Learning Module 4: Fixed Income Market for Corporate Issuers

LOS 4a: compare short-term funding alternatives available to corporations and financial institutions

Short-term funding is key for corporations to meet immediate cash needs, maintain liquidity, and capitalize on supplier discounts.

Short-Term Funding Alternatives for Non-Financial Institutions

External Financing

Non-financial entities can acquire immediate liquidity through various banking avenues:

Uncommitted Lines of Credit

These are provisional credit arrangements where there's no obligation for the bank to lend the specified amount. They are useful for immediate liquidity needs. Banks typically grant these lines to clients with stable cash deposits, which allows them to monitor the company's financial activities closely. Uncommitted lines of credit are cost-efficient since there are no upfront fees, and companies are charged interest only on the utilized amount. However, given their ‘uncommitted’ nature, they are not always reliable, especially during financial downturns.

Regular (Committed) Lines of credit

Contrary to the uncommitted lines, these involve a formal contractual obligation by the bank to provide the funds up to the agreed limit. They are often utilized as backup credit sources, and they can be categorized as short-term liabilities when drawn. They are more reliable than uncommitted lines, but there might be upfront costs, such as a commitment fee. Renewal at maturity can become a challenge, especially for companies whose financial positions are deteriorating.

Revolvers (Revolving Credit Agreements)

Revolvers are long-term credit arrangements that can span several years. They may come with specific covenants or conditions the borrower needs to adhere to. They can also include medium-term loan options. Being a multi-year commitment, they provide a dependable source of liquidity. However, due to their extended nature, lenders often seek protections to safeguard their interests.

1. **Secured Loans and Factoring**Secured Loans are those that demand collateral like company-owned assets or high-quality receivables, inventory, and securities. The lender secures a right on the collateral until the loan is cleared, reflecting on the borrower's credit report. Companies with inadequate credit strength typically opt for these loans.Companies can utilize their accounts receivable in two main ways:
    i. Assignment of accounts receivable: Here, receivables act as collateral for loans, but the responsibility of collection remains with the company.
    ii. Factoring: This involves selling receivables to a factor, usually at a discount. Here, the factor handles the credit granting and collection.
2. **External, Security-Based Financing**

    Commercial Paper (CP)

    Commercial Paper (CP) is predominantly issued by big, high-credit corporations, CPs are short-term, unsecured notes which generally mature in under three months. They are used for working capital, bridging finance, or handling seasonal cash demands. A common practice is “rolling over” or paying off maturing CP with new issuances. This introduces “rollover risk” - the potential inability to issue new CP. To counteract this, investors typically seek a liquidity enhancement, like a backup credit line from banks. This acts as a protective measure, ensuring issuers can fully repay their obligations if new issuances aren't viable. Given their brief maturity, CP markets are agile in adjusting to credit hiccups, making defaults infrequent. Beyond non-financial corporations, other CP issuers include governments, financial institutions, and international bodies.

    Eurocommercial Papers (ECPs)

Eurocommercial Papers (ECPs) are CPs issued internationally. While they share many similarities with the U.S. Commercial Paper (USCP), they tend to involve smaller transaction sizes and are generally less liquid.

Short-Term Funding Alternatives for Financial Institutions

Financial institutions, such as banks, serve as intermediaries between depositors and borrowers. Their assets mainly comprise loans given or securities purchased, while liabilities include deposits, securities sold, and short-term borrowings. Here's a closer look at their short-term funding sources:

Deposits Demand Deposits

Primarily from households and commercial entities, these deposits don't have a stated maturity and often pay minimal interest. While they can be withdrawn anytime, banks count on them due to added stability. Operational deposits, generated through clearing, custody, and cash management activities, also offer a stable source of funding.

Saving Deposits

These are non-transactional and may have defined terms. Certificates of deposit (CDs) are an example where banks offer pre-set maturity and interest rates. CDs can be non-negotiable or negotiable, allowing for early withdrawal with penalties or market selling. CDs are also found in the Eurobond market.

