

# Lodging real estate finance: Securitization

by A. J. Singh

*Commercial Mortgage Backed Securities (CMBSs) introduced to the U.S. lodging industry in the early 1990s were a panacea during a period of severe shortage of debt capital. These instruments changed commercial real estate capital markets by providing flexibility and liquidity to an otherwise illiquid investment. As a relatively new form of financing to the lodging industry, the mechanics of securitization, the types of CMBS instruments, and their structure are not well understood. The article illustrates the process of securitization and its importance as a significant source of debt financing to the lodging industry.*

**A**n overbuilt lodging market, devaluation of hotel real estate, delinquent hotel loans, the S&L debacle, and a national recession all combined to shut off funding for hotel projects in the early 1990s. In particular, traditional lending sources such as commercial banks, life insurance companies, and S&Ls stopped lending for hotel projects. A survey of lenders in 1990 by Hospitality Valuation Services indicated that only 33 percent of lenders would

consider new hotel loans.<sup>1</sup> Most lenders did not plan to return to hotel lending in the near future. In fact, during this period they were more concerned with disposing of non-performing hotels in their portfolio or working with hotel owners to restructure their loans.

The sentiments of most investors during the early 1990s are reflected in an investment survey conducted by PKF Consulting.<sup>2</sup> The survey results showed that hotels were risky investments and accordingly reflected higher interest rates, capitalization rates, debt coverage ratios, loan-to-value ratios, return requirements, and other investment and lending terms. The true credit crisis was accurately stated in a research newsletter by Grubb & Ellis, a real estate advisory firm: "The truth seems to be that the crisis in real estate finance, where it exists, is not a crisis born of a shortage of loan funds. Instead it is one of confidence, on the part of both lenders and buyers, in the integrity

of investment real estate in a severely overbuilt market.”<sup>3</sup>

During the cyclical downturn and retrenchment of traditional lending sources, alternative sources of financing emerged to partially fill in the credit gap and take advantage of the depressed values of hotel real estate. In particular, new debt instruments such as commercial mortgage backed securities (CMBS), collateralized mortgage obligations (CMOs), and real estate mortgage investment conduits (REMICs) emerged during this period as new investment vehicles and have revolutionized the way in which commercial real estate is financed.

#### **Securitization is explained**

Given the importance of debt securities in financing commercial real estate and hotels, in particular, it is imperative that hotel investors and academicians understand securitization. The purpose of the study was to describe the fundamentals of the securitization process and the basic structure of mortgage-backed securities. Secondary literature, which includes textbooks, journal articles, research studies, and other significant documents from each of the periods studied, was relied on. Commenting on historical research, Baumgartner states, “using the historical approach, the researcher endeavors to record and understand events of the past. In turn, interpretations of recorded history hold to provide better understanding of the present and suggest possible future directions.”<sup>4</sup> Being a relatively new vehicle for financing

commercial real estate, a cogent review of this “new order,” a systematic and comprehensive understanding of CMBS, will increase the transparency for hotel investors in these instruments.

#### **Financing is changed**

A major change in the way that commercial real estate in general and hotel real estate in particular is being currently financed is the linkage of the originators of mortgage loans with the broader capital markets. This linkage started with the development of a secondary market for real estate loans. Until the 1970s, when a bank or another financial institution originated a loan it was held on its balance sheet until the loan was paid off. By participating in the secondary market, lenders were able to spread their underwriting risk and reduce market risk by diversifying their loan portfolio outside their immediate geographic area.

Securitization is a process by which an asset, such as a hotel mortgage, is standardized into individual units, such as shares. An investor in these shares is a partial owner of a large pool of mortgages. The direct-sale program started to revolutionize mortgage lending by letting the mortgage originator remove mortgages off its books and sell them to another party. However, the creation of securities carried the revolution to greater heights by converting the mortgage instrument into a packaged product, which could then be sold in an organized market just like a stock or bond.<sup>5</sup>

### Process involves steps

The process of securitizing commercial mortgages involves a series of steps and includes a variety of organizations from initial origination to final sale of the bond to investors. The securitization process is discussed and the process flow is outlined in Figures 1 and 2.

