

## **Learning Module 18: Asset Backed Security (ABS) Instrument and Market Features**

### **LOS 18a: describe characteristics and risks of covered bonds and how they differ from other asset-backed securities.**

Covered bonds are priority debt instruments, meaning they have a higher claim on the issuing financial institution's assets or income in case of liquidation. These bonds are unique because a separate pool of high-quality assets backs them. Typically, the assets backing these bonds are commercial or residential mortgages or public sector assets, but they can also include other types of assets like ships and commercial aircraft.

### **Covered Bond Transaction Process**

For covered bonds, the loans remain on the issuer's balance sheet while being segregated or ring-fenced into a separate cover pool. This provides dual recourse for investors. In the event of bankruptcy, investors can claim against the assets in the cover pool and the unencumbered assets of the issuing institution. This ensures a heightened level of security.

The structure typically involves an issuer, usually a bank or financial institution, who creates and is accountable for the repayment of the covered bond. Each covered bond usually features one bond class per dynamic cover pool. The pools are managed by a servicer and overseen by a monitor or trustee. They ensure adherence to performance and underwriting standards and safeguard bondholders' interests. Additionally, they maintain compliance and the performance of the asset pool. Issuers must replace non-performing or prepaid assets to maintain sufficient cash flows until bond maturity.

The evolving landscape is witnessing a rise in green-covered bonds. These bonds are primarily secured by mortgages to environmentally certified green buildings. This trend reflects the growing emphasis on environmental conservation and renewable energy in financial instruments.

## Risk Mitigation

To mitigate investor risks, covered bonds use strategies like overcollateralization. In this approach, the collateral exceeds the face value of the issued bonds. They also maintain stringent Loan to Value (LTV) ratios on mortgages in the pool, ensuring that only eligible mortgages are included. In events of sponsor default, redemption regimes are structured to maintain the bond's cash flow alignment with the original maturity schedule.

Different mechanisms trigger based on adherence to the payment schedule. With hard-bullet-covered bonds, any variance from the predetermined payment schedule activates a bond default and hastens the bond payments. On the other hand, soft-bullet bonds postpone bond default and the speeding up of bond payments until a revised final maturity date. This date is typically up to a year beyond the initial maturity date. If there are outstanding bond payments after the initial maturity date, conditional pass-through bonds transition to pass-through securities. Finally, if all bond payments are not completed by the original maturity date, conditional pass-through covered bonds transition into pass-through securities.

## Comparison of Asset-Backed Securities (ABS) and Covered Bonds

The following table compares covered bonds and ABS.

Feature	Covered Bonds	Asset-Backed Securities (ABS)
Issuer's Balance Sheet	Loans remain on the issuer's balance sheet.	Loans are removed from the issuer's balance sheet and sold to a separate legal entity.
Recourse	Dual recourse: claim on the cover pool and, if insufficient, on the issuer's unencumbered assets.	Recourse only to the assets in the pool; no claim if the pool is insufficient.
Risk and Yield	Lower credit risk with lower yields due to added security.	Higher credit risk and can offer higher yields.
Asset Management	Assets are managed dynamically with replacement of non-performing assets to maintain cash flows.	Once assets are securitized, not managed dynamically, performance impacts security.
Regulation and Oversight	Stringent regulation and oversight to protect bondholders.	Less stringent regulatory requirements vary by jurisdiction and asset type.
Market Impact	More stable during market fluctuations due to requirements and dual recourse.	More volatile in fluctuating markets due to direct impact of asset performance.
Use of Funds	Used for funding mortgages, public sector loans, and green projects.	Diverse, from credit card receivables to auto loans and student loans.

## Question

Which of the following is *most accurate* regarding covered bonds?

- A. After the asset pool supporting covered bonds is securitized, it is usually not managed in a dynamic manner.
- B. Covered bonds are typically associated with higher credit risk and offer higher yields than similar ABS.
- C. Covered bonds often feature overcollateralization, where the collateral underlying the transaction surpasses the face value of the bonds issued.

The correct answer is **C**.

Covered bonds often feature overcollateralization as a strategy to mitigate investor risks, where the collateral underlying the transaction surpasses the bonds' face value.

