CHAPTER 10

Long-Term Liabilities

OVERVIEW OF EXERCISES, PROBLEMS, AND CASES

Learning Objectives	Exercises	Estimated Time in Minutes	Level
Module 1			
1. Identify the components of the Long-Term Liability category of the balance sheet.			
2. Define the important characteristics of bonds payable.	1	10	Easy
3. Determine the issue price of a bond using compound interest techniques.	2	15	Easy
	3	25	Mod
4. Show that you understand the effect on the balance sheet of the issuance of bonds.	4	10	Mod
	15*	15	Mod
	16*	15	Mod
	17*	20	Mod
Module 2			
5. Find the amortization of premium or discount using the effective interest method.	15*	15	Mod
	16*	15	Mod
	17*	20	Mod
6. Find the gain or loss on retirement of bonds.	5	10	Mod
	6	10	Mod
Module 3			
7. Determine whether a lease agreement must be reported as a liability on the balance sheet.	7	10	Mod
	8	10	Mod
	9	20	Mod
Module 4			
8. Explain how inventors use ratios to evaluate long-term liabilities.			
9. Explain the effects that transactions involving long-term liabilities have on the statement of cash flows.	10	5	Easy
	11	20	Mod
	12	10	Mod
Module 5			
10. Explain deferred taxes and calculate the deferred tax liability (Appendix).	13	5	Easy
	14	10	Easy

*Exercise, problem, or case covers two or more learning objectives
Level = Difficulty levels: Easy; Moderate (Mod); Difficult (Diff)

Learning Objectives	Problems and Alternates	Estimated Time in Minutes	Level
Module 1			
1. Identify the components of the Long-Term Liability category of the balance sheet.	9	20	Mod
2. Define the important characteristics of bonds payable.			
3. Determine the issue price of a bond using compound interest techniques.	1	15	Mod
4. Show that you understand the effect on the balance sheet of the issuance of bonds.	8*	20	Mod
Module 2			
5. Find the amortization of premium or discount using the effective interest method.	2	25	Mod
	3	25	Mod
	8#	20	Mod
6. Find the gain or loss on retirement of bonds.	4	15	Mod
	8**	20	Mod
Module 3			
7. Determine whether a lease agreement must be reported as a liability on the balance sheet.	5	35	Diff
Module 4			
8. Explain how investors use ratios to evaluate long-term liabilities.	9*	20	Mod
9. Explain the effects that transactions involving long-term liabilities have on the statement of cash flows.			
Module5			
10. Explain deferred taxes and calculate the deferred tax liability (Appendix).	6	15	Mod
	7	30	Diff
	9*	20	Mod

*Exercise, problem, or case covers two or more learning objectives
**Alternate problem only
#Original problem only
Level = Difficulty levels: Easy; Moderate (Mod); Difficult (Diff)

Learning Objectives	Cases	Estimated Time in Minutes	Level
Module 1			
1. Identify the components of the Long-Term Liability category of the balance sheet.	1* 4*	40 25	Mod Mod
2. Define the important characteristics of bonds payable.			
3. Determine the issue price of a bond using compound interest techniques.			
4. Show that you understand the effect on the balance sheet of the issuance of bonds.			
Module 2			
5. Find the amortization of premium or discount using the effective interest method.			
6. Find the gain or loss on retirement of bonds.	5	15	Mod
Module 3			
7. Determine whether a lease agreement must be reported as a liability on the balance sheet.	4* 6	25 30	Mod Mod
Module 4			
8. Explain how investors use ratios to evaluate long-term liabilities.	1*	25	Mod
9. Explain the effects that transactions involving long-term liabilities have on the statement of cash flows.	2* 3*	40 25	Mod Mod
Module 5			
10. Explain deferred taxes and calculate the deferred tax liability (Appendix).	2* 3*	40 25	Mod Mod

*Exercise, problem, or case covers two or more learning objectives
Level = Difficulty levels: Easy; Moderate (Mod); Difficult (Diff)

EXERCISES

LO 2 **EXERCISE 10-1 RELATIONSHIPS**

	Cash Interest	Interest Expense	Amort. Disc./Prem.	Carrying Value
1.	C	I	I	I
2.	C	D	I	D

LO 3 **EXERCISE 10-2 ISSUE PRICE**

1. a. \$500,000

b. \$500,000

c. \$500,000

2. a. \$500,000 × 8% × 1/2 year = \$20,000

b. \$500,000 × 8% × 1/2 year = \$20,000

c. \$500,000 × 8% × 1/2 year = \$20,000

3. a.

\$ 20,000	× 13.59033	(Table 9-4, n = 20, i = 4%) =	\$271,807
\$500,000	× 0.45639	(Table 9-2, n = 20, i = 4%) =	228,195
Issue price			\$500,002*

*Should equal \$500,000; the difference is due to rounding in present value factors.

b.

\$ 20,000	× 14.87747	(Table 9-4, n = 20, i = 3%) =	\$297,549
\$500,000	× 0.55368	(Table 9-2, n = 20, i = 3%) =	276,840
Issue price			\$574,389

c.

\$ 20,000	× 12.46221	(Table 9-4, n = 20, i = 5%) =	\$249,244
\$500,000	× 0.37689	(Table 9-2, n = 20, i = 5%) =	188,445
Issue price			\$437,689

LO 3

EXERCISE 10-3 ISSUE PRICE

a.	\$500,000	×	0.62092 (n = 5, i = 10%) =	\$ 310,460
	\$ 40,000*	×	3.79076 (n = 5, i = 10%) =	151,630
				\$ 462,090

*500 bonds × \$1,000 par × 8% = \$40,000

b.	\$500,000	×	0.61391 (n = 10, i = 5%) =	\$ 306,955
	\$ 20,000*	×	7.72173 (n = 10, i = 5%) =	154,435
				\$ 461,390

*500 bonds × \$1,000 par × 8% × 6/12 = \$20,000

c.	\$800,000	×	0.37689 (n = 20, i = 5%) =	\$ 301,512
	\$ 32,000*	×	12.46221 (n = 20, i = 5%) =	398,791
				\$ 700,303

*800 bonds × \$1,000 par × 8% × 6/12 = \$32,000

d.	\$1,000,000	×	0.23138 (n = 30, i = 5%) =	\$ 231,380
	\$ 60,000*	×	15.37245 (n = 30, i = 5%) =	922,347
				\$1,153,727

*2,000 bonds × \$500 par × 12% × 6/12 = \$60,000

LO 4

EXERCISE 10-4 IMPACT OF TWO BOND ALTERNATIVES

1. If the company issues bonds with a face rate of 8% when the market rate is 9%, the bonds will be issued at a discount. The real interest cost the company incurs is the market rate of interest of 9%. Thus, the company cannot “save money” by issuing bonds at a discount.
2. If the company issues bonds with a face rate of 10% when the market rate is 9%, the bonds will be issued at a premium. The company will receive an amount in excess of the par value of the bonds, but that amount is offset by the fact that the company must then pay interest at 10%. The result is that the company incurs a real interest cost of 9%, which is the market rate of interest. Thus, the company does not “benefit” by issuing bonds at 10%.

