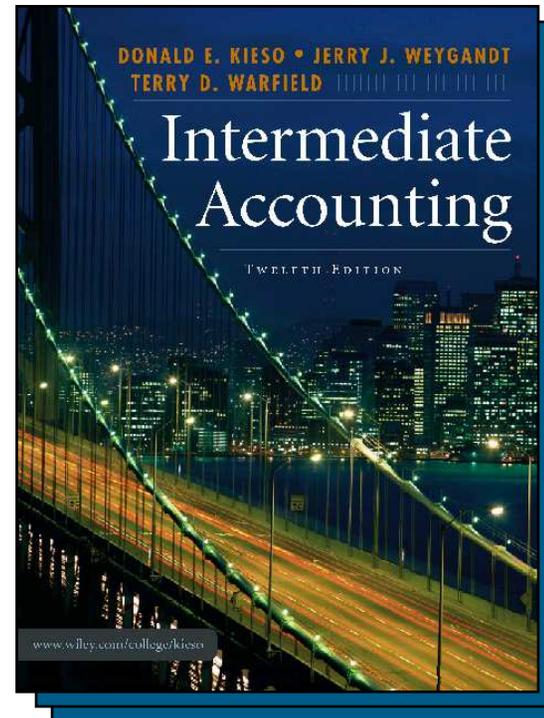


Accounting and Reporting of Long-Term Liabilities

Chapter 14

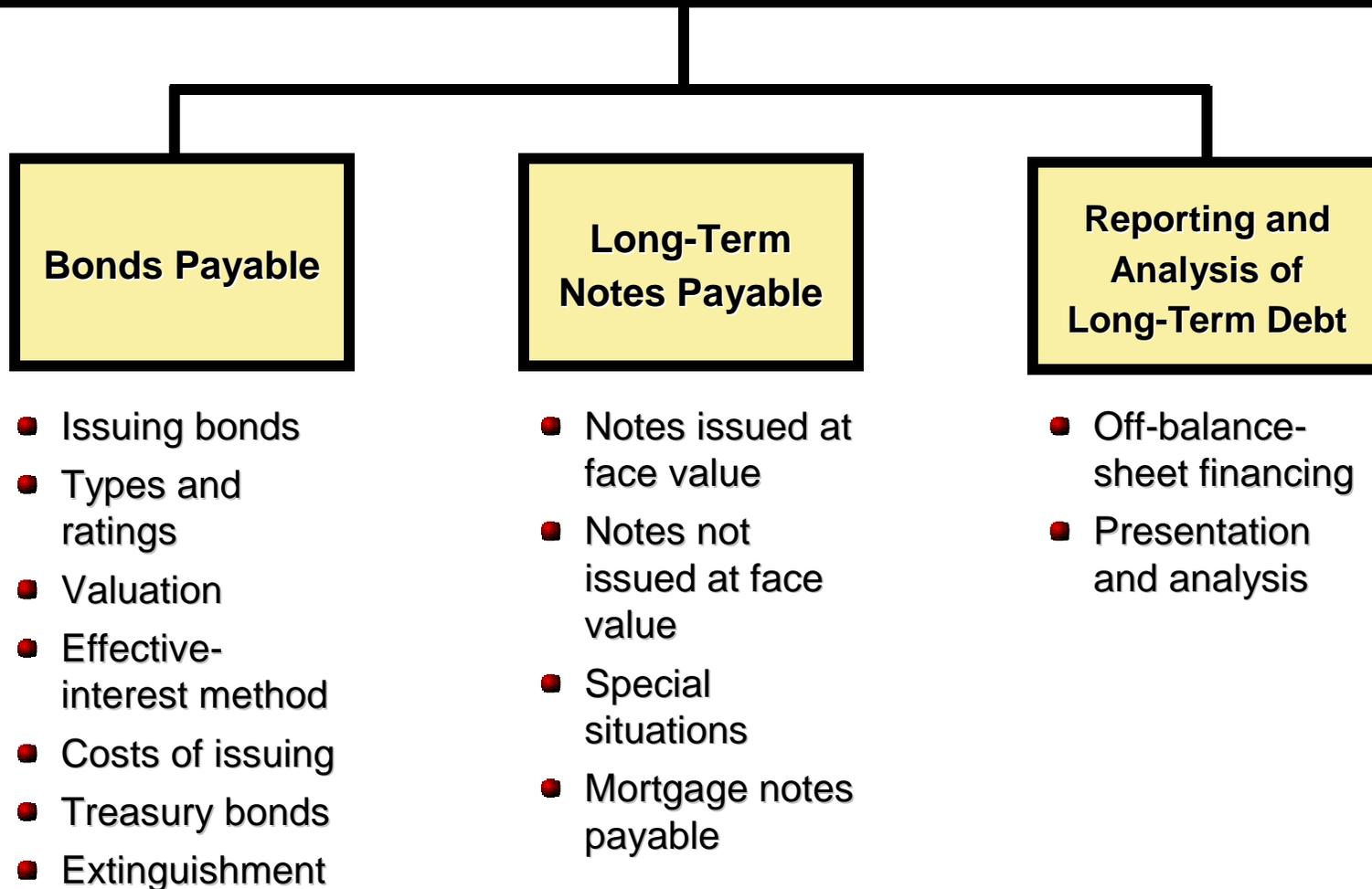
Intermediate Accounting
12th Edition
Kieso, Weygandt, and Warfield