**A is incorrect:** The assets in covered bonds are managed dynamically, and non-performing assets are typically replaced to maintain sufficient cash flows until bond maturity.

**B is also incorrect:** Covered bonds have lower credit risk and offer lower yields due to the added security and dual recourse nature compared to similar Asset-Backed Securities (ABS).

## **LOS 18b: describe typical credit enhancement structures used in securitizations**

ABS inherently carries a high credit risk primarily due to the possibility of underlying borrowers defaulting on their obligations. This can significantly affect the returns for ABS holders. Therefore, structures within ABS are designed to address and mitigate these risks. In a basic securitization procedure, a sole ABS class may be sold. In such cases, certificate holders are allotted a specific share of the returns from the combined assets after deducting any relevant fees. Investors can be vulnerable to the innate risks of the asset pool, like default risk. Many Special Purpose Entities (SPEs) implement various credit enhancement techniques to address these vulnerabilities and protect investor returns, developing complex securitization structures with multiple ABS debt classes.

### **Mechanisms of Internal Credit Enhancement**

- i. **Overcollateralization:** This method ensures that the total value of the assets backing the bond exceeds the bond's issuance value. So, even when some assets default, the extra value from the surplus ensures continued payments to bondholders. For instance, if a bond worth €1,000 million is backed by assets valued at €1,200 million, an extra €200 million acts as a buffer against potential defaults.
- ii. **Excess spread:** This is the gap between the interest generated by the collateral and the interest paid out to bondholders. If a loan yields a 9% return, but securities derived from the pool return just 6%, the resulting 3% yield differential can offset potential collateral shortfalls or be set aside for future contingencies.
- iii. **Subordination or Credit Tranching:** Subordination or "credit tranching" serves as a protective measure for more senior bond classes. Essentially, the subordinated bond classes bear the losses before the senior bond classes do. This protective mechanism is known as a "waterfall" structure, highlighting the step-by-step flow of payments between bond classes during default scenarios.

Other external credit enhancement methods are third-party guarantees (from entities like banks

or insurers), credit letters, and designated cash collateral reserves.

## **Securitization Process**

In a securitization setup, an entity might acquire a pool of assets (e.g., car loans). This entity could then issue multiple bond classes, each with different par values and risk profiles. In such a structure, payments prioritize the most senior tranche, which has the lowest risk and return. The hierarchy then descends to mezzanine tranches and junior or equity tranches with the highest risk and potential return.

## **Distribution of Risk**

If a total loss on the collateral is less than a specified amount, the most junior tranche absorbs this loss first. The next tranche would then bear any remaining balance, and so on. If the loss doesn't exceed a certain threshold, the senior tranches might remain unaffected, receiving their due payments. This setup allows investors to select their preferred risk level and get returns accordingly. Additionally, altering tranche features allows investors to pick an ideal mix of maturity, risk, and return characteristics.

## **Risk Ratings & Bond Classes**

Every bond class in a securitization gets a risk rating. This rating depends on both the collateral quality and the class's seniority. These ratings help investors gauge the credit risk of the bond class in conjunction with the collateral pool's credit risk. In many cases, certain bond classes might have better credit ratings due to collateralization or credit enhancement than those seeking to raise funds through securitization.

## Question

Which of the following statements about the senior/subordinated structure in securitizations is most accurate?

- A. The junior tranche, having the highest priority in payments, carries the least risk among all tranches.
- B. The senior tranche always receives interest payments after all other tranches have been paid.
- C. The mezzanine tranche carries a slightly higher risk than the senior tranche and typically offers better returns.

The correct answer is **C**.

The mezzanine tranche assumes a slightly higher risk than the senior tranche but offers higher returns.

**A is incorrect:** The junior tranche is the first to absorb losses and, as a result, carries the highest risk among all tranches. The statement misrepresents the risk profile of a junior tranche in securitization.

**B is incorrect:** The senior tranche, due to its priority in the hierarchy, receives payments before the other tranches and thus bears the least risk.