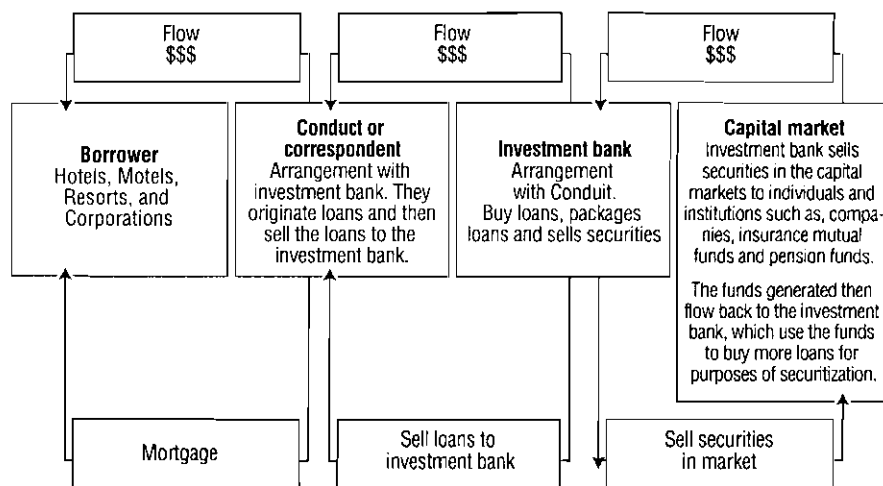
- **Origination and underwriting:** Commercial mortgages, which form the collateral for all commercial mortgage securities (CMBS), are originated either by traditional portfolio lenders such as commercial banks and life insurance companies or through the investment bank's own origination system known as conduits. In many cases, investment banks set up conduit programs with licensed mortgage bankers, known as correspondents. Under this arrangement, the correspondent bank is responsible for underwriting and closing the loan.

As the underwriter, it will determine the collateral's ability to function as an income producing and debt servicing property over a specific period.

Clearly, the quality of underwriting of the individual loans is critical to its ultimate sale for securitization, pricing of the certificates, and assigned rating. The investment bank conduit is responsible for pricing the loan, reviewing loan documents, and funding the loan. Once the loan is closed by the originating institution (portfolio lender or correspondent), it is sold to the investment bank at a predetermined rate, which in turn packages the pool of loans and sells them as a bond (security) in the capital market. This cycle, which provides more capital to fund more loans, is illustrated in Figure 1.

- **Underwriting of the loan pool:** While underwriting the individual loans, the originator

**Figure 1**  
**Conceptual flow of funds**



evaluates the economics of individual properties. In this underwriting step, the underwriter reviews issues related to the entire pool such as industry concentration, geographic concentration, borrower concentration, average life of coupon (interest rate), and average maturity. In consultation with rating agencies, the most appropriate mix of loans is determined in this step.

- **Warehousing:** After origination and underwriting the mortgage, and prior to securitization, loans are said to be warehoused. These loans are kept with the portfolio lender if they originated the loan or placed in a depository if a conduit originated mortgages. The loans are warehoused until securitization closing.

- **Structuring and credit enhancement:** Next, the pooled mortgages are structured to create the bond, which will ultimately be sold to investors. The goal of the structuring process is to experiment with various combinations of mortgages and security classes to achieve an optimal price, which appeals to different levels of investors.

Sally Gordon, vice president

and senior analyst for Moody's Investor Service, illustrates the structuring of a \$100 million pool of commercial mortgages, in a typical example (Table 1).<sup>6</sup> As noted in Table 1, a \$100 million pool of commercial mortgages may be divided into three classes (tranches). Using the most common payment structure, known as "waterfall," investors in Class A bonds will receive principal and interest until they are paid off in 3.5 years, while B and C bond holders will get only interest payments during this period. Once Class A bondholders are retired (fully paid), holders of B class bonds will receive principle and interest for the next 1.5 years until they are retired. Finally, after five years, investors in C class bonds will receive the principle and remaining interest balance outstanding.