Learning Objectives

1. Describe the formal procedures associated with issuing long-term debt.
2. Identify various types of bond issues.
3. Describe the accounting valuation for bonds at date of issuance.
4. Apply the methods of bond discount and premium amortization.
5. Describe the accounting for the extinguishment of debt.
6. Explain the accounting for long-term notes payable.
7. Explain the reporting of off-balance-sheet financing arrangements.
8. Indicate how to present and analyze long-term debt.

Current Liabilities and Contingencies



Bonds Payable

Long-term debt consists of probable future sacrifices of economic benefits arising from present obligations that are not payable within a year or the operating cycle of the company, whichever is longer.

Examples:

- Bonds payable
- Notes payable
- Mortgages payable
- Pension liabilities
- Lease liabilities

Long-term debt has various **covenants** or **restrictions**.

Issuing Bonds

- Bond contract known as a **bond indenture**.
- Represents a promise to pay:
 - (1) sum of money at designated maturity date, plus
 - (2) periodic interest at a specified rate on the maturity amount (face value).
- Paper certificate, typically a \$1,000 face value.
- Interest payments usually made semiannually.
- Purpose is to borrow when the amount of capital needed is too large for one lender to supply.

Types of Bonds

Common types found in practice:

- Secured and Unsecured (debenture) bonds,
- Term, Serial, and Callable bonds,
- Convertible bonds, Commodity-backed bonds, Deep-discount bonds (Zero-interest debenture bonds),
- Registered bonds and bearer or coupon bonds,
- Income and Revenue bonds.

Valuation of Bonds - Discount and Premium

Between the time the company sets the terms and the time it issues the bonds, the market conditions and the financial position of the issuing corporation may change significantly. Such changes affect the marketability of the bonds and thus their selling price.

The investment community values a bond at the **present value** of its expected future cash flows, which consist of (1) **interest** and (2) **principal**.

Valuation of Bonds - Discount and Premium

Interest Rates

- **Stated, coupon, or nominal rate** = The interest rate written in the terms of the bond indenture.
- **Market rate or effective yield** = rate that provides an acceptable return on an investment commensurate with the issuer's risk characteristics.

Rate of interest actually earned by the bondholders.

Valuation of Bonds - Discount and Premium

How do you calculate the amount of interest that is actually paid to the bondholder each period?

(Stated rate x Face Value of the bond)

How do you calculate the amount of interest that is actually recorded as interest expense by the issuer of the bonds?