## **LOS 18c: describe types and characteristics of non-mortgage asset-backed securities, including the cash flows and risks of each type.**

Non-mortgage asset-backed securities (ABS) encompass financial instruments collateralized by various non-mortgage assets. These include auto loans, credit card receivables, and personal loans.

### **Amortizing vs. Non-Amortizing ABS**

Amortizing ABS is secured by loans like residential mortgages and auto loans, where periodic payments cover both principal and interest. Over time, the number of these loans and their total value diminishes as they are paid off. On the other hand, non-amortizing ABS represents loans like credit card debt that do not have scheduled principal repayments. During the lockout or revolving period, the repaid principal is reinvested in new loans, replenishing the collateral pool.

### **Credit Card Receivable ABS**

Credit cards, provided by various institutions, offer a mechanism for payment and credit extension. When purchases are made, the issuer extends credit to the cardholder, creating a receivable. Pooling these receivables can form the underlying collateral for ABS.

### **Benefits of Credit Card Receivable ABS**

- i. **Balance Sheet Management:** Credit card receivable ABS helps issuers offload credit card receivables from their balance sheet. This optimizes their capital structure.
- ii. **Reduction in Risk:** ABS minimizes the cost of default risk from credit card debt, safeguarding the issuer against potential losses.
- iii. **Additional Revenue:** Issuers are able to generate additional fee income through credit card receivable ABS.
- iv. **Reinvestment:** The repaid principle is reinvested over the lockout or revolving period to acquire more loans. This helps maintain the pool size of the collateral.
- v. **Investor Protection:** Provisions for rapid amortization can activate early principal



repayments to protect investor interests during uncertain economic times.

- vi. Credit Enhancement: Credit card receivable ABS integrates multiple credit enhancement methods, such as subordination and over-collateralization, to boost its attractiveness to potential investors.

## Solar Asset-Backed Securities

Solar ABS has emerged as a prominent financing tool in the renewable energy sector, catering to homeowners' growing interests in solar energy systems. They are structured by specialized finance companies offering two distinct financing avenues: solar loans (borrowing to buy and install the system) and solar leases (renting equipment from a solar provider). The financial proposition of solar energy is dual-faceted, offering both environmental sustainability and cost savings. Solar ABS allows institutional investors to invest in environmentally-driven initiatives while targeting attractive risk-adjusted yields.

The green tag of solar ABS makes them ideal. Solar ABS is an attractive investment alternative for investors keen on ESG (Environmental, Social, Governance) considerations. Legally, solar ABS is anchored on the underlying debt—often mortgages, loans, or receivables. When pegged to solar energy system loans, the ABS can be likened to a junior mortgage on the property. Solar ABS are of interest to investors primarily because borrowers are usually creditworthy homeowners. Furthermore, built-in safeguards such as overcollateralization and subordination increase investor confidence by reducing default risks. Lastly, a distinct feature of many solar ABS is the **pre-funding period**, which permits the trust to acquire eligible assets for a set duration post-transaction.

## Question

Which of the following best describes the primary safeguard for investors in a credit card receivable ABS during periods of economic volatility?

- A. Extending the revolving period.
- B. Lowering finance charges
- C. Implementing rapid amortization provisions.

The correct answer is **C**.

Rapid amortization provisions in credit card receivable ABS act as a safeguard during economic uncertainties, ensuring investors are not overexposed to adverse changes in the asset pool.

**A is incorrect:** The revolving period's length is not typically altered to protect against economic volatility.

**B is incorrect:** Finance charges are not directly linked to investor protection during economic downturns.

## **LOS 18d: describe collateralized debt obligations, including their cash flows and risks.**

Collateralized Debt Obligations (CDOs) are financial instruments issuing securities backed by diversified debt pools. These diversified pools can include corporate bonds, emerging market bonds, leveraged bank loans, and even other CDOs. Among them, the most common are Collateralized Loan Obligations (CLOs), backed primarily by leveraged bank loans.

### **Classification of CDOs**

- i. Collateralized Bond Obligations (CBOs) are backed by corporate and emerging market bonds.
- ii. Collateralized Loan Obligations (CLOs) are backed by leveraged bank loans.
- iii. Structured Finance CDOs are backed by other CDOs.
- iv. Synthetic CDOs are backed by a pool of credit default swaps or other structured securities.