While structuring securities, it is important to build in credit enhancement to protect against potential cash flow delays and shortfalls. This is mainly due to defaults within the pool of mortgages. There are a variety of techniques used to enhance security

**Table 1**  
**Basic security structure: \$100 million, five-year fixed rate CMBS**

Class	Size (Million)	Rating	Coupon	Average life
A	\$85.0 MM	AAA	7.00%	3.5
B	\$11.0 MM	BBB	8.20%	5.0
C	\$4.0 MM	Not rated	variable	variable

Source: Sally Gordon, vice president, Moody's Investor Service.

credit, such as third party letter of credit, a surety bond, or structural enhancements through reserve accounts, cross-collateralization, cross-default, and creating senior and subordinated classes of securities. A brief explanation of some of these terms will further clarify the importance of incorporating credit enhancements into bond structures.

- **Reserve accounts:** A variety of reserve requirements may be required by rating agencies to protect against variation and adequacy of cash flow. In the case of resort hotels for instance, a reserve account to cover interest rate coverage during slow seasons, will mitigate this risk.

- **Cross-collateralization, cross default:** By cross-collateralizing the underlying properties in a mortgage pool, each property loan is pledged against other loans in the pool. Thus, if a particular property has insufficient cash flow to make loan payments, cash flows from several properties can be used to make payments on a property. This protects the investor by reducing the default risk of the total mortgage pool. Cross default adds further enforcement penalties to the cross-collateralization as lenders have the right to call all loans in the pool if a single loan is in default.

- **Senior and subordinated classes:** The process of subordination creates a senior class of bondholders who receive payment before other (subordinated) classes. Hence, the security structure does

not reduce risk but spreads the risk among the different classes of bondholders. This sequential form of payment, in effect, protects the senior bondholder (Class A for instance) at the expense of the subordinated class (B or C class), which creates the notion of "credit enhancement."

#### **Rating agencies review**

The four rating agencies that rate CMBS, Standard and Poor's, Moody's, Fitch, and Duff and Phelps, provide a third party opinion on the quality of each bond in the structure, and suggest the necessary credit enhancements required to achieve a specific rating level. To initiate the review process, the investment bank, loan originator, or underwriter's counsel submit collateral, mortgage, and security documents to one of the rating agencies. Starting with this information, these rating agencies use other due diligence reports such as appraisals and engineering or environmental reports to form an opinion of the critical characteristics of the underlying loan pool and assign ratings to each tranche of the CMBS certificate. Investment grade securities are assigned ratings from AAA to BBB. The highest rating possible for a CMBS is AAA or Aaa, which indicates that the rating agency believes in a very high likelihood of full and timely payment of principal and interest. Securities rated double-B and single-B are considered to be below investment grade (Table 2).

### Servicer selection critical

The servicers (selected by the investment bank and originator of the loan) are a critical part of the securitization process. They are responsible for the collection of monthly loan payments, keeping a record of the payments, monitoring the condition of underlying properties, preparing reports for the trustee, and transferring collected funds to the trustee for payment. Servicers may be further subdivided into three types. The Master Servicer performs most of the functions previously mentioned and transfers to the Special Servicer any non-performing loans. The latter, in turn, either conducts a "work out" (restructuring the loan) or forecloses on the loan and sells the property. Both the Master Servicer and the Special Servicer are allowed to subcontract with a Sub-Servicer who specializes in a particular property type (such as hotels) or market area.

The trustee, an independent entity selected by the originator and investment bank, represents the collective interests of CMBS investors. Therefore, the trustee holds legal title to the trust's estate, which includes funds on deposit and collateral property of the trust. The basic services of the trustee include holding the mortgage collateral, issuing CMBS certificates, passing principal and interest payments collected by the servicers to the certificate holders (investors), ensuring that the servicers act in accordance with the terms of the servicing agreements, and appointing new servicers as needed. Currently, State Street Bank, LaSalle Bank, National Bank, and Bankers Trust are the leading trustees for CMBS issues.<sup>7</sup>

### Closing involves transfers

During closing all legal documents such as pooling and service

**Table 2**  
**Moody's and Standard & Poor's bond rating categories**

Moody's Rating	Explanation	Standard & Poor's	Explanation
Aaa	Prime quality	AAA	Bank investment quality
Aa	High grade	AA	
A	Upper medium grade	A	
Baa	Medium grade	BBB	
Ba	Lower medium grade	BB	Speculative
B	Speculative		
Caa	Speculative to near or in default	CCC	
Ca	Speculative to near or in default	CC	
C	Lowest grade	C	Income bond
D	In default		

Source: Moody's Investor Service, Inc. and Standard & Poor's Corporation.

agreements, final ratings, and the funding are authorized. The pool of mortgages, which is the underlying collateral for the CMBS, is transferred to the trust for the benefit of all class holders of the certificates.

