# Chapter 2: Business Processes and Accounting Information

## QUESTIONS

1. The four business processes are: (1) business organization and strategy—determine long-term objectives, (2) operating—profit-making activities, (3) capital resources—investing and financing activities, and (4) performance measurement and management—evaluating.
2. The three sub-processes of the operating process are: (1) marketing/sales/collection/customer service, (2) conversion, and (3) purchasing/human resources/payment.
3. The balanced scorecard is a holistic approach to planning and evaluating that uses financial and nonfinancial measures in four perspectives.
4. The four perspectives of the balanced scorecard are: (1) financial, (2) internal, (3) customer, and (4) learning and growth.
5. Some measures in the financial perspective include ratios such as: (1) return on investment, (2) quick, (3) return on owners' equity, (4) gross margin, (5) current [Chapter One], (6) return on sales [Chapter One], and (7) debt-to-equity [Chapter One].
6. Some measures in the internal perspective include time measures, quality measures, and measures of employee satisfaction.
7. Some measures in the customer perspective include customer satisfaction, growth in market shares, number of customer retained, and growth in the number of customers.
8. Some measures in the learning and growth perspective include research and development expenditures, the number of new products introduced, employee training, and information systems development.
9. An internal control system must: (1) promote operational efficiency, (2) ensure the accuracy of accounting information, and (3) encourage management and employee compliance with applicable laws and regulations.
10. The five procedures employed in an internal control system are: (1) requiring proper authorization, (2) separation of duties, (3) maintaining adequate documentation, (4) physically controlling assets and information, and (5) providing independent checks on performance.
11. Internal controls are important to safeguard assets and information.
12. If a company operates in a relatively certain environment with a mechanistic structure, it will tend to use an efficiency strategy. If a company operates in a relatively uncertain environment with an organic structure, it will tend to use a flexibility strategy.
13. The three phases of the management cycle are: (1) planning, (2) performing, and (3) evaluating. Planning leads to performing. Then plans are compared to performance during the evaluating phase so that planning can be done for the next period.
14. A lockbox system is where the business established bank accounts at various locations across the area where customers live in order to receive customer payments more promptly.

15. Internal control over cash is critical because ownership is difficult, if not impossible, to prove.
16. A bank reconciliation is a comparison of the bank's records to the business's records to adjust the recorded cash amount and reflect any differences.
17. The bank statement is the bank's report on the activity in a customer's account. It shows the deposits made and the checks written as well as any charges levied by the bank or amounts added to the customer's account by the bank.
18. The bank balance is adjusted for: (1) outstanding checks, (2) deposits in transit, and (3) errors made by the bank.
19. The company balance is adjusted for (1) interest earned, (2) service charges, (3) nonsufficient funds checks, and (4) errors.
20. Strategic planning is long term in nature while operating planning is short term.

**EXERCISES**

| | | |
|---|---|---|
| E2.1 | Environment: | certain |
| | Structure: | mechanistic |
| | Strategy: | efficiency |
| E2.2 | Environment: | certain |
| | Structure: | mechanistic |
| | Strategy: | efficiency |
| E2.3 | Environment: | uncertain |
| | Structure: | organic |
| | Strategy: | flexibility |

| | | | | |
|---|---|---|---|---|
| E2.4 | a. | performing | b. | planning |
| | c. | planning | d. | performing |
| | e. | evaluating | | |
| E2.5 | a. | planning | b. | evaluating |
| | c. | performing | d. | evaluating |
| | e. | planning | | |

E2.6 Separation of duties

E2.7 Proper authorization

E2.8 Physical control of assets

E2.9 Independent checks on performance

E2.10

| Balance per bank: | | Balance per books: | |
|---|---|---|---|
| Starting balance | $17,252 | Starting balance | $16,243 |
| Deposits in transit | 562 | Service charge | (12) |
| Outstanding checks | ? | NSF check | (56) |
| Adjusted balance | $16,175 | Adjusted balance | $16,175 |

Outstanding checks = $17,252 - $562 - $16,175 = $1,639

E2.11

| Balance per bank: | | Balance per books: | |
|---|---|---|---|
| Starting balance | $8,610 | Starting balance | $9,060 |
| Outstanding checks | (825) | Service charge | (7) |
| Deposits in transit | ? | Adjusted balance per book | $9,053 |
| Adjusted balance per bank | $9,053 | | |

Deposits in transit = $9,053 + $825 - $8,610 = $1,268.

