Question #1 of 10

Question ID: 1587674

A fixed-income analyst gathers the following data on a domestic bond portfolio to forecast the components of the portfolio's total expected return for the next 12 months:

Notional principal	$75 million
Current average bond price	$107.80
Expected average bond price in 12 months if the yield curve remains unchanged	$105.90
Average coupon rate	3.0%
Coupon frequency	Annual

Assuming that there is no reinvestment income, the rolldown return over the 12-month investment horizon is *closest* to:

A) 1.02%.

B) 1.79%.

C) −1.76%.

Explanation

Rolldown return = (expected price at the end of the horizon period − beginning price) / (beginning price) = (105.90 − 107.80) / 107.80 = −1.76%.

(Module 9.2, LOS 9.d)

Question #2 of 10

Question ID: 1552085

Randolph Lyndsey is a defined benefit plan consultant and is advising pension managers to be cautious of interest rate risk in their portfolios from expected increases in rates by the Fed.

To lower the duration of their portfolios because of Randolph's rising interest rate forecast:

A) A receive-fixed swap has negative duration so this will decrease the overall portfolio’s duration.

B) A portfolio manager can enter into a receive- floating swap to lower the portfolio's duration. ✓

C) A portfolio manager can enter into a receive-fixed swap to lower the portfolio's duration. ✗

Explanation

A receive-fixed swap has positive duration and will increase the portfolio's duration. To lower the portfolio's duration, the PM should enter into a receive-floating swap.

(Module 10.1, LOS 10.e)

Jeff Avenon is an analyst in the risk management department of XENO Bank (XENO).

Avenon's latest research highlights the probability of rising default and a downturn in the economy.

Recently, XENO installed a software specialized in evaluating the credit risk of institutional clients. Avenon discovers several bugs in the software, resulting in incorrect credit spreads on corporate bonds. He reports the issue to XENO's management, who contacts the outsourcing software development company. The software company provides XENO with an updated version of the software and assures the bank that the bugs have been handled. Avenon is tasked with running a quality assurance test to ensure that there are no more issues in the calculation process of corporate credit spreads. He gathers the data presented in Exhibit 1 to check whether the G-spread on a bond issued by ABC Corporation (ABC) is correctly calculated.

Exhibit 1: Selected Characteristics of a Bond Issued by ABC Corporation and Two Government Bonds

Issuer	Tenor (Years)	Coupon (Annual)	Yield	Modified Duration
ABC	4	2.0%	1.40%	3.4
Government	3	0.9%	0.85%	2.5
Government	6	1.3%	1.10%	5.4

Avenon then calculates the credit spread on a second lien bank loan that would be offered to a U.S.-based corporation. The first lien of the bank loan offered to the corporation has three years to maturity and a spread of 70 bps. Avenon uses the average historical volume-weighted corporate debt recovery rate (RR) of 64% for the first lien bank loan and an RR of 29% for the second lien bank loan as inputs for his calculation.

Two years later, Avenon is promoted to senior analyst. His new responsibilities include assessing the risk in the bank's proprietary bonds portfolio. XENO had invested in floating-rate Canadian bonds that pay coupons on a quarterly basis based on a money market reference rate (MRR) plus a spread. The Canadian economy is in the recovery phase and most Canadian companies are expected to experience higher revenue growth in the coming years. Accordingly, Avenon expects a higher MRR and an enhancement in the creditworthiness of the Canadian bonds.

Question #3 - 6 of 10

Question ID: 1552264

Based on the expected state of the economy highlighted in Avenon's research, which of the following statements pertaining to the expected changes in the shape of credit spread curves is *most accurate*?

A) The credit spread curve for high-yield bonds is expected to flatten more than the credit spread curve for investment-grade bonds. ✓

B) **The credit spread curve for high-yield bonds is expected to steepen, while the credit spread curve for investment-grade bonds is expected to flatten.** ✗

C) The credit spread curve for high-yield bonds is expected to flatten, while the credit spread curve for investment-grade bonds is expected to steepen. ✗

Explanation

During an economic downturn, the profitability of both high-yield (HY) and investment-grade (IG) issuers declines. Given an increase in near-term downgrades and defaults, both the credit spread curves for HY and IG bonds are expected to flatten. However, the credit spread curve for HY bonds is expected to flatten more (often becoming inverted) than the credit spread curve for IG bonds.

