

Bonds payable**Bond information**

1. Par value, Principal, or Face value	1,000,000 Baht
2. Stated interest rate, Coupon rate, or Contract rate	10% per year
3. Interest payment periods [Annually, Semiannually, Quarterly, Monthly]	Semiannually (June 30 and December 31)
4. Bonds term or Life Issuance date: January 1, 20X1 Maturity date: December 31, 20X5	5 years

Future cash flows related to bonds payable

1. Principal payment (December 31 20X5)	1,000,000 Baht
2. Interest payment (Every 6 months for 10 periods)	50,000 Baht per period

Cash interest payment per period

= Par x Stated i x Time

= 1,000,000 x 10% x 6/12

= 50,000

Bond price**Case #1 Bond issued at PAR**

Market interest rate, Yield, or Effective interest rate 10% per year

a. Present value of *par value*

Par 1,000,000 x PV factor [Table 2] (n=10,i=5%) 0.61391 613,910

b. Present value of *interest*

Interest 50,000 x PVA factor [Table 4] (n=10,i=5%) 7.72173 + 386,087

= Bond price

999,997 ~1,000,000

N=10, I/Y=5%, PV=PRICE, PMT=50,000, FV=1,000,000 1,000,000

Journal entry to record bond issuance

Date	General Journal	Debit	Credit
Jan. 1, 20X1	Dr. Cash (A+) -- recorded at price	1,000,000	
	Cr. Bonds payable (L+) -- recorded at par		1,000,000

Journal entry to record the first interest payment

Date	General Journal	Debit	Credit
Jun. 30, 20X1	Dr. Interest expense (EXP+, E-)	50,000	
	Cr. Cash (A-)		50,000

n = 10 periods

Journal entry to record the principal payment

Date	General Journal	Debit	Credit
Dec. 31, 20X5	Dr. Bonds payable (L-)	1,000,000	
	Cr. Cash (A-)		1,000,000

Case #2 Bond issued at DISCOUNT

Market interest rate, Yield, or Effective interest rate	12% per year
a. Present value of par value	
Par 1,000,000 x PV factor [Table 2] (n=10,i=6%) 0.55839	558,390
b. Present value of interest	+
Interest 50,000 x PVA factor [Table 4] (n=10,i=6%) 7.36009	368,005
= Bond price	926,395 <1,000,000
N=10, I/Y=6%, PV=PRICE, PMT=50,000,FV=1,000,000	926,399

Journal entry to record bond issuance

Date	General Journal	Debit	Credit
Jan. 1, 20X1	Dr. Cash (A+) -- recorded at price	926,395	
	Bonds discount (Contra L+, L-)	73,605	
	Cr. Bonds payable (L+) -- recorded at par		1,000,000

Journal entry to record the first interest payment UNDER THE EFFECTIVE INTEREST METHOD

Date	General Journal	Debit	Credit
Jun. 30, 20X1	Dr. interest expense (EXP+, E-)	55,584	
	Cr. Cash (A-)		50,000
	Bonds discount (Contra L-, L+)		5,584

n = 10 periods

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Journal entry to record the principal payment

Date	General Journal	Debit	Credit
Dec. 31, 20X5	Dr. Bonds payable (L-)	1,000,000	
	Cr. Cash (A-)		1,000,000

Bonds discount amortization under the straight-line (STL) method

BONDS DISCOUNT [Contra L]				01-01-X1	...	31-12-X5
01-01-X1	73,605.00	30-06-X1	7,360.50	Bonds payable, at par	1,000,000	1,000,000
		31-12-X1	7,360.50	Less: Bonds discount	(73,605)	0
		30-06-X2	7,360.50	Bonds payable, net	926,395	1,000,000
		31-12-X2	7,360.50			
		30-06-X3	7,360.50			
		31-12-X3	7,360.50			
		30-06-X4	7,360.50			
		31-12-X4	7,360.50			
		30-06-X5	7,360.50			
		31-12-X5	7,360.50			
31-12-X5	0.00					

Dr. Interest expense*	57,360.50
Cr. Cash	50,000.00
Bonds discount	7,360.50

*Interest expense^{@STL method}

= Cash interest payment + Discount amortization
= 50,000.00 + 7,360.50
= 57,360.50