(Market rate x Carrying Value of the bond)

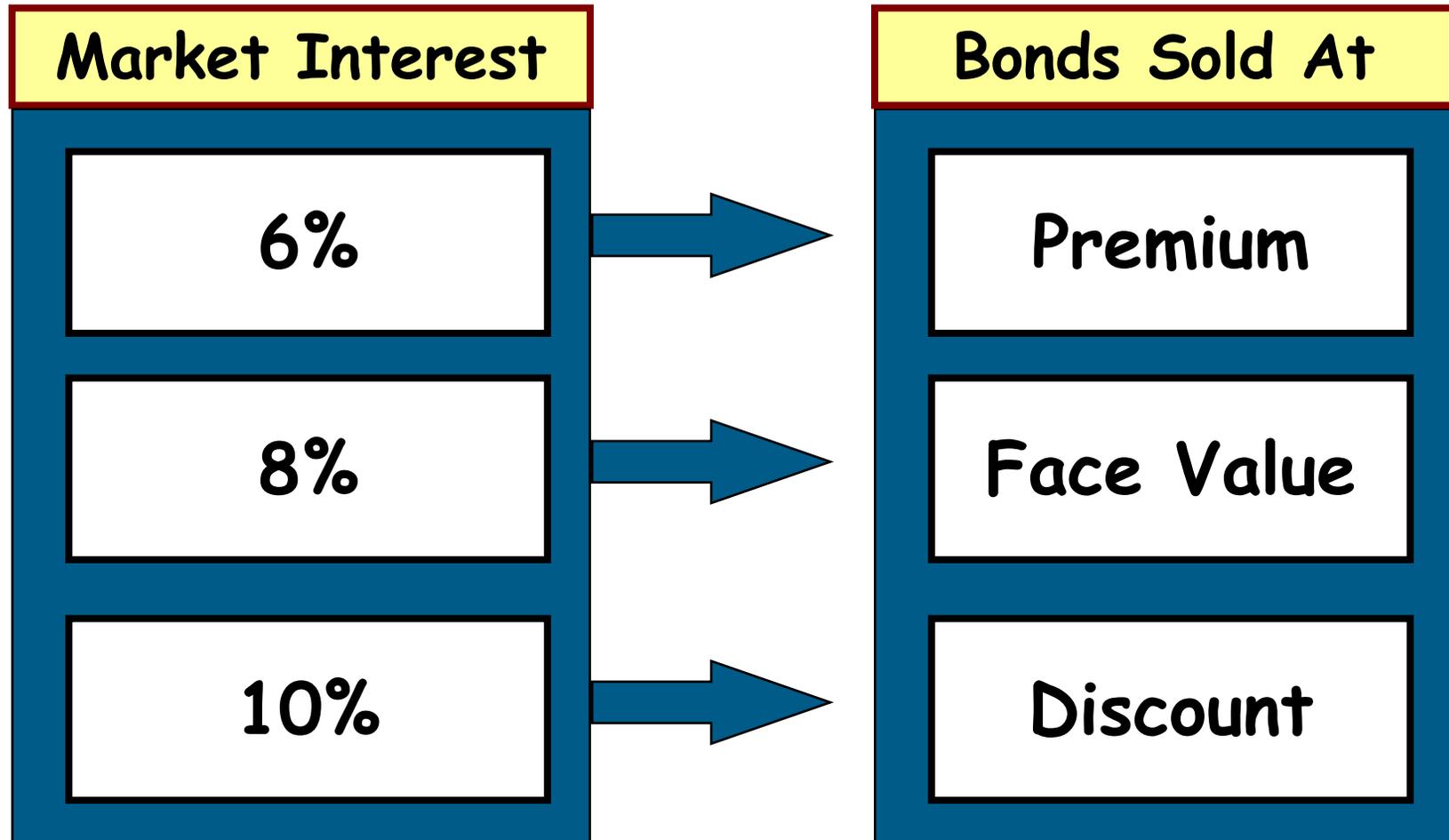
Valuation of Bonds - Discount and Premium

Calculating the Selling Price of a Bond

- 1- Depends on Market Rate of interest
- 2- Computation of selling price:
 - PV of maturity value, plus
 - PV of interest payments, at what rate?
 - Market rate of interest
- 3- Semi-annual interest paying bonds:
 - Require doubling the periods
 - Halving the interest rate

Valuation of Bonds - Discount and Premium

Assume Stated Rate of 8%



Bonds Issued at Par

Illustration Three year bonds are issued at face value of \$100,000 on Jan. 1, 2007, with a stated interest rate of 8%. Interest paid annually on Dec. 31. Calculate the issue price of the bonds, market interest rate of 8%.

