

Fabozzi-Handbook-32
Commercial Mortgage Backed Securities (CMBS)

IntroductionResidential MBS

The underlying collateral is loans on residential properties.

Commercial MBS (CMBS)

The underlying collateral is loans on:

- ✓ Retail Properties,
- ✓ Office Properties,
- ✓ Industrial Properties,
- ✓ Multifamily housing,
- ✓ Hotels.

Exhibit 32-1 on page 682 list the main comparisons of the CMBS and nonagency RMBS,

CMBS issuers have developed several types of transactions:

- 1) Conduit transactions (*Securizations of fixed-rate commercial mortgage loans in which no loan comprises more than 5% of a transaction and the largest 10 loans comprise less than 30% of the transaction*),
- 2) Fusion transactions (*Fixed-rate securizations in which the 10 largest loans comprise more than 30% of the transaction*)
- 3) Single-sponsored transactions for sizeable debt offerings
- 4) Floating rate transactions.

The majority of CMBS transactions are considered Fusion transactions. CMBS investors usually perform due diligence. They perform a review of the underlying mortgage loans and mortgage properties to understand the idiosyncratic credit risks of the investment.

Summary of Valuation techniques for Underlying Mortgage Properties

Commercial real estate values are typically computed by using:

- 1) The direct capitalization method,
- 2) A discounted cash-flow (DCF) analysis,
- 3) Comparables method or
- 4) The replacement cost method.

We review them and provide classic guidelines:

The direct capitalization method

- It uses the cap rate (the unleveraged yield associated with the current income from a commercial property),
- Property value is found as follows:

$$\text{Property Value} = \frac{\text{Net Operating Income}}{\text{Cap Rate}}$$

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$$\text{Property Value} = \frac{\text{Net Operating Income}}{\text{Cap Rate}}$$

- Cap rate are based on many factors (To be seen in QFIA-Exam).
- Multifamily properties have the lowest average cap rates (*Availability of the GSE sponsoring and ability to reset rent*).
- Hospitality properties have the highest cap rate (*Due to the volatility of the net operating income*).
- Office, retail and industrial properties have their cap rate in the middle of the above extremes.
- The direct cap rate method is used because the data inputs are typically available from dealers.

The DCF Analysis

- It is more precise,
- The property value is found as:

Property Value

= *The discounted (Net Operating Income) over time where the discount rate is the WACC*

- It is hard for investors to get the required input to perform the calculations.

Comparables method

- The property value is determined based on the actual sales of similar properties in the same area.
- Effective at finding the MV if similar properties traded in the same area.
- Updated information is not made available through transaction reporting.

The replacement cost approach

- The property value is calculated as the MV of the underlying land, plus the cost associated with constructing the property's improvements less depreciation.
- It is not often used, because it fails to account for the future income stream.
- The appraiser uses the Comparables method to determine the MV of land.
- Given that land sales in highly developed area are rare, this valuation method would require significant assumptions.

Classic guidelines

- Locations is essential to determining real estate values
- The investor would appreciate the bespoke nature of commercial real estate properties and their values to properly model the commercial real estate debt exposures in a CMBS transaction.

Commercial Mortgage Lending standards

- Mortgage loans are sized based on the LTV (Loan to Value) ratio and the Debt service coverage ratio (*DSCR: The ratio of net operating income of the underlying collateral to the debt service of the mortgage loan*)
 - Most owners of commercial real estate will borrow from 50% to 80% of the value of the commercial property.
 - In 2006/2007, CMBS originators offered loan products that provided borrowers up to >95% LTV.
 - During the 2008 crisis, commercial mortgage offering disappeared with liquidity.
 - If debt was available, the terms were punitive: (i) LTV of 50% and (ii) High coupons.
 - Lenders usually require a minimum DSCR of 1.2*
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Loan Structures and Features

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Loan Structures and Features