LO 6

EXERCISE 10-5 REDEMPTION OF BONDS

1.	Redemption price:	\$75,000 × 1.03	=	\$ 77,250
	Carrying value:	\$75,000 – \$1,750	=	73,250
				\$ (4,000) loss

2. The gain or loss on bond redemption should be presented on the income statement. In most cases, the gain or loss on bond redemption should not be considered unusual or infrequent and therefore should not be presented in the section of the statement where extraordinary items are presented.

LO 6

EXERCISE 10-6 REDEMPTION OF A BOND AT MATURITY

Since the bonds are fully matured, the carrying value equals the face value and there will be no gain or loss on the redemption of the bonds.

The effect on the accounting equation of the redemption of the bonds is as follows:

Balance Sheet						Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	←	REVENUES	–	EXPENSES	=	NET INCOME
Cash (250,000)		Bonds Payable (250,000)								

LO 7

EXERCISE 10-7 LEASED ASSET

1. Payment × Table Factor Ord. Annuity = PV Min. Lease Payments
   $8,000 × 6.14457 (Table 9-4, n = 10, i = 10%) = $49,157

2. $80,000 is not a correct amount to record because it does not recognize the time value of money. Since the payments will extend over ten years, the lease must be recorded at the present value of the payments.

LO 7

EXERCISE 10-8 FINANCIAL STATEMENT IMPACT OF A LEASE

1. Payment × Table Factor Ord. Annuity = PV Min. Lease Payment
   Payment × 4.35526 (Table 9-4, n = 6, i = 10%) = $13,065
   Payment = $13,065/4.35526 = $3,000 per year

2. $9,508.65

Date	Lease Payment	Interest Expense	Reduction of Obligation	Lease Obligation
1/01/16				$13,065.00
12/31/16	$3,000	$1,306.50*	$1,693.50	11,371.50
12/31/17	3,000	1,137.15	1,862.85	9,508.65

*$13,065 × 10% = $1,306.50

LO 7

EXERCISE 10-9 LEASED ASSETS

1. a. The value of the forklift will not appear on the balance sheet.

b. The lease payments will appear on the income statement as lease expense.

2. a.

Journal Entry Analysis

2016			
Jan. 1	Leased Asset	5,001*	
	Lease Liability		5,001
	To record signing of lease.		

Balance Sheet					Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	REVENUES	–	EXPENSES	=	NET INCOME
Leased Asset 5,001		Lease Liability 5,001							

*$1,510 × 3.31213 (Table 9-4, n = 4, i = 8%) = $5,001

The leased asset should be reported at the present value of the payments which is $5,001, not at $6,040.

b.

Journal Entry Analysis

Dec. 31	Lease Liability	1,110	
	Interest Expense	400*	
	Cash		1,510
	To record lease payment.		

Balance Sheet					Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	REVENUES	–	EXPENSES	=	NET INCOME
Cash (1,510)		Lease Liability (1,110)		(400)			Interest Expense 400*		(400)

*$5,001 × 8% = $400

c. Depreciation expense = $5,001/4 years = $1,250

d. Current liabilities:

Lease liability (current portion) $\underline{\$1,199}$*

*($5,001 – $1,110) × 8% = $311
$1,510 – $311 = $1,199

Long-term liabilities:

Lease liability $\underline{\underline{\$2,692}}$**

**$5,001 – $1,110 – $1,199 = $2,692

LO 9

EXERCISE 10-10 IMPACT OF TRANSACTIONS INVOLVING BONDS ON STATEMENT OF CASH FLOWS

F—Proceeds from issuance of bonds payable
O—Interest expense
F—Redemption of bonds payable at maturity

LO 9

EXERCISE 10-11 IMPACT OF TRANSACTIONS INVOLVING CAPITAL LEASES ON STATEMENT OF CASH FLOWS

1. Garnett obtained the equipment by signing a lease; no cash changed hands. As a result, this transaction would be reported as a noncash investing and financing transaction on the statement of cash flows.

2. F—Reduction of lease obligation (principal portion of lease payment)
O—Interest expense
O—Depreciation expense—leased assets

LO 9

EXERCISE 10-12 IMPACT OF TRANSACTIONS INVOLVING TAX LIABILITIES ON STATEMENT OF CASH FLOWS

(O) operating	(deduct from net income)—Decrease in taxes payable
(O) operating	(add to net income)—Increase in deferred taxes

LO 10

EXERCISE 10-13 TEMPORARY AND PERMANENT DIFFERENCES (Appendix)

1. Permanent
2. Permanent
3. Temporary
4. Temporary
5. Temporary
6. Permanent

LO 10

EXERCISE 10-14 DEFERRED TAX (Appendix)

Balance of deferred tax account:

2016	Tax depreciation	=	$10,667			
	Book depreciation	=	6,400			
	Difference	=	$ 4,267			
	× Tax rate		× 0.40			
	Entry to deferred tax			=	$1,707	credit
	Balance of account			=	$1,707	credit
2017	Tax depreciation	=	$10,667			
	Book depreciation	=	6,400			
	Difference	=	$ 4,267			
	× Tax rate		× 0.40			
	Entry to deferred tax			=	$1,707	credit
	Balance of account			=	$3,414	credit
2018	Tax depreciation	=	$10,666			
	Book depreciation	=	6,400			
	Difference	=	$ 4,266			
	× Tax rate		× 0.40			
	Entry to deferred tax			=	$1,706	credit
	Balance of account			=	$5,120	credit
2019	Tax depreciation	=	$ 0			
	Book depreciation	=	6,400			
	Difference	=	$(6,400)			
	× Tax rate		× 0.40			
	Entry to deferred tax			=	$2,560	debit
	Balance of account			=	$2,560	credit
2020	Tax depreciation	=	$ 0			
	Book depreciation	=	6,400			
	Difference	=	$(6,400)			
	× Tax rate		× 0.40			
	Entry to deferred tax			=	$2,560	debit
	Balance of account			=	$ 0	

MULTI-CONCEPT EXERCISES

LO 4,5

EXERCISE 10-15 ISSUANCE OF A BOND AT FACE VALUE

1.