Effective Interest Amortization Method -- Discount

Interest Payment Period ☐	Carrying Amount (Book Value) of Bonds Payable at the Beginning of the period	Effective [Dr.] Interest Expense	[Cr.] Cash Interest Payment	[Cr.] Discount Amortization	Unamortized Discount	Carrying Amount (Book Value) of Bonds Payable at the End of the period
		= BV x MKTi x Time	= Par x STATEDi x Time	C-D		
0: 01-01-X1					73,605	926,395
1: 30-06-X1	926,395	55,584	50,000	5,584	68,021	931,979
2: 31-12-X1	931,979	55,919	50,000	5,919	62,103	937,897
3: 30-06-X2	937,897	56,274	50,000	6,274	55,829	944,171
4: 31-12-X2	944,171	56,650	50,000	6,650	49,178	950,822
5: 30-06-X3	950,822	57,049	50,000	7,049	42,129	957,871
6: 31-12-X3	957,871	57,472	50,000	7,472	34,657	965,343
7: 30-06-X4	965,343	57,921	50,000	7,921	26,736	973,264
8: 31-12-X4	973,264	58,396	50,000	8,396	18,341	981,659
9: 30-06-X5	981,659	58,900	50,000	8,900	9,441	990,559
10: 31-12-X5	990,559	59,441	50,000	9,441	- 0	1,000,000

Case #3 Bond issued at PREMIUM

Market interest rate, Yield, or Effective interest rate **8%** per year

a. Present value of par value

Par **1,000,000** x PV factor [Table 2] (n=10,i=4%) **0.67556** **675,560**

b. Present value of interest

Interest **50,000** x PVA factor [Table 4] (n=10,i=4%) **8.11090** **405,545**
 = Bond price **1,081,105** >1,000,000

N=10, I/Y=4%, PV=PRICE, PMT=50,000,FV=1,000,000 **1,081,109**

Journal entry to record bond issuance

Date	General Journal	Debit	Credit
Jan. 1, 20X1	Dr. Cash (A+) -- recorded at price	1,081,105	
	Cr. Bonds payable (L+) -- recorded at par		1,000,000
	Bonds premium (Adjunct L+, L+)		81,105

Journal entry to record the first interest payment UNDER THE EFFECTIVE INTEREST METHOD

Date	General Journal	Debit	Credit
Jun. 30, 20X1	Dr. Interest expense (EXP+, E-)	43,244	
	Bonds premium (Adjunct L-, L-)	6,756	
	Cr. Cash (A-)		50,000

n = 10 periods

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Journal entry to record the principal payment

Date	General Journal	Debit	Credit
Dec. 31, 20X5	Dr. Bonds payable (L-)	1,000,000	
	Cr. Cash (A-)		1,000,000

Bonds premium amortization under the straight-line (STL) method

BONDS PREMIUM [Adjunct L]			
30-06-X1	8,110.50	01-01-X1	81,105.00
31-12-X1	8,110.50		
30-06-X2	8,110.50		
31-12-X2	8,110.50		
30-06-X3	8,110.50		
31-12-X3	8,110.50		
30-06-X4	8,110.50		
31-12-X4	8,110.50		
30-06-X5	8,110.50		
31-12-X5	8,110.50		
		31-12-X5	0.00

	01-01-X1	...	31-12-X5
Bonds payable, at par	1,000,000		1,000,000
Add: Bonds premium	81,105		0
Bonds payable, net	1,081,105		1,000,000

Dr. Interest expense*	41,889.50	
Bonds premium	8,110.50	
Cr. Cash		50,000.00

*Interest expense^{@STL method}

= Cash interest payment - Premium amortization

= 50,000.00 - 8,110.50

= 41,889.50

Effective Interest Amortization Method -- Premium

Interest Payment Period ☐	Carrying Amount (Book Value) of Bonds Payable at the Beginning of the period	Effective Interest Expense	Cash Interest Payment	Premium Amortization	Unamortized Premium	Carrying Amount (Book Value) of Bonds Payable at the End of the period
		= BV x MKTi x Time	= Par x STATEDi x Time	 C-D 		
0					81,105	1,081,105
1	1,081,105	43,244	50,000	6,756	74,349	1,074,349
2	1,074,349	42,974	50,000	7,026	67,323	1,067,323
3	1,067,323	42,693	50,000	7,307	60,016	1,060,016
4	1,060,016	42,401	50,000	7,599	52,417	1,052,417
5	1,052,417	42,097	50,000	7,903	44,513	1,044,513
6	1,044,513	41,781	50,000	8,219	36,294	1,036,294
7	1,036,294	41,452	50,000	8,548	27,746	1,027,746
8	1,027,746	41,110	50,000	8,890	18,856	1,018,856
9	1,018,856	40,754	50,000	9,246	9,610	1,009,610
10	1,009,610	40,390	50,000	9,610	- 0	1,000,000