E2.12

| Balance per bank: | | Balance per books: | |
|---|---|---|---|
| Starting balance | $8,939 | Starting balance | $8,700 |
| Deposit in transit | 856 | Service charge | (15) |
| Outstanding checks | (1,110) | Adjusted balance | $8,685 |
| Adjusted balance | $8,685 | | |

E2.13

| Balance per bank: | | Balance per books: | |
|---|---|---|---|
| Starting balance | $ 824.00 | Starting balance | $1,289.00 |
| Deposits in transit | 900.00 | Service charge | (15.00) |
| Outstanding checks | (573.50) | Interest earned | 0.50 |
| Adjusted balance | $1,150.50 | NSF check | (124.00) |
| | | Adjusted balance | $1,150.50 |

$1,150.50

E2.14 a. capital resources; financing b. operating
c. operating d. capital resources; investing

E2.15 a. operating b. capital resources; financing
c. capital resources; investing d. operating

E2.16 a. operating b. capital resources; investing
c. capital resources; investing d. operating

E2.17 Customer response time = 0.8 + 3.5 + 2.0 + 6.8 + 4.5 = 17.6 days
Value-added time = 6.8 days

E2.18 Customer response time = 1.3 + 5 + 3 + 1 + 0.5 = 10.8 days
Pauley should reduce the nonvalue-added time of 1.3 + 3 + 1 + 0.5 = 5.8

**PROBLEMS**

P2.1

| Balance per bank: | |
|---|---|
| Starting balance | $11,920.91 |
| Outstanding checks: | |
| 758 | (316.34) |
| 762 | (89.36) |
| 765 | (461.30) |
| Deposits in transit | 1,275.98 |
| Error made by bank | 153.60 |
| Adjusted balance | $12,483.49 |

| Balance per books: | |
|---|---|
| Starting balance | $12,732.36 |
| NSF check | (212.87) |
| Error made by company | (36.00) |
| Adjusted balance | $12,483.49 |

P2.2

| Balance per bank: | | Balance per books: | |
|---|---|---|---|
| Starting balance | $2,029 | Starting balance | $1,923 |
| Outstanding checks: | | NSF check | (150) |
| 421 | (250) | Service charge | (45) |
| 422 | (370) | Adjusted balance | $1,728 |
| Deposit in transit | 319 | | |
| Adjusted balance | $1,728 | | |

P2.3

| | |
|---|---|
| April disbursements according to bank statement | $49,700 |
| Less March disbursements clearing the bank in April | 12,600 |
| April checks clearing the bank in April | $37,100 |
| Add outstanding checks for April | 7,500 |
| Total April disbursements | $44,600 |

P2.4 Answers vary depending on year (ratios) and students (balanced scorecard). Students should consider all the balanced scorecard measures discussed in the chapter and how they relate to this company.

P2.5 Answers vary depending on year (ratios) and students (balanced scorecard). Students should consider all the balanced scorecard measures discussed in the chapter and how they relate to this company.

P2.6 Answers vary depending on year (ratios) and students (balanced scorecard). Students should consider all the balanced scorecard measures discussed in the chapter and how they relate to this company.

P2.7 Quick ratio:
($22,000 + $41,500)/($24,000 + $3,500 + $6,750) = $63,500/$34,250 = 1.85
Current ratio:
($22,000 + $41,500 + $72,000)/($24,000 + $3,500 + $6,750) = $135,500/$34,250 = 3.96
Gross margin ratio:
$152,000/$400,000 = 38%
Return on sales ratio:
$27,500/$400,000 = 6.88%
Return on investment ratio:
$27,500/[($343,500 + $316,000)/2] = $27,500/$329,750 = 8.34%
Return on owners' equity ratio:
$27,500/[($80,000 + $80,000 + $129,250 + $86,500)/2] = $27,500/$187,875 = 14.64%
Debt to equity ratio:
($24,000 + $3,500 + $6,750 + $100,000)/($80,000 + $129,250) = $134,250/$209,250 = 0.6
Accounts receivable turnover and days in the collection cycle:
$400,000/[($41,500+$39,000)/2] = 9.94; 365/9.94 = 36.72 days
Inventory turnover and days in the selling cycle:
$248,000/[($72,000+$64,000)/2] = 3.65; 365/3.65 = 100 days
Accounts payable turnover and days in the payment cycle:
$248,000/[($24,000+$37,000)/2] = 8.13; 365/8.13 = 44.9 days .