$300,000*	×	0.61391	(Table 9-2, n = 10, i = 5%) =	$184,173
$ 15,000**	×	7.72173	(Table 9-4, n = 10, i = 5%) =	115,826
Issuance price				$299,999***

*300 × $1,000 = $300,000
**$300,000 × 10% × 1/2 year = $15,000
***Should equal $300,000; difference due to rounding in present value factors.

Journal Entry Analysis

2016			
Jan. 1	Cash	300,000	
	Bonds Payable..		300,000
	To record issuance of bond.		

Balance Sheet					Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	REVENUES	–	EXPENSES	=	NET INCOME
Cash 300,000		Bonds Payable 300,000							

2. If the market rate of interest had been higher than 10%, the issue price would have been less than the face value of the bonds. The bonds would have been issued at a discount.

3. The effect on the accounting equation of the payment of interest, on July 1, 2016, is as follows:

Journal Entry Analysis

July 1	Interest Expense..	15,000	
	Cash		15,000
	To record payment of interest.		

Balance Sheet					Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	REVENUES	–	EXPENSES	=	NET INCOME
Cash (15,000)				(15,000)			Interest Expense 15,000		(15,000)

4. The amount of interest to be accrued, on December 31, 2016, is calculated as follows:

$300,000 × 10% × 1/2 year = $15,000

LO 4,5

EXERCISE 10-16 IMPACT OF A DISCOUNT

1.

Journal Entry Analysis				
2016				
Jan. 1	Cash	91,526		
	Discount on Bonds Payable	8,474		
	Bonds Payable		100,000	
	To record issuance of bond.			

Balance Sheet						Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY		REVENUES	–	EXPENSES	=	NET INCOME
Cash 91,526		Bonds Payable 100,000 Discount on Bonds Payable* (8,474)								

*The Discount on Bonds Payable account has increased. It is shown as a decrease in the equation above because it is a contra account and causes total liabilities to decrease.

Bonds payable	$100,000
Discount on bonds payable	8,474
	$ 91,526

2.

Journal Entry Analysis				
2016				
Dec. 31	Interest Expense	9,153		
	Cash ($100,000 × 9%)		9,000	
	Discount on Bonds Payable		153	
	To record payment of interest and amortization of discount.			

Balance Sheet						Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY		REVENUES	–	EXPENSES	=	NET INCOME
Cash* (9,000)		Discount on Bonds Payable*** 153		(9,153)				Interest Expense** 9,153		(9,153)

*$100,000 × 9% × 1 year = $9,000

**$91,526 × 10% × 1 year = $9,153

***The Discount on Bonds Payable account has decreased. It is shown as an increase in the equation above because it is a contra account and causes total liabilities to increase.

Bonds payable	$100,000
Discount on bonds payable	8,321*
	$ 91,679

*$8,474 – $153 = $8,321

3. The market rate of interest of 10% was greater than the contract interest rate that Berol Corporation was paying which was 9%. Therefore, in order to be able to issue this bond, the issuance price will have to be lower than the face value.

LO 4,5

EXERCISE 10-17 IMPACT OF A PREMIUM

1.

Journal Entry Analysis

2016			
Jan. 1	Cash	109,862	
	Premium on Bonds Payable		9,862
	Bonds Payable		100,000
	To record the issuance of bonds.		

Balance Sheet					Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	REVENUES	–	EXPENSES	=	NET INCOME
Cash 109,862		Bonds Payable 100,000 Premium on Bonds Payable 9,862							

Bonds payable	$100,000
Premium on bonds payable	9,862
	$109,862

2.

Journal Entry Analysis

2016			
Dec. 31	Interest Expense	8,789	
	Premium on Bonds Payable	211	
	Cash ($100,000 × 9%)		9,000
	To record interest and amortize premium on bond.		

Balance Sheet					Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	REVENUES	–	EXPENSES	=	NET INCOME
Cash (9,000)*		Premium on Bonds Payable (211)		(8,789)			Interest Expense 8,789**		(8,789)

*$100,000 × 9% × 1 year = $9,000

**$109,862 × 8% × 1 year = $8,789

Bonds payable	$100,000
Premium on bonds payable	9,651*
	$109,651

*$9,862 – $211 = $9,651

3. The market rate of 8% is lower than the interest rate Berol is paying. Therefore, investors will be willing to pay more on the basis of the future cash flows discounted at the market rate.

PROBLEMS

LO 3 **PROBLEM 10-1 FACTORS THAT AFFECT THE BOND ISSUE PRICE**

1. a. The bonds would be issued at par, since the face or coupon rate is equal to the market rate of interest.

b. The bonds would be issued at a discount in this situation because investors would demand a 7% return on their investment. Since the cash flows are fixed, the investment must be decreased to increase the effective interest rate.

2. a.

$100,000	×	0.55368	(Table 9-2, *n* = 20, *i* = 3%) =	$ 55,368
$ 3,000*	×	14.87747	(Table 9-4, *n* = 20, *i* = 3%) =	44,632
Total present value =				$100,000

*$100,000 × 6% × 6/12 = $3,000

b.

$100,000	×	0.50835	(Table 9-2, *n* = 10, *i* = 7%) =	$ 50,835
$ 6,000*	×	7.02358	(Table 9-4, *n* = 10, *i* = 7%) =	42,141
Total present value =				$ 92,976

*$100,000 × 6% = $6,000

LO 5 **PROBLEM 10-2 AMORTIZATION OF DISCOUNT**

1. **Discount Amortization**
Effective Interest Method of Amortization

Date	Col. 1 Cash Interest 10%	Col. 2 Interest Expense 12%	Col. 3 Discount Amortized Col. 2 – Col. 1	Col. 4 Carrying Value
1/01/16				$ 9,279
12/31/16	$1,000	$1,113*	$113	9,392
12/31/17	1,000	1,127	127	9,520
12/31/18	1,000	1,142	142	9,662
12/31/19	1,000	1,159	159	9,821
12/31/20	1,000	1,179	179	10,000
Totals	$5,000	$5,721	$721	

*$9,282 × 12% = $1,113

2.

Interest expense	$5,721
Cash interest payment	5,000
Discount amortized	$ 721

PROBLEM 10-2 (Concluded)

3.