(Module 12.1, LOS 12.a)

Question #4 - 6 of 10

Question ID: 1552265

Based on **Exhibit 1: Selected Characteristics of a Bond Issued by ABC Corporation and Two Government Bonds**, the G-spread on ABC's bond is *closest* to:

A) 0.425%.

B) 0.467%.

C) 0.933%.

Explanation

The G-spread is equal to the difference between the yield on ABC's bond and the yield on a government bond with a similar maturity (i.e., yield on 4-year government bond).

To calculate the G-spread, a linear interpolation of the government bond is used to estimate the 4-year government bond yield.

First, calculate the weight of each bond based on its tenor:

weight of the 3-year government bond = $\frac{(6-4)}{(6-3)}$ = 0.6667

The weight of the 6-year government bond = 1 – weight of the 3-year government bond = 0.3333.

Next, calculate the return on the 4-year government bond as:

$$r_{4-\text{year}} = w_{3-\text{year}} \times r_{3-\text{year}} + w_{6-\text{year}} \times r_{6-\text{year}}$$

where $r_{4-\text{year}}$ is the yield on the 4-year government bond; $w_{3-\text{year}}$ and $w_{6-\text{year}}$ are the weights of the 3-year and 6-year government bonds, respectively; and $r_{3-\text{year}}$ and $r_{6-\text{year}}$ are the yield to maturities on the 3-year and 6-year government bonds:

$r_{4-\text{year}}$ = 0.6667 × 0.85% + 0.3333 × 1.10% = 0.9333%

The G-spread = 1.40% – 0.9333% = 0.4667%.

The weights of the 3-year and 6-year government bonds are erroneously considered as 0.50, resulting in $r_{4\text{-year}}$ = (0.50 × 0.85%) + (0.50 × 1.10%) = 0.975% and the G-spread is calculated as 1.40% – 0.975% = 0.425%.

The 0.933% answer option is incorrect because that is the calculation for $r_{4\text{-year}}$ and not the G-spread.

(Module 12.2, LOS 12.b)

Question #5 - 6 of 10

Question ID: 1552266

The estimated credit spread of the second lien bank loan to the U.S.-based corporation is *closest* to:

A) 0.70%.

B) 1.38%.

C) 1.94%.

Explanation

The *credit spread* is the extra yield that compensates an investor for the specific issuer risk of not receiving the due payments on time. The credit spread depends on the issuer's credit risk and is estimated using the probability of default and loss severity.

First, calculate POD as:

$$\text{POD} = \frac{\text{spread}}{\text{LGD}}$$

where *POD* is the probability of default (i.e., the likelihood the borrower will fail to settle the due payments on a timely basis); *spread* is the credit spread; *LGD* is the loss given default, calculated as 1 – RR; and *RR* is the recovery rate:

LGD on the first lien bank loan = 1 – 0.64 = 36%

$$\text{POD} = \frac{0.70\%}{0.36} = 1.944\%$$

The POD is the same across all loans, but the RR differs.

Using the POD on the first lien bank loan and the LGD on the second lien bank loan, the credit spread on the second lien bank loan can be estimated as follows:

credit spread = POD × LGD

The LGD on the second lien bank loan = 1 – RR = 1 – 29% = 71%.

The credit spread on the second lien bank loan = 1.944% × 0.71 = 1.380%.

The 0.70% answer option is incorrect as the credit spread on the first lien bank loan is solved as 1.944% × 0.36 = 0.700%.

The POD instead of the credit spread is solved.

(Module 12.1, LOS 12.a)

Question #6 - 6 of 10

Question ID: 1552267

Based on Avenon's analysis regarding the Canadian bonds, which of the margins is *most likely* expected to be the highest if Canada is in the beginning of the recovery phase?

A) Quoted margin. ✓

B) Discount margin. ✗

C) Zero-discount margin. ✗

Explanation

Quoted margin (QM), which is the yield spread over the MRR upon issuance of the floating rate note (FRN), compensates investors for the issuer's credit risk. Discount margin (DM) is the yield spread over the MRR that prices the FRN at par on each reset date. Zero-discount margin (Z-DM), which is the yield spread over the forward MRR curve, is the fixed periodic adjustment to the FRN pricing model that is required to solve for the observed market price.

