ACC1701XA
ACCOUNTING FOR DECISION MAKERS
SEMESTER 1 2025 / 2026

SELF STUDY ANSWER SOLUTIONS

PART 2 (Chapter 8 – 15)

This document contains solutions only to the textbook questions that have been assigned for self-study. Refer to the "*Detailed Course Schedule Outline*" on Canvas for the assigned list of self-study questions.

CONTENTS:

Note: Separate solutions will be provided for tutorial questions.

CHAPTER 8

PE 8-5 (LO2) Inventory Purchases

(1). and (2).

Perpetual			Periodic		
Inventory	37,500		Purchases	37,500	
Accounts Payable		37,500	Accounts Payable		37,500

PE 8-6 (LO2) Transportation Costs

(1). and (2).

Perpetual			Periodic		
Inventory	920		Freight In	920	
Cash		920	Cash		920

PE 8-7 (LO2) Purchase Returns

(1). and (2).

Perpetual			Periodic		
Accounts Payable	3,000		Accounts Payable	3,000	
Inventory		3,000	Purchase Returns		3,000

Returned 20 tables costing £150 each; 20 × £150 = £3,000.

PE 8-8 (LO2) Purchase Discounts

(1). and (2).

Perpetual			Periodic		
Accounts Payable	34,500		Accounts Payable	34,500	
Inventory		690	Purchase Discounts		690
Cash		33,810	Cash		33,810

Paid for 230 tables [(250 purchased – 20 returned) × £150 = $34,500] with a 2% discount (£34,500 × 0.02 = £690).

PE 8-9 (LO2) Sales

(1). and (2).

Perpetual			Periodic		
Accounts Receivable	14,000		Accounts Receivable.....	14,000	
Sales (70 × £200).....		14,000	Sales		14,000
Cost of Goods Sold.....	10,570				
Inventory (70 × £151) .		10,570			

Cost per table

Initial cost	£150 per table
Transportation	£920/(250 tables – 20 tables returned) = £920/230 tables = £4 per table
Discount	£690/230 tables = £3 per table
Total	£150 + £4 – £3 = £151 per table

PE 8-10 (LO3) Closing Inventory Entries for a Periodic System

(1).	Inventory	34,730	
	Purchase Returns	3,000	
	Purchase Discounts.....	690	
	Freight In		920
	Purchases.....		37,500
(2).	Cost of Goods Sold.....	10,570	
	Inventory(£34,730 – £24,160)		10,570

PE 8-14 (LO3) Inventory Errors—Multiple Years

2025

	Beginning inventory	$ XXX	(OK)
+	Purchases	XXX	(OK)
=	Cost of goods available for sale	$ XXX	(OK)
–	Ending inventory	2,000	(understated)
=	Cost of goods sold	$2,000	(overstated)
	Net income	$2,000	(understated)

Correct net income: $3,000 + $2,000 = $5,000

PE 8-18 (LO4) Weighted Average Cost Formula

	Cameras	Costs
Beginning inventory	8	NT$ 800
Net purchases	34	4,000
Goods available for sale	42	NT$4,800

($4,800/42 units) = $114.286 per unit

(1) Weighted average cost of goods sold: 26 units × NT$114.286 per unit = NT$2,971 (rounded)

(2) Weighted average ending inventory: 16 units × NT$114.286 per unit = NT$1,829 (rounded)

E 8-2 (LO1) Determine the Correct Inventory Amount

£ 594,000	Counted
+50,000	1.Title passed to Beta when goods were shipped
+ 0	2. No effect
+ 0	3. No effect
+70,000	4. Title remains with Beta until purchaser receives goods
+ 0	5. No effect
£714,000	Ending inventory

E 8-4 (LO2) Perpetual Inventory System

Oct.	2	Inventory	27,650	
		Accounts Payable		27,000
		Cash		650
	5	Accounts Receivable	8,250	
		Sales Revenue		8,250
		Cost of Goods Sold	4,900	
		Inventory		4,900
	10	Accounts Payable	13,950	
		Inventory		279*
		Cash		13,671
		*(HK$13,950 × 0.02 = HK$279)		
	14	Accounts Payable	1,100	
		Inventory		1,100
	19	Cash	4,560	
		Accounts Receivable		4,560

20	Accounts Payable	11,950*	
	Cash		11,950
	*(HK$27,000 – HK$13,950 – HK$1,100 = HK$11,950)		
22	Accounts Receivable	5,200	
	Sales Revenue		5,200
	Cost of Goods Sold.....	3,800	
	Inventory.....		3,800

Beginning inventory	HK$12,000
	27,650
	(4,900)
	(279)
	(1,100)
	(3,800)
Ending inventory.....	HK$29,571

E 8-8 (LO2, 3) Computing Inventory and Cost of Goods Sold

1. FIFO

Beginning inventory (46 X $1,067).....		$49,082
Purchases		
Sept. 12 (90 X $1,122)	$100,980	
Sept. 19 (40 X $1,144)	45,760	
Sept. 26 (88 X $1,155)	101,640	248,380
Cost of goods available for sale		297,462
Less: Ending inventory (22 X $1,155).....		25,410
Cost of goods sold.....		$272,052

Calculation

Date	Units	Unit Cost	Total Cost
Sept. 1	46	€ 970	€ 49,082
Sept. 12	90	1,122	100,980
Sept. 19	40	1,144	45,760
Sept. 26	66	1,155	76,230
	242		€272,052

Weighted Average Cost

Cost of goods available for sale	€297,462
Less: Ending inventory (22 X €1,126.75*).....	24,788.5
Cost of goods sold.....	€272,673.5

***Average unit cost is €1,126.75 computed as follows:**

€297,462 (Cost of goods available for sale) / 264 units (Total units available for sale) = €1,126.75

Recalculation

242 units X €1,126.75 = €272,673.5

2.

FIFO €25,410 (ending inventory) + €272,052 (COGS) = €297,462
Weighted average cost €24,788.5 (ending inventory) + €272,673.5 (COGS) = €297,462, } **Cost of goods available for sale**

Under both methods, the sum of the ending inventory and cost of goods sold equals the same amount, €297,462, which is the cost of goods available for sale.

E 8-19 (LO6) Inventory Ratios

Atkins	**Inventory turnover:**	**£720,000/£50,000**	**= 14.4 times**
	Number of days' sales in inventory:	**365/14.4**	**= 25.3 days**
Burbank	**Inventory turnover:**	**£850,000/£$86,000**	**= 9.9 times**
	Number of days' sales in inventory:	**365/9.9**	**= 36.9 days**

Atkins Computers is handling its inventory more efficiently, as shown by its higher inventory turnover and its lower days' sales in inventory.

E 8-20 (LO6) Computing Inventory Turnover and Days in Inventory

1. **Inventory Turnover**
   2025: [£450,000/(50,000+165,000)/2]=4.19
   2026: [£560,000/(165,000+200,000)/2]=3.07
   2027: [£650,000/(200,000+240,000)/2]=2.95

2. **Number of days in Inventory**
   2025: 365/4.19=87.11 days
   2026: 365/3.07=118.89 days
   2027: 365/2.95=123.73 days

The inventory turnover ratio decreased by approximately 30% from 2025 to 2027 while the days in inventory increased by almost 42% over the same time period. Both of these changes would be considered negative since it's better to have a higher inventory turnover and lower days in inventory.

P 8-2 (LO2) Perpetual and Periodic Journal Entries

1. Periodic Inventory System

a.	Purchases	20,000	
	Accounts Payable		20,000
	Purchased 500 automobile tires on account at HK$40 each.		
b.	Purchases	24,000	
	Accounts Payable		24,000
	Purchased 300 truck tires on account at HK$80 each.		
c.	Accounts Payable	480	
	Purchase Returns		480
	Returned 12 automobile tires to supplier.		
d.	Accounts Payable	19,520	
	Cash		19,520
	Paid for automobile tires.		
e.	Accounts Payable	12,000	
	Cash		12,000
	Paid for half of truck tires purchased.		
f.	Accounts Payable	12,000	
	Cash		12,000
	Paid remaining amount owed on truck tires.		

2. Perpetual Inventory System

a.	Inventory	20,000	
	Accounts Payable		20,000
	Purchased 500 automobile tires on account at HK$40 each.		
b.	Inventory	24,000	
	Accounts Payable		24,000
	Purchased 300 truck tires on account at HK$80 each.		
c.	Accounts Payable	480	
	Inventory		480
	Returned 12 automobile tires to supplier.		
d.	Accounts Payable	19,520	
	Cash		19,520
	Paid for automobile tires.		
e.	Accounts Payable	12,000	
	Cash		12,000
	Paid for half of truck tires purchased.		
f.	Accounts Payable	12,000	
	Cash		12,000
	Paid remaining amount owed on truck tires.		

P 8-2 (LO2) (Continued)

Periodic Inventory System			Perpetual Inventory System		
g. Accounts Receivable	**36,000**		**g. Accounts Receivable**	**36,000**	
Sales		**36,000**	**Sales**		**36,000**
Sold 400 automobile tires on account at HK$90 each.			**Cost of Goods Sold**	**16,000**	
			Inventory		**16,000**
			Sold 400 automobile tires that cost HK$40 each for HK$90 each, on account.		
h. Accounts Receivable	**30,000**		**h. Accounts Receivable**	**30,000**	
Sales		**30,000**	**Sales**		**30,000**
Sold 200 truck tires on account at HK$150 each.			**Cost of Goods Sold**	**16,000**	
			Inventory		**16,000**
			Sold 200 truck tires that cost HK$80 each for HK$150 each, on account.		