Interbank Market Unsecured Loans

This market facilitates short-term lending and borrowing among financial institutions. Loans usually span from overnight to one year. The rate of interest on these loans is affected by credit risk, and banks often set counterparty limits to manage this risk.

Central Bank Funds Market

Banks are mandated to maintain reserves with the central bank. Banks with a surplus can lend to those short on reserves through this market. The rate of borrowing and lending in this space is known as the central bank funds rate. Banks struggling in the interbank market can borrow directly from the central bank, albeit at higher rates and with more scrutiny.

Commercial Paper (CP)General CP

Predominantly, large financial institutions issue CPs to cater to their short-term borrowing needs. About 60% of the yearly issuance is from financial institutions and the rest from non-financial corporate entities. These institutions need to manage the rollover risk associated with CP.

Asset-Backed Commercial Paper (ABCP)

This is a secured variant of CP. Loans or receivables are typically sold to a special-purpose entity (SPE) that issues debt. The bank trades short-term loans for cash with the SPE, which in turn issues ABCP to investors with a backup credit line from the bank. This off-balance-sheet financing benefits the bank and investors as it offers liquidity and access to loan portfolios. However, during the Global Financial Crisis, challenges in rolling ABCPs led to multiple SPE failures. Post-crisis, the ABCP market primarily funds short-term, high-quality loans and receivables.

Question #1

Which of the following best describes a credit arrangement where the bank has no obligation to lend the specified amount and is typically granted to clients with stable cash deposits?

A. Revolvers (Revolving Credit Agreements)
B. Uncommitted Lines of Credit
C. Regular (Committed) Lines of Credit

Solution

The correct answer is B:

Uncommitted Lines of Credit are provisional credit arrangements where the bank has no obligation to lend the specified amount. They are granted to clients with stable cash deposits, allowing the bank to monitor the company's financial activities closely.

A is incorrect: Revolvers (Revolving Credit Agreements) are long-term credit arrangements that span several years and often come with specific covenants.

C is incorrect: Regular (Committed) Lines of Credit involve a formal contractual obligation by the bank to provide funds up to an agreed limit.

Question #2

Which of the following is a type of commercial paper issued internationally *most likely* involves smaller transaction sizes, and is less liquid compared to its domestic counterpart?

A. Eurocommercial Papers (ECPs)
B. U.S. Commercial Paper (USCP)
C. Asset-Backed Commercial Paper (ABCP)

Solution

The correct answer is **A.**

Eurocommercial Papers (ECPs) are commercial papers issued internationally and tend to involve smaller transaction sizes and are generally less liquid compared to U.S. Commercial Papers.

B is incorrect: U.S. Commercial Paper (USCP) is domestically issued and does not fit the international criterion.

C is incorrect: Asset-Backed Commercial Paper (ABCP) is a secured variant of CP, and its definition does not match the given description.

Question #3

In the context of short-term funding for financial institutions, which deposit type *least likely* have a stated maturity and is relied upon by banks due to its stability?

A. Saving Deposits
B. Demand Deposits
C. Certificates of Deposit (CDs)

Solution

The correct answer is **B.**

Demand Deposits primarily come from households and commercial entities and don't have a stated maturity. Banks rely on them because of their added stability.

A is incorrect: Saving Deposits are non-transactional and may have defined terms but do not fit the described criteria.

C is incorrect: Certificates of Deposit (CDs) offer pre-set maturity and interest rates and do not match the given description

LOS 4b: describe repurchase agreements (repos), their uses, and their benefits and risks

Repurchase agreements, commonly known as repos, serve as a secured method for short-term borrowing and lending. These transactions consist of a seller committing to repurchase a security at a predefined price on a future date. This operation essentially allows the seller to obtain a short-term loan collateralized by the security.

The repo transaction starts with the sale of a security and ends with its repurchase. For instance, consider a US five-year Treasury note trading at $150 million. If it's sold today (t=0) under a 45-day repo term at an annual interest rate (repo rate) of 0.5%, the repurchase price after 45 days would be calculated as:

Assuming that there are 360 days in a year:

$$150 \times [1 + (0.5\% \times \frac{45}{360})] = \$150.094 \text{ million}$$

The security seller effectively gets a short-term loan, collateralized by the US Treasury note. Repos can range from overnight to term repos, which have maturities longer than a day. The most common collateral is highly liquid bonds with minimal credit risk, such as sovereign bonds. A general collateral repo transaction allows a range of securities as eligible collateral.

