Solutions Chapter 5

Exercise 5.1

	2011	2012
a. Income statement	$90,000*6%=$5,400	$87,000*6%=$5,220
b. Cash flow	-interest: $5,400 -Redemption: $3,000	-interest: $5,220 -Redemption: $3,000
c. Balance sheet ending	Loan: $87,000	Loan: $84,000

	2011	2012
d. Income statement	$90,000*6%*4/12=$1,800	$90,000*6%*8/12=$3,600 $87,000*6%*4/12=$1,740 $5,340
e. Cash flow	0	-interest: $90,000*6%=$5,400 -Redemption: $3,000
f. Balance sheet ending	-Loan: $90,000 -Interest payable: $1,800	-Loan: $87,000 -Interest payable: $1,740

Exercise 5.2
a. $500/5=$100.
b. No, 5*$120=$600 (< $625).
c. Redemption will be at face value of $500. This is lower than the value of shares.
d. 12,000*0.9=10,800 bonds are converted into 54,000 shares.
Common stock: 54,000*$20 =+ $1,080,000
Paid in surplus: 54,000* $80 = + $4,320,000
Bonds: - $6,000,000
Cash: 6,000,000*0.10 =   - $ 600,000

Exercise 5.3
a. The bond is above par because the market interest rate is lower than the coupon rate on this bond.
b. $60/1.05 + 60/1.05^2 + 60/1.05^3 + 60/1.05^4 + 1,000/1.05^4 = \$1,035.46$.
c. $1,044/30 = $34.80.
d. It can be higher because owning a convertible offers more protection than owning shares.

Exercise 5.4
a. Mortgage can be fully cleared. The table shows what's left for other claimholders ($1,000):

Building	1,400 – 900 = 500
Equipment	0.75*5,600 = 4,200
Inventory	0.40*4,300 = 1,720
Receivables	3,560 – 200 = 3,360
Total	9,780

Common bonds and payables can be fully cleared. There will be 9,780 – (2,900 + 3,200) = 3,680 left for subordinate debt.
b. Subordinate bond: $3,680,000/$4,700,000*$1,000 = $783. Common bond = $1,000.

Exercise 5.5
a.

Year	Profit ($1,000)
1	3,600 – 400 = 3,200
2	3,600 – 400 = 3,200
3	3,600 – 400 = 3,200
4	3,600 – 400 = 3,200
5	3,600 – 400 – 3,500 = (300)

b. $3,500,000/5 = $700,000 annual maintenance expense for building.

Year	Profit ($1,000)
1	3,600 – 400 – 700 = 2,500
2	3,600 – 400 – 700 = 2,500
3	3,600 – 400 – 700 = 2,500
4	3,600 – 400 – 700 = 2,500
5	3,600 – 400 – 700 = 2,500