P 8-2 (LO2) (Continued)

3. It is helpful to first look at the inventory and related accounts to see what adjustments are needed.

PERIODIC

Inventory

Auto tires beg. inv.	4,000		
Truck tires beg. inv.	5,600		

Purchases

(a)	20,000		
(b)	24,000		

Purchase Returns

		(c)	480

PERPETUAL

Inventory

Auto tires beg. inv.	4,000		
Truck tires beg. inv.	5,600	(c)	480
(a)	20,000		
(b)	24,000		
		(g)	16,000
		(h)	16,000
	21,120		

After posting entries (a)–(h), the inventory account has a balance of HK$21,120.

P 8-2 (LO2) (Continued)

Periodic Inventory System

We now need to make entries to eliminate the balances in all accounts (except Inventory) and add "net purchases" to inventory. The entry is:

Inventory	43,520	
Purchase Returns	480	
Purchases		44,000
Closed Net Purchases to Inventory. Closing of temporary inventory accounts.		

After this entry the inventory account includes the beginning inventory and net purchases, so its total is cost of goods available for sale as follows:

Inventory

Auto tires beg. inv.	4,000	
Truck tires beg. inv.	5,600	
Net purchases	43,520	
Goods available for sale	53,120	

Now we need to adjust for ending inventory. We know from the physical count that the ending inventory is:

Auto tires	184 × HK$40 =	HK$ 7,360
Truck tires	164 × HK$80 =	13,120
Total		HK$20,480

Perpetual Inventory System

Because the physical count of inventory of $20,480 was less than the balance in the inventory account, an adjustment for shrinkage must be made. The entry is:

Cost of Goods Sold	640	
Inventory		640
Adjusted Inventory for shrinkage (HK$21,120 – HK$20,480). Adjustment of Inventory balance to reflect inventory shrinkage.		

The accuracy of this entry can be determined by examining the physical number of tires on hand as follows:

	Automobile Tires	Truck Tires
Beg. inv.	100	70
Transaction (a)	500	
Transaction (b)		300
Transaction (c)	(12)	
Transaction (g)	(400)	
Transaction (h)		(200)
Ending inventory	188	170
Per count	184	164
Shrinkage	4	6
Cost	× HK$ 40	× HK$ 80
	HK$160	HK$ 480
	HK$640	

P 8-2 (LO2) (Continued)

Periodic Inventory System

To adjust Inventory to the correct amount, it must be credited for HK$32,640 (HK$53,120 – HK$20,480). The entry is:

Cost of Goods Sold	**32,640**	
Inventory		**32,640**
Adjustment of Inventory to appropriate ending balance.		

The inventory account balance is now HK$20,480 as shown below.

Inventory

Auto tires			
beg. inv.	**4,000**	**Adjust end. inv.**	**32,640**
Truck tires			
beg. inv.	**5,600**		
Net purchases	**43,520**		
End. inv.	**20,480**		

The cost of goods sold account will be closed with other closing entries.

P 8-5 (LO2) The Effect of Inventory Errors

1.

Net Purchases	**Ending Inventory**
$ 80,800	**$29,800**
+ 1,800	**+ 800**
– 3,000	**– 300**
$ 79,600	**$30,300**

2.

Beginning inventory	**$ 20,200**
Net purchases	**+ 79,600**
Cost of goods available for sale	**$ 99,800**
Ending inventory	**– 30,300**
Cost of goods sold	**$ 69,500**

3.

Beginning inventory	**$ 20,200**
Net purchases (before correcting)	**+ 80,800**
Cost of goods available for sale	**$101,000**
Ending inventory (before correcting)	**– 29,800**
Cost of goods sold (overstated)	**$ 71,200**
Cost of goods sold (correct)	**– 69,500**
Overstatement	**$ 1,700**

P 8-7 (LO3) The Effect of Inventory Errors

1. The effect of each of these errors on gross margin is as follows:

- **(a) No effect (liabilities are understated).**
- **(b) Ending inventory is understated, $4,400.**
- **(c) Net purchases are overstated, $900.**
- **(d) Net purchases are understated, $1,200.**
- **(e) Net purchases are overstated, $3,100.**
- **(f) Ending inventory is overstated, $800.**

The following analysis shows how these errors affect cost of goods sold:

Error	Beginning Inventory	+	Net Purchases	=	Goods Available	–	Ending Inventory	=	Cost of Goods Sold
(a)	No effect		No effect		No effect		No effect		No effect
(b)	No effect		No effect		No effect		$4,400 understated		$4,400 overstated
(c)	No effect		$900 overstated		$900 overstated		No effect		$900 overstated
(d)	No effect		$1,200 understated		$1,200 understated		No effect		$1,200 understated
(e)	No effect		$3,100 overstated		$3,100 overstated		No effect		$3,100 overstated
(f)	No effect		No effect		No effect		$800 overstated		$800 understated
Totals	No effect		$2,800 overstated		$2,800 overstated		$3,600 understated		$6,400 overstated

If cost of goods sold is overstated by $6,400, gross margin is understated by $6,400. The correct gross margin is $31,400 ($25,000 + $6,400).

2. Since the ending inventory of 2025 becomes the beginning inventory of 2026, net income would be $3,600 overstated.

AA 8-6 Shipping Bricks

Ethics

The company would make a journal entry debiting Accounts Receivable and crediting Sales. If the company was using a perpetual inventory system, it would also have to fabricate the purchase of inventory. Then, when the fictitious inventory was sold, an entry would be made debiting Cost of Goods Sold and crediting Inventory.

A fraud like this could not go on forever because the receivables would build up on the balance sheet. Without a real customer to pay the bill, the receivables balance would just get larger and larger. Eventually, someone would perform an analysis of the accounts receivable and determine that a large number of accounts were uncollectible.

In reviewing the financial statements, users would analyze changes in relationships among accounts. For example, cost of goods sold as a percentage of sales may be decreasing if fictitious inventory is being sold. Also, receivables as a percentage of total assets would be increasing at a faster than expected rate.

CHAPTER 9

PE 9-19 (LO3) Provisions and Contingent Liabilities

The correct answer is E. "Probable" means the future event is likely to occur, and the amount can be measured reliably so that the entity can make an appropriate journal entry. According to IAS 37 paragraph 14, an entity must recognize a provision if, and only if (1) a present obligation (legal or constructive) has arisen as a result of a past event (the obligating event), (2) payment is probable ('more likely than not'), and (3) the amount can be estimated reliably.

PE 9-20 (LO3) Provisions

Estimating the amount of compensation for contract disputes is an estimation of single obligation. This means that we should take the most possible outcome (55%) as the value of estimation.
Provisions = $2,000,000

PE 9-21 (LO3) Provisions

Estimating the number of part being changed is estimation of single obligation, so it should take the most possible outcome (possibility excess 60%) as the value of estimation.
Provisions = $25,000 × 2 = $50,000

E 9-9 (LO3) Provisions and Contingent Liabilities

The objective of this exercise is to illustrate the difficulty involved in applying the contingency standards. While the accounting standard uses terms such as *probable* and *possible*, matching these terms with probabilities is difficult. Studies show that there is little consensus on the probabilities associated with the terms *probable*, *possible*, and *remote*. While there are no exact answers to the scenarios given, students should recognize the judgment involved in making the classification decision. The following are provided as possible (or probable) answers.

a. A 40% probability of occurrence would most likely fall between remote and probable. If Rayn Company determined this contingency was reasonably possible, then note disclosure would be appropriate.

b. If the probability of incurring fines levied by the government is less than 10%, most would classify this event as remote and provide no information (or only a brief mention, with no details) in the notes to the financial statements.

c. A probability of 90% is likely to be interpreted as probable. If management determines the likelihood of losing the gender discrimination lawsuit as being probable, the liability (and associated loss) would be formally recognized in the accounting records.

E 9-11 (LO3) Warranty

1. Apr. 30	**Product Warranty Expense**	**154,000**	
	Product Warranty Provision		**154,000**
2. Sep.	**Product Warranty Provision**	**90,000**	
	Supplies (Cash or Wages Payable)*		**90,000**

***Depends on what resources Quick Manufacturing Co. uses for repair.**

E 9-12 (LO3) Computing Warranty Expense

1. Jan. 31	**Product Warranty Expense**	**50,000**	
	Product Warranty Provision		**50,000**
2. Feb. 5	**Product Warranty Provision**	**7,000**	
	Supplies		**4,250**
	Wages Payable		**2,750**

P 9-6 (LO3) Provisions and Contingent Items

1. The service of repairing belongs to provisions, and the amount can be reasonably estimated according to past repairing experiences, so the company should recognize the provisions in the year of sales.

Estimated product service guarantee liability is $1,500 × 800 × 10% = $120,000, so the adjusting journal entries are:

Product Warranty Expense	**120,000**	
Product Warranty Provision		**120,000**

The cost of repairing caused by actually fulfilling repairing guarantee contract is $1,500 × 60 = $90,000, so the adjusting journal entries are:

Product Warranty Provision	**90,000**	
Supplies		**90,000**

2. Because this defaulting lawsuit is very likely to lose, the outcome of the affair that the company faces single obligation is just win or lose the lawsuit. So the value

of estimation is not available in this situation. The journal entries of the provisions are:

Lawsuit loss	**500,000**	
Lawsuit Provision		**500,000**

3. When contingent loss may happen, but the amount cannot be estimated, there is no need to make a journal entry. But it should be disclosed in the financial statement to explain the nature and the fact that loss amount cannot be reasonably estimated.