Features and Calculations

Repos may require collateral in excess of the cash exchanged, termed as initial margin.

$$\text{Initial margin} = \frac{\text{Initial security price}}{\text{Initial purchase price}}$$

A loan that's backed entirely by collateral has a 100% initial margin. If the margin is greater than this, it indicates that there's even more collateral provided initially. You can think of this extra collateral as a “haircut” or reduction to the loan in comparison to the starting value of the collateral. The equation representing this concept is:

$$\text{Haircut} = \frac{(\text{Initial Security Price} - \text{Purchase Price at the start})}{\text{Initial Security Price}}$$

Repos adapt to fluctuations in collateral value by allowing those involved in the contract to either ask for more collateral or give back some of what they've already provided. This ensures that the security interest remains consistent with the originally agreed-upon margin terms. This fluctuating margin payment, known as the variation margin, measures the gap between the current required margin and the value of the security at a specific time, which is represented in the following equation:

$$\begin{aligned}\text{Variation margin} = &(\text{Initial margin} \times \text{Purchase price at time t}) \\ &- \text{Security Price at time t.}\end{aligned}$$

Uses of Repos

i. Financing Securities: Institutions that trade or hold securities, such as banks, often use the repo market to finance their security ownership. It enables them to manage their cash flow efficiently without selling the asset.
ii. Secured Lending: From the perspective of the buyer in a repo transaction, it's an opportunity to lend funds on a short-term basis with the added security of collateral, thus minimizing default risk.
iii. Short Selling: Some entities utilize repos to borrow securities for short selling, a strategy where the borrower believes the asset price will decrease.

Benefits of Repos

i. Liquidity: Repos provide immediate liquidity, making them invaluable for institutions requiring short-term funds.
ii. Security: Repos are collateralized, meaning the risk of default is lower compared to unsecured loans.
iii. Flexibility: With durations ranging from overnight to longer-term, repos can cater to diverse liquidity needs.
iv. Central Bank Operations: Central banks use the repo market as a tool for implementing monetary policy, allowing them to manage liquidity in the banking system.

Factors Influencing Repo Rates

i. Money market interest rates: Repo rates align with short-term interest rates, and central banks utilize secured repo markets to influence unsecured central bank funds rates.
ii. Collateral quality: Greater collateral risk leads to higher repo rates, with equity securities or emerging market bonds typically having higher rates compared to developed market government bonds.
iii. Repo term: Repo rates tend to rise with maturity due to higher long-term rates in normal market conditions, increasing credit risk with longer terms.
iv. Collateral uniqueness: Demand for specific securities inversely affects repo rates, with recently issued or on-the-run developed market sovereign bonds typically commanding lower rates.
v. Collateral delivery: Repo rates are higher when cash lending is undercollateralized or no collateral is provided to the funds lender.

Risks Associated with Repos

i. Default Risk: Despite being secured, there remains a risk of default. If a party fails to meet its obligations, the other party might suffer losses, especially if the collateral's value has depreciated.
ii. Collateral Risk: The quality, liquidity, and value of the collateral can fluctuate. If a party defaults, the other might find it challenging to liquidate the collateral at the expected value.
iii. Margining risk: It's crucial to ensure accurate and prompt valuation of collateral and the transfer of variation margin. This helps prevent collateral deficiencies if there's a need to liquidate after a default. Moreover, unfavorable market situations might lead to significant shifts in collateral's value, amplifying margin requirements and prompting more liquidations among traders.
iv. Legal risk: This pertains to the enforceability of rights within a repurchase agreement.
v. Netting and settlement risk: This involves the capability of those involved in a repo contract to either offset the duties of a party that hasn't defaulted and to claim either collateral or cash as a trade settlement.