Simultaneous with the closing, loans are transferred from the depository or portfolio holders to the trustee in exchange for the requisite funds, and the trustee issues certificates, representing undivided interest in the trust which owns the collateral pool. The certificates are either privately placed or publicly offered by an investment bank. Typically insurance companies, pension funds, and commercial banks purchase the investment grade CMBS bonds.

Below investment, grade tranches are usually sold to prominent real estate investment funds that have the sophistication necessary to properly underwrite the risk inherent in these tranches. A tranche is a term used to describe classes of CMBS securities such as "AAA." It follows that the liquidity of the CMBS certificate is a function of its investment grade. Higher credit rated instruments are more liquid and therefore enjoy a larger and more active secondary market, while the lower credit rated tranches require more due diligence and are relatively non-liquid.

#### **Securitization has advantages**

As stated by Arnold, there are four principal advantages of securitization:<sup>8</sup>

- **Small investment:** Securitization reduces the amount of capital that an investor needs to invest in the asset, therefore giving small investors (the public) access to the mortgage market.

- **Diversification:** Since the entity issuing the security can pool a large number of mortgages to back the securities, the risk exposure of the investors is reduced due to diversification.

- **Liquidity:** Real estate has always been maligned due to its non-liquid nature. The creation of debt securities (such as stocks in a corporation) enables investors to buy and sell these units in an organized market.

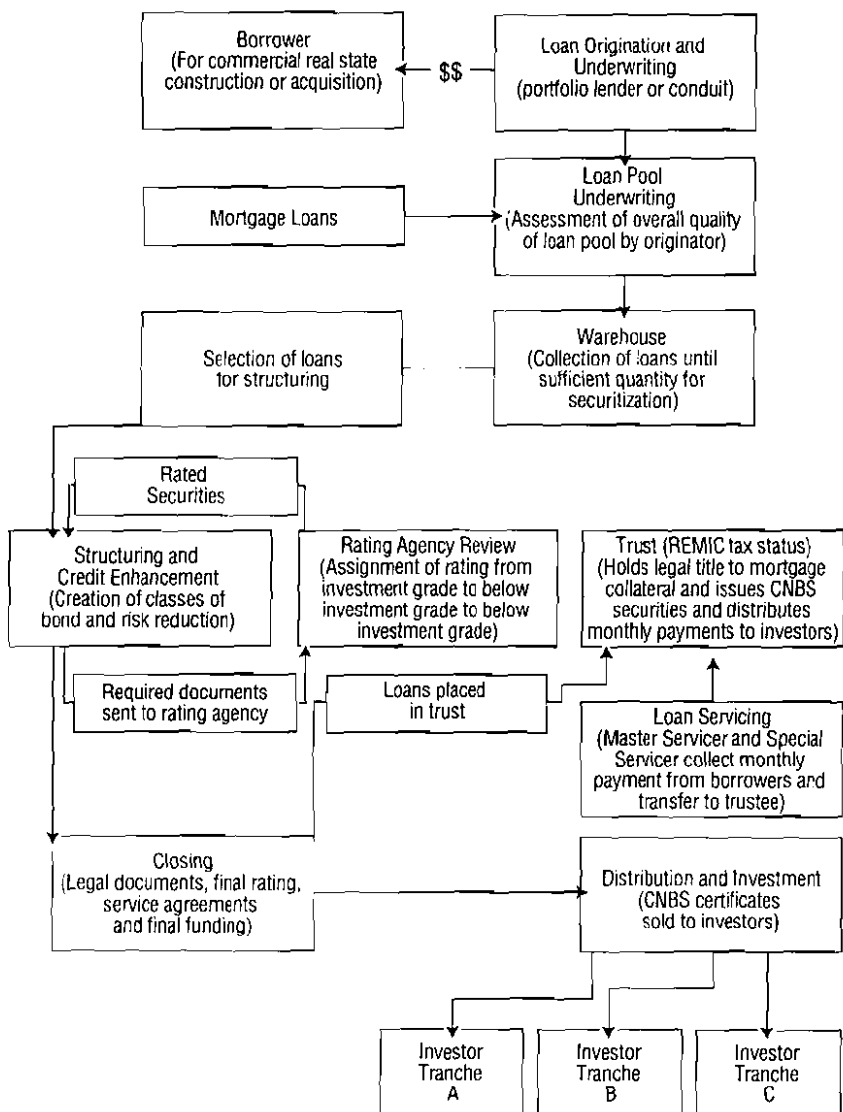
- **Flexibility:** More advanced structures of mortgage securities create various classes of these securities to suit the risk/return preferences of different investors.