P 9-8 (LO4) Classifying Expenditures to be Capitalized or Expensed

a. **Capitalize. This is a depreciable asset whose service will help generate future revenues over its useful life.**
b. **Expense. Research and development costs are expensed as incurred.**
c. **Capitalize. This is targeted advertising directed at specific past customers.**
d. **Expense. This is advertising pertaining to a new product and not directed at specific past customers.**

CHAPTER 10

PE 10-7 (LO3) Straight-Line Method of Depreciation

$$\text{Depreciation expense} = \frac{\text{Cost} - \text{Salvage value}}{\text{Estimated useful life (years)}}$$

$$= \frac{\$1{,}000{,}000 - \$40{,}000}{8 \text{ years}}$$

$$= \$120{,}000$$

Depreciation Expense	120,000	
Accumulated Depreciation, Machine		120,000
To record depreciation expense on a straight-line basis.		

PE 10-8 (LO3) Units-of-Production Method of Depreciation

$$\text{Depreciation rate} = \frac{\text{Cost} - \text{Salvage value}}{\text{Estimated useful life (units)}}$$

$$= \frac{\$1{,}000{,}000 - \$40{,}000}{1{,}600{,}000 \text{ units}}$$

$$= \$0.60 \text{ per unit}$$

$$\text{Current-year depreciation} = \text{Depreciation rate} \times \text{Units produced}$$
$$= \$0.60 \times 180{,}000$$
$$= \$108{,}000$$

Depreciation Expense	108,000	
Accumulated Depreciation, Machine		108,000
To record depreciation expense on units-of-production basis.		

PE 10-9 (LO3) Partial-Year Depreciation Calculations

Full-Year Depreciation*	Depreciation First Year (3 months)	Depreciation Second Year (12 months)
$5,000	$1,250 ($5,000 × 3/12)	$5,000

$$\text{*Full-year depreciation} = \frac{\text{Cost} - \text{Salvage value}}{\text{Estimated useful life (years)}}$$

$$= \frac{\$34{,}000 - \$4{,}000}{6 \text{ years}}$$

= $5,000

PE 10-10 (LO3) Units-of-Production Method with Natural Resources

$$\text{Depletion rate} = \frac{\text{Cost}}{\text{Total estimated units}} = \frac{\$4{,}200{,}000}{600{,}000 \text{ barrels}} = \$7.00 \text{ per barrel}$$

First-year depletion = Depletion rate × Barrels extracted and sold
= $7.00 × 70,000
= $490,000

Depletion Expense	**490,000**	
Accumulated Depletion, Oil Field		**490,000**

To record depletion for the year: 70,000 barrels at $7.00 per barrel.

PE 10-11 (LO3) Declining-Balance Method of Depreciation

DDB rate = 1/10 × 2 = 20%

Depreciation expense year 1 = $3,000,000 × 0.20 = $600,000

Depreciation expense year 2 = ($3,000,000 – $600,000) × 0.20 = $480,000

PE 10-12 (LO4) Changes in Depreciation Estimates

Carrying amount after three years = $1,000,000 – (3 × $120,000) = $640,000

Depreciation expense year 4 = ($640,000 – $40,000)/8 years = $75,000

E 10-5 (LO3) Depreciation Calculations

1. a. Straight-line method

$$\text{2025: } \frac{\$26{,}000 - \$1{,}000}{5 \text{ years}} \times 1/2 \text{ year} = \$5{,}000 \times 1/2 \text{ year} = \$2{,}500$$

2026: $5,000

b. Units-of-production method

$$\text{2025: } \frac{\$26{,}000 - \$1{,}000}{110{,}000 \text{ miles}} \times 9{,}000 \text{ miles} = \$2{,}045$$

$$\text{2026: } \frac{\$26{,}000 - \$1{,}000}{110{,}000 \text{ miles}} \times 24{,}000 \text{ miles} = \$5{,}455$$

2. There is no definitive answer to the question of which depreciation method more closely reflects the used-up service potential of the car. If there is no obsolescence factor, then the asset probably would wear out based on use, for which the units-of-production method would appear to be more appropriate. If obsolescence is an important factor in determining the car's useful life, the car's service potential would probably decline on an accelerated basis because obsolescence affects a car's fair market value more when it is newer than when it is older. The decline in service potential would also be affected by the extent to which the maintenance policy assumed in selecting the five-year life is actually followed during the five-year period

E 10-10 (LO2, LO3) Acquisition and Depreciation of Assets

1.

2026					
July	**1**	**Drilling Equipment**		**230,000**	
		Cash			**230,000**
		Purchased drilling equipment.			

2. **Straight-line** $= \frac{\$195{,}000 - \$7{,}000}{10 \text{ years}} \times 1/2 \text{ year}$

$= \$18{,}800 \times 1/2 \text{ year} = \$9{,}400$

E 10-18 (LO6) Asset Impairment

The impaired value of the land and buildings must be recognized. The journal entry on January 1, 2026, would be:

Impairment Loss	**430,000**	
Accumulated Impairment Losses, Land		**100,000**
Accumulated Impairment Losses, Buildings		**330,000**
To record loss on impairment of land and building.		

*** Land: $150,000 – $50,000 = 100,000; Buildings: $400,000 – $70,000 = 330,000**

E 10-21(LO8) Accounting for Disposal of Equipment

1.

Cash	**56,000**	
Accumulated Depreciation—Equipment		
[($100,000 –$16,000) X 3/5]	**50,400**	
Equipment		**100,000**
Gain on Sale of Plant Assets		**6,400**

2.	**Depreciation Expense**			
	[($100,000 –$16,000) X 1/5 X 4/12]	**5,600**		
	Accumulated Depreciation—Equipment			**5,600**
	Cash	**56,000**		
	Accumulated Depreciation—Equipment			
	($50,400 + $5,600)	**56,000**		
	Equipment			**100,000**
	Gain on Sale of Plant Assets			**12,000**
3.	**Cash**	**22,000**		
	Accumulated Depreciation—Equipment	**50,400**		
	Loss on Sale of Plant Assets	**27,600**		
	Equipment			**100,000**
4.	**Depreciation Expense**			
	[($100,000 –$16,000) ÷ 5 X 9/12]	**12,600**		
	Accumulated Depreciation—Equipment			**12,600**
	Cash	**22,000**		
	Accumulated Depreciation—Equipment			
	($50,400 + $12,600)	**63,000**		
	Loss on Sale of Plant Assets	**15,000**		
	Equipment			**100,000**

E 10-24 (LO9) Intangible Assets

1.	**2026**			
	Jan. 1 Patent	**500,000**		
	Cash			**500,000**
	To record purchase of a patent.			
2.	**2026**			
	Dec. 31 Amortization Expense, Patent	**25,000**		
	Patent			**25,000**
	To record amortization expense of patent ($500,000 ÷ 20 years).			

3. Goodwill is never amortized. Each year, goodwill would be evaluated to ensure that the amount recorded on the books of the company is not overstated. If goodwill is overstated, then it could be written down based on the results of impairment tests.

E 10-27 (LO10) Fixed Asset Turnover

	2026	2025
Land	$ 350,000	$ 310,000
Buildings	740,000	680,000
Equipment	140,000	120,000
Total property, plant, and equipment	$1,230,000	$1,110,000

Fixed asset turnover = Sales/Average fixed assets
= $3,650,000/[($1,230,000 + $1,110,000)/2] = 3.12

P 10-2 (LO2, LO3) Property, Plant, and Equipment Cost; Depreciation Methods

1.

	Appraised Value	Percent of Total	Apportioned Cost
Buildings	$816,000	48%	$756,000
Land	578,000	34	535,500
Land Improvements	85,000	5	78,750
Vehicles	221,000	13	204,750
Total	$1,700,000	100%	$1,575,000

Jan. 1 Buildings		756,000	
Land		535,500	
Land Improvements		78,750	
Vehicles		204,750	
Cash			1,575,000
To record asset purchases.			

2. Year 2026 straight-line depreciation on buildings
[($756,000 - $51,300) / 15 years] = $46,980

3. Year 2026 double-declining-balance depreciation on land improvements
(100% / 5 years) x 2 = 40% rate
$78,750 x 40% = $ 31,500

4. Accelerated depreciation does not lower the total amount of taxes paid over the asset's life. Instead, it defers or postpones taxes to the later years of an asset's useful life. This is because accelerated methods charge a higher portion of asset costs against revenue in earlier years and a lower portion in later years. The result is to reduce taxable income more in earlier years but less in later years. [Note: From a present value perspective, there is a tax savings from use of accelerated depreciation. The company gets to use the tax deferred amounts for investment purposes until they are due.]

P 10-8 (LO2, LO3) Basket Purchase and Partial-Year Depreciation

1.

Asset	Fair Market Value	Percentage		Cost		Allocated Cost
Land	$ 75,000	33.3333%	×	$200,000	=	$ 66,667
Buildings	100,000	44.4444	×	200,000	=	88,889
Equipment	50,000	22.2222	×	200,000	=	44,444
Totals	$225,000					$200,000

Land	66,667	
Buildings	88,889	
Equipment	44,444	
Cash		200,000

Purchased assets as a group and allocated the single-sum cost among the assets based on relative fair market values.

2. Depreciation of assets:

Buildings: $\frac{\$88,889}{20 \text{ years}} \times 3/4 = \$3,333$

Equipment: $\frac{\$44,444}{5 \text{ years}} \times 3/4 = \$6,667$

P 10-10 (LO3, LO4, LO5) Changes in Depreciation Estimates and Capitalization of Expenditures

1. a. 2025

Jan.	2	Machine	76,600	
		Cash		76,600

Purchased a machine for cash.

b. 2025

Dec.	31	Depreciation Expense	19,150	
		Accumulated Depreciation, Machine		19,150

To record depreciation expense for 2025
[1/8× 2 = 0.25]
[$76,600 × 0.25 = $19,150].

2026

Dec.	31	Depreciation Expense	14,363	
		Accumulated Depreciation, Machine		14,363

To record depreciation expense for 2026
[($76,600 - $19,150) × 0.25 = $14,363].

c. 2027

Dec.	**31**	**Depreciation Expense**	**21,544**	
		Accumulated Depreciation, Machine		**21,544**
		To record depreciation expense for 2027 after change in estimates.		

