7.07 Yield and Yield Spread Measures for Fixed-Rate Bonds

Question 1

If a zero-coupon bond's annual YTM stated with a periodicity of 4 is 5.80%, then the annual YTM stated with a periodicity of 2 is *closest* to:

A. 2.92%
B. 5.84%
C. 5.92%

Question 2

Information on two bonds is shown below:

Bond	Price	Yield-to-maturity	Periodicity
A	98	8.25%	2
B	102	9.00%	4

If yields are stated on a quarterly basis, the difference in yields between Bonds A and B, measured in basis points (bps), is *closest* to:

A. 75 bps.
B. 83 bps.
C. 85 bps.

Question 3

If a putable bond has an option-adjusted spread (OAS) of 125 basis points (bp), the *most appropriate* conclusion is that:

A. its zero-volatility spread is less than 125 bp.
B. the put option value is 125 bp higher than the bond's government spread.
C. the appropriate compensation for this bond's liquidity, credit, and volatility risks is 125 bp.

Question 4

Information on the yield spreads for three nonconvertible bonds, expressed in basis points, is as follows:

	Zero-volatility spread (Z-spread)	**Option-adjusted spread (OAS)**
Bond 1	145	130
Bond 2	100	120
Bond 3	125	115

Based on this data, the *most appropriate* conclusion is that:

A. Bond 1 and Bond 3 are putable.
B. Bond 2 is putable and Bond 3 is callable.
C. Bond 1 is putable and Bond 2 is callable.

Question 5
An analyst gathers the following information:

	Coupon Rate	Price (per 100 Par Value)
Two-year government benchmark bond	4.25%	98.50
Two-year corporate bond	6.00%	99.75

Both bonds pay coupon interest semiannually. The one-year and two-year spot rates are 3.50% and 5.09%, respectively. All rates are stated on a semiannual basis. The G-spread, measured in basis points (bps), between the two-year corporate bond and the two-year government bond is *closest* to:
A. 107.9 bps.
B. 108.7 bps.
C. 159.0 bps.

Question 6
An analyst has compiled the following data about a bond that has an embedded call option and matures in 8 years:

Selected Data	
6-year benchmark spot rate	2.17%
10-year benchmark spot rate	3.31%
Z-spread	760 basis points

If an option pricing model determines that the value of the embedded call is 208 basis points/year, the option-adjusted spread for the bond (in basis points/year) is *closest* to:
A. 552
B. 934
C. 968

Question 7
The I-spread is *most appropriately* defined as the difference between a bond's yield and:
A. a swap rate.
B. the spot curve.
C. a government bond's yield.

Question 8
An analyst is reviewing the term structure of spreads for a group of fixed-rate corporate bonds. The bonds were all issued in the UK and have the same risk profile. The analyst would *most appropriately* use the:
A. I-spread.
B. Z-spread.
C. G-spread.

Question 9
A bond has two future cash flows: SAR 5 in 1 year and SAR 105 in 2 years, and the 1- and 2-year benchmark spot rates are 3% and 4% respectively. If the Z-spread is 6%, the bond's price is *closest* to:
A. 91.36
B. 92.92
C. 98.17

Question 10
Which of the following is *most likely* included in the spread component of a corporate bond's yield-to-maturity?
A. Liquidity in trading
B. Currency exchange rates
C. Business conditions in the issuer's country

Question 11
A callable corporate bond's option-adjusted spread (OAS) is *most likely* calculated using the value (in basis points per year) of the embedded option and the:
A. I-spread.
B. Z-spread.
C. G-spread.

Question 12
A three-year, zero-coupon bond is priced at 80 per 100 of par value. The annual yield-to-maturity (YTM), stated with a periodicity of 6, is *closest* to:
A. 3.74%
B. 7.48%
C. 7.72%

Question 13
An analyst gathers the following data for two bonds:

	Bond X	Bond Y
Coupon rate	5.2%	5.4%
Payment frequency	2	4
Price	97	95
Time to maturity	4 years	4 years

Based on a periodicity of 2, the difference between the YTM values of the two bonds is *closest* to:
A. 78 bps
B. 84 bps
C. 132 bps

Question 14
An analyst gathers the following information on 10-year government benchmark rates (with YTMs assuming semiannual compounding):

Benchmark	**YTM**
Government bond	4.18%
Interest rate swap	4.28%
Government spot rate	4.35%

For a 6% coupon semiannual pay corporate bond with 10 years to maturity and priced at 100.35, the g-spread in basis points (bps) is *closest* to:
A. 160 bps
B. 167 bps
C. 177 bps

Question 15
An analyst has compiled the following data to analyze a bond:

Selected Benchmark Data (%)	
5-year government bond yield	2.10
5-year interbank lending rate	4.83

If the bond is five years from maturity, trades at 78.3, and has a 6% annual coupon, paid semiannually, the I-spread for the bond is *closest* to:
A. 1.11%
B. 7.05%
C. 9.78%

Question 16

The stated yield-to-maturity for a 4-year, quarterly coupon bond is 8.5%. For the same bond, the annual yield-to-maturity stated with a periodicity of 12 is *closest* to:

A. 8.19%
B. 8.44%
C. 8.56%

Question 17

An analyst gathers the following information about three bonds:

	Bond X	Bond Y	Bond Z
Current price	83.3833	90.1280	93.1152
Time to maturity	5	3	2
Periodicity	2	1	4
Stated annual rate (%)	9	9	9
Coupon rate (%)	4.8	5.1	5.2

The bond with the greatest effective annual rate is *most likely*:

A. Bond X
B. Bond Y
C. Bond Z

Question 18

A government spot-rate curve is shown below:

Maturity	1-year	2-year	3-year
Rate	3.75%	5.15%	6.00%

If a 3-year, 5% annual-pay nongovernment bond has a zero-volatility spread of 55 basis points and a par value of 100, the highest arbitrage-free price that an investor should be willing to pay for the bond (per 100 par value) is *closest* to:

A. 95.90
B. 96.07
C. 97.50