

Financial Accounting

Prepared by Dr. Sara Ahmed

MGM 611

Lecture 8





مجموعة جامعة
الجميع الذكية
للتعليم القابضة

MIDOCEAN
UNIVERSITY
BY EVERYONE'S SMART UNIVERSITY

Long term Liabilities

Lecture 8

MGM 611

Prepared by
Dr. Sara Abdallah

www.midocean.ae

TOPIC
08

LEARNING OBJECTIVES

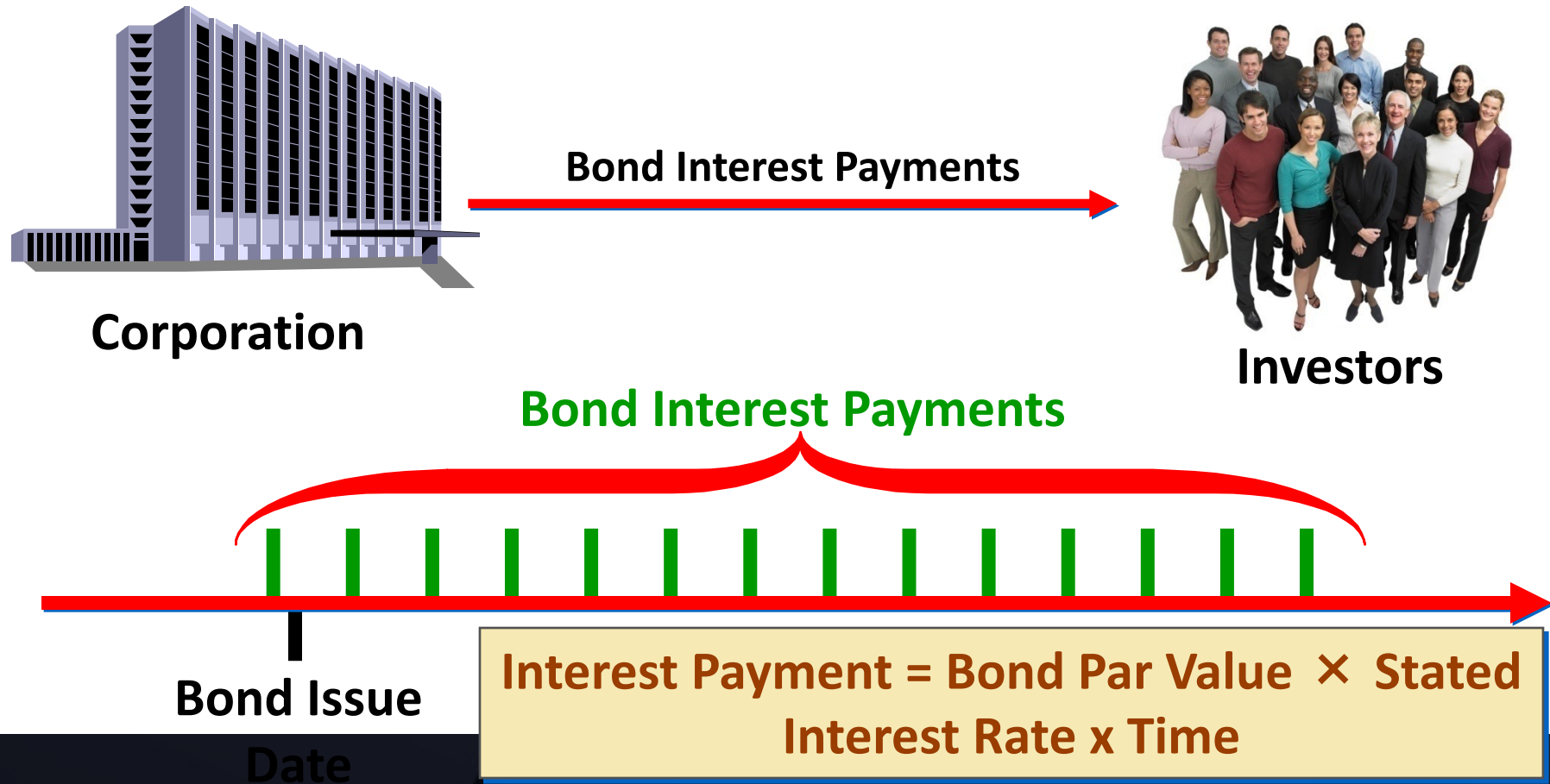
- Assess debt features and their implications.
- Compute the debt-to-equity ratio and explain its use.
- Prepare entries to record bond issuance and interest expense.
- Compute and record amortization of bond discount using straight-line method.
- Compute and record amortization of bond premium using straight-line method.
- Record the retirement of bonds.