Market Rate 8% (PV for 3 periods at 8%)

Principal	\$100,000	x	0.79383	=	\$ 79,383
Interest	8,000	x	2.57710	=	20,617
			Present value		<u>100,000</u>
			Face value		<u>100,000</u>
			Discount		<u><u>\$ 0</u></u>

Bonds Issued at Par

Illustration Three year bonds are issued at face value of \$100,000 on Jan. 1, 2007, a stated interest rate of 8%, and market rate of 8%.

Date	Cash Paid	Interest Expense	Carrying Amount
1/1/07			\$ 100,000
12/31/07	\$ 8,000	\$ 8,000	100,000
12/31/08	8,000	8,000	100,000
12/31/09	8,000	8,000	100,000

Bonds Issued at Par

Illustration Stated rate = 8%. Market rate = 8%.

Journal entries for 2007:

1/1/07	Cash	100,000	
	Bonds payable		100,000
12/31/07	Interest expense	8,000	
	Cash		8,000

Bonds Issued at a Discount

Illustration Three year bonds are issued at face value of \$100,000 on Jan. 1, 2007, and a stated interest rate of 8%. Calculate the issue price of the bonds assuming a market interest rate of 10%.

Market Rate 10% (PV for 3 periods at 10%)

Principal	\$100,000	x	0.75132	=	\$ 75,132
Interest	8,000	x	2.48685	=	19,895
			Present value		<u>95,027</u>
			Face value		100,000
			Discount		<u><u>\$ (4,973)</u></u>

Bonds Issued at a Discount

Illustration Three year bonds are issued at face value of \$100,000 on Jan. 1, 2007, a stated interest rate of 8%, and market rate of 10%.

Date	8% Cash Paid	10% Interest Expense	Discount Amortized	Carrying Amount
1/1/07				\$ 95,027
12/31/07	\$ 8,000	\$ 9,503	\$ 1,503	96,530
12/31/08	8,000	9,653	1,653	98,183
12/31/09	8,000	9,817 *	1,817	100,000

* rounding

Bonds Issued at a Discount

Illustration Stated rate = 8%. Market rate = 10%.

Journal entries for 2007:

1/1/07	Cash	95,027	
	Discount on bonds payable	4,973	
	Bonds payable		100,000
12/31/07	Interest expense	9,503	
	Discount on bonds payable		1,503
	Cash		8,000

Bonds Issued at a Premium

Illustration Three year bonds are issued at face value of \$100,000 on Jan. 1, 2007, and a stated interest rate of 8%. Calculate the issue price of the bonds assuming a market interest rate of 6%.

Market Rate 6% (PV for 3 periods at 6%)

Principal	\$100,000	x	0.83962	=	\$ 83,962
Interest	8,000	x	2.67301	=	21,384
			Present value		<hr/> 105,346
			Face value		100,000
			Premium		<hr/> <hr/> \$ 5,346

Bonds Issued at a Premium

Illustration Three year bonds are issued at face value of \$100,000 on Jan. 1, 2007, a stated interest rate of 8%, and market rate of 6%.

Date	8% Cash Paid	6% Interest Expense	Premium Amortized	Carrying Amount
1/1/07				\$ 105,346
12/31/07	\$ 8,000	\$ 6,321	\$ 1,679	103,667
12/31/08	8,000	6,220	1,780	101,887
12/31/09	8,000	6,113	1,887	100,000

Bonds Issued at a Premium

Illustration Stated rate = 8%. Market rate = 6%.

Journal entries for 2007:

1/1/07	Cash	105,346	
	Premium on bonds payable		5,346
	Bonds payable		100,000
12/31/07	Interest expense	6,321	
	Premium on bonds payable	1,679	
	Cash		8,000

Valuation of Bonds - Discount and Premium

Bonds Issued between Interest Dates

Buyers will pay the seller the interest accrued from the last interest payment date to the date of issue.