Journal Entry Analysis

Date	Account	Debit	Credit
2018 Dec. 31	Interest Expense	1,142	
	Discount on Bonds Payable		142
	Cash		1,000
	To record interest and amortize discount.		

Balance Sheet: ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	Income Statement: REVENUES	–	EXPENSES	=	NET INCOME
Cash (1,000)		Discount on Bonds Payable* 142		(1,142)			Interest Expense 1,142		(1,142)

*The Discount on Bonds Payable account has decreased. It is shown as an increase in the equation above because it is a contra account and causes total liabilities to increase.

Bonds payable	$10,000
Discount on bonds payable	339*
	$ 9,661

*Total Discount – Amortization of Discount for Year 1, Year 2, and Year 3 = $721 – $113 – $127 – $142 = $339

LO 5 **PROBLEM 10-3 AMORTIZATION OF PREMIUM**

1. **Premium Amortization**
Effective Interest Method of Amortization

Date	Col. 1 Cash Interest 10%	Col. 2 Interest Expense 8%	Col. 3 Premium Amortized Col. 2 – Col. 1	Col. 4 Carrying Value
1/01/16				$10,799
12/31/16	$1,000	$ 864	$136	10,663
12/31/17	1,000	853	147	10,516
12/31/18	1,000	841	159	10,357
12/31/19	1,000	829	171	10,186
12/31/20	1,000	814*	186	10,000
Totals	$5,000	$4,202	$798	

*Amount needed to bring carrying value to face value.

2.

Interest expense	$4,202	
Cash interest payment	5,000	
Premium amortized	$ 798	(rounded to $798 in amortization table)

PROBLEM 10-3 (Concluded)

3.

Journal Entry Analysis				
2018				
Dec. 31	Interest Expense	841	
	Premium on Bonds Payable	159	
	Cash		1,000
	To record interest and amortize premium.		

Balance Sheet					Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	REVENUES	–	EXPENSES	=	NET INCOME
Cash (1,000)		Premium on Bonds Payable (159)		(841)			Interest Expense 841		(841)

Bonds payable	$10,000
Premium on bonds payable	357*
	$10,357

*Total Premium – Amortization for Premium for Year 1, Year 2, and Year 3 = $799 – $136 – $147– $159 = $357

LO 6 **PROBLEM 10-4 REDEMPTION OF BONDS**

1.	Redemption price	$200,000 × 1.01 =	$202,000
	Carrying value	$200,000 + ($4,500 – $1,000) =	203,500
	Gain on redemption		$ 1,500
2.	Redemption price	$200,000 × 1.03 =	$206,000
	Carrying value	$200,000 + $3,500 =	203,500
	Loss on redemption		$ 2,500

3. The gain or loss on bond redemption should be presented on the income statement. In most cases, the gain or loss on bond redemption should not be considered unusual or infrequent and therefore should not be presented in the section of the statement where extraordinary items are presented.

4. Bonds are redeemed early only if it is advantageous to the issuing firm. However, early redemption is usually not favorable to the investor because it usually means the investor can no longer benefit from a favorable interest rate. To compensate the investor for forgone interest, as well as for the costs and inconvenience involved, the call price is normally set at an amount higher than 100.

LO 7 **PROBLEM 10-5 FINANCIAL STATEMENT IMPACT OF A LEASE**

1.

Date	Col. 1 Lease Payment	Col. 2 Interest Expense 8%	Col. 3 Reduction of Obligation Col. 1 – Col. 2	Col. 4 Lease Obligation
1/01/16				$112,994
12/31/16	$28,300	$9,040	$19,260	93,734
12/31/17	28,300	7,499	20,801	72,932
12/31/18	28,300	5,835	22,465	50,467
12/31/19	28,300	4,037	24,263	26,204
12/31/20	28,300	2,096	26,204	0

2.

Journal Entry Analysis				
2016				
Jan. 1	Leased Truck		112,994	
	Lease Liability			112,994
	To record acquisition by lease.			

Balance Sheet					Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	REVENUES	–	EXPENSES	=	NET INCOME
Leased Truck 112,994		Lease Liability 112,994							

3.

Journal Entry Analysis				
2017				
Dec. 31	Lease Liability		20,801	
	Interest Expense		7,499	
	Cash			28,300
	To record payment of lease liability and interest.			

Balance Sheet					Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	REVENUES	–	EXPENSES	=	NET INCOME
Cash (28,300)		Lease Liability (20,801)		(7,499)			Interest Expense 7,499		(7,499)

PROBLEM 10-5 (Concluded)

Journal Entry Analysis			
Dec. 31	Depreciation Expense—Leased Truck	22,599	
	Accumulated Depreciation— Leased Truck		22,599
	To record depreciation of leased asset.		

Balance Sheet					Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	REVENUES	–	EXPENSES	=	NET INCOME
Accumulated Deprecia- tion— Leased Truck* (22,599)				(22,599)			Depreciation Expense —Leased Truck 22,599		(22,599)

*The Accumulated Depreciation—Leased Truck account has increased. It is shown as a decrease in the equation above because it is a contra account and causes total assets to decrease.

*$112,994/5 years = $22,599

4. Long-term assets:

Leased truck	$113,000
Accumulated depreciation	45,198*
	$ 67,802

*$22,599 × 2 years = $45,198

Current liabilities:

Lease liability	$ 22,465

Long-term liabilities:

Lease liability	$ 50,473

LO 10 **PROBLEM 10-6 DEFERRED TAX (Appendix)**

1.

Journal Entry Analysis				
	2016			
	Dec. 31	Income Tax Expense	200	
		Deferred Tax		80
		Income Tax Payable		120
		To record tax expense for the year 2016.		

Balance Sheet					Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	REVENUES	–	EXPENSES	=	NET INCOME
		Income Tax Payable 120 Deferred Tax 80		(200)			Income Tax Expense 200		(200)

2. The Deferred Tax account exists to reconcile the difference between the accounting done for tax purposes and that done for reporting to stockholders, also referred to as book purposes. The balance of the Deferred Tax account represents all temporary differences between book and tax accounting reflected at the corporate tax rate. The amount of the temporary differences is entered into the Deferred Tax account when it originates. In theory, the items will be removed from the account when they reverse, and the balance of the account will be reduced at that time.

The current provision for tax of $120 represents the amount paid or payable to the government for 2016 taxes. The deferred portion of $80 represents the increase in the balance of the Deferred Tax account.

The deferred amount of $80 in the footnote represents the entry to deferred tax during the current year. The amount of $180 in the Liability category of the balance sheet represents the year-end balance of the account.