Learning Objective

bond financing

Bond Financing

Transactions during the bond life



Bond Financing

Advantages

Bonds do not affect owner control.

Interest on bonds is tax deductible.

Bonds can increase return on equity.

Disadvantages

Bonds require payment of both periodic interest and par value at maturity.

Bonds can decrease return on equity.

Bond Trading

Bonds	Rate	Mat	Yld	Vol	Close	Chg
IBM	4	42	3.81	110	103.08	+0.73%

Bonds are securities that can be purchased or sold in the securities markets. They have a market value which is expressed as a percent of their par value. The closing price indicates that the IBM stock is being sold at 103.08% of face value.

Bond Issuing Procedures (Bond indenture)



Learning Objective

Prepare entries to record
bond issuance and
interest expense.

Issuing Bonds at Par

On Dec. 31, 2017, a company issued the following bonds:

Par Value: \$100,000

Stated Interest Rate: 8%

Interest Dates: 6/30 and 12/31

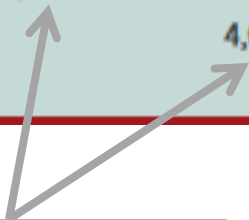
Maturity Date = Dec. 31, 2019 (2 years)

2017			
Dec. 31	Cash	100,000	
	Bonds Payable		100,000
	<i>Sold bonds at par.</i>		

Issuing Bonds at Par

On June 30, 2018, the issuer of the bond pays the first semiannual interest payment of \$4,000.

2018			
June 30	Bond Interest Expense	4,000	
	Cash		4,000
	<i>Paid semiannual interest (8% × \$100,000 × ½ year).</i>		



$$\text{\$100,000} \times 8\% \times \frac{1}{2} \text{ year} = \text{\$4,000}$$

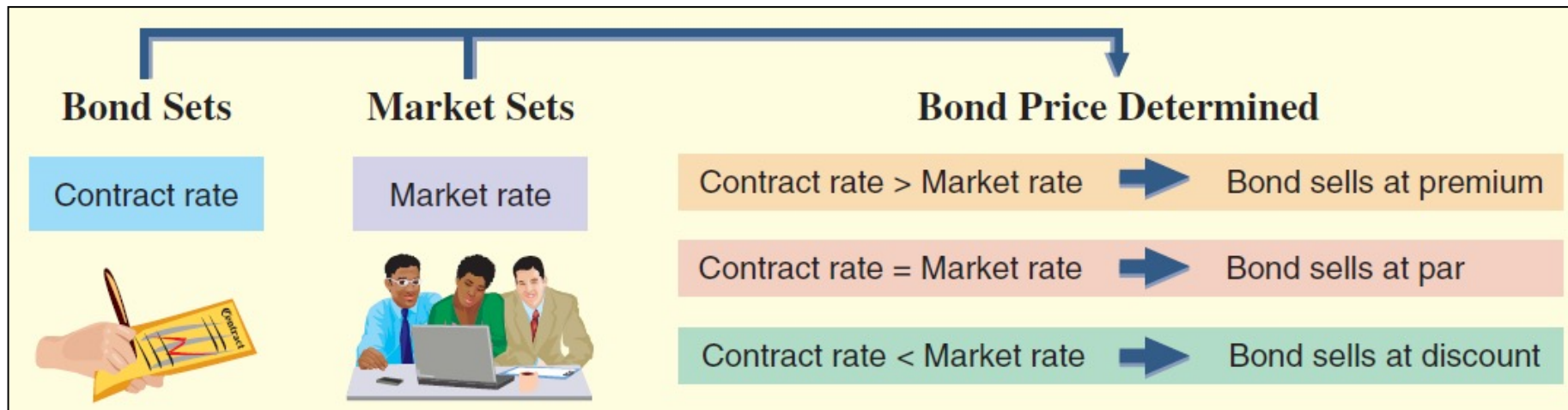
This entry is made every six months until the bonds mature.