Cost of machine	**$76,600**
Less Depreciation, 2025 and 2026	**33,513**
Carrying amount at January 1, 2027	**$43,087**

1/4× 2 = 0.5
Depreciation = 0.5 × $43,087 = $21,544

d. 2028

Jan.	**2**	**Machine**	**34,000**	
		Cash		**34,000**
		To record the cost of major repairs that increased machine's useful life by two years and increased its salvage value to $3,000.		

e. 2028

Dec.	**31**	**Depreciation Expense**	**22,217**	
		Accumulated Depreciation, Machine		**22,217**
		To record depreciation expense for 2028.		

Carrying amount at January 1, 2027	**$43,087**
Less Depreciation for 2027	**21,544**
Carrying amount at January 1, 2028	**$21,543**
Cost of major repairs in 2028	**34,000**
Carrying amount after major repairs	**$55,543**

Remaining estimated life:
3 years (before repairs) + 2 additional years = 5 years
1/5× 2 = 0.4
Depreciation = 0.4 × $55,543 = $22,217

2. Carrying amount at December 31, 2028: $55,543 – $22,217 = $33,326

P 10-15 (LO2, LO3, LO8) Acquisition, Depreciation, and Sale of an Asset

1. a. 2025

July	1	Transportation Equipment	6,100	
		Cash		6,100
		Purchased truck ($5,300 + $800).		

b. 2025

Dec.	31	Depreciation Expense	950	
		Accumulated Depreciation, Transportation Equipment		950
		To record depreciation expense on the truck for 2025 [($6,100 cost – ($450–$50) net salvage value) ÷ 3 years = $1,900; $1,900 × 1/2 year = $950].		

c. 2026

Dec.	31	Depreciation Expense	1,900	
		Accumulated Depreciation, Transportation Equipment		1,900
		To record depreciation expense on the truck for 2026.		

d. 2027

Jan.	2	Cash	2,600	
		Accumulated Depreciation, Transportation Equipment	2,850	
		Loss on Sale of Transportation Equipment.....	650	
		Transportation Equipment		6,100
		Sold truck for $2,600 cash.		

2. $\frac{\$6,100 - \$400}{40,000 \text{ miles}} \times 8,000 \text{ miles} = \$1,140$

3. The loss of $650 in part (1)d occurred because the carrying amount of the truck at the date of sale was $3,250 ($6,100 – $2,850), which was higher than the sale price of $2,600. This shows that depreciation is not a method of valuation but rather a process of allocating an asset's cost over its life. In this case, the market and carrying amounts of the truck were significantly different because the original estimates of useful life and salvage value were not totally accurate.

CHAPTER 12

PE 12-9 (LO3) Issuance of No-Par Common Stock

Cash	**1,125,000**	
Common Stock		**1,125,000**
Issued 25,000 shares of no-par common stock at $45 per share.		

PE 12-10 (LO3) Issuance of Common Stock for Cash

Cash (3,000 shares × $40)	**120,000**	
Common Stock (3,000 shares × $1 par value)		**3,000**
Paid-In Capital in Excess of Par, Common Stock (3,000 shares × $39)		**117,000**
Issued 3,000 shares of $1 par-value common stock at $40 per share.		

PE 12-11 (LO3) Issuance of Common Stock for Other Assets

Buildings (10,000 shares × $40)	**400,000**	
Common Stock (10,000 shares × $0.01 par value)		**100**
Paid-In Capital in Excess of Par, Common Stock (10,000 shares × $39.99)		**399,900**
Issued 10,000 shares of $0.01 par-value common stock for buildings (10,000 shares × $40 per share = $400,000).		

PE 12-12 (LO3) Accounting for Stock Repurchases

Treasury Stock, Common (1,500 shares × $64)	**96,000**	
Cash		**96,000**
Purchased 1,500 shares of treasury stock at $64 per share.		

PE 12-13 (LO3) Accounting for Sale of Treasury Stock at Price Higher than Cost

Cash (400 shares × $80)	**32,000**	
Treasury Stock, Common (400 shares × $64 cost)		**25,600**
Paid-In Capital, Treasury Stock [400 × ($80 – $64)]		**6,400**
Reissued 400 shares of treasury stock at $80 per share.		

PE 12-14 (LO3) Accounting for Sale of Treasury Stock at Price Lower than Cost

Cash (300 shares × $56)	**16,800**	
Paid-In Capital, Treasury Stock*	**2,400**	
Treasury Stock, Common (300 shares × $64 cost)		**19,200**
Reissued 300 shares of treasury stock at $56 per share.		

*** According to PE12-13, $6,400 credit balance is in this account. Otherwise, the debit would be to Retained Earnings.**

PE 12-15 (LO3) Accounting for Sale of Treasury Stock at Price Lower than Cost

Cash (800 shares × $60)	**48,000**	
Paid-In Capital, Treasury Stock	**2,000**	
Retained Earnings	**1,200**	
Treasury Stock, Common (800 shares × $64 cost)		**51,200**
Reissued 800 shares of treasury stock at $60 per share; original cost was $64 per share.		

E 12-4 (LO3) No-Par Stock Transactions

1. a. Cash	**744,000**		
Common Stock			**744,000**
Issued 31,000 shares of no-par common stock at $24 per share.			
b. Cash	**109,200**		
Common Stock			**109,200**
Issued 3,900 shares of no-par common stock at $28 per share.			
c. Buildings	**90,000**		
Common Stock			**90,000**
Issued 3,000 shares of no-par common stock for a building.			
d. Cash Dividends	**56,850**		
Cash Dividends Payable			**56,850**
Declared a $1.50-per-share dividend on common stock. (31,000 + 3,900 + 3,000) × $1.50 = 56,850			
e. Revenues	**405,000**		
Retained Earnings			**187,000**
Expenses			**218,000**
Closed revenues and expenses for the year to Retained Earnings.			

f.	**Retained Earnings**	56,850	
	Cash Dividends		56,850
	Closed dividends to Retained Earnings.		

2.	**Common stock (no par)**		$ 943,200
	Retained earnings		130,150*
	Total equity		$1,073,350

***$187,000 – $56,850 = $130,150**

E 12-13 (LO3, LO4) Stock Issuance, Treasury Stock, and Dividends

a.	**Cash**	1,750,000	
	Common Stock		700,000
	Paid-In Capital in Excess of Par, Common Stock		1,050,000
	Issued 70,000 shares of common stock at $25 per share (70,000 × $25 = $1,750,000; 70,000 × $10 = $700,000).		
b.	**Cash**	240,000	
	Preferred Stock		160,000
	Paid-In Capital in Excess of Par, Preferred Stock		80,000
	Issued 8,000 shares of preferred stock at $30 per share (8,000 × $30 = $240,000; 8,000 × $20 = $160,000).		
c.	**Treasury Stock**	100,000	
	Cash		100,000
	Purchased 5,000 shares of outstanding common stock at $20 per share (5,000 × $20 = $100,000).		
d.	**Cash**	46,000	
	Treasury Stock		40,000
	Paid-In Capital, Treasury Stock		6,000
	Reissued 2,000 shares of treasury stock at $23 per share (2,000 × $23 = $46,000; 2,000 × $20 = $40,000).		
e.	**Cash Dividends, Preferred Stock**	12,800	
	Cash Dividends, Common Stock	67,000	
	Cash Dividends Payable		79,800
	Declared dividends on preferred and common stock (preferred: 8,000 × $20 × 8% = $12,800; common: 70,000 – 5,000 + 2,000 = 67,000 shares outstanding at $1 per share).		

E 12-16 (LO3, LO4) Stock Issuance, Treasury Stock, and Dividends

1.

2026				
Jan.	**15**	**Cash**	**104,000**	
		Common Stock		**104,000**
		Issued 6,500 shares of common stock at par value.		
Feb.	**6**	**Cash Dividends, Common Stock**	**60,650**	
		Cash Dividends Payable		**60,650**
		Declared a 50¢-per-share dividend to common stockholders of record on March 6, 2026. 121,300 x $0.50 = $60,650		
Mar.	**6**	**No entry**		
	8	**Cash**	**346,000**	
		Common Stock		**320,000**
		Paid-In Capital in Excess of Par, Common Stock		**26,000**
		Issued 20,000 shares of stock for $346,000 or $17.30 per share (20,000 × $16 = $320,000; 20,000 × $1.30 = $26,000).		
Apr.	**6**	**Cash Dividends Payable**	**60,650**	
		Cash		**60,650**
		Paid 50¢-per-share dividend on common stock.		
June	**19**	**Treasury Stock**	**9,350**	
		Cash		**9,350**
		Purchased 800 shares of treasury stock.		
Sept.	**6**	**Cash Dividends, Common Stock**	**77,275**	
		Cash Dividends Payable		**77,275**
		Declared a 55¢-per-share dividend to common stockholders of record on October 15 (121,300 + 20,000 – 800 = 140,500; 140,500 × $0.55 = $77,275).		
2026				
Oct.	**6**	**No entry**		
	15	**No entry**		
Nov.	**16**	**Cash Dividends Payable**	**77,275**	
		Cash		**77,275**
		Paid 55¢-per-share dividend on common stock.		

Dec. 15	**Cash Dividends, Preferred Stock**	**34,560**	
	Cash		**34,560**
	Paid 6% cash dividend on preferred stock (18,000 shares × $32 × 6%).		