P2.8 Quick ratio:
($10,900 + $19,600)/$25,000 = $30,500/$25,000 = 1.22
Current ratio:
($10,900 + $19,600 + $28,200)/$25,000 = $58,700/$25,000 = 2.35
Gross margin ratio:
$58,850/140,000 = $42.04%
Return on sales ratio:
$11,795/$140,000 = 8.43%
Return on investment ratio:
$11,795/[($144,400 + $138,600)/2] = $11,795/$141,500 = 8.34%
Return on owners' equity ratio:
$11,795/[($97,400 + $92,800)/2] = $11,795/$95,100 = 12.4%
Debt to equity ratio:
($25,000 + $22,000)/$97,400 = $47,000/$97,400 = 0.48
Accounts receivable turnover and days in the collection cycle:
$140,000/[($19,600+$18,800)/2] = 7.29; 365/7.29 = 50.07 days
Inventory turnover and days in the selling cycle:
$81,150/[($28,200+$24,800)/2] = 3.06; 365/3.06 = 119.28 days
Accounts payable turnover and days in the payment cycle:
Note: Since we know purchases, we will not need to use a surrogate number. However, we do not know accounts payable, so we must use current liabilities as a surrogate. $83,000/[($25,000+$23,800)/2] = 3.40; 365/3.40 = 107.35 days

P2.9

| | | | |
|---|---|---|---|
| a. | E | b. | E |
| c. | A | d. | P |
| e. | I | f. | I |
| g. | P | h. | A |
| i. | I | j. | E |
| k. | A | l. | P |
| m. | E | n. | A or P |
| o. | P | p. | I |
| q. | E | r. | I |
| s. | I | t. | A |
| u. | I | v. | A |
| w. | P | x. | P |
| y. | A or P | z. | E |

**CASES**

C2.1 Answers vary.
C2.2 Answers vary. Students should explain how to locate reconciling items and whether to adjust the bank or book column for each item.

## CRITICAL THINKING

CT2.1 (A)

Quick ratios:
2007 ($42,000 + $14,000 + $192,000/$178,000 = $248,000/$178,000 = 1.39
2006 ($41,000 + $10,000 + $178,000)/$207,000 = $229,000/$207,000 = 1.11
Current ratios:
2007 $496,000/$178,000 = 2.79
2006 $530,000/$207,000 = 2.56
Gross margin ratios:
2007 $676,000/$2,085,000 = 32.42%
2006 $623,000/$1,920,000 = 32.45%
Return on sales ratios:
2007 $60,000/$2,085,000 = 2.88%
2006 $65,000/$1,920,000 = 3.39%
Return on investment ratios:
2007 $60,000/[($1,029,000 + $1,079,000)/2] = $60,000/$1,054,000 = 5.69%
2006 $65,000/[($1,079,000 + $928,000)/2] = $65,000/$1,003,500 = 6.48%
Return on owners' equity ratios:
2007 $60,000/[($761,000 + $782,000)/2] = $60,000/$771,500 = 7.78%
2006 $65,000/[($782,000 + $629,000)/2] = $65,000/$705,500 = 9.21%
Debt to equity ratios:
2007 ($178,000 + $90,000)/$761,000 = $268,000/$761,000 = 0.35
2006 ($207,000 + $90,000)/$782,000 = $297,000/$782,000 = 0.38
Accounts receivable turnover and days in the collection cycle:
2007 $2,085,000/[($192,000+$178,000)/2] = 11.27; 365/11.27 = 32.39 days
2006 $1,920,000/[($178,000+$152,000)/2] = 11.64; 365/11.64 = 31.36 days
Inventory turnover and days in the selling cycle:
2007 $1,409,000/[($248,000+$301,000)/2] = 5.13; 365/5.13 = 71.15 days
2006 $1,297,000/[($301,000+$316,000)/2] = 4.20; 365/4.20 = 86.90 days
Accounts payable turnover and days in the payment cycle:
2007 $1,409,000/[($98,000+$106,000)/2] = 13.81; 365/13.81 = 26.43 days
2006 $1,297,000/[($106,000+$110,000)/2] = 12.01; 365/12.01 = 30.39 days