Issuing Bonds at Par

On December 31, 2019, the bonds mature and the issuer of the bond pays face value of \$100,000 to the bondholders.

2019			
Dec. 31	Bonds Payable	100,000	
	Cash		100,000
	<i>Paid bond principal at maturity.</i>		

Bond Discount or Premium



Learning Objective

Compute and record amortization of bond discount using straight-line method.

Issuing Bonds at a Discount

Fila issues bonds with the following provisions:

Par Value: \$100,000

Issue Price: 96.454% of par value

Stated Interest Rate: 8%

Market Interest Rate: 10%



Bond will sell at a discount.

Interest Dates: 6/30 and 12/31

Bond Date: Dec. 31, 2017

Maturity Date: Dec. 31, 2019 (2 years)

Issuing Bonds at a Discount

On Dec. 31, 2017, Fila should record the bond issue.

Par value	\$ 100,000
Cash proceeds	96,454 *
Discount	<u>\$ 3,546</u>

*\$100,000 x 96.454%

Dec. 31	Cash	96,454	
	Discount on Bonds Payable.	3,546	
	Bonds Payable.		100,000
	<i>Sold bonds at a discount on their issue date.</i>		

Contra-Liability
Account

Amortizing a Discount Bond

Straight-Line Amortization Table					
Date	Interest Payment	Interest Expense	Discount Amortization*	Unamortized Discount	Carrying Value
12/31/2017				\$ 3,546	\$ 96,454
6/30/2018	\$ 4,000	\$ 4,887	\$ 887	2,659	97,341
12/31/2018	4,000	4,887	887	1,772	98,228
6/30/2019	4,000	4,887	887	885	99,115
12/31/2019	4,000	4,885	885	-	100,000
	<u>\$ 16,000</u>	<u>\$ 19,546</u>	<u>\$ 3,546</u>		

* Rounded.

These two columns always sum to par value for a discount bond.

Issuing Bonds at a Discount

Partial Balance Sheet as of Dec. 31, 2017		
Long-term Liabilities:		
Bonds Payable	100,000	
Less: Discount on Bonds Payable	<u>3,546</u>	96,454

Maturity Value

Carrying Value

Panel A: Interest Computations

Four payments of \$4,000 (4 pymts × [\$100,000 × 0.08 × 1/2 yr])	\$ 16,000
Plus discount	<u>3,546</u>
Total bond interest expense	\$19,546

$$\text{Bond interest expense (per interest period)} = \frac{\text{Total bond interest expense}}{\text{Number of interest periods}} = \frac{\$19,546}{4} = \$4,887$$

Panel B: Entry to Record Interest Payment and Amortization

2018–2019
June 30 and
Dec. 31

Bond Interest Expense	4,887
Discount on Bonds Payable	
Cash	

Record semiannual interest and discount amortization (straight-line method).

Discount ÷
periods

887
4,000

Par value ×
contract rate

Learning Objective

Compute and record amortization of bond premium using straight-line method.

Issuing Bonds at a Premium

Adidas issues bonds with the following provisions:

Par Value: \$100,000

Issue Price: 103.546% of par value

Stated Interest Rate: 12%

Market Interest Rate: 10%



Bond will sell at a premium.

