

**COMMERCIAL MORTGAGE BACKED SECURITIES:  
CAN THEY SURVIVE THE REAL ESTATE RECOVERY?**

by

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Submitted to the Department of Urban Studies and Planning  
in Partial Fulfillment of the Requirements for the Degree  
of  
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in Real Estate Development

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## **ABSTRACT**

The real estate recession of the late 1980s and early 1990s resulted in a tremendous drop in real estate values. This condition led to much higher default probability or (outright default) of most real estate debt. As market values of real estate debt dropped, the portfolios of most traditional lending institutions were, at best, diminishing below book value and, at worst, causing these lending institutions to fail.

As these institutions failed, their assets (mortgages) and liabilities (deposits) became the property and responsibility of the federal institutions which insured them. In order to liquidate a multi-billion dollar portfolio of distressed assets, federal insurers repackaged these assets into a new investment vehicle which appealed to a broader class of investors -- the commercial mortgage-backed security (CMBS).

As the viability of the CMBS market became evident, solvent lending institutions began to use CMBSs to dispose their problem mortgages. Evidence of the feasibility of the CMBS came early in the form of substantial underwriting activity. CMBS issues jumped from \$4.6 billion in 1991 to \$16.6 billion in 1992. As this market became established as a legitimate investment alternative for investors seeking to invest in real estate debt, the market began to attract non-distressed mortgage issues.

This paper will look at the issues which shape the viability of the CMBS market. At its core, this paper will investigate whether the CMBS market can survive the withdrawal of federal agencies, as these agencies have virtually completed the sale of their problem mortgages. As federal agencies leave the CMBS market, a key question is whether other mortgage holders will be able to continue to supply economically viable commercial mortgages for securitization.

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## **CHAPTER ONE**

As recently as several years ago investors interested in real estate debt had very few investment products from which to choose. Since that time, largely as a result of the severe real estate recession of the late 1980's, many new real estate investment alternatives have emerged to attract capital to the real estate market.

With regards to the commercial real estate debt markets, investors have been historically limited to purchasing whole mortgages. Recently, a new investment alternative, commercial mortgage-backed securities, has experienced significant growth. This chapter will review the features of both whole mortgages and CMBS issues and explain why each has been attractive to investors.

### **I. Why Purchase Whole Commercial Loans?**

Whole-loan commercial mortgages are a note secured by a lien on a real estate asset. Historically, investors have been drawn to this investment class as result of its risk-adjusted yield relative to comparable investment alternatives. Over the past ten years the spread between whole loan commercial mortgages and U.S. treasury issues of a like maturity has ranged from under 100 basis points to over three hundred basis points.

A more meaningful interpretation of this data can be generated by extrapolating commercial mortgage data into an index form and then

comparing this index to indexes which track other comparable asset classes when defined in terms of risk .

A common measure of risk is the standard deviation of returns. That is, how broad a range do the returns, from a given asset class, cover. As the graph below illustrates the standard deviation for commercial mortgages as measured by the Salomon-Levy Index II, an index which account for loss severity, compares favorable with the Salomon BIG index, which represents the corporate bond market.

### **Standard Deviation and Risk-Adjusted Rate of Return Comparison**

**1983-1992**

	<u>Standard Deviation</u>	<u>Risk-Adjusted Return</u>
Salomon-Levy Index II	5.31	.880
Salomon Big Index	5.74	.774