LO 10 **PROBLEM 10-7 DEFERRED TAX CALCULATIONS (Appendix)**

1.	**2014**	Income before taxes	$210,000
		Excess of tax depreciation over book depreciation ($50,000 – $26,667*)	(23,333)
		Taxable income	$186,667
		Tax paid or payable (35%)	$ 65,333
		*($88,000 – $8,000)/3 years = $26,667	
	2015	Income before taxes	$240,000
		Excess of book depreciation over tax depreciation ($26,667 – $20,000)	6,667
		Taxable income	$246,667
		Tax paid or payable (35%)	$ 86,333
	2016	Income before taxes	$280,000
		Excess of book depreciation over tax depreciation ($26,667 – $10,000)	16,667
		Taxable income	$296,667
		Tax paid or payable (35%)	$103,833
2.	**2014**	Income before taxes	$210,000
		Income tax expense (35%)	$ 73,500
	2015	Income before taxes	$240,000
		Income tax expense (35%)	$ 84,000
	2016	Income before taxes	$280,000
		Income tax expense (35%)	$ 98,000

3.

Year	**Col. 1 Income Tax Expense**	**Col. 2 Income Tax Payable**	**Col. 3 Col. 1 – Col. 2**	**Col. 4 Deferred Tax Account**
2014	$73,500	$ 65,333	$ 8,167	$8,167 credit
2015	84,000	86,333	–2,333	5,834 credit
2016	98,000	103,833	–5,834*	0

*Difference due to rounding.

MULTI-CONCEPT PROBLEMS

LO 4,5

PROBLEM 10-8 BOND TRANSACTIONS

1.

Journal Entry Analysis

2016			
Apr. 1	Cash	1,000,000	
	Bonds Payable		1,000,000
	To record the issuance of bonds.		

Balance Sheet					Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	REVENUES	–	EXPENSES	=	NET INCOME
Cash 1,000,000		Bonds Payable 1,000,000							

2.

Journal Entry Analysis

2016			
Oct. 1	Interest Expense	60,000	
	Cash		60,000
	To record interest payment.		

Balance Sheet					Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	REVENUES	–	EXPENSES	=	NET INCOME
Cash (60,000)				(60,000)			Interest Expense 60,000*		(60,000)

*$1,000,000 × 0.12 × 6/12 = $60,000

3. Additional interest must be recorded on December 31 to *accrue* interest for the time period of October 1–December 31. The interest should be recorded as an expense when it is incurred under the accrual accounting process. The accrual does not affect the amount of interest paid on April 1, 2017. A full semiannual payment of $60,000 should occur on that date.

4.

Total cash inflow to Brand		$1,000,000
Total cash outflow:		
Interest ($60,000 × 16 payments)	$ 960,000	
Principal	1,000,000	
Total outflow		1,960,000
Difference		$ 960,000

LO 1,8,10

PROBLEM 10-9 PARTIAL CLASSIFIED BALANCE SHEET FOR WALGREENS

1. The following is the Liabilities section of the consolidated balance sheet of Walgreens at August 31, 2014. (All amounts are in millions.)

Current Liabilities	Trade accounts payable	$4,315
	Accrued expenses and other liabilities	3,701
	Income taxes	105
	Short-term borrowings	774
	Total current liabilities	$8,895
Long-Term Liabilities	Deferred income taxes (long-term)	$1,048
	Long-term debt	3,736
	Other non-current liabilities	2,942
	Total long-term liabilities	$7,726

2. Computation of debt-to-equity ratios:
2014: $16,621/$20,561 = 0.81
2013: $16,027/$19,454 = 0.82

Walgreens' debt-to-equity ratio was nearly the same from 2013 to 2014. Overall, the company has maintained a stable financing pattern from year to year. Most investors would prefer a decrease rather than an increase in this ratio over time. Debt has fixed repayment terms, and its repayment must include interest. Equity never has to be repaid, and dividend payments are optional. Also, the debt represents a claim on the company's assets. In the event of liquidation, this claim would need to be repaid before any assets are distributed to stockholders. Based on this ratio, Walgreens is a very safe company with a low level of debt compared to most other companies.

3. Walgreens' lenders want to be sure that the company can repay the principal and pay the interest on the loan. They would be interested in Walgreens' times interest earned and debt service coverage ratios. Both ratios measure the degree to which a company can make its debt payments out of current cash flows.

ALTERNATE PROBLEMS

LO 3

PROBLEM 10-1A FACTORS THAT AFFECT THE BOND ISSUE PRICE

1. a. The bonds would be issued at par, since the face or coupon rate is equal to the market rate of interest.

b. The bonds would be issued at a premium in this situation because investors would bid the price upward on a bond with a 10% return. Since the cash flows are fixed, the investment must be increased to decrease the effective interest rate.

2. a.

\$500,000	×	0.37689	(n = 20, i = 5%) =	\$188,445
\$ 25,000*	×	12.46221	(n = 20, i = 5%) =	311,555
Total				\$500,000

*\$500,000 × 10% × 6/12 = \$25,000

b.

\$500,000	×	0.46319	(n =10, i = 8%) =	\$231,595
\$ 50,000*	×	6.71008	(n =10, i = 8%) =	335,504
Total				\$567,099

*\$500,000 × 10% = \$50,000

LO 5

PROBLEM 10-2A AMORTIZATION OF DISCOUNT

1.

Discount Amortization
Effective Interest Method of Amortization

Date	Col. 1 Cash Interest 5%	Col. 2 Interest Expense 8%	Col. 3 Discount Amortized Col. 2 – Col. 1	Col. 4 Carrying Value
1/01/16				\$44,011
12/31/16	\$ 2,500	\$ 3,521**	\$1,021	45,032
12/31/17	2,500	3,603	1,103	46,135
12/31/18	2,500	3,691	1,191	47,326
12/31/19	2,500	3,786	1,286	48,612
12/31/20	2,500	3,888*	1,388	50,000
Totals	\$12,500	\$18,489	\$5,989	

*Amount needed to bring carrying value to face value.
**\$44,011 × 8% = \$3,520.88 = \$3,521

2.

Interest expense	\$18,489
Cash interest payments	12,500
Discount amortized	\$ 5,989

PROBLEM 10-2A (Concluded)

3.

Journal Entry Analysis				
	2018			
	Dec. 31	Interest Expense...	3,691	
		Discount on Bonds Payable.........................		1,191
		Cash		2,500
		To record interest and amortization of discount.		