- Commercial loans are originated with structural features that isolate the underlying collateral for the benefit of the trust.
- Many borrowers are single-purposed entities that are created for the sole purpose of owning the commercial real estate (the security for the mortgage loan).
- Legal protections are necessary for loans underlying CMBS since those loans are nonrecourse loans (in the event of default, the lender's only recourse is to seize the property).
- CMBS originators require additional loan features to protect the trust in the event the borrower fails to prudently operate the mortgage property.
- CMBS originators require borrowers to establish reserve accounts for various property expenses.
- CMBS originators could also require borrowers to make monthly payments for replacement reserves, tenant improvement, and leasing commissions. They could also require debt service reserves, ground lease reserves, and other reserves to mitigate specific property conditions,
- CMBS originators typically require lockbox structures. These are deposits accounts held by the servicer.
- With a hard lockbox, the borrower would be required to notify all tenants to forward their rental payments and reimbursements to the servicer for deposit in the lockbox and the borrower would have access to the funds pursuant to the terms of the loan documents.
- Soft lockboxes allow the servicer to sweep all amounts in the lockbox to a borrower-controlled account on a daily basis.
- CMBS loans typically restrict prepayments during the loan term. The originators would 'lock out' all loans from prepayment during the first 2 to 4 years of the loan term.
- CMBS originators would sometimes cross-collateralize several mortgage loans.

Diversification of CMBS Loan Pools

Main Source of Risk (Relating to the Underlying Loan Portfolio: Wachovia Bank Commercial Mortgage Trust)

1. Default/credit/delinquency risk

Exhibit 32.2 shows the loan features (*Be able to interpret and use the data in this table: the cap rate for performing various valuations, the DSCR in terms of comparing lower and higher DSCR, the LTV and the size of the loans (in terms of loan amounts and SF areas).*)

The property is risky if

- High coupon rate (due to low credit rating)
- High DSCR
- Low LTV

Property Type Diversification:

- a. CMBS pools can be diversified across property types
- b. Rating agencies require lower levels of credit enhancement (due to the diversification benefits)

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Exhibit 32.4 on page 689 shows the property type diversification for Wachovia (*Note how 30.6% of loans were Office*).

The mortgage loans shall provide adequate protection by including amortization schedule. There is now a preference of interest-only or partial interest in later vintages of CMBS. See the interest-only concentrations of Wachovia in 2007 (Exhibit 32.5 on page 689).

CMBS Investors should monitor the borrower concentrations in conduit or fusion transactions to ensure adequate diversity of borrower risk. To further split this concentration risk, keep the exposure below certain size thresholds that would require additional disclosures. CMBS issuers may split mortgage loans into multiple pieces.

In a pari passu loan, the first servicer (The Paymaster) is responsible for collecting the loan payments and administering the loan for all the various notes created by the originator.

- **By performing due diligence on the largest 10 loans in a CMBS transaction, CMBS investors can understand the credit risk profiles of approximately 30% to 50% of the collateral.**

CMBS Trust Structure

Mortgage Loan originators include the following:

- ✚ Insurance companies,
- ✚ Special finance companies,
- ✚ Conduits,
- ✚ Banks.

The deal (See exhibit 32.9 on page 692):

- 1) The mortgage loans are sold by the originator (CMBS Originator) to a depositor entity,
- 2) The depositor forms a common law trust (CMBS Trust) and transfers the Mortgage Loans to that Trust in exchange for a payment (\$),
- 3) The CMBS Trust issues certificates to investors in an aggregate amount that equals the cut-off balance of the mortgage loans,
- 4) Rating agencies review the proposed loan pool and provide preliminary certificate subordination levels for a CMBS transaction. Rating agencies provide due diligence on the loans and properties.
- 5) The issuer and transaction underwriters prepare various documentation for the transaction (Prospectus, pooling and servicing agreement),
- 6) The underwriters market the CMBS certificates to investors,

Subsequent to the 2008 financial crisis, CMBS issuers have simplified the capital structures of deals by creating thicker classes that are better able to withstand the default of a single loan (exhibit 32.10 on page 693).