Interest Dates: 6/30 and 12/31

Bond Date: Dec. 31, 2017

Maturity Date: Dec. 31, 2019 (2 years)

Issuing Bonds at a Premium

On Dec. 31, 2017, Adidas will record the bond issue as:

Par value	\$ 100,000
Cash proceeds	103,546 *
Premium	<u>\$ 3,546</u>

*\$100,000 x 103.546%

Dec. 31	Cash	103,546	
	Premium on Bonds Payable		3,546
	Bonds Payable		100,000
	<i>Sold bonds at a premium on their issue date.</i>		

Adjunct-Liability
Account

Issuing Bonds at a Premium

Partial Balance Sheet as of Dec. 31, 2017		
Long-term Liabilities:		
Bonds Payable	100,000	
Plus: Premium on Bonds Payable	<u>3,546</u>	103,546

Maturity Value

Carrying Value

Amortizing a Premium Bond

Straight-Line Amortization Table					
Date	Interest Payment	Interest Expense	Premium Amortization*	Unamortized Premium	Carrying Value
12/31/2017				\$ 3,546	\$ 103,546
6/30/2018	\$ 6,000	\$ 5,113	\$ 887	2,659	102,659
12/31/2018	6,000	5,113	887	1,772	101,772
6/30/2019	6,000	5,113	887	885	100,885
12/31/2019	6,000	5,115	885	-	100,000
	<u>\$ 24,000</u>	<u>\$ 20,454</u>	<u>\$ 3,546</u>		

* Rounded.

Amortizing a Premium Bond

Adidas will make the following entry every six months to record the cash interest payment and the amortization of the discount.

June 30 and Dec. 31	Bond Interest Expense	5,113	
	Premium on Bonds Payable	887	
	Cash		6,000
	<i>To record semiannual interest and premium amortization (straight-line method).</i>		

$$\text{\$3,546} \div 4 \text{ periods} = \text{\$887 (rounded)}$$

$$\text{\$100,000} \times 12\% \times \frac{1}{2} = \text{\$6,000}$$

Learning Objective

Record the retirement of bonds.

Bond Retirement

Retirement of the Fila bonds at maturity for \$100,000 cash.

Dec. 31	Bonds Payable	100,000	
	Cash		100,000
	<i>To record retirement of bonds at maturity.</i>		

Because any discount or premium will be fully amortized at maturity, the carrying value of the bonds will be equal to par value.

Bond Retirement before Maturity

Carrying Value > Retirement Price = Gain

Carrying Value < Retirement Price = Loss

Assume that \$100,000 of callable bonds will be retired on July 1, 2017, after the first interest payment. The bond carrying value is \$104,500. The bonds have a call premium of \$3,000.

July 1	Bonds Payable	100,000	
	Premium on Bonds Payable	4,500	
	Gain on Bond Retirement		1,500
	Cash		103,000
	<i>To record retirement of bonds before maturity.</i>		

Bond Retirement

Conversion of Bonds to Stock

On January 1, \$100,000 par value bonds of Converse, with a carrying value of \$100,000, are converted to 15,000 shares of \$2 par value common stock.