Balance Sheet						Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY		REVENUES	–	EXPENSES	=	NET INCOME
Cash (2,500)		Discount on Bonds Payable* 1,191		(3,691)				Interest Expense 3,691		(3,691)

*The Discount on Bonds Payable account has decreased. It is shown as an increase in the equation above because it is a contra account and causes total liabilities to increase.

Bonds payable	$50,000
Discount on bonds payable..	2,674*
	$47,326

*Total Discount – Amortization of Discount for Year 1, Year 2, and Year 3
= $5,989 – $1,021 – $1,103 – $1,191 = $2,674*

LO 5

PROBLEM 10-3A AMORTIZATION OF PREMIUM

1. **Premium Amortization**
Effective Interest Method of Amortization

Date	Col. 1 Cash Interest 5%	Col. 2 Interest Expense 4%	Col. 3 Premium Amortized Col. 1 – Col. 2	Col. 4 Carrying Value
1/01/16				$52,227
12/31/16	$ 2,500	$ 2,089**	$ 411	51,816
12/31/17	2,500	2,073	427	51,389
12/31/18	2,500	2,056	444	50,945
12/31/19	2,500	2,038	462	50,483
12/31/20	2,500	2,017*	483	50,000
Totals	$12,500	$10,273	$2,227	

*Amount needed to bring carrying value to face value.
**$52,227× 4% = $2,089

2.

Interest expense	$10,273
Cash interest payment	12,500
Premium amortized	$ 2,227

PROBLEM 10-3A (Concluded)

3.

Journal Entry Analysis				
2018				
Dec. 31	Interest Expense	2,056	
	Premium on Bonds Payable	444	
	Cash		2,500
	To record interest and amortization of premium.		

Balance Sheet					Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	REVENUES	–	EXPENSES	=	NET INCOME
Cash (2,500)		Premium on Bonds Payable (444)		(2,056)			Interest Expense 2,056		(2,056)

Bonds payable	$50,000
Premium on bonds payable	945*
	$50,945

*Total Premium – Amortization for Premium for Year 1, Year 2, and Year 3 = $2,227– $411 – $427 – $444 = $945

LO 6 **PROBLEM 10-4A REDEMPTION OF BONDS**

1.

Redemption price ($100,000 × 1.01)	$101,000
Carrying value [$100,000 + ($5,500 – $2,000)]	103,500
Gain on redemption	$ 2,500

2.

Redemption price ($100,000 × 1.04)	$104,000
Carrying value ($100,000 + $3,500)	103,500
Loss on redemption	$ 500

3. The gain or loss on bond redemption should be presented on the income statement. In most cases, the gain or loss on bond redemption should not be considered unusual or infrequent and therefore should not be presented in the section of the statement where extraordinary items are presented.

4. Bonds are redeemed early only if it is advantageous to the issuing firm. However, early redemption is usually not favorable to the investor because it usually means the investor can no longer benefit from a favorable interest rate. To compensate the investor for forgone interest, as well as for the costs and inconvenience involved, the call price is normally set at an amount higher than 100.

LO 7

PROBLEM 10-5A FINANCIAL STATEMENT IMPACT OF A LEASE

1.

Date	Col. 1 Lease Payment	Col. 2 Interest Expense 9%	Col. 3 Reduction of Obligation Col. 1 – Col. 2	Col. 4 Lease Obligation
1/01/16				$98,600
12/31/16	$21,980	$8,874**	$13,106	85,494
12/31/17	21,980	7,694	14,286	71,208
12/31/18	21,980	6,409	15,571	55,637
12/31/19	21,980	5,007	16,973	38,664
12/31/20	21,980	3,480	18,500	20,164
12/31/21	21,980	1,816	20,164*	0

*Rounded to bring carrying value to zero.
**$98,600 × 9% = $8,874

2.

Journal Entry Analysis

2016			
Jan. 1	Leased Machine	98,600	
	Lease Liability		98,600
	To record acquisition by lease.		

Balance Sheet			Income Statement		
ASSETS =	LIABILITIES +	STOCKHOLDERS' EQUITY	REVENUES –	EXPENSES =	NET INCOME
Leased Machine 98,600	Lease Liability 98,600				

3.

Journal Entry Analysis

2017			
Dec. 31	Lease Liability	14,286	
	Interest Expense	7,694	
	Cash		21,980
	To record payment of lease liability and interest.		

Balance Sheet			Income Statement		
ASSETS =	LIABILITIES +	STOCKHOLDERS' EQUITY	REVENUES –	EXPENSES =	NET INCOME
Cash (21,980)	Lease Liability (14,286)	(7,694)		Interest Expense 7,694	(7,694)

PROBLEM 10-5A (Concluded)

Journal Entry Analysis				
	Dec. 31	Depreciation Expense—Leased Machine..........	16,433	
		Accumulated Depreciation—Leased Machine..........		16,433
		To record depreciation of leased asset.		

Balance Sheet					Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	REVENUES	–	EXPENSES	=	NET INCOME
Accum. Depr. —Leased Machine* (16,433)				(16,433)			Depreciation Expense—Leased Machine 16,433		(16,433)

*The Accumulated Depreciation—Leased Machine account has increased. It is shown as a decrease in the equation above because it is a contra account and causes total assets to decrease.

4. Long-term assets:

Leased machine	$98,600
Accumulated depreciation	32,866*
	$65,734

*$16,433 × 2 years = $32,866

Current liabilities:

Lease liability—current portion	$15,571

Long-term liabilities:

Lease liability	$55,637

LO 10 **PROBLEM 10-6A DEFERRED TAX (Appendix)**

1. The effect on the accounting equation of the December 31, 2016, income tax expense, deferred tax, and income tax payable is as follows:

ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	REVENUES	–	EXPENSES	=	NET INCOME
		Income Tax Payable 120 Deferred Tax (20)		(100)			Income Tax Expense 100		(100)

2. The Deferred Tax account exists to reconcile the difference between the accounting done for tax purposes and that done for reporting to stockholders, also referred to as book purposes. The balance of the Deferred Tax account represents all temporary differences between book and tax accounting reflected at the corporate tax rate. The amount of the temporary differences is entered into the Deferred Tax account when it originates. In theory, the items will be removed from the account when they reverse and the balance of the account will be reduced at that time.

LO 10 **PROBLEM 10-7A DEFERRED TAX CALCULATIONS (Appendix)**

1.