Transaction Participants

Several parties are involved:

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The master servicer: Collects loan payments for distribution to the trustee. Performs basic servicing duties such as management of escrows, reserves, and lockboxes. Collects and provides periodic loan performance data and property financials to the trustee and rating agencies. The master servicer receives a fee that is some basis points of the outstanding mortgage. For delinquent loans, the master servicer transfers its duties to a special servicer that focuses on workout and loss mitigation activities.

The trustee and the master servicer can all earn additional income by reinvesting underlying mortgage cash flows.

The special servicer handles distressed loans. It makes the determination for the loan to be distressed. The special servicer's responsibility to the CMBS trust is to maximize recovery value of the distressed loan. The special servicer receives a monthly fee during the loan workout period based on the outstanding loan balance.

Similar to the trustee and the master servicer, the payment to the special servicer are paid prior to allocating cash-flows to the certificate holders.

CMBS transactions typically designate the most subordinate tranche as **the controlling certificate holder**. This position absorbs the first defaults. This position is empowered to make certain decisions.

Transaction Features

The CMBS incorporate a standard set of transaction features regardless of vintages. We will discuss the following features:

- 1) Subordination,
- 2) Pass-Through Rates,
- 3) Priority of Payments,
- 4) Interest-Only Certificates,
- 5) Payment Advancing and Appraisal Reductions,
- 6) Clean-Up Call provisions

Subordination

Senior certificates typically have priority to principal payments, and therefore, are the shortest certificates in a transaction.

Junior certificates are subordinate to senior certificates. They are first in line to absorb collateral losses.

The subordination rate is a measure of credit support for a certificate. **It is defined as the percentage of the collateral balance that must experience a complete principal write-down before the certificate in question is exposed to principal loss** (You shall be able to perform this simple calculation given data).

Subordination rates are higher for the senior most certificates and decrease down the capital structure.

Three categories of principal pay for conduits

- 1) AAA classes,
- 2) Mezzanine classes and

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- 3) Junior Credit classes.

Exhibit 32.10 shows subclasses within the AAA class and all other classes.

The AA classes

- ✓ The A1 Certificate is the first-pay AAA. It is the shortest certificate in the transaction with a weighted average life (WAL) of two years.
- ✓ The A1 amortizes gradually overtime.
- ✓ The A2 and A3 are usually tied to 5-or-7 year balloon loans. They have bullet-like principal cash flows.
- ✓ The A4 certificate is typically the largest of the AAA classes and also the longest WAL. It is referred to as the benchmark certificate of the transaction.
- ✓ The A4 has bullet-like principal tied to the 10-year balloon mortgage.
- ✓ The A1 classes is created only if multifamily and manufactured housing loans exist in the CMBS transaction.

Mezzanine classes

- ✓ They usually carry 20% subordination while the junior classes carry 10% to 15% subordination,
- ✓ They are typically rated between AAA to BBB. They constitute a small portion of the original balance.
- ✓ They are generally tied to a 10-year balloon payment.

Pass-Through Rates

Traditionally, the deal is structured such that:

$$\begin{aligned} & \textit{The Net Weighted Average Coupon of the Collateral (The assets)} \\ & > \textit{The Weighted Average Coupon of the Certificate (The liabilities)} \end{aligned}$$

Where:

$$\begin{aligned} & \textit{The Net Weighted Average Coupon of the Collateral} \\ & = \textit{The Weighted Average Coupon of the Collateral} \\ & - \textit{The fees payable to the trustee and master servicer} \end{aligned}$$

The structure results to excess interest cash flow which is directed to the IO tranches.

IOs by definition do not receive any principal.

Three types of coupon structures:

- 1) Fixed-rate,
- 2) WAC (Weighted Average Coupon): They pay the weighted average net coupon of the collateral,
- 3) WAC-capped, they pay the minimum of a fixed-rate and the WAC rate and are generally lower in capital structure.

Priority of Payments

- Pay off the highest-rated bonds first, then move down to the next one.
- The APB tranche first receives principal in accordance with the amortization schedule and any excess is diverted to the A1, A2, A3 and A4 classes in sequential order.
- Pay interest received on outstanding principal to all tranches

- 3) Junior Credit classes.

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