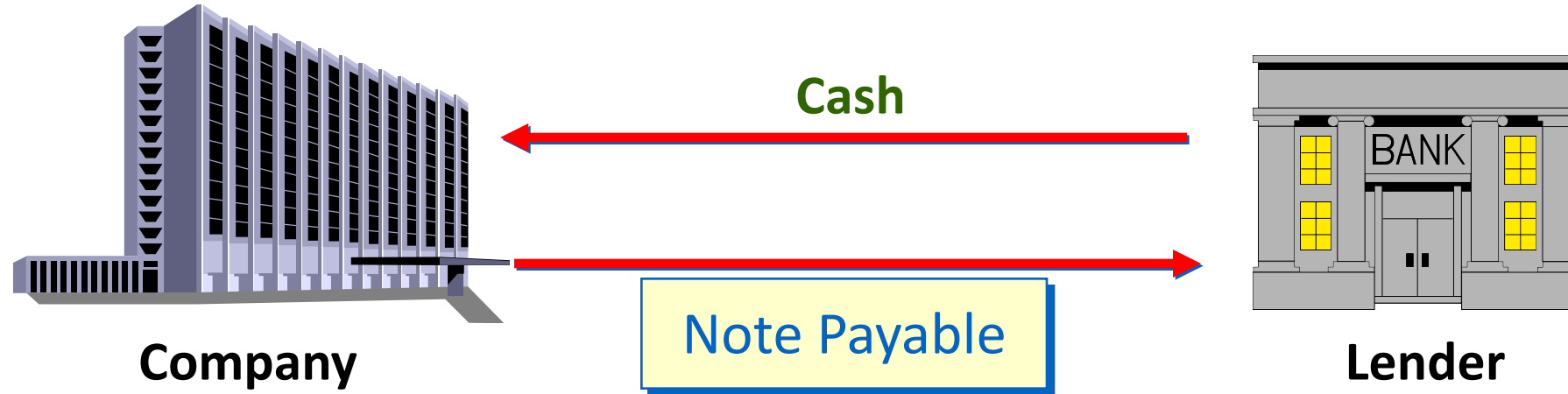
Jan. 1	Bonds Payable	100,000	
	Common Stock		30,000
	Paid-In Capital in Excess of Par Value		70,000
	<i>To record retirement of bonds by conversion.</i>		

15,000 shares × \$2 par value per share

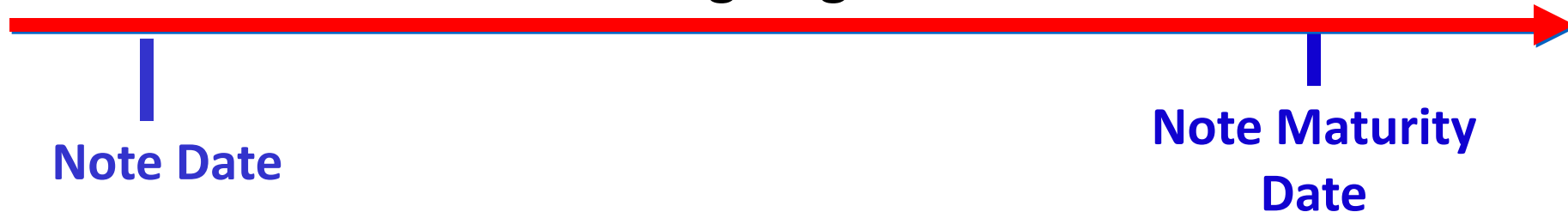
Learning Objective

Explain the types of notes
and prepare entries to
account for notes.

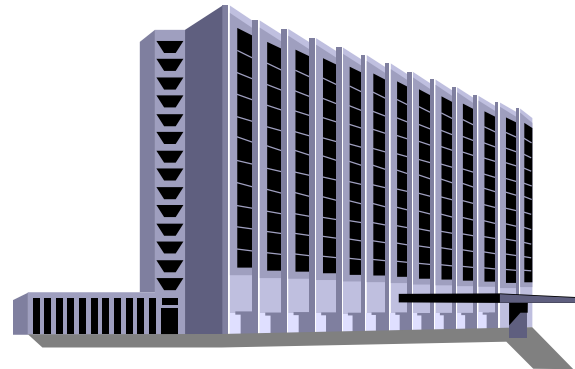
Long-Term Notes Payable



When is the repayment of the principal
and interest going to be made?