Year 1	Income before taxes	$120,000
	Tax-exempt income	(5,000)
	Excess of tax depreciation over book depreciation ($30,000 – $20,000)	(10,000)
	Taxable income	$105,000
	Taxes paid or payable (40%)	$ 42,000
Year 2	Income before taxes	$120,000
	Tax-exempt income	(5,000)
	Excess of book depreciation over tax depreciation ($20,000 – $20,000)	0
	Taxable income	$115,000
	Taxes paid or payable (40%)	$ 46,000
Year 3	Income before taxes	$120,000
	Tax-exempt income	(5,000)
	Excess of book depreciation over tax depreciation ($20,000 – $10,000)	10,000
	Taxable income	$125,000
	Taxes paid or payable (40%)	$ 50,000

2. The Deferred Tax account for Years 1–3 would contain the following information:

Year 1 entry:	Tax expense greater than tax payable ($10,000 × 40%)	= $4,000 credit
Year 1 balance		= $4,000 credit, a liability
Year 2 entry:		= 0
Year 2 balance		= $4,000 credit, a liability
Year 3 entry:	Tax payable greater than tax expense ($10,000 × 40%)	= $4,000 debit
Year 3 balance		= 0

The account would not appear on the balance sheet at the end of Year 3.

ALTERNATE MULTI-CONCEPT PROBLEMS

LO 4,6 **PROBLEM 10-8A FINANCIAL STATEMENT IMPACT OF A BOND**

1.

Journal Entry Analysis

2016				
July 1	Cash		916,162	
	Discount on Bonds Payable		83,838	
		Bonds Payable		1,000,000
	To record issuance of bond.			

Balance Sheet					Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	REVENUES	–	EXPENSES	=	NET INCOME
Cash 916,162		Bonds Payable 1,000,000							
		Discount on Bonds Payable* (83,838)							

*The Discount on Bonds Payable account has increased. It is shown as a decrease in the equation above because it is a contra account and causes total liabilities to decrease.

$ 50,000*	×	8.38384 (Table 9-4, n = 12, i = 6%) =	$419,192
$1,000,000	×	0.49697 (Table 9-2, n = 12, i = 6%) =	496,970
			$916,162

*$1,000,000 × 10% × 6/12 = $50,000

Journal Entry Analysis

2016				
Dec. 31	Interest Expense ($916,162 × 6%)		54,970	
		Discount on Bonds Payable		4,970*
		Interest Payable		50,000
	To record interest and amortization of discount.			

Balance Sheet					Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	REVENUES	–	EXPENSES	=	NET INCOME
		Discount on Bonds Payable 4,970***		(54,970)			Interest Expense 54,970**		(54,970)
		Interest Payable 50,000							

*Discount Amortized = $54,970 – $50,000 = $4,970

**$916,162 × 6% = $54,970

***The Discount on Bonds Payable account has decreased. It is shown as an increase in the equation above because it is a contra account and causes total liabilities to increase.

PROBLEM 10-8A (Concluded)

3.

Journal Entry Analysis				
2017				
Jan. 1	Interest Payable		50,000	
	Cash			50,000
	To record payment of interest.			

Balance Sheet					Income Statement				
ASSETS	=	LIABILITIES	+	STOCKHOLDERS' EQUITY	REVENUES	–	EXPENSES	=	NET INCOME
Cash (50,000)		Interest Payable (50,000)							

4. On the maturity date, July 1, 2022, the balance in Discount on Bonds Payable will have been reduced to $0. The only remaining amount to be paid is the principal on the bond as shown in the Bonds Payable account, $1,000,000.

LO 1,8,10 **PROBLEM 10-9A PARTIAL CLASSIFIED BALANCE SHEET FOR BOEING**

1. The following is the Liabilities section of the consolidated balance sheet of Boeing, Inc., at December 31, 2013. (All amounts are in millions.)

Liabilities	
Current liabilities:	
Accounts payable	$ 9,498
Deferred income taxes and income taxes payable	6,267
Short-term debt and current portion of long-term debt	1,563
Accrued liabilities	14,131
Advances and billings in excess of related costs	20,027
Total current liabilities	$51,486
Non-current income taxes payable	$ 156
Long-term debt	8,072
Accrued retiree health care	6,528
Accrued pension plan liability, net	10,474
Other long-term liabilities	950
Total long-term liabilities	$26,180

PROBLEM 10-9A (Concluded)

2. Computation of debt-to-equity ratios:

2013
$77,666/$14,997= 5.18

2012
$82,929/$5,967 = 13.90

Boeing's debt-to-equity ratio is quite high for both years but did decrease considerably in 2013; Boeing has $5.18 dollars of debt for each dollar of equity. This should cause some concern among investors about the company's use of debt. Most investors would prefer a mix of debt and equity but the use of equity has some advantages. Debt has fixed repayment terms, and its repayment must include interest. Equity never has to be repaid, and dividend payments are optional. Also, the debt represents a claim on the company's assets. In the event of liquidation, this claim would need to be repaid before any assets were distributed to stockholders. Overall, the debt-to-equity ratio is fairly high and indicates the company has a high level of debt.

3. Boeing's lenders want to be sure that the company can repay the principal and pay the interest on the loan. They would be interested in Boeing's times interest earned and debt service coverage ratios. Both ratios measure the degree to which a company can make its debt payments out of current cash flows.

DECISION CASES

READING AND INTERPRETING FINANCIAL STATEMENTS

LO 1,8 **DECISION CASE 10-1 EVALUATING THE LIABILITIES OF PANERA BREAD CO.**

1. Panera Bread has the following long-term liabilities:

Long-term debt increased from 2013 to 2014.
Deferred rent increased from 2013 to 2014.
Deferred income taxes increased from 2013 to 2014.
Other long-term liabilities increased from 2013 to 2014.

2. Debt-to-equity ratio for 2014: $654,718/$736,184 = 0.89
Debt-to-equity ratio for 2013: $480,970/$699,892 = 0.69

Times interest earned for 2014: $279,118/$1,824 = 153.03
Times interest earned for 2013: $313,773/$1,053 = 297.98

In both years, the company has a very high times interest earned ratio indicating it has the ability to meet its interest obligations. The company has very little debt, and it is very likely it can meet its obligations.

LO 9,10

DECISION CASE 10-2 MAKING BUSINESS DECISIONS: COMPARING TWO COMPANIES IN THE SAME INDUSTRY: PANERA BREAD AND CHIPOTLE

Part A. The Ratio Analysis Model

1. Formulate the Question:
The use of debt is a good management strategy, but sometimes a company may have too much debt. The important questions to ask are:
What is the amount of debt in relation to the total equity of the company?
Will the company be able to meet its obligations related to the debt? That is, when an interest payment comes due, will the company have the ability to make the payment?

