

E12-1

- a. Increase
- b. No effect
- c. No effect
- d. Increase
- e. Increase
- f. No effect
- g. Increase
- h. Increase

E12-2

a. The market rate of interest was higher than the coupon rate on the bonds. The market is discounting the bond's future cash flows using the market rate of interest. When the market rate of interest is higher than the coupon rate, the bond will sell at a discount.

b. Cash	875,378	
Discount on bonds payable	124,622	
Bonds payable		1,000,000

(to record the issuance of \$1,000,000 face value bonds for \$875,378)

c. 1) An increase in market interest rates during 2006 will not affect Jones Company. Jones will continue to make interest payments based on the coupon rate of 8% multiplied by the bond's face value. Jones will only be affected if it attempts to borrow new money in the bond market. The company would then have to offer a higher rate because market rates have increased.

2) Original bondholders who sell the bonds during 2006 will receive less than they paid for them. Because market interest rates have increased, the economic value of existing bonds will decrease, since the present value of the bond's future cash flows will be less.

3) Since rates are increasing, investors who purchase the bonds will pay less than they would have paid had they purchased the bonds at issuance. These investors will be locking in the market rate of interest in existence on the day they purchase the bonds.

E12-3

a. Cash	9,201.43	
Discount on bonds payable	798.57	
Bonds payable		10,000.00

(to record the issuance of a 6%, \$10,000 face value bond when market rates are 8%)

b. The liabilities section of the balance sheet on the date of issuance would contain a liability of:

Bonds payable	\$10,000.00
Less: Discount on bonds payable	(798.57)
Bonds payable, net\$	9,201.43

- c. Interest expense will be  $\$9,201.43 \times .08 = \$736.11$   
Cash payment will be  $\$10,000.00 \times .06 = \$600.00$   
Discount amortized will be  $\$736.11 - \$600.00 = \$136.11$

The entry to record the first coupon payment will be:

Interest expense	736.11	
Discount on bonds payable		136.11
Cash		600.00

d. Discount on bonds payable account will decrease by 136.11. The balance on 12/31/2000 will be \$662.46 ( $\$798.57 - \$136.11$ ). The net bond liability will increase by \$136.11. Thus, the economic value of the bond is also the accounting value (no interest rate change) and is  $\$10,000 - \$662.46 = \$9,337.54$ .

e. Bonds payable	\$ 10,000.00	
Less: Discount on bonds payable		(662.46)
Bonds payable, net	\$	9,337.54

f. By 12/31/2008, the entire bond discount will have been amortized. The net bond liability will be \$10,000.

g. Bonds payable	10,000.00	
Cash		10,000.00
(to retire bonds at maturity)		

E12-4

a. Cash	5,216.49	
Premium on bonds payable		216.49
Bonds payable		5,000.00

(to record the issuance of a 6% coupon, \$5,000 face value bond when market rates are 5%)

b. The liabilities section of the balance sheet on the date of issuance would contain a liability of:

Bonds payable	\$5,000.00
Plus: Premium on bonds payable	216.49
Bonds payable, net	\$5,216.49

- c. Interest expense will be  $\$5,216.49 \times .05 = \$260.82$   
Cash payment will be  $\$5,000.00 \times .06 = \$300.00$   
Premium amortization will be  $\$300.00 - \$260.82 = \$39.18$

## 1 12-Long-Term-Liabilities-Exercises

The entry to record the first coupon payment will be:

Interest expense	260.82	
Premium on bonds payable	39.18	
Cash		300.00

d. Premium on bonds payable account will decrease by 39.18. The balance on 12/31/2004 will be \$177.31. The net bond liability will decrease by \$39.18. The economic value is also the book value of \$5,177.31.

e. Bonds payable	\$5,000.00	
Plus: Premium on bonds payable	177.31	
Bonds payable, net	\$5,177.31	

f. By 12/31/2008, the entire bond premium will have been amortized. The net bond liability will be \$5,000.00.

g. Bonds payable	5,000.00	
Cash		5,000.00

(to retire bonds at maturity)

#### E12-5

a. Noblick must consider whether the lease meets any of the criteria that would require that it be accounted for as a capital lease under GAAP. The criteria are:

- The lease lasts for at least 75% of the expected useful life of the leased property.
- The present value of the lease payments is at least 90% of the value of the property.
- The lease contains a bargain purchase clause that allows the lessee to buy the asset at below market price at any time during the lease.

If the lease meets any one of the above criteria, Noblick must account for it as a capital lease. Otherwise, it will be accounted for as an operating lease.

b. If the lease is accounted for as an operating lease, the total expense will be the cash paid of \$9,000 (3 × \$3,000).

c. If the lease is accounted for as a capital lease, \$7,460 will be recognized as depreciation expense. The difference between the \$9,000 total lease payments and their present value of \$7,460 will be recognized as interest expense (\$1,540). Total expense will be \$9,000 over three years (7,460 + 1,540).

d. There will be no difference in the total net income, since the total expenses are the same under each lease. However, the timing of when the expenses will be recognized will be different, so the expense recognized each year will not be the same. Generally, capital leases show higher expenses in the early years of the lease life than if the same lease were treated as an operating lease.

e. Since both leases result in a \$3,000 cash payment, there will be no difference in the total cash flows. Cash flows will be the same each year.