### **CDO Structure**

CDO structures reallocate the cash flows generated by the underlying collateral to various tranches. However, unlike ABS, CDO pools are not static. A collateral manager who actively manages buying and selling debt obligations must ensure cash flows are sufficient for the CDO bondholders. A pivotal consideration for these transactions is the collateral pool's return rate compared to the funding costs. Since CDOs leverage transactions, equity tranche holders use borrowed funds to achieve a return surpassing the funding cost.

The CDO market mainly focuses on CLOs backed by senior secured bank loans. They offer a diversified portfolio of company loans.

### **Key Features of a Generic CLO Structure**

CLOs source funds for collateral assets by issuing various debt obligations, categorized into senior, mezzanine, and subordinated/junior/equity tranches. Investors in senior or mezzanine tranches may receive higher yields than corporate bonds or access debt products usually out of their reach. Meanwhile, equity tranche investors face risks similar to equity, with potential returns to match.

Cash Flow CLOs redistribute interest and principal payments, while market value CLOs depend on portfolio market value. On the other hand, synthetic CLOs use credit derivatives to create their collateral pool.

A distinctive aspect of CLOs is that their portfolio might not be finalized immediately after transaction closure. There is often a ramp-up period when more assets join the collateral pool. Once set, the manager can still swap out loans if replacements meet portfolio criteria. The CLO life cycle concludes when underlying loans mature and tranches receive payments in the defined order.

## **Protective Measures in CLOs**

CLOs employ various tests to ensure the bank loan collateral's cash flows meet the obligations of the various tranches. Overcollateralization tests are prevalent, ensuring the CLO's underlying bank loan pool's principal value does not surpass the issued notes' principal value. For instance, if a CLO promises USD600 million of principal across its tranches, it might need to procure USD780 million of bank loans, leading to an overcollateralization ratio of 1.30.

Additionally, each tranche in a CLO has its overcollateralization ratio targets. If the ratio dips below the set limit, cash flows divert to purchase more collateral or repay the most senior debt tranche. There are also other tests considering the diversity of borrowers, industry diversification, and even the credit ratings of the loans within the collateral pool.

Collateral managers are integral to the performance of CLOs, actively determining the asset mix, managing risks, and ensuring ongoing performance tests and collateral limits are adhered to. If these standards are not met, provisions mandate redirecting the principal payoff to the senior bond class.

## Risks Associated with CDOs

- i. Credit Risk: Since multiple debt obligations back CDOs, these underlying assets' default can impact CDO investors' returns. This risk is more pronounced in lower tranches, like equity ones.
- ii. Liquidity Risk: CDOs, especially those of complex structures, may not be easily tradable in secondary markets. If many investors try to sell their CDOs simultaneously, it could depress prices.
- iii. Interest Rate Risk: CDOs are susceptible to interest rate fluctuations like all fixed-income instruments. When interest rates rise, the price of CDOs can decline.
- iv. Management Risk: The performance of CDOs, especially CLOs, depends significantly on the collateral manager. A manager's poor decision-making or lack of expertise can degrade the CDO's performance.
- v. Reinvestment Risk: During periods of falling interest rates, the proceeds from callable bonds or maturing bonds within the collateral might get reinvested at lower rates, impacting returns.

## Question

Which of the following best describes the role of an overcollateralization test in a CLO?

- A. It ensures that the interest rates on the bank loans exceed the CLO's funding costs.
- B. It confirms that the total principal value of the issued notes should be less than the principal value of the bank loan pool.
- C. It ensures that the CLO's underlying bank loan pool's principal value does not exceed the issued notes' total principal value.

## Solution

**The correct answer is C:** The overcollateralization test ensures that the principal value of the CLO's underlying bank loan pool does not exceed the total principal value of the notes issued by the various CLO debt tranches.

**A is incorrect:** This relates to the basic economics of CDO transactions, not the overcollateralization test.

**B is incorrect:** This represents the opposite of what the test ensures.