2. The following dividends were paid during 2026.

To common stockholders ($60,650 + $77,275)	**$137,925**
To preferred stockholders	**34,560**
Total dividends paid	**$172,485**

E 12-18 (LO3, LO4) Preparing the Equity Section

Spring Company
Partial Balance Sheet
December 31, 2026

Equity	
Contributed capital:	
Preferred stock (8%, $50 par value, 50,000 shares authorized, 5,000 shares issued and outstanding)	**$ 250,000**
Common stock ($1 par value, 100,000 shares authorized, 70,000 shares issued and outstanding)	**70,000**
Paid-in capital in excess of par, preferred stock	**5,000**
Paid-in capital in excess of par, common stock	**1,330,000**
Total contributed capital	**$ 1,655,000**
Retained earnings	**400,000***
Total equity	**$2,055,000**

***$350,000 (beginning balance) + $125,000 (net income) – $75,000 (dividends) = $400,000**

P 12-4 (LO4) Dividend Calculations

1. In this case, preferred stockholders should receive $15,000 for each year (10,000 shares × 0.10 × $15) and common stockholders will receive the rest. Thus, the allocations for 2025 and 2026 are as follows:

Year	Total Dividends	Preferred	Common
2025	$ 8,000	$ 8,000	$ 0
2026	92,000	15,000	77,000
	$100,000	$23,000	$77,000

2. In this case, preferred stockholders should receive $15,000 each year plus dividends in arrears. In 2026, dividends of $7,000 are in arrears from 2025. Common stockholders receive the remainder.

Year	Total Dividends	Preferred	Common
2025	$ 8,000	$ 8,000	$ 0
2026	92,000	22,000	70,000
	$100,000	$30,000	$70,000

3. In this case, preferred stockholders would receive $8,000 in 2025, and common stockholders would get nothing. In 2026, preferred stockholders would get $52,000 ($15,000 for 2022, $7,000 for 2025, $15,000 for 2024, and $15,000 for 2023). Common stockholders would get the remaining $40,000.

Year	Total Dividends	Preferred	Common
2025	$ 8,000	$ 8,000	$ 0
2026	92,000	52,000	40,000
	$100,000	$60,000	$40,000

P 12-10 (LO3, LO4) Stock Transactions and Equity Section

1.	**a.**	**Treasury Stock**	**5,250**	
		Cash		**5,250**
		Purchased 750 shares of treasury stock at $7 each.		
	b.	**Treasury Stock**	**1,500**	
		Accounts Receivable		**1,500**
		Received 150 shares of common stock as payment of a receivable.		
	c.	**Cash Dividends, Preferred Stock**	**1,250**	
		Cash Dividends, Common Stock	**10,200**	
		Cash Dividends Payable		**11,450**
		Declared cash dividends on common and preferred stock.		
		Cash Dividends Payable	**11,450**	
		Cash		**11,450**
		Paid previously declared cash dividends.		

Preferred Stock	Common Stock	
2,500	15,000	Shares outstanding January 1
× $0.50	(750)	Treasury stock purchased in (a)
$ 1,250	(150)	Treasury stock acquired in (b)
	(500)	Treasury stock on hand December 31, 2025
	13,600	Shares outstanding on declaration date
	× $0.75	
	$10,200	

d.	Preferred Stock	10,000	
	Retained Earnings	5,000	
	Common Stock		15,000
	Preferred stockholders converted 500 shares to 1,500 shares of common stock (500 preferred shares × $20 par = $10,000; 1,500 shares of common stock × $10 par = $15,000).		
e.	Cash	11,700	
	Treasury Stock		6,750
	Paid-In Capital, Treasury Stock		4,950
	Reissued 900 shares of treasury stock at $13 per share (cost of treasury shares = $5,250 + $1,500 = $6,750).		
	Machine	6,300	
	Treasury Stock		6,000
	Paid-In Capital, Treasury Stock		300
	Exchanged 500 shares of treasury stock that cost $6,000 for a machine with a fair market value of $6,300.		
f.	Land	39,000	
	Common Stock		30,000
	Paid-In Capital in Excess of Par, Common Stock		9,000
	Exchanged 3,000 shares of common stock for land with a fair market value of $39,000.		
g.	Cash Dividends, Preferred Stock	1,000	
	Cash Dividends, Common Stock	14,625	
	Cash Dividends Payable		15,625
	Cash Dividends Payable	15,625	
	Cash		15,625
	Declared and paid semiannual dividends (preferred: 2,000 shares × $0.50 = $1,000; common: 19,500 shares × $0.75 = $14,625).		

Preferred Stock		Common Stock	
2,500)	shares	15,000	shares
(500)	converted to common	1,500	from preferred conversion
2,000)	shares outstanding	3,000	for land
		19,500	shares outstanding

h.	Revenues	135,000	
	Retained Earnings		35,000
	Expenses		100,000
	Closed 2026 net income to Retained Earnings.		

i.	Retained Earnings	27,075	
	Cash Dividends, Preferred Stock		2,250
	Cash Dividends, Common Stock		24,825
	Closed dividends to Retained Earnings.		

2. The equity section is easily prepared by using the following equity T-accounts to analyze the transactions.

Preferred Stock			
(d)	10,000	Beg. Bal.	50,000
		End. Bal.	40,000

Common Stock			
		Beg. Bal.	150,000
		(d)	15,000
		(f)	30,000
		End. Bal.	195,000

Paid-In Capital in Excess of Par, Common Stock			
		Beg. Bal.	30,000
		(f)	9,000
		End. Bal.	39,000

Treasury Stock			
Beg. Bal.	6,000		
(a)	5,250	(e)	6,750
(b)	1,500	(e)	6,000
End. Bal.	0		

Paid-In Capital, Treasury Stock			
		(e)	4,950
		(e)	300
		End. Bal.	5,250

Cash Dividends, Preferred Stock			
(c)	1,250		
(g)	1,000	(i)	2,250
End. Bal.	0		

Retained Earnings			
(d)	5,000	Beg. Bal.	116,000
(i)	27,075	(h)	35,000

Cash Dividends, Common Stock			
(c)	10,200		
(g)	14,625	(i)	24,825

End. Bal.	118,925	End. Bal.	0

Lakeland Corporation
Partial Balance Sheet
December 31, 2026

Equity

Contributed Capital:

Preferred stock, convertible (5%, $20 par value)	$ 40,000
Common stock ($10 par value)	195,000
Paid-in capital in excess of par, common stock	39,000
Paid-in capital, treasury stock	5,250
Total contributed capital	$279,250
Retained earnings	118,925
Total equity	$398,175

P 12-16 (LO3, LO4) Unifying Concepts: Stock Transactions and the Equity Section

1. a. No journal entry is required, but a memo entry will be made in the board of directors' minutes.

b.	Cash	600,000	
	Common Stock		500,000
	Paid-In Capital in Excess of Par, Common Stock		100,000
	Issued 25,000 shares of $20 par-value common stock at $24 per share.		
c.	Cash	80,000	
	Preferred Stock		50,000
	Paid-In Capital in Excess of Par, Preferred Stock		30,000
	Issued 10,000 shares of $5 par-value preferred stock at $8 per share.		
d.	Cash	110,000	
	Common Stock, No-Par		110,000
	Issued 5,000 shares of no-par common stock at $22 per share.		
e.	Treasury Stock, Common	25,000	
	Cash		25,000
	Repurchased 1,000 shares of $20 par-value common stock at $25 per share.		

f.	**Treasury Stock, Common, No-Par**	**10,000**	
	Cash		**10,000**
	Repurchased 500 shares of no-par common stock for $20 per share.		
g.	**Cash**	**5,750**	
	Retained Earnings	**500**	
	Treasury Stock, Common		**6,250**
	Resold, for $23 per share, 250 shares of $20 par-value common stock that was previously purchased at $25 per share.		
h.	**Cash**	**11,500**	
	Treasury Stock, Common, No-Par		**10,000**
	Paid-In Capital, Treasury Stock		**1,500**
	Reissued no-par treasury stock for $23 per share; the stock was previously purchased for $20 per share.		
i.	**Revenues**	**90,000**	
	Retained Earnings		**14,000**
	Expenses		**76,000**
	Closed net income to Retained Earnings.		

2. The equity section can be easily prepared if T-accounts are used to update the account balances, as follows:

Common Stock

		(b)	500,000

Paid-In Capital in Excess of Par, Common Stock

		(b)	100,000

Preferred Stock

		(c)	50,000

Paid-In Capital in Excess of Par, Preferred Stock

		(c)	30,000

Common Stock, No-Par

		(d)	110,000

Treasury Stock, Common

(e)	25,000	(g)	6,250
End. Bal.	18,750		

Treasury Stock, Common, No-Par

(f)	10,000	(h)	10,000
End. Bal.	0		

Retained Earnings

(g)	500	(i)	14,000
		End. Bal.	13,500

Paid-In Capital, Treasury Stock

		(h)	1,500

P 12-16 (LO3, LO4) (Continued)

Richard Corporation
Partial Balance Sheet
December 31, 2026

Equity	
Contributed Capital:	
Preferred stock ($5 par value, 6%, 50,000 shares authorized, 10,000 shares issued and outstanding)	**$ 50,000**
Common stock ($20 par value, 100,000 shares authorized, 25,000 shares issued, 24,250 shares outstanding)	**500,000**
Common stock (no par, 50,000 shares authorized, 5,000 shares issued and outstanding)	**110,000**
Paid-in capital in excess of par, preferred stock	**30,000**
Paid-in capital in excess of par, common stock	**100,000**
Paid-in capital, treasury stock	**1,500**
Total contributed capital	**$791,500**
Retained earnings	**13,500**
Total contributed capital plus retained earnings	**$805,000**
Less treasury stock (750 shares at cost)	**(18,750)**
Total equity	**$786,250**

CHAPTER 14

PE 14-10 (LO4) Indirect Method

Operating activities			
Income before income tax			**$ 1,023**
Add:	**Interest expense**	**$ 462**	
	Depreciation expense	**4,603**	
	Loss on sale of land	**1,130**	
	Increase in accounts payable	**145**	
	Decrease in prepaid expenses	**130**	
Less:	**Increase in accounts receivable**	**(340)**	
	Increase in inventory	**(103)**	
	Interest paid	**(486)**	
	Income tax paid in cash	**(455)**	**5,086**
Net cash flows from operating activities			**$6,109**

PE 14-11 (LO5) Computing Cash Paid for Property, Plant, and Equipment

The amount of cash paid for property, plant, and equipment during the year was $60,000, as shown, using the following T-account:

Property, Plant, and Equipment

Beg. bal.	**235,000**		
Cash paid for property, plant, and equipment	**60,000**	**Historical cost of equipment sold**	**30,000**
End. bal.	**265,000**		

To reconcile the account, we can only assume that cash paid for property, plant, and equipment was $60,000.