Risk Management

Repo market players often involve a third party for risk management. Direct transactions between two entities are termed bilateral repos. On the other hand, triparty repos involve a third-party agent agreed upon by both main parties. The triparty agent, such as a custodian, oversees the transaction, including cash, securities, collateral valuation, and safekeeping. Triparty agents enable cost efficiencies, larger collateral pools, and access to multiple counterparties. Although the repo market is stable, it poses significant rollover and liquidity risks, especially during adverse conditions. Financial institutions must weigh the affordability of repo funding against the flexibility of pricier long-term financing methods. While repo transactions are collateralized, they've led to significant losses during crises due to over-reliance on repo financing by some firms.

Question #1

Assume that today (t=0) the current US ten-year Treasury note trades at a price equal to the bond's face value of USD150,000,000. The security buyer takes delivery of the US Treasury note today and pays the security seller a purchase price based on an initial margin of 104%. The repo haircut is closest to:

A. 0.00%
B. 3.85%
C. 4.00%

Solution

The face value of the US ten-year Treasury note = USD150,000,000.

Initial margin =104%

Now, the “Purchase Price” can be found using the formula:

$$\text{Purchase Price} = \frac{\text{Security price}}{\text{Initial Margin}}$$

$$\text{Purchase Price} = \frac{\text{USD } 150,000,000}{1.04} = \text{USD } 144,230,769.23$$

Now, the repo haircut is defined as:

$$\text{Haircut} = \left(\frac{\text{Initial Security Price} - \text{Purchase Price}}{\text{Initial Security Price}}\right) \times 100\%$$

Inserting our values:

$$\text{Haircut} = \left(\frac{\text{USD } 150,000,000 - \text{USD } 144,230,769.23}{\text{USD } 150,000,000}\right) \times 100\% = 3.85\%$$

Question #2

Which of the following best describes the primary use of a repurchase agreement

(repo) in the context of financial institutions?

A. Hedging against exchange rate fluctuations.
B. Financing their security ownership.
C. Securing long-term funding for capital expenditure.

Solution

The correct answer is B:

Financial institutions often use the repo market to finance their security ownership, which enables them to manage their cash flow efficiently without selling the asset.

A is incorrect: Hedging against exchange rate fluctuations is not the primary use of repos.

C is incorrect: Repurchase agreements are primarily for short-term funding, not long-term capital expenditure.

Question #3

What are the inherent risks associated with repurchase agreements?

A. Inflation risk, currency risk, and equity risk.
B. Default risk, collateral risk, and legal risk.
C. Commodities risk, strategic risk, and liquidity risk.

Solution

The correct answer is B:

Repos come with risks such as default risk (if a party fails to meet its obligations), collateral risk (related to the quality, liquidity, and value of the collateral), and legal risk (related to the enforceability of rights within a repurchase agreement).

A is incorrect: Inflation risk, currency risk, and equity risk are more general market risks and not specifically inherent to repos.

C is incorrect: While liquidity risk is a concern for the repo market, commodities risk and strategic risk aren't primary risks associated with repurchase agreements.

LOS 4c: contrast the long-term funding of investment-grade versus high-yield corporate issuers

Corporate issuers use long-term debt to secure stable funding for a range of requirements, from short-term operations to long-term capital investments. However, the features and availability of such funding vary based on the credit quality of the issuer. While IG corporate issuers showcase a strong capacity to meet future obligations, HY issuers are vulnerable in meeting debt interest and principal payments.

Similarities between IG & HY Issuance

Both IG and HY issuers are confronted with a series of considerations when issuing long-term debt. They weigh the relative risk against its costs or yield-to-maturity of long-term debt of different maturities. Moreover, both categories of issuers need to address concerns associated with interest rates, credit spreads, and maturity choices. The overarching issues of price risk, reinvestment risk, and rollover risk further bind these issuers in their decision-making process.

Distinguishing Features of IG and HY Bonds

Investment-Grade Bonds

- IG bonds often possess a lower proportion of YTM that's attributed to credit spreads.
- These bonds come with fewer restrictions for issuers, primarily because they're less likely to default.
- Cash flows from IG bonds are more predictable, aligning more with traditional bond characteristics.

