CH13 Questions

**9.**

Above the yield curve. The callability of a bond makes it relatively undesirable. Because this added control over the bond is an undesirable aspect of the bond, holders will demand a higher yield on the bond and, therefore, the yield for the callable bonds will lie above that of the noncallable bonds.

**10.**

a) Year one = 10%

year two;

year three;

b) next year, the YTM on one-year bonds will be 12.009%

on two-year bonds, the YTM will be:

c) two-year bond will be priced @ 811.62 today. One year from now, the bond will be priced at 892.79. The imputed gain will be 81.17, which is a gain of 10%. On the three year bond, the price of the bond will rise from 711.78 to 782.93, resulting in a gain of 71.15, which is a gain of 10%

d)

**12.**

a)

b) YTM = 7.96; courtesy of my finance calculator

**13.**

a)

YTM = 6.97 courtesy of the fine calc

b) PV(n2) = 1008.92

**17.**

a)

YTM Zero N2 = 8.53%

b)

c) i.

ii.

**18.**

a)



b)

We need to issue x amount of 3-year zero-coupon bonds to buy y amount of 4-year bonds. To determine how many 3 year bonds we need to issue today to buy a y amount of 4-year bonds, we must find out how many four-year bonds we need to purchase; 782.92/715=1.095

1.095 is the amount of four-year bonds we need to buy and will cover it with an issuance of 1 3-year bond. This will ensure that today’s cash flows are 0 and that we receive a loan payment at year 4 that is equivalent to the forward rate; 9.5%.

@ time = 3, we will pay out the 1000 for the loan whereas we will receive 1000\*1.095 @ time = 4, an equivalent to 1.095 times our loaned amount, which is also equivalent to our forward rate.

c)

715/650=1.1

We will issue 1 4-year bond and will buy 1.1 5-year bonds. This will ensure that we loan out the synthetic loan for an amount of 1k @ time=4 and receive 1k\*1.1=1100 @ time=5, which is also equivalent to out forward interest rate amount.