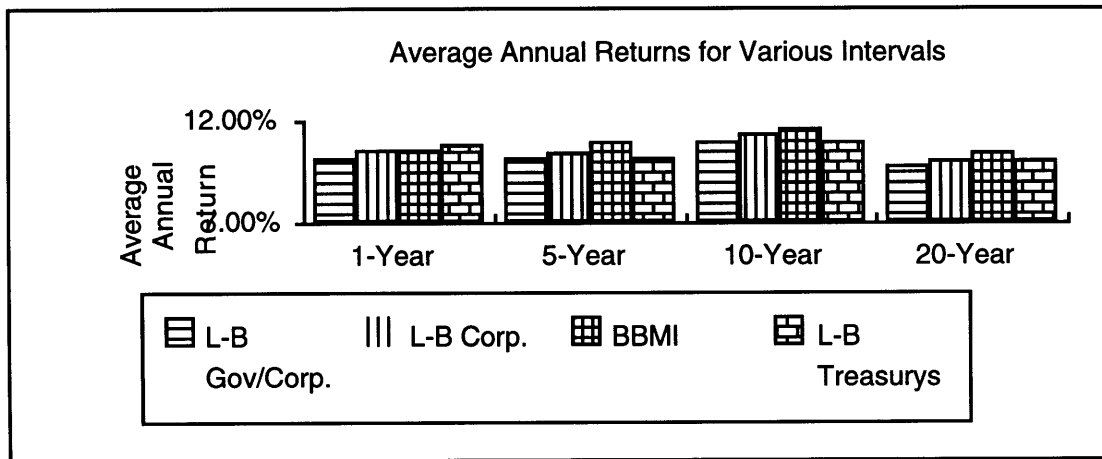
Sources: Institutional Investor, Inc.

Callan Associates, Inc. Quantitative Consulting  
Salomon Brothers

Using data from the American Council of Life Insurers (ACLI), indexes have been generated for the commercial mortgage market. These indexes include the Solomon-Levy Index (S/L), which as shown above indicates that mortgages have historically performed significantly better than corporate bonds.

In addition the S/L index, the Berkshire-Barnes Mortgage Index also looks at returns on commercial mortgages. When this commercial mortgage indexes is compared to Lehman Brothers corporate bond index, as well as Lehman Brothers Government/Corporate index, and Lehman Brothers treasury index,

it to indicates that commercial mortgages offer a very attractive yield. This point is illustrated in the graph below.



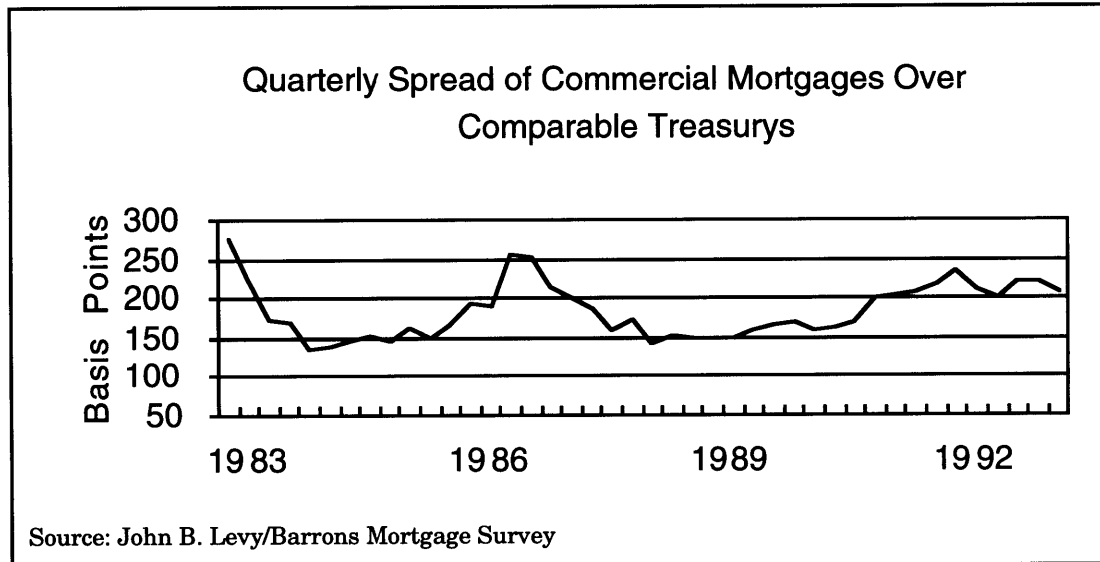
Sources: L-B Gov/Corp: Lehman Brothers Government Corporate Index

L-B Corp: Lehman Brothers Corporate Index

BBMI: Bershire Barnes Mortgage Index

L-B Treasury: Lehman Brothers Treasury Index

It is important to note the spread between commercial mortgages and treasuries (illustrated below). As the incidence of default increased during the late 1980's and early 1990's the spread between commercial mortgages and treasuries increased. This was due to several factors including an increased default rate by commercial mortgagors and an increase increasing imbalance between the supply of and demand for mortgage credit; specifically, an unwillingness of the part of traditional lenders (life insurance companies and commercial banks) to lend, and an increased demand for funds stemming from the large volume of commercial loans scheduled for repayment over the same period.



