Fixed Income

Fixed-Income Markets for Corporate Issuers

Exam Focus

- Repurchase agreements (repos)
- Short-term funding options
- Long-term funding options

Short-Term Funding—Nonfinancial Corporations

External loan financing

- Uncommitted/committed/revolving line of credit
- Collateral may be required

External security-based financing

- Commercial paper
- May be rolled over

Short-Term Funding—Financial Institutions

Commercial and retail deposits

- Checking accounts/operational deposits/savings deposits

Interbank funds

Central bank funds

Commercial paper

Short-Term Financing Options: Example

Pennington Corporation is a large pharmaceutical company with an investment-grade credit rating and uses Cavalier Bank for some of its financing needs. Pennington maintains stable cash deposits at Cavalier Bank and is seeking a short-term financing option with no upfront commitment fee. Which of the following financing options would be *most appropriate* for Pennington?

A. Secured loan.

B. Committed bank line of credit.

C. Uncommitted bank line of credit.

-1

Commercial Paper: Example

Which of the following would a commercial paper issuer *most likely* obtain to minimize rollover risk?

A. Credit rating.

B. Bridge financing.

C. Liquidity enhancement.

-1

Source: CFA Institute. Used with permission.

Repurchase Agreements

- Sell security to another party, committing to buy back at a later date, at a predetermined higher price
- Can be for one day (overnight repos) or longer periods (term repos)
- Typically used by financial institutions as seller or borrower to finance securities held in trading activities or to earn repo rate on excess short-term funds

Repurchase Agreements: Example

$100m U.S. 5-year Treasury note sold under a repo, for repurchase in 30 days, at a repo rate of 0.25%.

- Borrower sells note today, receiving a loan of $100m.
- In 30 days, borrower will repurchase note and pay lender:

- Interest of

-2

Source: CFA Institute. Used with permission.

Repurchase Agreements—Initial Margin

- Typically post extra collateral above the loan amount (initial margin) (i.e., loan will be at a discount to value of security)
- Initial margin = $\dfrac{\text{security price}}{\text{purchase price}}$
- Repo haircut = $\dfrac{\text{security price} - \text{purchase price}}{\text{security price}}$

Repurchase Agreements: Example

- Same example as before, but initial margin required of 102%.
- Borrower sells note today, receiving a loan of:

102% =

Purchase price =

Repo haircut = =

-3

Source: CFA Institute. Used with permission.

Repurchase Agreements: Example

Repurchase price =

$98,039,216

Loan of $98,039,216 had an interest cost of

-2

Source: CFA Institute. Used with permission.

Repurchase Agreements—Variation Margin

- Lender can request further collateral if value of underlying security declines
- **Variation margin** = (initial margin % × purchase price @ T) – security price @ T
- Where purchase price @ T = original purchase price × (1+ (0.25% × T / 360))

Repurchase Agreements: Example

- Same example as before, but after the first five days, the price of the sold security fell to $99m. Original purchase price: $98,039,216.
- Purchase price @ Day 5 = $98,039,216
- Variation margin =

-2

Source: CFA Institute. Used with permission.

Repo Rate Will Be Higher When . . .

- Other short-term funds cost more
- Maturity is longer
- Collateral is specified but not actually delivered
- Lower credit quality of security
- Collateral security has low demand/excess supply
- Deemed to be higher risk (default risk; collateral risk; margining risk; legal risk)

Repos: Example

Which of the following statements about repos is correct?

A. Financial market participants use the repo market to earn short-term income by lending funds on a secured basis.

B. Investors can generate higher returns for shorter repo terms.

C. From a security buyer's perspective, a repo offers a short-term cash investment on a collateralized basis with significant liquidity or default risk.

-1

Source: CFA Institute. Used with permission.

Long-Term Funding: Investment Grade vs. High Yield

- Bond yields typically higher for longer-dated maturities

- For high yield compared to investment grade:
  - Difference in yields across maturities will be greater
  - Default risk more of a concern
  - Credit spreads are larger proportion of yield
  - More restrictive covenants, need for collateral
  - Issues are less standardized, tailored to individual circumstances

High-Yield Issuer: Example

Which of the following is a reason why a high-yield issuer may elect to issue equity as opposed to bonds?