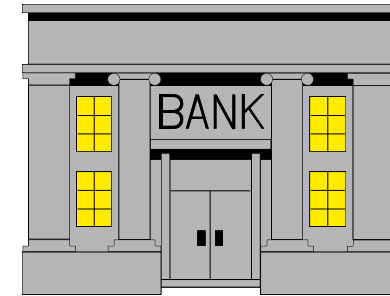


Long-Term Notes Payable



Company

Single Payment of Principal
plus Interest

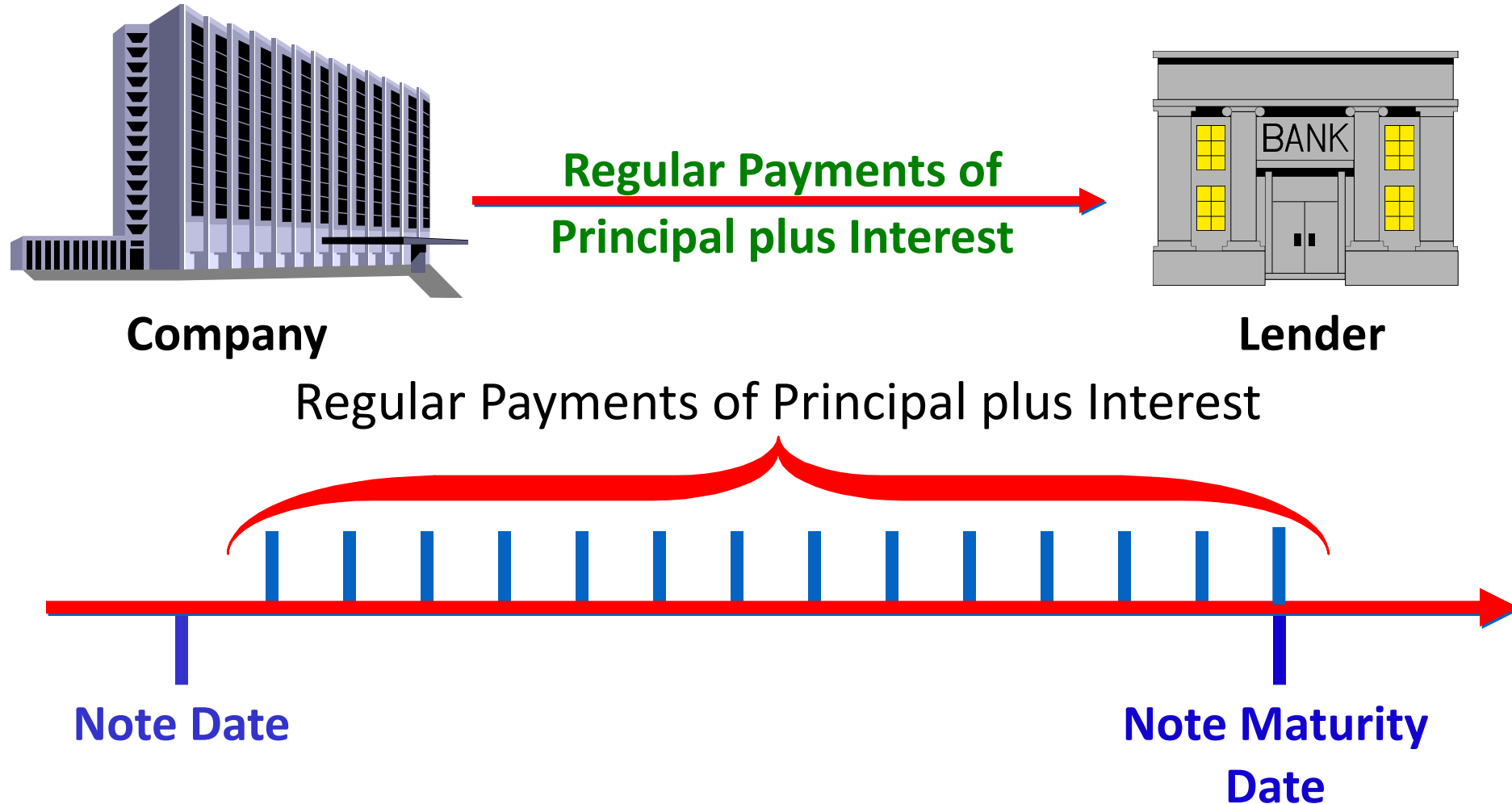


Lender

Single Payment of
Principal plus
Interest



Long-Term Notes Payable