Over the past several years, however, the spread between commercial mortgages and treasuries has been reduced. This condition was largely the result of an increased supply of available funds. Funds are being offered from a variety of sources which did not before exist or were previously unwilling to offer funds. These sources include the securitized debt market as well as traditional lenders who have recently demonstrated an increased willingness of to offer funds.

This willingness to offer funds is the result of actions in the securitized market (to be discuss in greater detail below) as well as perception that the real estate market is recovering and therefore default risk is diminishing. As discussed in Chapter Three, the perception of a diminishing default risk is likely true. If so, then the current yields associated with commercial mortgages are particularly attractive.

While the yield the associated with commercial mortgages may be tempting, some investors have been discouraged by the lack of liquidity associated with

such investments. New investment products, such as CMBSs, have been developed to meet this demand. But adding features such as liquidity, tend to correspondingly increase the market price of the product or, alternatively, lower its yield.

The typical commercial mortgage holder, a pension fund or life insurance company, must decide if adding additional features offers sufficient value to justify the additional cost. In making this decision it is important to note that most mortgage investors typically have a fairly long duration to their liabilities. The duration of the more liquid investment vehicles such as CMBSs, however, typically are much shorter. Life companies are seeing the duration of their liabilities shorten as the demand for their whole life policies decreases and the demand for their term policies increases.<sup>1</sup>

More important than duration, commercial lender have been drawn to commercial mortgages for their risk-adjusted returns. This issue will addressed more thoroughly below. First, a brief outline of other, less important features which have attracted capital to whole commercial mortgages. These include:

**Investor control over the asset.** Very often covenants are incorporated into commercial mortgages which give the lender the right to many of the elements relating to the underlying assets. These approvals relate to substantial lease executions, capital improvement requirements, and placement of secondary mortgages. Additionally, commercial mortgages have a secured interest; that is, in the event of default, the holder of the mortgage can exercise its right to take title to the underlying asset.

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<sup>1</sup> Beck, Susan, Vice President, Travelers Realty, personal interview, July 23, 1994



**Correlation of risk-adjusted returns between commercial mortgages and other comparable investments.** The correlation between commercial mortgages and Treasury Bonds, BBB corporate bonds, and Government National Mortgage Association (GNMAS) was investigated by the Prudential Insurance Company Economic Investment and Analysis Group over the period 1983- 92. In their study they determined that commercial mortgages demonstrated some of the lowest risk-adjusted return correlations with the investment alternatives listed above.

This low correlation of returns appears to be the result of several factors including the relatively lower prepayment risk associated with commercial mortgages. A lower prepayment probability stems from the call protection provisions generally incorporated into commercial mortgages. Call protection can take several forms including: outright prepayment prohibitions or yield maintenance provisions which require penalty payments in the event of prepayment. Thus, as interest rates decline, commercial mortgages are much less likely to be pre-paid than non-call protected instruments.

Secondly, the low correlation is caused by the fact that commercial mortgages are secured by real estate. This condition causes commercial mortgages, as compared to corporate debt, to be more affected by changes in the local property markets than by general economic cycles.

The final factor causing the negative correlation is the relationship between commercial mortgages and inflation. Fixed-rate debt is generally reduced in value in times of inflation (increasing interest rates). However, inflation

generally increases the value of real estate collateralizing commercial mortgages. This dichotomy tends to reduce the relative default risk of commercial mortgages and acts to offset the impact of increasing rates<sup>2</sup>.

