, 400 |\$371, 400 | | Cash Payments | 364, 000 | 257, 000 | 274, 000 | 702, 000 | | Net Cash Flow | 41, 200 | 135, 400 | 103, 400 |(330, 600) | | Beginning Cash Balance | 20, 000 | 50, 000 | 50, 000 | 50, 000 | | Cumulative Cash Balance | 61, 200 | 185, 400 | 153, 400 |(280, 600) | | Monthly Borrowing or (Repayment) |-- |-- |-- |*80, 600 | | Cumulative Loan Balance |-- |-- |-- | 80, 600 | | Marketable Securities Purchased | 11, 200 | 135, 400 | 103, 400 |-- | | (Sold) | |-- |-- | 250, 000 | | Cumulative Marketable

Securities | 11, 200 | 146, 600 | 250, 000 |-- | | Ending Cash Balance | 50, 000
 | 50, 000 | 50, 000 | 50, 000 | *Cumulative Marketable Sec. (Aug) \$250, 000
 Cumulative Cash Balance (Sept) —280, 600 Required (ending) Cash Balance
 50, 000 Monthly Borrowing —\$80, 600 25. Carter Paint Company has plants
 in nine midwestern states. Sales for last year were \$100 million, and the
 balance sheet at year-end is similar in percentage of sales to that of previous
 years (and this will continue in the future). All assets (including fixed assets)
 and current liabilities will vary directly with sales. BALANCE SHEET (in \$
 millions) Assets Liabilities and Stockholders' Equity Cash \$ 5 Accounts
 payable \$15 Accounts receivable 15 Accrued wages 6 Inventory 30 Accrued
 taxes 4 Current assets 50 Current liabilities 25 Fixed assets 40 Notes payable
 30 Common stock 15 Retained earnings 20 Total liabilities and Total assets
 \$90 stockholders' equity \$90 Carter Paint has an aftertax profit margin of 5
 percent and a dividend payout ratio of 30 percent. If sales grow by 10
 percent next year, determine how many dollars of new funds are needed to
 finance the expansion. (Assume Carter Paint is already using assets at full
 capacity and that plant must be added.) 4-25. Solution: Carter Paint
 Company [pic] [pic] [pic] [pic] [pic][pic] [pic] 26. Jordan Aluminum Supplies
 has the following financial statements, which are representative of the
 company's historical average. Income Statement Sales \$300, 000 Expenses
 247, 000 Earnings before interest and taxes \$ 53, 000 Interest 3, 000
 Earnings before taxes \$ 50, 000 Taxes 20, 000 Earnings after taxes \$ 30, 000
 Dividends \$ 18, 000 Balance Sheet Assets Liabilities and Stockholders' Equity
 Cash \$ 8, 000 Accounts payable \$ 6, 000 Accounts receivable 20, 000
 Accrued wages 2, 000 Inventory 62, 000 Accrued taxes 4, 000 Current assets
 \$ 90, 000 Current liabilities \$ 12, 000 Fixed assets 100, 000 Notes payable

10, 000 Long-term debt 20, 000 Common stock 80, 000 Retained earnings
68, 000 Total liabilities and Total assets \$190, 000 stockholders' equity \$190,
000 Jordan is expecting a 20 percent increase in sales next year, and
management is concerned about the company's need for external funds. The
increase in sales is expected to be carried out without any expansion of fixed
assets, but rather through more efficient asset utilization in the existing
stores. Among liabilities, only current liabilities vary directly with sales. Using
the percent-of-sales method, determine whether Jorda