Installment Notes

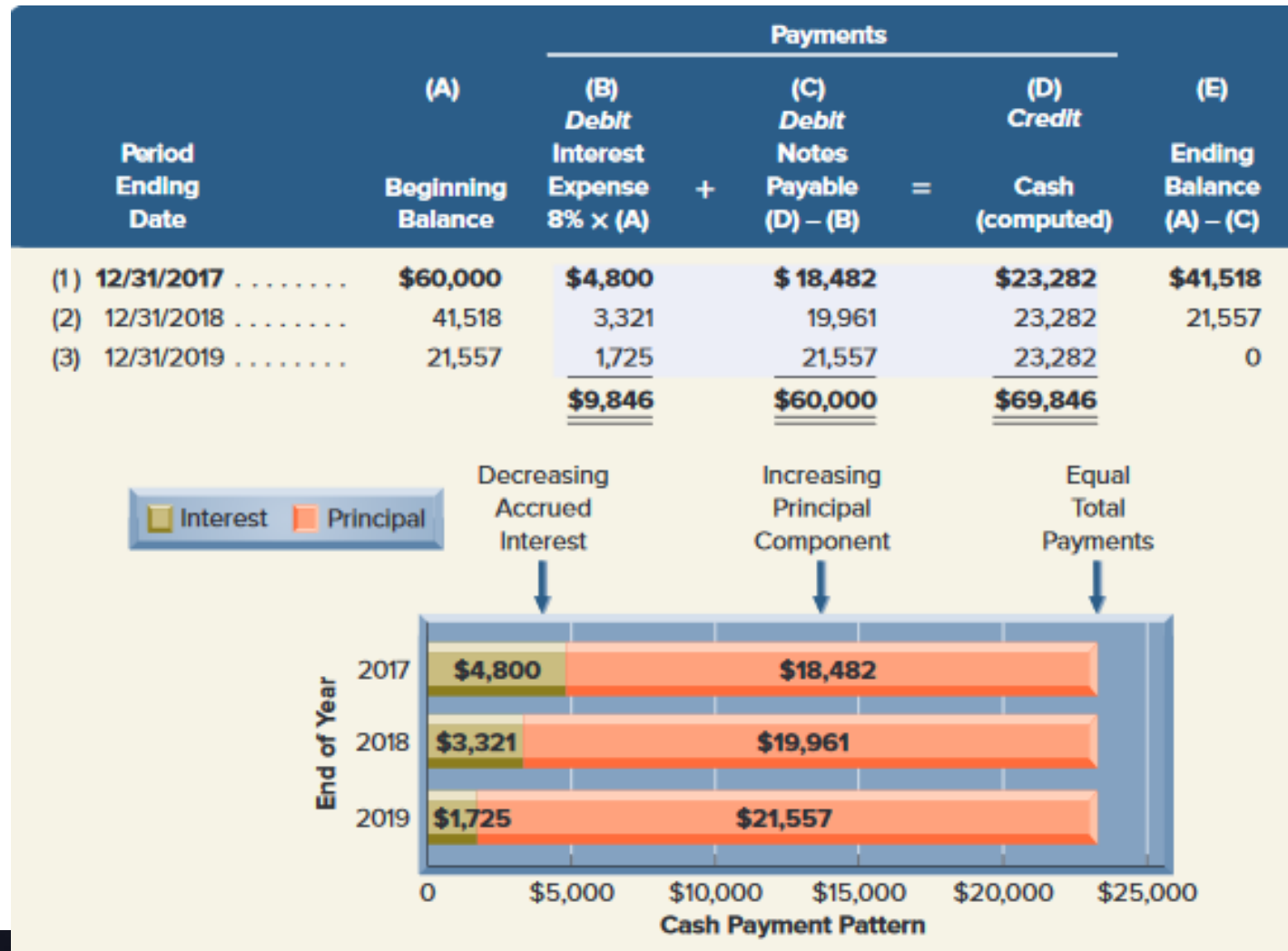
On January 1, 2017 Foghog borrows \$60,000 from a bank to purchase equipment. It signs an 8% installment note requiring 3 annual payments of principal plus interest.