**A growing secondary market for commercial mortgages.** Pools of assets have been purchased and sold by institutional investors, such as commercial banks and life insurance companies. These transactions have led to increasingly standardized documents and underwriting guidelines. This increase in standardization has assisted in the supply-side growth of commercial mortgage securitization which has led, in turn, to an increased demand for commercial mortgages. All of this has resulted in a more liquid market for the transfer of whole commercial mortgages

## **II. Why purchase Commercial Mortgage-Backed Securities?**

Perhaps the greatest reasons to invest in commercial mortgage-backed securities (CMBS) is that

“Securitizing [single-property] debt allows risk to be spread across many investors rather than borne by one institution. By holding a portfolio of [rated] smaller securities representing participations in many different properties, investors can greatly reduce property-specific risks”.<sup>3</sup>

In addition, investors are able to purchase the portions of the mortgage they wish to acquire while leaving the balance, with its respective risk and return characteristics, for other investors. The means by which commercial mortgages are securitized will be discussed in the following chapter. The most

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<sup>2</sup> California Mortgage Bankers Association, The Institutional Real Estate Letter, 1993, The Role of Commercial Mortgages In An Institutional Portfolio, page 4

<sup>3</sup>Quigg, Laura, Lehman Brothers Fixed Income Research Mortgage Strategies, December 1993, page 22.

important element to note at this juncture is that CMBSs allow commercial mortgages to be synthesized into more distinct, varied and liquid instruments. It is these features which have lead to the vast growth of investor participation in this product.

Equally important to why investors choose to acquire CMBSs is how this investment vehicle came into existence. Unlike residential mortgage-backed securities (MBS), CMBS have only recently become a significant investment vehicle.

Historically, growth of this investment vehicle was inhibited by numerous obstacles, the most significant of which were:

- An abundance of alternative sources of capital.
- The absence of consistent underwriting standards.
- The lack of standard loan documentation.
- Poor historical loan performance data.
- Excessive leveraging of real estate transactions.<sup>4</sup>

All of these obstacles were associated with the traditional sources of debt (whole loan and mortgages). In the absence of any new economic forces or investment structures these impediments were significant and precluded any significant growth in the CMBS market.

The “credit crisis” which occurred in the late 1980’s, as many commercial banks and savings and loans failed, provided the economic catalyst to foster

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<sup>4</sup> Jacob, David J., Duncan, Kimbell R., Mortgage Securities Research, Nomura Securities International, Inc., January 1994, page 4.

the growth of the CMBS market. The RTC, as a result of the failure of the institutions which it insured, became the holder of billions of dollars in face value of mortgages. As sole owner of the mortgages, the RTC had the power to overcome the obstacles described above. It accomplished this by standardizing these loans and using them as collateral in securitized offerings. Previously the mortgages had been held by many different lenders and included many covenants and conditions. While the RTC has been the largest offerer of securitized commercial debt, other more traditional lending institutions followed suit and used CMBSs to remove troubled mortgages from their balance sheets.

The efforts by life insurance companies and commercial banks were largely the result of regulatory pressure. The large number of commercial bank and S&L failures which occurred as a result of the recent real estate recession has led to an increased pressure on all lending institutions to write down or dispose of their non-performing assets.

As noted above, the RTC has been the largest force in the CMBS market, completing a cumulative total of \$14.4 in bulk sales as of December 1993. In 1993 alone, an additional 32 private institutions have combined bulk sales of \$14.5 billion. While the volume of trouble sales has declined, they have not ceased. According to Dr. Laura Quigg, at Lehman Brothers, approximately \$7.2 billion CMBS have sold January, 1994 and June, 1994. She anticipates that the total CMBS sales for the year will reach \$20 -23 billion; \$3- 4 billion of which will come from FDIC and RTC bulk sales, with the balance consisting of

growth from the mortgage conduit program as well as re-financing efforts with single borrowers on multiple assets.<sup>5</sup>

Sources such as large single asset refinancing, REITs, commercial mortgage conduits, and single borrowers with multiple assets to refinance, will represent the future of CMBS growth. In order for this market to continue to experience growth, Wall Street firms must have access to an economically viable pool of commercial mortgages. These firms must underwrite debt at or below the yields being offered by commercial banks and life companies. In Chapter Four the future of the CMBS market will be discussed in greater detail.

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<sup>5</sup> Quigg, Laura, Lehman Brothers, personal interview, July 6, 1994

## CHAPTER 2

### I. What is Securitized Debt (CMBS)

CMBSs are debt securities whose interest payments and value are derived from commercial mortgages, held in trust, which collateralize the security. CMBSs are very similar to residential mortgage backed securities (MBS), although the transactions completed to date have been much simpler than those completed in the MBS market.