PE 14-12 (LO5) Computing Gain on Sale of Property, Plant, and Equipment

The gain on the sale of equipment during the year is $12,500.

First, we need to compute the book value of the equipment sold during the year. The equipment had a historical cost of $30,000 and accumulated depreciation of $16,500 as computed using the following T-account:

Accumulated Depreciation

		Beg. bal.	86,000
Accumulated depreciation of equipment sold	16,500	Depreciation expense for the year	14,500
		End. bal.	84,000

To reconcile the account, we can only assume that the accumulated depreciation related to equipment sold during the year was $16,500.

The carrying amount of the equipment sold was $13,500 ($30,000 – $16,500). So the gain on the sale of equipment during the year was $12,500 ($26,000 sales price – $13,500 carrying amount).

PE 14-13 (LO5) Computing Cash Flows from Financing Activities

Financing activities	
Cash paid to purchase treasury stock	**$(15,000)**
Cash payments for dividends	**(5,350)**
Cash payments to repay long-term debt	**(28,000)**
Net cash flows from financing activities	**$(48,350)**

PE 14-14 (LO6) Analyzing Cash Flow Statements to Make Lending Decisions

You would likely feel some apprehension about loaning money to this company. Although the company has reported positive net income over the past three years, it is facing significant cash flow issues. Cash flow from operating activities has declined drastically over these years, turning negative and indicating that the company's core operations are not generating sufficient cash to sustain its business.

At the same time, the company's cash flow from financing activities has increased, suggesting that it is relying on external funding to cover its operational needs. While this strategy might work in the short term, it is unsustainable in the long run. If the company's operations do not improve and start generating positive cash flow, it will struggle to meet its long-term borrowing commitments.

As a potential lender, it's important to remember that net income, while important, does not repay loans—cash does. The company's inability to generate positive cash flow from its operations is a significant red flag, and you should be cautious about extending credit under these circumstances.

E 14-3 (LO3) Transaction Analysis

1.	**a.**	**Cash**	**55,000**	
		Common Stock (1,000 shares × $15 par)		**15,000**
		Paid-In Capital in Excess of Par, Common Stock		**40,000**
	b.	**Cash**	**220,000**	
		Accounts Receivable		**220,000**
	c.	**Dividends Payable**	**75,000**	
		Cash		**75,000**
	d.	**Cash**	**5,000**	
		Interest Revenue		**5,000**
	e.	**Insurance Expense**	**3,500**	
		Cash		**3,500**
	f.	**Depreciation Expense**	**7,000**	
		Accumulated Depreciation		**7,000**

2. a. The $55,000 cash inflow would be classified as a financing activity.

b. The $220,000 cash inflow would be classified as an operating activity.

c. The $75,000 cash outflow would be classified as a financing activity.

d. The $5,000 cash inflow would be classified as an operating activity.

e. The $3,500 cash outflow would be classified as an operating activity.

f. Depreciation is a non-cash item. The $7,000 would be added back as an adjustment to income before income tax under the indirect method and ignored when using the direct method.

E 14-10 (LO4) Cash Flows from Operations (Indirect Method)

Net income	**$70,200**
Add (deduct) adjustments to cash basis:	
Decrease in accounts receivable	**3,000**
Increase in inventory	**(1,000)**
Decrease in prepaid insurance	**400**
Increase in accounts payable	**3,000**

Decrease in wages payable	**(1,200)**
Net cash flows from operating activities	**$74,400**

The following spreadsheet may be helpful in explaining the adjustments:

	Income Statement	Adjustments		Cash Flows from Operations
Sales revenue	$600,000	3,000	Cash collected from customers	$603,000
Cost of goods sold	–410,000	–1,000	Cash paid for inventory	–408,000
		3,000		
Wages expense	–60,000	–1,200	Cash paid for wages	–61,200
Utilities expense	–4,000	0	Cash paid for utilities	–4,000
Rent expense	–41,300	0	Cash paid for rent	–41,300
Insurance expense	–14,500	400	Cash paid for insurance	–14,100
Net income	$ 70,200		Cash flows from operating activities	$74,4000

E 14-12 (LO4, LO5) Net Cash Flows (Indirect Method)

Operating activities		
Net income	**$ 96,000**	
Add (deduct) adjustments to cash basis:		
Depreciation	**26,000***	
Increase in accounts receivable	**(11,000)**	
Decrease in inventory	**4,000**	
Increase in prepaid assets	**(8,000)**	
Decrease in accounts payable	**(6,000)**	
Increase in wages payable	**16,000**	
Net cash flows from operating activities		**$117,000**
Investing activities		
Cash payment for equipment	**$ (41,000)****	
Net cash flows from investing activities		**(41,000)**
Financing activities		
Cash receipts from issuance of bonds	**$101,000**	
Cash payments for dividends	**(44,000)*****	
Net cash flows from financing activities		**57,000**
Net increase in cash		**$133,000**

***Increase in accumulated depreciation $6,000 plus disposal of equipment with accumulated depreciation $20,000**

****Increase in equipment $21,000 plus disposal of equipment with historical cost $20,000**

*****Dividends declared and paid ($41,000) plus decrease in Dividends Payable ($3,000).**

P 14-4 (LO4) Cash Flows from Operations (Indirect Method)

1.	**Net loss**	**$(80,000)**
	Add (deduct) adjustments to cash basis:	
	Depreciation	**86,000**
	Decrease in accounts receivable	**30,000**
	Increase in inventory	**(14,000)**
	Decrease in prepaid expenses	**6,000**
	Increase in accounts payable	**10,000**
	Decrease in accrued liabilities	**(12,000)**
	Net cash flows from operating activities	**$ 26,000**

Note: **The amount of cash dividends paid was $50,000 ($70,000 declared + $50,000 payable at beginning of year – $70,000 payable at year-end). However, dividends are classified as a financing activity, not as an operating activity.**

2. Gordon Enterprises can pay $50,000 in cash dividends, even though the company reported a $80,000 net loss, because the cash flows from operations were positive (positive $26,000). The positive cash flows come primarily from the collection of receivables and the addition of depreciation (a non-cash item) to net income. Also, other investing and financing activities may have generated some positive cash flows. Finally, the company probably used some of the beginning cash balance to pay the dividends (the cash and cash equivalents balance decreased $60,000).

P 14-8 (LO4, LO5) Statement of Cash Flows (Indirect Method)

Jessie Company
Statement of Cash Flows
(Indirect Method)
For the Year Ended December 31, 2026

Operating activities		
Income before income tax	**$ 54,500**	
Add (deduct) adjustments to cash basis:		
Depreciation	**16,000[1]**	
Increase in accounts receivable	**(13,500)**	
Decrease in inventory	**15,000**	
Increase in accounts payable	**5,400**	
Gain on sale of equipment	**(1,500)**	
Income tax paid in cash	**(1,400)[2]**	
Net cash flows from operating activities		**$ 74,500**
Investing activities		
Cash receipts from sale of equipment	**$ 2,500**	
Cash payments for purchase of equipment	**(33,000)[3]**	
Net cash flows from investing activities		**(30,500)**
Financing activities		
Cash receipts from borrowing (long-term note payable)	**$ 20,000**	
Cash payments for dividends	**(42,000)**	
Net cash flows from financing activities		**(22,000)**
Net increase in cash and cash equivalents		**$ 22,000**
Cash and cash equivalents at beginning of year		**12,000**
Cash and cash equivalents at end of year		**$ 34,000**

[1]Accumulated depreciation beginning balance ($12,000) + depreciation expense (X) – write-off on sale ($7,000) = accumulated depreciation ending balance ($21,000); therefore, X = $16,000 depreciation for current year.

[2]Income tax payable beginning balance ($3,700) + income tax expense ($2,500) – income tax paid in cash (X) = income tax payable ending balance ($4,800); therefore, X = $1,400 income tax paid in cash during year

[3]Equipment beginning balance ($32,000) + purchase (X) – sale ($8,000) = equipment ending balance ($57,000); therefore, X = $33,000 purchase of equipment during year.

P 14-10 (LO4, LO5, LO6) Unifying Concepts: Analysis of Operating, Investing, and Financing Activities

1. Operating activities

Income before income tax	$104,000	
Add (deduct) adjustments to cash basis:		
Depreciation	13,600	
Decrease in accounts receivable	5,000	
Increase in Inventory	(18,000)	
Decrease in accounts payable	(4,400)	
Decrease in wages payable	(3,800)	
Income tax paid in cash	(27,400)[1]	
Net cash flows from operating activities		$ 69,000
Investing activities		
Cash used to purchase property, plant, and equipment (increase in property, plant, and equipment account)		$ (97,000)
Financing activities		
Cash provided by borrowing (increase in notes payable account)		$ 20,000

[1]Income tax	$ 24,600
Income tax payable decrease	2,800
Cash paid for income tax	$ 27,400

2. Mile High Sporting Goods Company is not in as good a liquidity position as it was last year. Net cash flows provided by operations are less than accrual net income, and the end-of-year cash position is now having decreased $8,000 from the end of last year. This decrease is the result of the company opening a new store, which required significant cash flows to purchase additional equipment ($97,000) and inventory ($18,000). The company was able to use operations to fund part of the expansion but also had to increase its borrowing ($20,000) and decrease its cash position.