Jan. 1	Cash	60,000	
	Notes Payable.....		60,000
	<i>Borrowed \$60,000 by signing 8%, three-year note.</i>		

Compute the periodic payment by dividing the face amount of the note by the present value factor.

Computation	Table	Table Value	Present Value	Payment
Principal divided by PV factor	Annuity of \$1 (B.3)	2.5771	60,000	23,282

Installment Notes with Equal Payments



Installment Notes with Equal Payments

Let's record the first payment made on December 31, 2017 by Foghog to the bank.

2017 Dec. 31	Interest Expense	4,800	
	Notes Payable	18,482	
	Cash		23,282
	<i>Record first installment payment.</i>		

Refer back to the amortization schedule to make the December 31, 2018 payment on the note.

2018 Dec. 31	Interest Expense	3,321	
	Notes Payable	19,961	
	Cash		23,282
	<i>Record second installment payment.</i>		

Mortgage Notes and Bonds

A mortgage is a legal agreement that helps protect the lender if the borrower fails to make the required payments.

It gives the lender the right to be paid out of the cash proceeds from the sale of the borrower's assets specifically identified in the mortgage contract.

$$p = \left[1 - \frac{1}{(1+i)^n} \right] / i$$

TABLE B.3

Present Value of an Annuity of 1

Periods	Rate											
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	15%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.8929	0.8696
2	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.6901	1.6257
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4018	2.2832
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.0373	2.8550
5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6048	3.3522
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.1114	3.7845
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.5638	4.1604
8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349	4.9676	4.4873
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.3282	4.7716
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.6502	5.0188
11	10.3676	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	5.9377	5.2337
12	11.2551	10.5753	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.1944	5.4206
13	12.1337	11.3484	10.6350	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034	6.4235	5.5831
14	13.0037	12.1062	11.2961	10.5631	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.6282	5.7245
15	13.8651	12.8493	11.9379	11.1184	10.3797	9.7122	9.1079	8.5595	8.0607	7.6061	6.8109	5.8474
16	14.7179	13.5777	12.5611	11.6523	10.8378	10.1059	9.4466	8.8514	8.3126	7.8237	6.9740	5.9542
17	15.5623	14.2919	13.1661	12.1657	11.2741	10.4773	9.7632	9.1216	8.5436	8.0216	7.1196	6.0472
18	16.3983	14.9920	13.7535	12.6593	11.6896	10.8276	10.0591	9.3719	8.7556	8.2014	7.2497	6.1280
19	17.2260	15.6785	14.3238	13.1339	12.0853	11.1581	10.3356	9.6036	8.9501	8.3649	7.3658	6.1982
20	18.0456	16.3514	14.8775	13.5903	12.4622	11.4699	10.5940	9.8181	9.1285	8.5136	7.4694	6.2593
25	22.0232	19.5235	17.4131	15.6221	14.0939	12.7834	11.6536	10.6748	9.8226	9.0770	7.8431	6.4641
30	25.8077	22.3965	19.6004	17.2920	15.3725	13.7648	12.4090	11.2578	10.2737	9.4269	8.0552	6.5660
35	29.4086	24.9986	21.4872	18.6646	16.3742	14.4982	12.9477	11.6546	10.5668	9.6442	8.1755	6.6166
40	32.8347	27.3555	23.1148	19.7928	17.1591	15.0463	13.3317	11.9246	10.7574	9.7791	8.2438	6.6418

Learning Objective

Compute the
debt-to-equity ratio and
explain its use.

Debt-to-Equity Ratio

$$\text{Debt-to-equity ratio} = \frac{\text{Total liabilities}}{\text{Total equity}}$$

This ratio helps investors determine the risk of investing in a company by dividing its total liabilities by total equity.

\$ millions	2015	2014	2013	2012
Total liabilities	\$52,060	\$43,764	\$30,413	\$24,363
Total equity.....	\$13,384	\$10,741	\$ 9,746	\$ 8,192
Debt-to-equity	3.9	4.1	3.1	3.0
Industry debt-to-equity	1.7	1.8	1.6	1.5



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