2. Gather the Information from the Financial Statements:
For those questions to be addressed, information from the balance sheet and the income statement needs to be collected and analyzed.
- Total debt and total equity: From the balance sheet
- Income before interest and tax: From the income statement
- Interest expense: From the income statement

3. Calculate the Ratio:
Debt-to-equity ratio for Panera Bread:
2014: $654,718/$736,184 = 0.89
2013: $480,970/$699,892 = 0.69

Debt-to-equity ratio for Chipotle:
2014: $533,916/$2,012,369 = 0.27
2013: $470,992/$1,538,288 = 0.31

4. Compare the Ratio with Other Ratios:
The debt-to-equity ratio for the two companies is quite different. Chipotle carries a very low amount of debt so its debt-to-equity ratio is very low for both years. Panera Bread also has a moderate amount of debt and a ratio that is very reasonable when compared to other companies. Both companies have an ability to generate cash to pay interest obligations and repay debt so they can manage their debt levels rather easily.

DECISION CASE 10-2 (Concluded)

Part B. The Business Decision Model

1. Formulate the Question:
If you were a lender, would you be willing to lend money to either or both companies based on their use of debt?

2. Gather Information from the Financial Statements and Other Sources:
This information will come from a variety of sources, not limited to but including:

- The balance sheet provides information about the amount of debt and equity. The income statement and statement of cash flows provide information about the amount of interest expense.
- The outlook for the industry, including consumer trends, foreign markets, labor issues, and other factors.
- The outlook for the economy in general.
- Alternative uses for the money.
- Compare the ratios in (A) above as well as with industry averages.
- Look at trends over time in the level of debt and equity and the companies' use of leverage.
- Review projections for the economy and the industry.

3. Analyze the Information Gathered:
Whether a company is using leverage effectively is always a matter of judgment. For example, Chipotle has a very low debt-to-equity ratio and that is an indication of a good, low-risk company. However, you also must consider whether the company could increase its profitability by borrowing money and using that money to invest in productive activities that would generate a profit.

4. Make the Decision:
Taking into account all of the various sources of information, decide either to

- Lend money to either company or
- Find an alternative use for the money

5. Monitor Your Decision:
If you decide to lend money, you will need to monitor your investment periodically. During the time of the investment, you will want to assess the company's level of debt and its composition of equity as well as other factors you considered before making the investment.

LO 9,10

DECISION CASE 10-3 READING PEPSICO'S STATEMENT OF CASH FLOWS

1. Proceeds from debt is a positive amount on the cash flows statement because it indicates that the company has incurred a loan and received cash. Payment of debt is a negative amount because it indicates that the company has used cash to repay a loan or other form of debt.
2. When interest rates are at low levels, companies often pay off loans that carry interest at a rate that is higher than the current rate. It makes good economic sense to pay off loans that have a high rate of interest because money borrowed at the current rate of interest will be less than the rate on debt that was incurred previously.
3. A company may repurchase stock for several reasons. The company may want to eliminate a certain class of stock or reduce the need to pay dividends. The company may also want to have more control of its stock by having the stock in the hands of fewer stockholders. Finally, when a company repurchases stock, this does have a positive impact on its earnings per share.

MAKING FINANCIAL DECISIONS

LO 1,7

DECISION CASE 10-4 MAKING A LOAN DECISION

1. The bank's policy is that a 2-to-1 ratio of assets to debt must be maintained. The note in Molitor's annual report indicates that generally accepted accounting principles do not require the item to be recorded. This is an example of an off-balance-sheet financial arrangement. A strict interpretation of the policy and the accounting principle does not require the item to be recorded, and the ratio is $660,000/$300,000 = 2.2. If the amount is included, the ratio is $860,000/$500,000 = 1.7.
2. The bank should adopt a more flexible policy to consider those financing techniques that are off-balance-sheet. However, it is very difficult to develop a policy that accommodates the wide variety of financial arrangements that fall into this category. Some are, in substance, liabilities and should be considered as such. Others are not liabilities and are more appropriately excluded from the bank's policy.

LO 6 **DECISION CASE 10-5 BOND REDEMPTION DECISION**

DATE:

TO: Controller

FROM: Student Name

RE: Retirement of Outstanding Bonds

The outstanding bonds require the company to continue to pay 10% in a market that requires only a 4% return. If the company issues new bonds at 4%, the new issuance will yield the company $100,000 and the interest cash payment will be much lower at 4% than at the old rate of 10%. The benefit to the company is that in the future ten years, the company is required to pay only $4,000 each year rather than $10,000 in annual interest. Discounting the savings of $6,000 per year yields a benefit to the company of $48,666 ($6,000 × 8.111 rounded). This is more than the call premium of 2% and justifies the retirement of the original bonds. Therefore, I recommend that the company retire the outstanding bonds and reissue the bonds at the lower rate in order to reduce future cash outflow.

ETHICAL DECISION MAKING

LO 7 **DECISION CASE 10-6 DETERMINATION OF ASSET LIFE**

1. **Recognize an ethical dilemma:**
   Jen must decide whether the lease criteria must be interpreted literally or whether she should change the life of the asset in order to allow the asset to be considered an operating lease.

2. **Analyze the key elements in the situation:**
   Even though criteria exist that govern lease accounting, significant judgment is necessary in the application of the criteria. An estimate of the life of the asset is always a matter of judgment. Jen should consider carefully how she can make an informed judgment about the life of the asset—are there published sources, past history, or appraisal information.

3. **List alternatives and evaluate the impact of each on those affected:**
   Whether to record an asset as an operating lease or capital lease can have a potential effect on anyone who uses the financial statements including investors and lenders. Financial statement readers must be able to rely on the accuracy of the information. It is true that some of the information may be disclosed in the footnotes, even if it is an operating lease. However, statement users may still be impacted by the decision.

DECISION CASE 10-6 (Concluded)

4. **Select the best alternative:**
   If Jen believes that the first source of information is valid, she should record the lease as a capital lease. If the trade publication is more valid, she should record the lease as an operating lease. Jen should gather additional information and consult other experts or opinions in forming her decision. However, in the final analysis, she must make an informed decision that represents her best professional judgment. The judgment should not be based on the desire to record the asset as an operating lease.

   If Jen decides the issue because Hale's does not want the lease recorded as a capital lease, then probably she is acting unethically. Accounting decisions should be based on the substance of the transaction and should not be based on a desire to achieve a certain objective, such as a desire to "hide" information or a desire to please one's boss.