

Learning Module 14: Credit Risk

Q.92 Which one of the following is *not* one of the two main components of credit risk?

- A. Default risk
- B. Business risk
- C. Loss severity

The correct answer is **B**.

The two main components of credit risk are default risk and loss severity. Default risk is the risk that a borrower will fail to make required payments on a loan or other credit obligation. Loss severity is the potential financial loss that a lender may incur in the event of default.

CFA Level I, Fixed Income, Learning Module 14: Credit Risk, LOS 14a: Describe credit risk and its components, probability of default and loss given default.

Q.93 Which of the following statements is *least likely* accurate?

- A. Simple assets tend to be more liquid than complex assets.
- B. The wider the bid-ask spread, the more liquid the market is.
- C. If the seller has urgency, this tends to exacerbate the liquidity risk.

The correct answer is **B**.

The wider the bid-ask spread, the lower the market liquidity risk is. Bid-ask spread is the difference between the ask and bid price of an asset in the market. A high bid-ask spread implies a huge difference between the price sellers are willing to sell, and the price buyers are willing to buy. This huge difference will decrease market liquidity as sellers will not be willing to sell at the buyers' prices, and buyers will not be willing to buy at the sellers' prices.

A and B are incorrect. They are true statements.

CFA Level I, Fixed Income, Learning Module 14: Credit Risk, LOS 14a: Describe credit risk and its components, probability of default and loss given default.

Q.97 Which of these bonds ratings would *most likely* have the highest yield?

- A. C
- B. CC
- C. CCC-

The correct answer is **A**.

In this question, C is the lowest rated bond. Therefore, it carries more risk and is more likely to have the highest yield.

As a general rule, investment-grade bonds will always have lower yields due to their low default risk. On the other hand, junk bonds/high yield bonds/non-investment grade bonds will always have higher yields due to their high default risk. The higher yields in non-investment grade bonds compensate investors for the high risk.

CFA Level I, Fixed Income, Learning Module 14: Credit Risk, LOS 14b: describe the uses of ratings from credit rating agencies and their limitations.

Q.98 Municipal debt refers to debt issued by:

- A. a city only.
- B. a state, a province or local governments.
- C. a state, a province, a country or local governments.

The correct answer is **B**.

Municipal debt refers to debt issued by a state, a province, or local governments, which includes cities but not countries.

CFA Level I, Fixed Income, Learning Module 15: Credit Analysis for Government Issuers, LOS 15a: explain special considerations when evaluating the credit of sovereign and non-sovereign government debt issuers and issues.

Q.222 A Treasury Bill (T-Bill) with a \$100 face value is selling for \$97. There are 150 days until maturity. The T-Bill's effective annual yield *closest to*:

- A. 0.3%
- B. 7.69%
- C. 7.2%

The correct answer is **B**.

The correct calculation for the holding period yield (HPY) is $(100-97)/97 = 0.03093$. Therefore, the correct calculation for the effective annual yield (EAY) would be $(1 + 0.03093)^{(365/150)} - 1 = 0.0769$, which is equivalent to 7.69%.

A is incorrect. It represents the holding period yield.

C is incorrect. It represents the bank discount yield.

CFA Level I, Fixed Income, Learning Module 14: Credit Risk, LOS 14a: Describe credit risk and its components, probability of default and loss given default.

Q.2020 Expected loss is equal to:

- A. the probability of default multiplied by credit risk.
- B. the probability of default multiplied by default risk.
- C. the probability of default multiplied by loss severity.

The correct answer is **C**.

The two main components of the expected loss are default risk and loss severity.

Expected loss = Default risk (or Probability of Default) * Loss Severity.

CFA Level I, Fixed Income, Learning Module 14: Credit Risk, LOS 14a: Describe credit risk and its components, probability of default and loss given default.

Q.2023 Which of the following is most likely correct regarding the effect of rating by rating agencies?

- A. Rating tends to have no impact on market prices.
- B. Rating tends to have an immediate effect on market prices.
- C. Rating tends to lag market prices.

The correct answer is **C**.

Bond prices and credit spreads can change rapidly with changes in perceived creditworthiness as compared to upgrades/downgrades by rating agencies. Therefore, rating agencies have an impact on market prices but they can lag behind the actual price change in the market.