On the next semiannual interest payment date, purchasers will receive the full six months' interest payment.

Valuation of Bonds - Discount and Premium

Classification of Discount and Premium

Discount on bonds payable is a liability valuation account, that reduces the face amount of the related liability (contra-account).

Premium on bonds payable is a liability valuation account, that adds to the face amount of the related liability (adjunct account).

Balance Sheet (in thousands)	
Assets	
Cash	\$ 40,000
Inventories	95,000
Plant assets, net	280,000
Total assets	<u>\$ 415,000</u>
Liabilities and Equity	
Accounts payable	\$ 80,000
Bonds payable	140,000
Discount on bonds payable	(15,000)
Common stock, \$1 par	150,000
Retained earnings	60,000
Total liabilities and equity	<u>\$ 415,000</u>

Costs of Issuing Bonds

Unamortized bond issue costs are treated as a deferred charge and amortized over the life of the debt.

Extinguishment of Debt

Extinguishment before Maturity Date

- $\text{Reacquisition price} > \text{Net carrying amount} = \text{Loss}$
- $\text{Net carrying amount} > \text{Reacquisition price} = \text{Gain}$
- At time of reacquisition, unamortized premium or discount, and any costs of issue applicable to the bonds, must be amortized up to the reacquisition date.

Extinguishment of Debt

Illustration Three year 8% bonds of \$100,000 issued on Jan. 1, 2007, are recalled at 105 on Dec. 31, 2008. Expenses of recall are \$2,000. Market interest on issue date was 8%.

Date	8% Cash Paid	10% Interest Expense	Discount Amortized	Carrying Amount
1/1/07				\$ 95,027
12/31/07	\$ 8,000	\$ 9,503	\$ 1,503	96,530
12/31/08	8,000	9,653	1,653	98,183

Account Balances at Dec. 31, 2008:

Bonds payable = \$98,183

Discount on bonds payable ($\$4,973 - 1,503 - 1,653$) = 1,817

Extinguishment of Debt

Illustration Three year 8% bonds of \$100,000 issued on Jan. 1, 2007, are recalled at 105 on Dec. 31, 2008. Expenses of recall are \$2,000. Market interest on issue date was 8%.

Journal entry at Dec. 31, 2007:

Bonds payable	100,000	
Loss on extinguishment	8,817	
Cash		107,000
Discount on bonds payable		1,817

$$\text{Reacquisition price} = \$105,000 + 2,000 = \$107,000$$

Long-Term Notes Payable

Accounting is Similar to Bonds

- A note is valued at the present value of its future interest and principal cash flows.
- Company amortizes any discount or premium over the life of the note.

Notes Issued at Face Value

BE14-12 Jennifer Capriati, Inc. issued a \$100,000, 4-year, 11% note at face value to Forest Hills Bank on January 1, 2008, and received \$100,000 cash. The note requires annual interest payments each December 31. Prepare Capriati's journal entries to record (a) the issuance of the note and (b) the December 31 interest payment.

(a)	Cash	100,000	
	Notes payable		100,000
(b)	Interest expense	11,000	
	Cash		11,000
	(\$100,000 × 11% = \$11,000)		

Zero-Interest-Bearing Notes

Issuing company records the difference between the face amount and the present value (cash received) as

- a discount and
- amortizes that amount to interest expense over the life of the note.

Zero-Interest-Bearing Notes

BE14-13 McNabb Corporation issued a 4-year, \$50,000, zero-interest-bearing note to Reid Company on January 1, 2008, and received cash of \$31,776. The implicit interest rate is 12%. Prepare McNabb's journal entries for (a) the Jan. 1 issuance and (b) the Dec. 31 recognition of interest.

Date	0%	12%		Carrying Amount
	Cash Paid	Interest Expense	Discount Amortized	
1/1/08				\$ 31,776
12/31/08	0	\$ 3,813	\$ 3,813	35,589
12/31/09	0	4,271	4,271	39,860
12/31/10	0	4,783	4,783	44,643
12/31/11	0	5,357	5,357	50,000

Zero-Interest-Bearing Notes

BE14-13 McNabb Corporation issued a 4-year, \$50,000, zero-interest-bearing note to Reid Company on January 1, 2008, and received cash of \$31,776. The implicit interest rate is 12%. Prepare McNabb's journal entries for (a) the Jan. 1 issuance and (b) the Dec. 31 recognition of interest.