High-Yield Bonds

- Their cash flows resemble equity investments, carrying an inherent uncertainty.

- A significant portion of their YTM is credited to issuer-specific spreads over benchmark yields, owing to the increased likelihood of default.
- These bonds often come laden with restrictions, and many are secured by tangible assets to appease wary investors.

Analytical Approach to IG and HY Bonds

For IG Bonds, analysts typically lean on financial ratios and credit ratings to gauge the potential shift in an IG issuer's likelihood of default. On the other hand, given their high-risk profile, HY bonds demand a more intricate analysis. Emphasis is placed on evaluating potential losses in the event of default. Moreover, analysts closely examine covenants, restrictions, and security pledges tied to HY bonds.

Bond Maturities and Restrictions

Investment-Grade Bonds:

- IG issuers have a high flexibility in choosing maturities (up to 30 years).
- Their bonds typically carry few, if any, restrictive covenants.

High-Yield Bonds:

- Their landscape is more restrictive, marked by shorter maturity horizons, usually capped at 10 years.
- Given their risk profile, these issuers often find themselves renegotiating covenants or restructuring their debt to capitalize on favorable borrowing rates.

Investor and Issuer Implications

Investment-Grade Bonds:

- There is a high investor confidence in the IG issuer's ability to meet obligations.

- Typically, IG issuers circulate multiple general obligation unsecured bonds. These bonds lack specific assets as collateral.
- IG Issuers stagger bond maturities across different periods. This strategy aids in risk minimization and ensures consistent capital availability.

High-Yield Bonds:

- HY bonds display unpredictable cash flows, similar to equity investments. This volatility stems from the issuer's comparatively weaker financial standing.
- To mitigate default risks, HY bonds incorporate restrictive covenants. These covenants impose guidelines to safeguard investors.
- HY issuers operate within stringent frameworks. They confront challenges in issuing additional debt and experience marked fluctuations in credit spreads.
- HY issuers, aiming for financial adaptability, explore diverse borrowing options. They often resort to leveraged loans with prepayment features or bonds with contingency provisions.

Fallen Angels

A unique subset within the high-yield universe is the “fallen angels” issuers. These are formerly investment-grade issuers who experienced a decline in their credit rating. However, their bonds still retain features characteristic of investment-grade instruments. These features include being non-callable, having minimal restrictions, and possessing longer maturities. However, any subsequent deterioration in the issuer's credit quality can precipitate losses for the original investors. This decline is further exacerbated by the fact that the market for high-yield bonds is significantly smaller compared to the market for investment-grade bonds, which can have a pronounced effect on bond prices.

Question #1

In terms of maturities, which bond issuer typically has the flexibility to choose maturities that can extend up to 30 years?

A. High-Yield Bonds
B. Fallen Angels
C. Investment-Grade Bonds

Solution

The correct answer is C:

Investment-Grade Bonds issuers have the flexibility in choosing maturities, and these can extend up to 30 years.

A is incorrect: High-Yield Bonds often have a more restrictive landscape, usually limited to maturities of 10 years.

B is incorrect: While Fallen Angels might retain some features of investment-grade instruments after a credit rating downgrade, the question specifically refers to the typical maturity of a particular type of bond, not a subset of issuers.

Question #2

In the context of credit quality, which of the following bonds typically carries a significant portion of its yield-to-maturity (YTM) attributed to issuer-specific spreads over benchmark yields?

A. Bonds with predictable cash flows
B. Investment-Grade Bonds
C. High-Yield Bonds

Solution

The correct answer is C:

High-Yield Bonds typically have a significant portion of their YTM credited to issuer-specific spreads over benchmark yields due to the increased likelihood of default.

A is incorrect: The predictability of cash flows does not directly determine the portion of YTM associated with issuer-specific spreads.

B is incorrect: Investment-Grade Bonds generally have a lower proportion of their YTM attributed to credit spreads, reflecting their lower default risk.