As Mr. Beecher's banker, you might not want to lend more money just now, but if sales keep increasing and the company manages its expenses carefully, it is likely that the company will produce sufficient future cash flows to pay its obligations.

In the short run, Mile High needs some cash (collect receivables, delay payables, borrow, or have the owners put more money into the business). Otherwise, the company might not have a chance to be profitable in the long run.

P 14-14 (LO4, LO5, LO6) Statement of Cash Flows (Indirect Method)

1.

Geoffrey Corporation
Statement of Cash Flows
For the Year Ended December 31, 2026

Operating activities		
Net income		**$9,650**
Adjustments to reconcile net income to net cash flows from operating activities		
Depreciation expense	**$ 3,100***	
Loss on disposal of equipment	**2,000****	
Increase in accounts payable	**1,750**	
Increase in accounts receivable	**(1,450)**	**5,400**
Net cash flows from operating activities		**15,050**
Investing activities		
Sale of equipment	**1,900**	
Purchase of investments	**(4,500)**	
Net cash flows from investing activities		**(2,600)**
Financing activities		
Issuance of ordinary shares	**2,500**	
Retirement of bonds	**(10,000)**	
Payment of dividends	**(7,700)**	
Net cash flows from financing activities		**(15,200)**
Net decrease in cash		**(2,750)**
Beginning cash balance		**8,850**
Ending cash balance		**$ 6,100**

***[$7,000 – ($5,000 – $1,100)]** **[1,900 – ($5,000 – $1,100)]

2. $15,050 – $0 – $7,700 = $7,350

AA 14-2 Should We Make the Loan?

Discussion

1.	Dec. 31, 2026	Dec. 31, 2027	Dec. 31, 2028	Dec. 31, 2029
Net income	$ 492	$ 467	$440	$ 481
Add (deduct) adjustments to cash basis:				
Depreciation	50	55	60	60
Accounts receivable change	(152)	39	(60)	(78)
Inventory change	111	(241)	(2)	(637)
Accounts payable change	(2)	264	(28)	(201)
Net cash flows from operating activities	$ 499	$ 584	$410	(375)

2. The sudden decrease in net cash flows from operating activities is caused by a decrease in the collection of receivables, a significant increase in inventories, and the payment of accounts payable.

3. Several factors would be important to know before making a loan to Save More, Inc. Some of them are:

a. **Are the receivables collectible? Are the receivables from good customers, or are they just left on the books to make assets look better? Something is causing the balance in accounts receivable to increase significantly.**

b. **Why have inventories increased so significantly? Does the inventory balance represent salable merchandise, or is some of the inventory becoming obsolete, making it necessary for all new merchandise to be purchased? Will the inventory be sold in the near future?**

c. **Does the company plan to continue paying cash dividends even though it is in a cash crunch? Should the bank (if it decides to make the loan) place restrictions on dividend payments?**

d. **What are the other cash flows from financing and investing activities?**

CHAPTER 15

PE 15-5 (LO2) Vertical Analysis of Balance Sheet

Assets		
Current assets:		
Cash	**$ 2,400**	**8.2%**
Accounts receivable	**4,650**	**15.8**
Inventory	**3,000**	**10.2**
Total current assets	**$10,050**	**34.2%**
Property, plant, and equipment (net)	**16,500**	**56.1**
Goodwill	**2,850**	**9.7**
Total assets	**$29,400**	**100.0%**
Liabilities and Equity		
Current liabilities:		
Accounts payable	**$ 3,600**	**12.2%**
Unearned revenue	**1,900**	**6.5**
Total current liabilities	**$5,500**	**18.7%**
Non-current liabilities	**9,000**	**30.6**
Total liabilities	**$14,500**	**49.3%**
Capital stock	**7,500**	**25.5**
Retained earnings	**7,400**	**25.2**
Total liabilities and equity	**$29,400**	**100.0%**

PE 15-6 (LO3) Common-Size Balance Sheet Standardized Using Total Assets

Assets		
Current assets:		
Cash	**$ 2,400**	**8.2%**
Accounts receivable	**4,650**	**15.8**
Inventory	**3,000**	**10.2**
Total current assets	**$10,050**	**34.2%**
Property, plant, and equipment (net)	**16,500**	**56.1**
Goodwill	**2,850**	**9.7**
Total assets	**$29,400**	**100.0%**
Liabilities and Equity		
Current liabilities:		
Accounts payable	**$ 3,600**	**12.2%**
Unearned revenue	**1,900**	**6.5**
Total current liabilities	**$5,500**	**18.7%**
Non-current liabilities	**9,000**	**30.6**
Total liabilities	**$14,500**	**49.3%**
Capital stock	**7,500**	**25.5**
Retained earnings	**7,400**	**25.2**
Total liabilities and equity	**$29,400**	**100.0%**

PE 15-8 (LO3) Financial Ratios Calculations

a. Debt ratio: Total liabilities / Total assets = $85,800 / $182,400 = 47.04%

Total liabilities = $7,000 + $11,400 + $3,400 + $64,000 = $85,800
Total assets = $4,200 + $12,000 + $5,000 + $3,200 + $28,000 + $130,000 = $182,400
b. Current ratio = Current assets / Current liabilities = $24,400 / $21,800 = 1.12

Current assets = $4,200 + $12,000 + $8,200 = $24,400
Current liabilities = $7,000 + $11,400 + $3,400 = $21,800
c. Return on sales = Net income / Net sales = $20,000 / $210,000 = 9.5%
d. Asset turnover = Net sales / Average total assets = $210,000 / $211,200 = 0.99 times

Average total assets = ($182,400 + $240,000) / 2 = $211,200
e. Return on equity = (Net income – preference dividends) / Average total equity = ($20,000 – 0) / $106,000 = 18.9%

Average total equity = ($96,600 + $115,400) / 2 = $106,000
f. PE ratio = Market values of shares / Net income = $206,000 / $20,000 = 10.3
g. Acid-test ratio = (Current assets – inventories – prepayments) / Current liabilities = ($24,400 – $5,000 – $3,200) / $21,800 = 0.74

PE 15-9 (LO3) Accounts Receivable Turnover

$$\text{A/R turnover} = \frac{\text{Sales revenue}}{\text{Average accounts receivable}}$$

$$= \frac{\$1{,}300{,}000}{(\$104{,}000 + \$120{,}000)/2} = 11.61 \text{ times}$$

PE 15-10 (LO3) Average Collection Period

$$\text{Average collection period} = \frac{365}{\text{Accounts receivable turnover}} = \frac{365}{11.61^*} = 31.4 \text{ days}$$

*The accounts receivable turnover of 11.61 was calculated in PE 15-9 by dividing sales by the average accounts receivable.

PE 15-11 (LO3) Inventory Turnover

$$\text{Inventory turnover} = \frac{\text{Cost of goods sold}}{\text{Average inventory}} = \frac{\$171{,}000}{(\$37{,}000 + \$41{,}000)/2} = 4.38 \text{ times}$$

PE 15-12 (LO3) Number of Days' Sales in Inventory

$$\text{Number of days' sales in inventory} = \frac{365}{\text{Inventory turnover}} = \frac{365}{4.38^*} = 83.3 \text{ days}$$

*For computation of inventory turnover, refer to PE 15-11.

PE 15-13 (LO3) Fixed Asset Turnover

$$\text{Fixed asset turnover} = \frac{\text{Sales}}{\text{Average fixed assets}}$$

$$= \frac{\$1{,}520{,}000}{(\$680{,}000 + \$600{,}000)/2} = 2.38 \text{ times}$$

PE 15-14 (LO3) Debt Ratio

$$\text{Debt ratio} = \frac{\text{Total liabilities}}{\text{Total assets}} = \frac{\$123{,}750}{\$271{,}425} = 45.6\%$$

PE 15-15 (LO3) Debt-to-Equity Ratio

$$\text{Debt-to-equity ratio} = \text{Total liabilities} / \text{Total equity} = \frac{\$123{,}750}{\$147{,}675^*} = 0.838$$

*Total equity = Total assets – Total liabilities ($271,425 – $123,750 = $147,675).