CFA Level I, Fixed Income, Learning Module 14: Credit Risk, LOS 14b: describe the uses of ratings from credit rating agencies and their limitations.

Q.2025 Covenants on new bond issues tend to be more valuable during:

- A. strong economic or market conditions.
- B. normal economic or market conditions.
- C. weak economic or market conditions.

The correct answer is **C**.

During market turmoil or weak economic or market conditions, investors seek more protection hence stronger covenants.

Option B) is incorrect because, in normal economic conditions, investors seek less protection.

Option A) is incorrect because, during strong economic conditions, investors seek less protection.

CFA Level I, Fixed Income, Learning Module 1: Fixed-Income Instrument Features, LOS 1b: describe the contents of a bond indenture and contrast affirmative and negative covenants.

Q.2027 Which of the following is *least likely* a bond covenant?

- A. The issuer must adhere to all applicable laws and regulations.
- B. The issuer can buy back as much stock as it likes.
- C. The issuer must offer security to this bond issue, before offering it to other creditors.

The correct answer is **B**.

Buying back as much stock as a company wants exposes lenders to default risk as the company might exhaust funds by buying back stock. The company can buy back as much stock as it likes when there are weak or no covenants. Strong covenants prohibit companies from buying back stocks.

Option A) is incorrect because it is an example of an affirmative covenant.

Option C) is incorrect because it is an example of a restrictive covenant.

CFA Level I, Fixed Income, Learning Module 1: Fixed-Income Instrument Features, LOS 1b: describe the contents of a bond indenture and contrast affirmative and negative covenants.

Q.2028 Credit analysis of the issuer's collateral should *most likely* involve analysis of:

- A. value of total asset compared to value of total debt.
- B. managements track record.
- C. reliability of accounting policies.

The correct answer is **A**.

The value of assets in relation to the level of debt is important to assess the collateral of the company; that is, the quality and value of the assets that support the debt levels of the company. Option B) is incorrect because it is a part of character.

Option C) is incorrect because it is also a part of character.

CFA Level I, Fixed Income, Learning Module 14: Credit Risk, LOS 14a: Describe credit risk and its components, probability of default and loss given default.

Q.2029 Capacity analysis should involve analysis of the:

- A. issuer's long-term goals.
- B. issuer's life cycle stage.
- C. issuer's accounting policies.

The correct answer is **B**.

Capacity is the ability of a borrower to pay off its debts (principal and interest). Issuer's life cycle stage is part of the capacity. A mature company will be better placed to service its debt than one that has just been launched.

A is incorrect. It is an example of character.

B is incorrect. It is an example of character.

CFA Level I, Fixed Income, Learning Module 14: Credit Risk, LOS 14a: Describe credit risk and its components, probability of default and loss given default.

Q.2031 The ability to use monetary policy is *least likely* associated with:

- A. sovereign bonds.
- B. government bonds.
- C. municipal bonds.

The correct answer is **C**.

State, provincial, and local governments (e.g., cities, towns, and counties) issue municipal bonds. They rely on available resources and do not have the ability to use monetary policy.

A is incorrect. Sovereign bonds are bonds issued by a national government and thus have the ability to use monetary policy.

B is incorrect. Not all government bonds can use monetary policy, only those offered by the national government. Note that municipal and sovereign bonds are all examples of government bonds.

CFA Level I, Fixed Income, Learning Module 15: Credit Analysis for Government Issuers, LOS 15a: Explain special considerations when evaluating the credit of sovereign and non-sovereign government debt issuers and issues.

Q.2032 General obligation (GO) bonds are:

- A. unsecured bonds issued with the full faith and credit of the issuing government.
- B. secured bonds issued with the full faith and credit of the issuing government.
- C. unsecured bonds issued without the full faith and credit of the issuing government.

The correct answer is **A**.

A general obligation bond (GO) is a municipal bond backed by the credit and taxing power of the issuing jurisdiction rather than the revenue from a given project. General obligation bonds are issued with the belief that a municipality will be able to repay its debt obligation through taxation or revenue from projects.

Note: Option B is incorrect because it is the definition of a sovereign bond.