From a legal, accounting, and tax perspective, CMBS transactions are structured the same as MBS transactions. CMBS transactions will take the form of either pass-throughs, mortgage backed bonds, collateralized mortgage obligations, or real estate investment conduits. These vehicles are better defined as follows:

#### **Pass-Throughs**

“In a pass-through structure, the investor owns a certificate which represents an undivided ownership security interest in the pool of mortgages. The monthly interest and principal payments on the underlying mortgages are “passed-through” to the investors at the stated [CMBS] pass-through rate on the outstanding balance until all the loans in the pool have been retired”.<sup>6</sup>

Like a collateralized mortgage obligation (defined in greater detail below), pass-throughs generally have different classes. These classes have different

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<sup>6</sup> Duff & Phelps Credit Rating Co., The Rating of Commercial Real Estate Securities, May 1993, 6

payment and maturity schedules, with the senior classes having shorter maturity and duration. This type of structure is most appealing when the underlying mortgages are “balloon” (i.e., when the amortization term exceeds the term to maturity). In this instance, the multi-class pass-through allows the senior class holder to minimize the risk of repayment associated with balloon payments. This is due to the pass-through structure, which means that the ultimate maturity of the security will depend on the cash flow timing of the underlying mortgages rather than a fixed maturity date<sup>7</sup>

### **Mortgage Backed Bonds**

Mortgage backed bonds, also known as pay-through bonds, “are general obligations of the issuing institution for an intermediate term (five to ten years) and are almost exclusively private sector issues, heavily overcollateralized by mortgages and/or pass-through certificates, to attract traditional fixed-income investors such as pension funds, bank trust departments, and general fund managers”.<sup>8</sup>

The primary difference in deal structure between CMBS and MBS deal structures relates primarily to the call protection associated with commercial mortgages. In general, commercial mortgages tend to have provisions which prohibit their repayment prior to maturity without the additional payment of a penalty (yield maintenance provision). The yield maintenance provision, calculated in a very complicated fashion, “sets a prepayment penalty as the

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<sup>7</sup>Ibid, 6

<sup>8</sup>Richards, David Alan, “Gradable and Tradable”: The Securitization of Commercial Real Estate Mortgages, Real Estate Law Journal [Vol. 16.19 1987]

present value of the benefits from refinancing, effectively negating the borrower's incentive to do so".<sup>9</sup>

Like the issuer of pass-through bonds, the issuer of pay-through bonds receives all interest and principal from the underlying collateral. Unlike pass-through obligations, the pay-through obligation is paid from the issuers' general account. Accordingly, these instruments have many of the same characteristics of corporate bonds including semi-annual interest, a stated maturity, and no government guarantee.

"Pay-through bonds enable an institution to liquidate low-yielding loans without having to write off [recognize] a capital loss, since the issuer retains ownership of the mortgage loans providing the bond collateral. They [the issuer] invariably offer some type of credit support"<sup>10</sup>.

### **Collateralized Mortgage Obligations**

In June, 1983 Freddie Mac created a new product called collateralized mortgage obligations (CMOs). CMOs were an offshoot of the pay-through bond.

"The CMO, in its simplest form, is a pay-through bond divided into multiple classes, or tranches (generally four), with different maturities. The interest on the several classes is distributed currently to the holders of each class. Principal, however, is not paid simultaneously to holders of all classes. Instead, holders of the first tranche of bonds receive all payments until their bonds are paid in full, and then each succeeding

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<sup>9</sup> Quigg, page 6

<sup>10</sup> Ibid, 107



tranche is retired. Often, the fourth tranche (the “Z bond” or “Z piece”) only begins receiving principal and interest after all prior maturing classes are retired. Interest accrued but not paid on the Z piece is added to its principal on each payment date and thereafter itself accrues interest”.<sup>11</sup>

Although CMOs have been very popular and have been the chosen form for many mortgaged-backed offerings, their growth has been hindered by the tax consequences associated with issuing this type of security. The tax code refused to give grantor trust tax status to any trust which was issuing more than one class of securities which would divide ownership of the investment assets or cash flow from the underlying assets into non-pro rata pieces. This condition has forced most CMOs to be collateralized debt offerings, rather than true securitized offerings. Because the issuing entity is often a thinly capitalized, such as a mortgage bank, with a balance sheet unable to meet the requirements of issuing such a large amount of additional debt, the popularity of CMOs has diminished.

