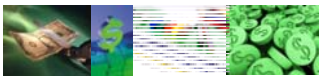
Example

- **Par Value = Principal = Face value: ฿1,000,000**
- **Stated interest rate = Coupon rate = Contract rate: 10% (an annual rate)**
- **Interest payment schedule: Annually, Semi-annually, Quarterly, Monthly**
  - Interest payment dates: Jun. 30 and Dec. 31
- **Date of issuance: Jan. 1, 20X1**
- **Bond life: 10 years**
- **Maturity date: Dec. 31, 20X10**

Market interest rate = Yield = Effective interest rate: ???



Future Cash Flows on the Bonds

Cash interest payment
= Par value x Stated rate x Time
= 1,000,000 x 10% x 6/12
= 50,000

B/S
Noncurrent liabilities:
Bonds @ par
Less: Bond discount
Add: Bond premium
= Bonds, net

Jan. 1, X1

Price ???

50 K 50 K 50 K 50 K 50 K 50 K 50 K 50 K 50 K 50 K
50 K 50 K 50 K 50 K 50 K 50 K 50 K 50 K 50 K 50 K

Interest

Dec. 31, X10

Case #1: Market interest rate = 10%	Future cash flows	PV factor (n=20, i=5%)	Amount
Present value of the principal	1,000,000	0.37689	376,890
+ Present value of the interest	50,000	12.46221	623,111
= Bond price			1,000,001

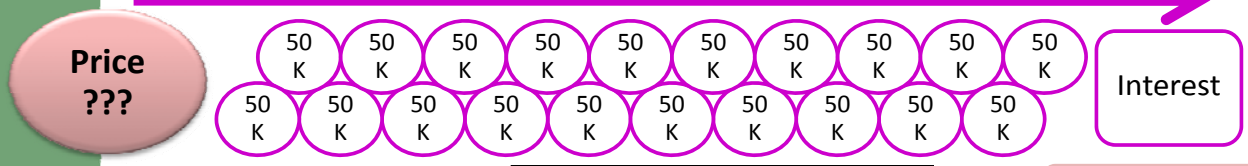
Date	General Journal	Debit	Credit
1/1/X1	Dr. Cash (@price)	1,000,000	
	Cr. Bonds payable (@par)		1,000,000

1,000,000 — Par value

Future Cash Flows on the Bonds

Cash interest payment
= Par value x Stated rate x Time
= 1,000,000 x 10% x 6/12
= 50,000

Jan. 1, X1

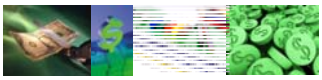


Dec. 31, X10

Case #2: Market interest rate = 8%	Future cash flows	PV factor (n=20, i=4%)	Amount
Present value of the principal	1,000,000	0.45639	456,390
+ Present value of the interest	50,000	13.59033	679,517
= Bond price			1,135,907

Date	General Journal	Debit	Credit
1/1/X1	Dr. Cash (@price)	1,135,907	
	Cr. Bonds payable (@par)		1,000,000
	Bond premium		135,907

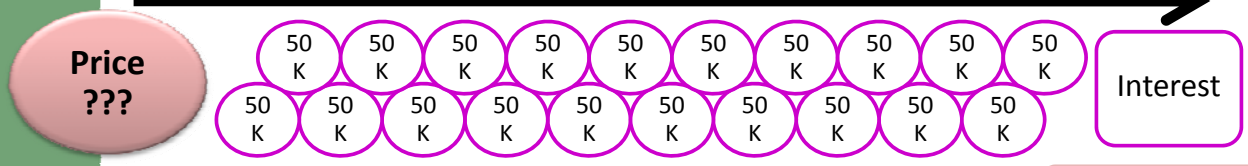
1,000,000 — Par value



Future Cash Flows on the Bonds

Cash interest payment
= Par value x Stated rate x Time
= 1,000,000 x 10% x 6/12
= 50,000

Jan. 1, X1



Dec. 31, X10

Case #3: Market interest rate = 12%	Future cash flows	PV factor (n=20, i=6%)	Amount
Present value of the principal	1,000,000	0.3118	311,800
+ Present value of the interest	50,000	11.46992	573,496
= Bond price			885,296

Date	General Journal	Debit	Credit
1/1/X1	Dr. Cash (@price)	885,296	
	Bond discount	114,704	
	Cr. Bonds payable (@par)		1,000,000

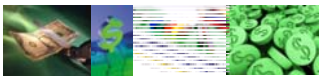
1,000,000 — Par value

Bonds	Principal	Stated interest rate	Interest payment periods	Market interest rate	Bond Life	Bond price
Bond #1	1,000,000	10%	Semiannually	6%	4 years	Premium
Bond #2	1,000,000	12%	Quarterly	10%	2 years	Premium
Bond #3	1,000,000	8%	Annually	10%	10 years	Discount

Bond #1	Future cash flows	PV factor (n=8, i=3%)	Amount
Present value of the principal	1,000,000	0.78941	789,410
+ Present value of the interest (1,000,000 x 10% x 6/12)	50,000	7.01969	350,985
= Bond price			1,140,395

Bond #2	Future cash flows	PV factor (n=8, i=2.5%)	Amount
Present value of the principal	1,000,000	0.82075	820,750
+ Present value of the interest (1,000,000 x 12% x 3/12)	30,000	7.17014	215,104
= Bond price			1,035,854

Bond #3	Future cash flows	PV factor (n=10, i=10%)	Amount
Present value of the principal	1,000,000	0.38554	385,540
+ Present value of the interest (1,000,000 x 8% x 12/12)	80,000	6.14457	491,566
= Bond price			877,106



Entry at issuance

Date	General Journal	Debit	Credit
1/1/X1	Dr. Cash (@price)	1,140,395	
	Cr. Bonds payable (@par)		1,000,000
	Bond premium		140,395

Date	General Journal	Debit	Credit
1/1/X1	Dr. Cash (@price)	1,035,854	
	Cr. Bonds payable (@par)		1,000,000
	Bond premium		35,854

Date	General Journal	Debit	Credit
1/1/X1	Dr. Cash (@price)	877,106	
	Bond discount	122,894	
	Cr. Bonds payable (@par)		1,000,000