CFA Level I, Fixed Income, Learning Module 15: Credit Analysis for Government Issuers, LOS 15a: Explain special considerations when evaluating the credit of sovereign and non-sovereign government debt issuers and issues.

Q.2035 Credit curves or spread curves are typically upward sloping because:

- A. longer maturity bonds tend to have wider spreads.
- B. shorter maturity bonds tend to have wider spreads.
- C. the maturity does not impact spreads.

The correct answer is **A**.

Credit curves or spread curves show the relationship between spread and maturity. Longer maturity bonds tend to have wider spreads because the longer the maturity, the higher the uncertainty of the future creditworthiness of the debt issuer. The opposite is true.

CFA Level I, Fixed Income, Learning Module 14: Credit Risk, LOS 14b: describe the uses of ratings from credit rating agencies and their limitations.

Q.2038 The risk of default on a debt that may arise from a borrower failing to make required payments is *most likely* known as:

- A. default risk.
- B. loss given default.
- C. expected loss.

The correct answer is **A**.

A credit risk is the risk of default on a debt that may arise from a borrower failing to make required payments. In the first resort, the risk is that of the lender and includes lost principal and interest, disruption to cash flows, and increased collection costs. B is incorrect. Loss-given default, also known as loss severity, is the amount of money that a lender loses when a borrower defaults.

$$\text{Loss severity} = 1 - \text{recovery rate}$$

where recovery rate is the amount of the loan that a lender can recover from the borrower. C is incorrect. The expected loss is obtained by multiplying default risk by loss given default. The expected loss is basically the probability that a loss will occur multiplied by the cost of the loss.

CFA Level I, Fixed Income, Learning Module 14: Credit Risk, LOS 14a: Describe credit risk and its components, probability of default and loss given default.

Q.2039 Which of the following statements is/are accurate?

- I. The expected loss is equal to the default risk multiplied by the loss severity.
- II. The difference in yield between a credit-risky and credit-risk-free bond of similar maturity is called the spread risk.
- III. Bond prices are inversely related to spreads.

- A. II only
- B. I & III only
- C. I, II & III

The correct answer is **B**.

The difference in yield between a credit-risky and credit-risk-free bond of similar maturity is called the yield spread. ***CFA Level I, Fixed Income, Learning Module 14: Credit Risk, LOS 14a: Describe credit risk and its components, probability of default and loss given default.***

Q.2040 A 5-year corporate bond 'A' is trading at a spread of 175 basis points to Treasuries. The yield on 5-year Treasury notes is 4%. Another corporate bond 'B' of 5-years maturity is trading at a spread of 150 basis points. Which bond has a higher credit risk?

- A. Both bonds have the same credit risk because they have the same maturity.
- B. Bond B, because it has a lower spread.
- C. Bond A, because it has a higher yield of 5.75%.

The correct answer is **C**.

Bonds with higher credit risk trade at higher yields than bonds considered free of credit risk, such as Treasury bonds. This higher yield compensates investors for the additional risk they are taking. We compare the spreads and the resulting yields to determine which bond has a higher credit risk.

For Bond A:

- Spread to Treasuries: 175 basis points (1.75%)
- Yield on 5-year Treasury notes: 4%
- The yield on Bond A: $4\% \text{ (Treasury yield)} + 1.75\% \text{ (spread)} = 5.75\%$

For Bond B:

- Spread to Treasuries: 150 basis points (1.50%)
- Yield on 5-year Treasury notes: 4%
- Yield on Bond B: $4\% \text{ (Treasury yield)} + 1.50\% \text{ (spread)} = 5.50\%$

Since Bond A has a higher yield (5.75%) compared to Bond B (5.50%), investors require more compensation to hold Bond A due to its higher perceived credit risk. Therefore, Bond A has a higher credit risk than Bond B.

A is incorrect. Both bonds do not have the same credit risk simply because they have the same maturity. Credit risk is more closely related to the credit spread than maturity alone.

B is incorrect. Bond B has a lower spread (150 basis points) compared to Bond A (175 basis points), which actually indicates that Bond B has a lower credit risk, not higher.

CFA Level I, Fixed Income, Learning Module 14: Credit Risk, LOS 14b: describe the uses of ratings from credit rating agencies and their limitations.