(B) Answers vary. Students should note that the ratios that measure profitability are slightly lower in 2003 than in 2002.

(C) Answers vary.

CT2.2 By using a lockbox system, Niyongere will have its cash sooner and could invest this cash to earn five percent. Currently the total cash inflow time is eight days and this could be cut to five days. Therefore for three days, Niyongere could earn interest of five percent. The interest earned on each days' cash receipts would be: $300,000 * 0.05 * 3/365 = $123.29. Since the lockbox system costs $6,000 per month and, therefore, $200 per day ($6,000/30), Niyongere should not invest in a lockbox system.

## ETHICAL CHALLENGES

EC2.1 Answers vary. Students must consider private versus public information and why companies may not want to release balanced scorecard information to employees.

EC2.2 Answers vary. Students should consider the issue of private versus public information and why companies may not want to release balanced scorecard information to shareholders.

## COMPUTER APPLICATIONS

CA2.1

| **Data** | **2009** | **2008** | **2007** |
|---|---|---|---|
| Cash | 42,000 | 41,000 | 39,000 |
| Temporary investments | 14,000 | 10,000 | 9,000 |
| Accounts receivable | 192,000 | 178,000 | 152,000 |
| Inventories | 248,000 | 301,000 | 316,000 |
| Total | 496,000 | 530,000 | 516,000 |
| Land | 75,000 | 75,000 | 75,000 |
| Buildings | 430,000 | 445,000 | 305,000 |
| Equipment | 28,000 | 29,000 | 32,000 |
| Total assets | 1,029,000 | 1,079,000 | 928,000 |
| | | | |
| Accounts payable | 98,000 | 106,000 | 110,000 |
| Notes payable, current | 38,000 | 60,000 | 60,000 |
| Other current liabilities | 42,000 | 41,000 | 39,000 |
| Total current liabilities | 178,000 | 207,000 | 209,000 |
| Long-term liabilities | 90,000 | 90,000 | 90,000 |
| Total liabilities | 268,000 | 297,000 | 299,000 |
| Owners' equity | 761,000 | 782,000 | 629,000 |
| Total liabilities & owners' equity | 1,029,000 | 1,079,000 | 928,000 |
| | | | |
| Sales | 2,085,000 | 1,920,000 | 1,880,000 |
| Cost of goods sold | 1,409,000 | 1,297,000 | 1,165,000 |
| Gross margin | 676,000 | 623,000 | 715,000 |
| Net income | 60,000 | 65,000 | 63,000 |
| | | | |
| **Ratios** | **2009** | **2008** | |

| | | | |
|---|---|---|---|
| Quick | 1.393258 | 1.10628 | |
| Current | 2.786517 | 2.560386 | |
| Gross margin | 0.324221 | 0.324479 | |
| Return on sales | 0.028777 | 0.033854 | |
| Return on investment | 0.056926 | 0.064773 | |
| Return on owners' equity | 0.077771 | 0.092133 | |
| Debt-to-equity | 0.352168 | 0.379795 | |
| Accounts receivable turnover | 11.27027 | 11.63636 | |
| Days in collection cycle | 32.38609 | 31.36719 | |
| Inventory turnover | 5.132969 | 4.204214 | |
| Days in the selling cycle | 71.10894 | 86.81766 | |
| Accounts payable turnover | 13.81373 | 12.00926 | |
| Days in the payment cycle | 26.423 | 30.39322 | |

CA2.1 Answers will vary depending on the sources located.