#### **Securities are flexible**

Since they were first started, mortgage-backed securities have evolved into very efficient and flexible financial products. The following sections identify the most common type of mortgage-backed securities and briefly explain their structure. Many of these mortgage-backed securities had originally packaged home mortgages but have since evolved to include commercial mortgages, including hotel mortgages. In fact, mortgage-backed securities are also known as commercial mortgage-backed securities.

There are two types of mortgage-backed securities (MBS):

**Figure 2**  
**CMBS securitization process**



pass-through securities and mortgage-backed bonds. A pass-through security represents a pool of mortgages. Owners of this security earn a pro-rata share of principal and interest, which is passed through to them. Many of the investors of these securities include institutions such as pension funds, insurance companies, bank trust departments, and mutual funds. In the case of mortgage-backed bonds, originators such as banks or mortgage companies use pools of mortgages to issue bonds to investors. Like corporate bonds, mortgage-backed bonds pay interest on a semiannual basis and all principal at maturity.

The main difference between a pass-through security and a mortgage-backed bond is that, with a pass-through security, the principal and interest are being amortized over the life of the security, so upon maturity the investor has already received the full payment of principal and interest. In the case of mortgage-backed bonds, interest is paid semi-annually, but the principal is paid to the bondholder at maturity. Besides the difference in payment structure, they are similar in that pools of mortgages collateralize them.

These early financial instruments suffered from two main drawbacks. First, they were single-class instruments, in that all investors shared the same return because they held identical securities with identical cash flows and identical maturities.<sup>9</sup> Second, borrowers have a tendency to prepay their mortgages in periods

when interest rates are declining. As a result, the stated return of a pass-through security was sometimes much lower than actual returns. This was because "the investor who receives an unanticipated early return of his investment must shorten his horizon and reinvest at lower interest rates."<sup>10</sup>

### **Drawbacks are rectified**

The drawbacks of MBSs were rectified by the creation of a new financial instrument called a collateralized mortgage obligation or CMO. The main advantage of a CMO is that it changed the security from a single-class financial instrument to a multi-class instrument. This added flexibility made CMOs a more attractive form of mortgage-backed security. The first CMO was created by First Boston in 1983. Each CMO issue is divided into various classes of securities known as tranches. The cash flow that each tranche receives is based on a predetermined plan. It is possible to consolidate all prepayment and interest risk into one segment of the issue (for example, Class E). Therefore, investors with a higher tolerance for risk may purchase this type of security.

There are an infinite variety of CMOs, ranging from plain vanilla types, in which cash flow from the underlying pool of mortgages is distributed in a sequential order, to more complex structures, such as stripped CMOs. In a stripped CMO, the principal and interest are divided between two classes unequally. For example, one class

may receive the entire principal and the other class all of the interest.<sup>11</sup>

Like MBSs before them, CMOs suffered from some drawbacks. A CMO is not considered to be a pass-through security and is therefore treated like a bond. This added considerable debt to the balance sheets of the issuing institutions. To alleviate this problem, issuing institutions such as investment banks placed these securities in a trust. The trust structure created adverse tax consequences for the issuer, as the IRS taxed these grantor trusts as they would a corporation.<sup>12</sup>

### **REMIC makes debut**

Real estate mortgage investment conduits (REMIC) made their debut into the securitization arena after Congress passed the Tax Reform Act of 1986. The major impetus for creating REMICs was the need to replace the trusts previously used to create CMOs because of their inherent tax problems.<sup>13</sup> The creation of the REMIC essentially made a CMO-like product, that is, a multi-class security, but with the added advantage of providing flow-through tax treatment.