PE 15-16 (LO3) Times Interest Earned Ratio

$$\text{Times interest earned ratio} = \frac{\text{Income before interest and taxes}}{\text{Annual interest expense}} = \frac{\$31{,}015}{\$2{,}602}$$

=11.92 times

PE 15-17 (LO3) Earnings Per Share

EPS = (Net income – preference dividends) / Weighted-average common shares outstanding = ($37,500 - $1,500) / 18,000) = $2

E 15-6 (LO3) Ratios and Computing Missing Values

b. Current ratio = Total current assets/Total current liabilities
1.2 = (b)/$160,000; (b) = $192,000

a. Cash + Accounts receivable = Total current assets
(a) + $110,000 = $192,000; (a) = $82,000

c. Total assets = Current assets + Non-current assets
(c) = $192,000 + $70,000 + $240,000 = $502,000

d. Total current liabilities = Accounts payable + Income taxes payable
$160,000 = $128,000 + (d); (d) = $32,000

f. Debt ratio = Total liabilities/Total assets
0.50 = (f)/$502,000; (f) = $251,000

e. Total liabilities = Current liabilities + non-current liabilities
$251,000 = $160,000 + (e); (e) = $91,000

i. Total liabilities and equity = Total assets

(i) = $502,000

h. Total liabilities and equity = Total liabilities + Total equity
$502,000 = $251,000 + (h); (h) = $251,000

g. Total equity = Capital stock + Retained earnings
$251,000 = (g) + $157,000; (g) = $94,000

In order, the answers are:

a.	**$82,000**	**d.**	**$32,000**	**g.**	**$94,000**
b.	**$192,000**	**e.**	**$91,000**	**h.**	**$251,000**
c.	**$502,000**	**f.**	**$251,000**	**i.**	**$502,000**

E 15-16 (LO3) Ratio Analysis

1. Inventory turnover = 3.6 = $\dfrac{\text{Cost of goods sold}}{\left[\dfrac{€200,000 + €180,000}{2}\right]}$

3.6 X €190,000 = Cost of goods sold
Cost of goods sold = €684,000.

2. Accounts receivable turnover = 7.8 = $\dfrac{\text{Net sales (credit)}}{\left[\dfrac{€73,000 + €126,000}{2}\right]}$

7.8 X €99,500 = Net sales (credit) = €776,100.

3. Return on ordinary shareholders' equity = 25%

$$= \frac{\text{Net income}}{\left[\dfrac{€400,000 + €134,000 + €400,000 + €122,000}{2}\right]}$$

0.25 X €528,000 = Net income = €132,000.

4. Return on assets = 20% = $\dfrac{€132,000 \text{ [see (c) above]}}{\text{Average assets}}$

Average assets = $\frac{€132{,}000}{0.20}$ = €660,000

[Total assets (Dec. 31, 2026) + €650,000]/2 = €660,000

Total assets (Dec. 31, 2026) = (€660,000 × 2) – €650,000 = €670,000.

E 15-23 (LO4) DuPont Framework Computations

Return on equity = Return on sales × Asset turnover × Assets-to-equity ratio

=($50,000 / $500,000) × ($500,000 / $300,000) × ($300,000 / $135,000)
= 10.0% × 1.67 × 2.22
= $50,000 / $135,000 = 37.0%

Average total assets = ($280,000 + $320,000) / 2 = $300,000
Average total equity = ($140,000 + $130,000) / 2 = $135,000
***Note*: It's for DuPont Analysis.**

E 15-28 (LO4) DuPont Framework for Analyzing Financial Statements

Profitability	×	**Efficiency**	×	**Leverage**	=	**Return on equity**
Profit margin	×	**Asset turnover**	×	**Assets-to-equity**	=	**Return on equity**
$\frac{\$87{,}500}{\$200{,}000}$		$\frac{\$200{,}000}{\$335{,}000}$		$\frac{\$335{,}000}{\$255{,}000}$		$\frac{\$87{,}500}{\$255{,}000}$
43.8%		**0.60**		**1.31**		**34.3%**

P 15-7 (LO3) Working Backwards Using Common Ratios

1. Return on equity = Net income/ Average total equity
= $82,000/$300,000
= 27.3%

2. Total assets

If debt ratio (Total liabilities/Total assets) is 80%, then the ratio (Equity/Total assets) is 20% since total assets is the sum of total liabilities and equity.

0.20 = Total equity/Total assets
0.20 = $300,000/Total assets
Total assets = $1,500,000

3. Net sales

Asset turnover = Net sales/ Average total assets
0.75 = Sales/$1,500,000
Sales = $1,125,000

4. Return on sales = Net income/ Net sales
= $82,000/$1,125,000
= 7.3%

5. Current ratio = Current assets/Current liabilities
Total assets = Current assets + Non-current assets
$750,000 = Current assets + $560,000
Current assets = $940,000
Current ratio = $940,000/$270,000
= 3.48

6. Total market value of shares

PE ratio = Market value of shares/Net income
39.0 = Market value of shares/$82,000
Market value = $3,198,000

P 15-11 (LO3) Calculating and Interpreting Inventory Ratios

1.

	Inventory Turnover	Number of Days' Sales in Inventory
Captain Geech Boating	$\frac{\$3{,}156M}{\$924M+\$1{,}306M/2}$ = 2.83 times	$\frac{365}{2.83}$ = 129 days
Merchant Marine	$\frac{\$2{,}200M}{\$240M+\$180M/2}$ = 10.48 times	$\frac{365}{10.48}$ = 35 days

2. The results of the ratios show that Captain Geech Boating has more than a third of the year's inventory on hand, while Merchant Marine has just over one month's inventory on hand. Captain Geech could be holding inventory longer because it is selling expensive boats, or the company could be carrying too much inventory. Both ratios show that Merchant Marine is managing its inventory more efficiently with a smaller amount of money tied up in inventory.

P 15-14 (LO3) Computing Amounts from Financial Ratios

1. **Inventory turnover = 3.6**

   3.6 X €95,000 = Cost of goods sold
   Cost of goods sold = €342,000.

2. **Accounts receivable turnover = 8.6**

   8.6 X €49,750 = Net sales (credit) = €427,850.

3. **Return on equity = 25% =** $\frac{net\ income}{\frac{(200{,}000+67{,}000+200{,}000+61{,}000)}{2}}$

   .25X €264,000 = Net income = €66,000.

4. **Return on assets = 20% =** $\frac{66{,}000}{average\ assets}$

   Average assets = $\frac{66{,}000}{0.20}$ **= €330,000**

   $\frac{\text{Total assets}+350{,}000}{2}$ **= €330,000**

   Total assets = 310,000

P 15-16 (LO3) Computing Missing Information Using Given Financial Ratio

Accounts receivable turnover = 7.5 = $\frac{21{,}000{,}000}{\text{average accounts receivable}}$

Average net accounts receivable = $\frac{21{,}000{,}000}{7.5}$ **= €2,800,000**

Net accounts receivable 12/31/26 + €2,100,000 = €5,600,000
Net accounts receivable 12/31/26 = €3,500,000

Profit margin = 15% = 0.15 = $\frac{net\ income}{21{,}000{,}000}$

Net income = €21,000,000 X 0.15 = €3,150,000
Income before income taxes = €3,150,000 + €900,000 = €4,050,000

Return on assets = 20% = 0.20 = $\frac{3{,}150{,}000}{average\ assets}$

Total Average assets = €3,150,000 ÷ 0.20 = €15,750,000
Total Assets (12/31/26) = €16,500,000
Total current assets = €16,500,000 – €6,240,000 = €10,260,000
Inventory = €10,260,000– €960,000-€3,500,000 = €5,800,000

Total liabilities and equity = €16,500,000

Total liabilities = €16,500,000 – €6,800,000 = €9,700,000

Current ratio = 3 = $\frac{10{,}260{,}000}{current\ liability}$

Current liabilities = €10,260,000 ÷ 3 = $3,420,000

Long-term notes payable =€9,700,000 – $3,420,000 = € 6,280,000

Inventory turnover = 3 = $\frac{cost\ of\ good\ sold}{(5{,}800{,}000+3{,}440{,}000)/2}$

Cost of goods sold = €4,620,000 X 3 = €13,860,000

Gross profit = €21,000,000 – €13,860,000 = €7,140,000

Income from operations = €7,140,000 – €3,000,000 = €4,140,000

Interest expense = €4,140,000 – €900,000-3,150,000 = €90,000

P 15-17 (LO4) DuPont Analysis

1. a. Return on sales = Net income/Net sales

Company A	Company B	Company C
$\frac{\$14{,}400}{\$90{,}000}$ = 16.000%	$\frac{\$2{,}775}{\$42{,}000}$ = 6.607%	$\frac{\$540}{\$31{,}500}$ = 1.714%

b. Asset turnover = Net sales/Average total assets

$\frac{\$90{,}000}{\$233{,}100}$ = 0.386 times $\frac{\$42{,}000}{\$32{,}250}$ = 1.302 times $\frac{\$31{,}500}{\$4{,}800}$ = 6.563 times

c. Assets-to-equity ratio = Average total assets/ Average total equity

$\frac{233{,}100}{\$91{,}500}$ = 2.548 $\frac{\$32{,}250}{\$16{,}950}$ = 1.903 $\frac{4{,}800}{\$2{,}535}$ = 1.893

d. Return on equity = Net income/ Average total equity

$\frac{\$14{,}400}{\$91{,}500}$ = 15.738% $\frac{2{,}775}{\$16{,}950}$ = 16.372% $\frac{\$540}{\$2{,}535}$ = 21.302%

2. Interpretive Question: The large electric utility is Company A. (The large investment in assets, the low asset turnover, and high return on sales suggest Company A is the utility.)

The large supermarket is assumed to be Company C. (Company C has a low return on sales and a high asset turnover.)

Therefore, the large department store is Company B.

AA 15-6 Does the Bonus Plan Reward the Right Thing?

Ethics

The underlying problem here is that the bonus plan rewards the wrong thing. Investors care about the overall return on their investment, and one measure of this is return on equity. Return on sales is only one component of return on equity, but because of the bonus plan, this is the component on which management is focusing. The real solution to this problem is to redesign the bonus plan to reward managers based on return on equity, not return on sales.

But redesigning the bonus plan is not going to happen within the next two weeks, so what do you do in the meantime? You must present your findings to the chief financial officer. The last thing you should do is keep your boss in the dark about your findings. It would be embarrassing for top management if this proposal were to go forward to the board of directors as a great plan to increase return on sales, only to have one of the board members ask about the impact of the machine acquisition on total return on equity. Top managers have two weeks to decide what they should do; your responsibility is to present your findings to your boss now to give the top managers time to reevaluate the project.

At the same time that you present your return on equity calculations to the chief financial officer, you would also do well to offer some alternative plans of action. In this case, one alternative is to finance the machine acquisition with debt instead of with stockholder investment. The increased interest expense will hurt return on sales (and management bonuses), but the increased leverage may boost return on equity enough to make the project worthwhile.

~ END OF PART 2 SOLUTIONS ~