A. High-yield bond maturities are limited to 30 years or less.

B. High-yield issuers face numerous restrictions when issuing debt.

C. High-yield bond analysts use financial ratios and credit ratings to determine when a high-yield issuer's credit rating is likely to change.

-1

Source: CFA Institute. Used with permission.

Solutions

Short-Term Financing Options: Example

Pennington Corporation is a large pharmaceutical company with an investment-grade credit rating and uses Cavalier Bank for some of its financing needs. Pennington maintains stable cash deposits at Cavalier Bank and is seeking a short-term financing option with no upfront commitment fee. Which of the following financing options would be *most appropriate* for Pennington?

A. Secured loan.

B. Committed bank line of credit.

C. Uncommitted bank line of credit.

Banks offer uncommitted lines of credit on an unsecured basis to clients who maintain stable cash deposits at the bank, allowing the banks to closely monitor and react to adverse borrower developments, such as declining account balances. Uncommitted lines of credit also have no up-front commitment fee.

-1

Source: CFA Institute. Used with permission.

Commercial Paper: Example

Which of the following would a commercial paper issuer *most likely* obtain to minimize rollover risk?

A. Credit rating.

B. Bridge financing.

C. Liquidity enhancement.

To minimize rollover risk, investors usually require a liquidity enhancement to ensure that the issuer can fully repay maturing commercial paper if a rollover is not possible.

-1

Source: CFA Institute. Used with permission.

Repurchase Agreements: Example

\$100m U.S. 5-year Treasury note sold under a repo, for repurchase in 30 days, at a repo rate of 0.25%.

- Borrower sells note today, receiving a loan of \$100m.
- In 30 days, borrower will repurchase note and pay lender:

  (\$100m × (1+ (0.25% / 12)) = \$100,020,833

- Interest of \$20,833

-2

Source: CFA Institute. Used with permission.

Repurchase Agreements: Example

- Same example as before, but initial margin required of 102%.
- Borrower sells note today, receiving a loan of:

$$102\% = \frac{\$100\text{m}}{\text{purchase price}}$$

Purchase price = $98,039,216

$$\text{Repo haircut} = \frac{\$100\text{m} - \$98{,}039{,}216}{\$100\text{m}} = 1.96\%$$

-3

Source: CFA Institute. Used with permission.

Repurchase Agreements: Example

Repurchase price =

$98,039,216 × (1+ (0.25% / 12)) = $98,059,641

Loan of $98,039,216 had an interest cost of $20,425

-2

Source: CFA Institute. Used with permission.

Repurchase Agreements: Example

- Same example as before, but after the first five days, the price of the sold security fell to $99m. Original purchase price: $98,039,216.
- Purchase price @ Day 5 = $98,039,216 × (1 + (0.25% × 5 / 360)) = $98,042,620
- Variation margin = (102% × $98,042,620) – $99m = $1,003,472

-2

Source: CFA Institute. Used with permission.

Repos: Example

Which of the following statements about repos is correct?

A. Financial market participants use the repo market to earn short-term income by lending funds on a secured basis.

B. Investors can generate higher returns for shorter repo terms.

C. From a security buyer's perspective, a repo offers a short-term cash investment on a collateralized basis with significant liquidity or default risk.

B is incorrect because investors can generate higher returns for longer (not shorter) repo terms.
C is incorrect because from a security buyer's perspective, a repo offers a short-term cash investment on a collateralized basis with minimal (not significant) liquidity or default risk.

-1

Source: CFA Institute. Used with permission.

High-Yield Issuer: Example

Which of the following is a reason why a high-yield issuer may elect to issue equity as opposed to bonds?

A. High-yield bond maturities are limited to 30 years or less.

B. High-yield issuers face numerous restrictions when issuing debt.

C. High-yield bond analysts use financial ratios and credit ratings to determine when a high-yield issuer's credit rating is likely to change.

A is incorrect because high-yield bond maturities tend to be limited to 10 years (not 30 years) or less whereas there is no maturity date on equity.
C is incorrect because investment-grade bond analysts use financial ratios and credit ratings to determine when an investment-grade issuer's credit rating is likely to change.

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