Q.2041 Which of the following statement(s) is/are correct?

Statement I. Market liquidity risk is greater for bonds of less creditworthy issuers and for the bonds of bigger issuers who have large publicly-traded debt.

Statement II. Credit migration risk is the possibility that spreads will widen because the issuer has become less creditworthy.

- A. Both statements are correct.
- B. Both statements are incorrect.
- C. Only one statement is correct

The correct answer is **C**.

Statement I is incorrect. Market Liquidity risk is greater for bonds of less creditworthy issuers and for the bonds of smaller issuers who have little publicly-traded debt.

Statement II is correct. Credit migration risk is the risk that spreads will widen because the issuer has become less creditworthy.

CFA Level I, Fixed Income, Learning Module 14: Credit Risk, LOS 14a: Describe credit risk and its components, probability of default and loss given default.

Q.2042 The size of the bid-ask spread widening *least likely* reflects that:

- A. market liquidity risk increases.
- B. credit migration risk increases.
- C. there is an increased demand for security.

The correct answer is **C**.

Increased demand for security will decrease the bid-ask spread of the security. Decreased demand will widen the bid-ask spread.

A and B are incorrect. They are correct statements. An increase in market liquidity and credit migration risk will widen the bid-ask spread.

The size of the bid-ask spread reflects market liquidity risk. When the bid-ask spread widens, market liquidity falls, and market liquidity risk increases.

CFA Level I, Fixed Income, Learning Module 14: Credit Risk, LOS 14c: Describe macroeconomic, market, and issuer-specific factors that influence the level and volatility of yield spreads.

Q.2047 Which of the following statement(s) is/are correct?

Statement I. Higher credit ratings tend to be more stable than lower credit ratings.
Statement II. Credit ratings lag market pricing.

- A. Both statements are correct.
- B. Both statements are incorrect.
- C. Only one statement is correct.

The correct answer is **A**.

Both statements are correct. Higher credit ratings tend to be more stable than lower credit ratings and credit ratings lag market pricing.

CFA Level I, Fixed Income, Learning Module 14: Credit Risk, LOS 14b: describe the uses of ratings from credit rating agencies and their limitations.

Q.2050 Which of the following conditions is/are affirmative covenants?

- I. The principal of \$500 million will be repaid at a 5% interest.
 - II. The debt-to-equity ratio of the borrowing company should not fall below 2.5.
 - III. The borrower is not allowed to distribute profits of the company as dividend as long as the loan is not repaid.
- A. All three conditions are affirmative covenants.
- B. Only I is an affirmative covenant.
- C. Only I and II are affirmative covenants.

The correct answer is **B**.

A covenant is a provision in a bond indenture meant to protect lenders by forbidding borrowers or requiring them to do some things.

An affirmative/positive covenant is a type of promise or contract that requires a party to adhere to certain terms. Option I is a positive covenant.

A negative covenant restricts a company from engaging in certain actions or, in other words, a promise not to do something. Option II and III are negative covenants. Financial ratios and examples of what the borrower cannot do are both examples of negative covenants.

CFA Level I, Fixed Income, Learning Module 16, Credit Analysis for Corporate Issuers, LOS16a: Describe the qualitative and quantitative factors used to evaluate a corporate borrower's creditworthiness.

Q.2052 Determine the effect the following cases have on yield spreads.

Case 1: Absence of brokers and dealers that provide market-making capital in the bond market.

Case 2: High demand for bonds due to a predicted upcoming recession.

- A. The yield spread will widen in one case and narrow in the other.
- B. The yield spreads will widen in both cases.
- C. The yield spread will narrow in both cases.

The correct answer is **A**.

Case 1: In the absence of brokers and dealers to provide market-making capital in the bond market, the yield spread will widen because brokers and dealers usually provide sufficient capital to enable the market to function efficiently.

Case 2: Due to the high demand for bonds, the yield spread will narrow.

Note: Yield spread is the difference between the quoted rates of return on two different investments. The two investments have similar maturity dates but different credit qualities.

CFA Level I, Fixed Income, Learning Module 14: Credit Risk, LOS 14b: describe the uses of ratings from credit rating agencies and their limitations.

Q.2054 Which of the following is *least likely* correct?