Some experts explained it this way: "Under the 1986 tax law, a REMIC is a tax entity (not necessarily a legal form of organization such as a corporation or partnership) that can be created by simply selecting a REMIC tax status and maintaining separate records relative to the mortgage pool and management of funds related to the

pool."<sup>14</sup> As such, "issuers can 'sell' mortgage assets to the REMIC, which then can issue multi-class securities (like CMOs). The main difference between CMOs and REMICs is that CMOs are bonds backed by mortgages, while REMICs are simply entities that facilitate the securitization of pools of mortgages."<sup>15</sup> Simply stated, a REMIC is a CMO without its tax disadvantages.

Bruggeman and Fisher state: "In summary, by providing for REMICs, a tax-exempt conduit has been created by Congress through which CMOs may be issued. This allows for the creation of mortgage-backed securities with multiple maturity classes. This should provide more choices to more investors and hence broaden the participation by investors in mortgage-related securities."<sup>16</sup>

The 1990s were a time of tremendous change with regard to financing the lodging industry. The decade began with a period of capital scarcity due to the excesses of the 1980s. However, the scarcity spurred innovations in real estate financing instruments. With the introduction of securitization, which is an extension of financial engineering or structured finance to the commercial real estate industry, many new and creative financial instruments were introduced, such as Commercial Mortgage Backed Securities, Collateralized Mortgage Obligations, Real Estate Mortgage Investment Conduits, and Real Estate Investment Trusts.

## References

- <sup>1</sup>HVS Financial Services, *Hotel Lender Survey*, Mineola, N.Y., (Summer 1990).
- <sup>2</sup>K. D. Slay, "Is It Worth It? Hotel Investments in the 1990s," *Hospitality Asset Watch* (1993): 1-3.
- <sup>3</sup>Grubb and Ellis, *National Market Report* (Northbrook, Ill., 1993).
- <sup>4</sup>T. A. Baumgartner and C.H. Strong, *Conducting and Reading Research in Health and Human Performance* (Wisconsin: Brown & Benchmark, 1994).
- <sup>5</sup>A. J. Singh, "Events have impact on lodging industry finance," *FIU Hospitality Review* 19, no.1 (Spring 2001): 11-25.
- <sup>6</sup>Sally Gordon, "How to Build A Bond," *CMBS World* 1, no.3 (Fall 1999): 16-19.
- <sup>7</sup>Ann Hambley, "Master Servicer, Special Servicer and Trustee," in Frank J. Fabozzi, (eds.), *Trends in Mortgage Backed Securities* (New Hope: Frank J. Fabozzi Associates, 1998), 31-43.
- <sup>8</sup>A. Arnold, *Real Estate Investors Handbook*. (Boston: Warren, Gorham & Lamont, 1994).
- <sup>9</sup>J. F. Marshall and V. K. Bansal, *Financial Engineering* (New York: Allyn & Bacon, 1992).
- <sup>10</sup>E. H. Duett, "An Economic Analysis of REMICs," *Real Estate Review* 18, no. 4 (1989): 66-71.
- <sup>11</sup>F. J. Fabozzi and F. Modigliani, *Mortgage and Mortgage Backed Securities Market* (Boston: Harvard Business School Press, 1992).
- <sup>12</sup>Duett.
- <sup>13</sup>P. S. Scherrer and C. Bolick "Understanding Real Estate Mortgage Conduits," *Capital Sources for Real Estate* (October 1997): 1-4.
- <sup>14</sup>W. B. Bruggeman and J. D. Fisher, *Real Estate Finance and Investments* (Illinois: Irwin, 1993).
- <sup>15</sup>Scherrer and Bolick.
- <sup>16</sup>Bruggeman and Fisher.

---

**A. J. Singh** is an assistant professor in the School of Hospitality Business at Michigan State University.