(a)	Cash	31,776	
	Discount on notes payable	18,224	
	Notes payable		50,000
(b)	Interest expense	3,813	
	Discount on notes payable		3,813
	(\$31,776 × 12%)		

Interest-Bearing Notes

BE14-14 Larry Byrd Corporation issued a 4-year, \$50,000, 5% note to Magic Johnson Company on Jan. 1, 2008, and received a computer that normally sells for \$39,369. The note requires annual interest payments each Dec. 31. The market rate of interest is 12%. Prepare Byrd's journal entries for (a) the Jan. 1 issuance and (b) the Dec. 31 interest.

Date	5% Cash Paid	12% Interest Expense	Discount Amortized	Carrying Amount
1/1/08				\$ 39,369
12/31/08	\$ 2,500	\$ 4,724	\$ 2,224	41,593
12/31/09	2,500	4,991	2,491	44,084
12/31/10	2,500	5,290	2,790	46,875
12/31/11	2,500	5,625	3,125	50,000

Special Notes Payable Situations

Notes Issued for Property, Goods, and Services

When exchanging the debt instrument for property, goods, or services in a bargained transaction, the stated interest rate is presumed to be fair unless:

- (1) No interest rate is stated, or
- (2) The stated interest rate is unreasonable, or
- (3) The face amount is materially different from the current cash price for the same or similar items or from the market value of the debt instrument.

Special Notes Payable Situations

Choice of Interest Rates

If a company cannot determine the fair value of the property, goods, services, or other rights, and if the note has no ready market, the company must **impute** an interest rate.

The choice of rate is affected by:

- prevailing rates for similar instruments
- factors such as restrictive covenants, collateral, payment schedule, and the existing prime interest rate.

Mortgage Notes Payable

A promissory note secured by a document called a mortgage that pledges title to property as security for the loan.

- Most common form of long-term notes payable.
- Payable in full at maturity or in installments.
- Fixed-rate mortgage.
- Variable-rate mortgages.

Off-Balance-Sheet Financing

An attempt to borrow monies in such a way to prevent recording the obligations.

Different Forms:

- Non-Consolidated Subsidiary
- Special Purpose Entity (SPE)
- Operating Leases

Presentation and Analysis of Long-Term Debt

Presentation of Long-Term Debt

Note disclosures generally indicate the nature of the liabilities, maturity dates, interest rates, call provisions, conversion privileges, restrictions imposed by the creditors, and assets designated or pledged as security.

Must disclose *future payments* for sinking fund requirements and maturity amounts of long-term debt during each of the next five years.

Presentation and Analysis of Long-Term Debt

Analysis of Long-Term Debt

Two ratios that provide information about debt-paying ability and long-run solvency are:

1. **Debt to total assets** =
$$\frac{\text{Total debt}}{\text{Total assets}}$$

The higher the percentage of debt to total assets, the greater the risk that the company may be unable to meet its maturing obligations.

Presentation and Analysis of Long-Term Debt

Analysis of Long-Term Debt

Two ratios that provide information about debt-paying ability and long-run solvency are:

$$2. \quad \text{Times interest earned} = \frac{\text{Income before income taxes and interest expense}}{\text{Interest expense}}$$

Indicates the company's ability to meet interest payments as they come due.

Copyright

Copyright © 2007 John Wiley & Sons, Inc. All rights reserved. Reproduction or translation of this work beyond that permitted in Section 117 of the 1976 United States Copyright Act without the express written permission of the copyright owner is unlawful. Request for further information should be addressed to the Permissions Department, John Wiley & Sons, Inc. The purchaser may make back-up copies for his/her own use only and not for distribution or resale. The Publisher assumes no responsibility for errors, omissions, or damages, caused by the use of these programs or from the use of the information contained herein.