- A. Longer maturity bonds have wider spreads because of longer durations.
- B. Longer maturity bonds have wider spreads because of larger bid-ask spreads.
- C. Longer maturity bonds have wider spreads because of their stronger creditworthiness.

The correct answer is **C**.

Longer maturity bonds have higher uncertainty of the issuer's future creditworthiness. Thus, they have higher credit spreads.

CFA Level I, Fixed Income, Learning Module 14: Credit Risk, LOS 14b: describe the uses of ratings from credit rating agencies and their limitations.

Q.2055 Estimating loss severity is essential for:

- A. high-yield debt.
- B. investment grade debt.
- C. municipal debt.

The correct answer is **A**.

Loss severity, also known as loss given default, is the portion of a bond's value, including unpaid interest, that an investor loses in the event of default. It is expressed as a monetary amount or as a percentage.<\p>

$$\text{Loss severity} = 1 - \text{Recovery rate}$$

The recovery rate is the percentage of the principal amount recovered in the event of default. Estimating loss severity is essential for High Yield Debt as they are most likely to default.

A and C are incorrect. It is less likely for an investment grade or a municipal bond to default.

CFA Level I, Fixed Income, Learning Module 14: Credit Risk, LOS 14c: Describe macroeconomic, market, and issuer-specific factors that influence the level and volatility of yield spreads.

Q.2056 A key metric for revenue bonds is the:

- A. operating profit ratio.
- B. debt service coverage ratio.
- C. debt ratio.

The correct answer is **B**.

Revenue bonds are bonds issued by a government other than the national government to finance a specific project. Revenue bonds carry more risks because their only revenue source is the particular project they are issued to finance. The debt service coverage ratio (DSCR), also known as "debt coverage ratio," (DCR) is the ratio of cash available for debt servicing to interest, principal, and lease payments.

$$\text{DSCR} = \frac{\text{Net operating income}}{\text{Total debt service}}$$

Because of how risky revenue bonds are, an investor needs to determine the debt service coverage ratio (will the proceeds from the specific project be enough to pay off the debt).

CFA Level I, Fixed Income, Learning Module 15: Credit Analysis for Government Issuers, LOS 15a: explain special considerations when evaluating the credit of sovereign and non-sovereign government debt issuers and issues.

Q.2057 The analysis of general obligation bonds is *most likely* similar to the analysis of:

- A. revenue bonds.
- B. corporate debt.
- C. sovereign debt.

The correct answer is **C**.

General obligation bonds are municipal bonds whose bond repayments are guaranteed by the revenue earned by the relevant government entity (tax and operating revenue generated by projects carried out by that specific government entity.) The analysis of general obligation bonds is similar to the analysis of sovereign debt, focusing on the strength of the local economy and its effects on taxes.

CFA Level I, Fixed Income, Learning Module 15: Credit Analysis for Government Issuers, LOS 15a: explain special considerations when evaluating the credit of sovereign and non-sovereign government debt issuers and issues.

Q.2522 Bond A's yield and yield spread increase by the same amount. From this, we can conclude that the increase in Bond A's yield was *most likely* caused due to:

- A. microeconomic factors like credit risk and liquidity.
- B. both macroeconomic and microeconomic factors taken together.
- C. macroeconomic factors like expected inflation and the real risk-free rate.

The correct answer is **A**.

If a bond's yield increases while its yield spread remains unchanged, it implies that the yield on its benchmark has also increased, indicating that macroeconomic factors have driven up bond yields overall. However, when both the yield and yield spread of Bond A increase by the same amount, it suggests that the increase in Bond A's yield is more likely attributable to microeconomic factors like credit risk or the bond's liquidity.

Note: Yield refers to the return that an investor earns from a bond, whereas yield spread represents the difference in yields between two bonds.

B is incorrect. An increase in yield spread is primarily influenced by microeconomic factors.

C is incorrect. Inflation generally leads to higher prices in the economy, which can increase credit risk, putting upward pressure on yields. When the risk-free rate of return rises, corporate bond yields must also increase to compensate.

CFA Level I, Fixed Income, Learning Module 14: Credit Risk, LOS 14c: Describe macroeconomic, market, and issuer-specific factors that influence the level and volatility of yield spreads.
