Chapter 9
BKM Essentials 6e
Solutions

9-35 Market Conversion Value = 40(22) = 880.00

9-36 Conversion Premium = 950-40(19) = 190.00

9-37 $\text{At k} = 8\%, V_0 = 40(3.993) + 1{,}000(.681) = 840.29$

9-38

$$AYTM = \frac{60 + \frac{84.52}{5}}{\frac{(1000 - 84.52) + 1{,}000}{2}} = 8.03\%$$

9-39 $\text{Current Yield} = 50/(1000 - 84.52) = 5.46\%$

9-40 $\text{At k} = 6\%, V_0 = 60(7.360) + 1{,}100(.558) = 911.90$

9-41 $V_0 = 50(8.11) + 1{,}000(.676) = 1081$

9-42 $V_0 = 90(3.605) + 1{,}000(.567) = 891.45$

9-43 Invoice Price = $1{,}000(1.17) + 60(2/12) = 1{,}180$

9-44 Default premium for 1- Year Bond = .067-.063 = .004

Default premium for 5- Year Bond = .093-.088 = .005

9-45 $\text{At k} = 5\%, V_0 = 1{,}000(.458) = 458$

9-47 $V_{-1} = 60(4.452) + 1{,}000(.822) = 1{,}089.12$

$V_0 = 60(3.717) + 1{,}000(.889) = 1{,}112.02$

$\text{HPR} = [60 + (1{,}112.02 - 1{,}089.12)]/1{,}089.12 = 7.61\%$

9-49

$$\frac{(1 + .075)^2}{1 + .06} - 1 = .09$$

9-51

$$80\frac{[1-\frac{1}{(1+Y)^{10}}]}{Y}+1{,}000[\frac{1}{(1+Y)^{10}}]=750.00$$

$$Y=12.5\%$$

$$Current\ Yield=\frac{80}{750}=10.7\%$$

$$Capital\ Gains\ Yield=12.5\%-10.7\%=1.8\%$$

9-52

$$\frac{(1+.0799)^3}{(1+.075)^2}-1=.09$$

9-55

$$\frac{(1+.0849)^4}{(1+.0832)^3}-1=.09$$

9-56

$$\frac{(1+.1070)^5}{(1+.0941)^4}-1=.16$$

9-63

$$V_0=1{,}000[\frac{1}{(1+\frac{.12}{2})^{20(2)}}]=97$$

9-64

$$100\frac{[1-\frac{1}{(1+Y)^{10}}]}{Y}+1{,}000[\frac{1}{(1+Y)^{10}}]=950$$

$$Y \le 12\%$$

9-65 $\text{Accrued interest} = 100{,}000(.06/2)(71/183) = 1163.93$

9-66

$$YTM = (\frac{1{,}000}{623.20})^{\frac{1}{8}} - 1 = .061$$

9-67

Nominal rate of return	=	(1050.60 – 1030 + 52.53)/1030
	=	73.13/1030
	=	7.10%

9-68

Nominal rate of return	=	(1050.60 – 1030 + 52.53)/1030
	=	73.13/1030
	=	7.10%

Real rate of return	=	nominal rate of return – inflation rate
	=	7.10% - 2%
	=	5.10%

9-72

Implied forward rate	=	I
(1.07) (1+I)	=	$(1.08)^2$
1+I	=	1.166 / 1.07
1+I	=	1.090
I	=	.090
I	=	9.0%

9-73 Price = (98 + 3/32) / 100 x 10000 = 9809.38

9-74 Price = (102 + 12/32) / 100 x 1000 = 1023.75

9-75 Accrued interest = (65/2) x (74/182) = 13.21

9-76 Accrued interest = (74/1) x (60/365) = 12.16

9-77 Accrued interest = (50/2) x (35/182) = 4.81

9-78 Credit risk = 4.59 – 3.45 = 1.19%

9-79 Yield = 3.24 + 4.33 = 7.57%

9-80 Conversion value = 40 x 35 = 1,400

9-81 Market conversion value = 37.50 x 30 = 1125

9-82 Conversion premium = 1289.60 – (42 x 30) = 29.60

9-83 Current yield = 48 / 989.4 = .0485

9-85 HPR = (975-980+45) / 980 = 4.08%