Noting that the economy is in the beginning of the recovery phase, the creditworthiness of the Canadian issuer is expected to improve over time, resulting in a decrease in the DM. As a result, the QM is expected to be higher than the DM since the QM does not reflect credit risk changes over time.

Because the recovery is expected to continue for the coming years, Z-DM (a forward-looking spread) is expected to be lower than the DM. As a result, QM > DM > Z-DM.

DM, which represents the spread that prices the FRN at each settlement date at par, is expected to be lower than QM because the creditworthiness of the bond will improve.

Because the recovery is expected to last for the coming years, Z-DM, which is the yield spread over the forward MRR, is expected to be lower than DM.

(Module 12.2, LOS 12.b)

Question #7 of 10

Question ID: 1552205

Gerhard Thompson is a fixed income manager for a large investment consulting firm based in the United States and has spent the last few weeks analyzing the bond market, specifically focusing on yield curve forecasting. Thompson's forecast is for the yield curve to remain relatively stable for the first half of the year. The investment strategy that Thompson is *most likely* to follow over the next few months, assuming his forecast is correct, is:

A) replacing callable bonds with straight bullet bonds. ✗

B) selling options indirectly by purchasing mortgage backed securities (MBS).

C) buying options indirectly by selling MBS.

Explanation

To reduce convexity, Thompson will purchase MBS. MBS have an embedded call option that can be exercised by the home buyer.

Selling MBS securities would increase convexity, not reduce it.

Replacing callable bonds with straight bullet bonds would also increase convexity.

(Module 11.3, LOS 11.d)

Question #8 of 10

Question ID: 1552227

To execute a domestic carry trade when there is a stable downward sloping yield curve, which of the following strategies is *most* appropriate?

A) Borrow at lower longer-term rates to invest at higher shorter-term rates.

B) Borrow at lower medium-term rates to invest at higher shorter-term or longer-term rates.

C) Borrow at lower shorter-term rates to invest at higher longer-term rates.

Explanation

A carry trade is a form of leverage. In a stable downward-sloping curve, rates are falling as time/term increases. Therefore, an appropriate strategy would be to borrow at lower *longer*-term rates to invest at higher *shorter*-term rates.

(Module 11.4, LOS 11.f)

Question #9 of 10

Question ID: 1552257

A portfolio analyst gathers the following data on three option-free bonds.

	Price	Yield to Maturity	Maturity	Modified Duration
Corporate bond	102.28	3.54%	5.5	4.9
Government bond 1	99.96	1.90%	4.9	4.7
Government bond 2	99.56	2.20%	7.0	6.5

The G-spread on the corporate bond is *closest* to:

A) 1.43%.

B) 1.55%.

C) 1.49%.

Explanation

Let a be the weighting of 4.9-year government bonds and $(1 - a)$ be the weighting of 7-year government bonds for maturity matching.

$4.9a + 7.0(1 - a) = 5.5$

$4.9a + 7.0 - 7.0a = 5.5$

$2.1a = 1.5$

$a = 1.5 / 2.1 = 0.714 = 71.4\%$

weighting in 4.9-year government bonds = 71.4%

weighting in 7-year government bonds = 1 − 0.714 = 0.286 = 28.6%

interpolated benchmark yield = (0.714 × 1.90%) + (0.286 × 2.20%) = 1.99%

G-spread of corporate bond = 3.54% − 1.99% = 1.55%

(Module 12.2, LOS 12.b)

Question #10 of 10

Question ID: 1552009

Which of the following factors is *most likely* to increase the bid-ask spread of a bond issue?

Factor 1: Greater ease in assessing the bond's credit quality.

Factor 2: Higher risk associated with the bond.

A) Only Factor 2.

B) Both Factor 1 and Factor 2.

C) Only Factor 1.

Explanation

Greater ease in assessing the bond's quality will typically help to lower the bid-ask spread (e.g., plain vanilla corporate bonds are likely to have lower spreads than callable corporate bonds).

Higher-risk bonds usually have higher bid-ask spreads because of the higher risk that dealers face when holding these bonds in inventory.

(Module 9.1, LOS 9.c)