#### E12-6

a. If the lease is considered an operating lease, the company will recognize the lease payment of \$12,000 as an expense in 2005.

b. If the lease is considered a capital lease, the total expense for 2005 will be:

Interest ( $\$32,826 - 12,000$ ) × .10 =	\$ 2,082.60
<u>Depreciation (<math>\\$32,826/3</math>)</u>	<u>10,942.00</u>
Total	\$13,024.60

#### E12-7

a. Date	Cash Payment	Interest Expense	Principal Decrease	Unpaid Principal
	(.085 × 1/12 × Beginning Principal)			
1/1/04				121,000.00
2/1/04	933.00	857.08	75.92	120,924.08
3/1/04	933.00	856.55	76.45	120,847.63
4/1/04	933.00	856.00	77.00	120,770.63

b. Cash		121,000.00	
Mortgage payable			121,000.00

c. Interest expense		857.08	
Mortgage payable		75.92	
Cash			933.00

d.	Total payments:	360 months × \$933	\$335,880
	Amount borrowed		(121,000)
	Total interest		\$214,880

E12-8

a.	Cash	10,000	
	Loan payable		10,000

(to record issuance of 10,000 loan)

Each interest payment will be \$800, paid on December 31, 2004, 2005, 2006, 2007, and 2008.

	Interest expense	800	
	Cash		800

On December 31, 2008, the loan will be repaid:

	Loan payable	10,000	
	Cash		10,000

b. Present value =  
 $(800)/(1.08) + (800)/(1.08)^2 + (800)/(1.08)^3 + (800)/(1.08)^4 + (800)/(1.08)^5 + (10,000)/(1.08)^5 = 740.74 + 685.87 + 635.07 + 588.02 + 544.48 + 6,805.83 = 10,000$

c. The entries would not be affected. GAAP view the issuance of the loan as borrowing \$10,000 at 8%. These data are locked in place until the loan is retired.

E12-9

a.	Beginning Loan Balance	Interest at 8%	Ending Loan Balance
2004	10,000.00	800.00	10,800.00
2005	10,800.00	864.00	11,664.00
2006	11,664.00	933.12	12,597.12
2007	12,597.12	1,007.77	13,604.89
2008	13,604.89	1,088.39	14,693.28

b. Present Value =  $(14,693.28)/(1.08)^5 = (14,693.28)/(1.4693) = (10,000.00)$

c.	Cash	10,000	
	Loan payable		10,000

(to record loan on January 2, 2004)

	Interest expense	800	
	Loan payable		800

(to accrue interest on December 31, 2004)

	Interest expense	864	
	Loan payable		864

(to accrue interest on December 31, 2005)

d.	Loan payable	14,693.28	
	Cash		14,693.28

(to record repayment of loan)

e. The entries will not be affected. In computing interest expense on any obligation, the amount of expense is always based on the market rate of interest in effect when the loan was entered into multiplied by the book value of the obligation at the beginning of the period. Changes in the market rate of interest do not affect the company.

E12-10

a. Present Value =  
 $(2,504.56)/(1.08) + (2,504.56)/(1.08)^2 + (2,504.56)/(1.08)^3 + (2,504.56)/(1.08)^4 + (2,504.56)/(1.08)^5 = (2,319.04) + (2,147.26) + (1,988.22) + (1,840.92) + (1,704.56) = (10,000)$

b.	Beginning Loan Payment	Interest at 8%	Repayment of Principal	Ending Loan Balance	
1	10,000.00	2,504.56	800.00	1,704.56	8,295.44
2	8,295.44	2,504.56	663.64	1,840.92	6,454.52
3	6,454.52	2,504.56	516.36	1,988.20	4,466.32
4	4,466.32	2,504.56	357.31	2,147.25	2,319.07
5	2,319.06	2,504.56	185.49	2,319.07	0.00

- c. Total payments =  $\$2,504.56 \times 5 =$  \$12,522.80  
 Amount borrowed = (10,000.00)  
 Interest \$ 2,522.80
- d. The book value of the loan after the third payment will be the ending loan balance of \$4,466.32.

e. Cash 10,000.00  
 Loan payable 10,000.00  
 (to record loan of 10,000.00, payable in five installments of \$2,504.56)

Interest expense 800.00  
 Loan payable 1,704.56  
 Cash 2,504.56  
 (to record first installment payment of \$2,504.56)

Interest expense 663.64  
 Loan payable 1,840.92  
 Cash 2,504.56  
 (to record second installment payment of \$2,504.56)

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