In order to address this problem “Issuers of these structures [CMBS] may elect REMIC [Real Estate Mortgage Investment Conduit] treatment which has positive tax and accounting implications for issuers. In particular, REMIC legislation was enacted to address CMO issuers’ previous inability to obtain Grantor Trust Status for structures where the pass-through of mortgage interest and principal did not mirror the payments to the certificate holders. By electing to operate as a REMIC, issuers effectively avoid taxes on a corporate level”.<sup>12</sup>

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<sup>11</sup> Ibid, 108

<sup>12</sup> Duff & Phelps Credit Rating Co., 6

## **Real Estate Mortgage Conduits**

Tax regulations were changed to address the issuer problems associated with CMOs. These changes allowed for the creation of real estate mortgage investment conduits (REMICs). “Under the new rules, any financing done through a REMIC will be treated as a sale of assets for tax purposes, regardless of the legal form or the financial accounting treatment of the transaction”.<sup>13</sup> This change in tax regulation allows the issuer the option of structuring a REMIC as either the sale of assets or collateralized debt.

Given the preferred status of REMICs it is important to note certain significant features of this mortgage backed security. These include:

- The REMIC structure eliminates double taxation. The chosen form of intermediary ownership (partnership, corporation, association or trust) is exempted from federal taxation.
- REMICs have two characteristic forms of ownership interests, regular and residual. Regular interests, which may have multiple classes, have debt characteristics. Residual interests, which have only one class, have equity characteristics. In either case, ownership interests are readily transferable.
- Like CMOs, REMICs may allocate payments among the investor classes in a disproportionate manner.

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<sup>13</sup> Ibid, 109

- Both the regular and residual interests are considered real estate assets. Therefore they are permitted to be incorporated into real estate investment trusts (REITs). As discussed later in greater detail, allowing REITs to hold shares of CMBS issues will aid in the growth of the CMBS market.
- REMICs must be backed by either qualified mortgages or permitted investments. Qualified mortgages are notes backed a lien position on real property. Permitted investments include: temporary cash flow investments which produce passive income (interest); qualified reserve assets; and real property received through foreclosure, which can not be held for more than one year.<sup>14</sup>

## **II. CMBS offering structures**

As noted above commercial mortgages generally have yield maintenance provisions. These covenants have greatly diminished refinancing in times of decreasing interest rates. Callable securities without yield maintenance provisions, such as corporate debt and residential mortgages, have experienced significantly “lower price appreciation than suggested by their initial durations because, as rates dropped, their durations decreased. As a result, many callable corporate bonds and mortgage-backed securities have underperformed investors’ return expectations”.<sup>15</sup> Accordingly, the non-callable instruments, such as CMBSs, outperform callable corporate debt and residential mortgages during periods of declining interest rates.

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<sup>14</sup> Murphy, Stephen J., “FINANCING OPPORTUNITIES THROUGH PROPERTY SPECIFIC COMMERCIAL MORTGAGE SECURITIES, MIT Thesis, MS in Real Estate Development, July 1987, 35-36

<sup>15</sup> Jacob, David P., Duncan Kimbell R., page 38

In addition to the yield maintenance and call protection provisions associated with commercial mortgages, commercial mortgages are typically non-recourse obligations of the borrower. That is, in the event of default by the borrower, the lender can not seize any other asset of the borrower; it is limited the real property securing the mortgage.

These two features combine to greatly influence the structure of CMBSs into one which primarily allocates credit risk; MBS transactions, on the other hand, primarily allocate prepayment risk.

The structure of a CMBS transaction is typically as follows:

- Commercial mortgages are placed in trust, with a trustee appointed by the issuer of the security.
- The issuer sells securities which are backed by the cash flow generated by the commercial mortgages held in trust by the trustee.
- Typically, the issuer hires a servicer to interact directly with the borrowers. The servicer will address any problems which may arise with the borrowers as well as facilitate the cash flow from the borrowers to the security holders. Servicers are generally required to make advances to the security holder in the event that debt service payments from the borrowers (commercial mortgages) are temporarily insufficient to meet debt service requirements of the securities.

- The most basic and typical CMBS structure is a fixed-rate pass-through with a single senior class and one or more subordinated classes. Combined, these groups represent 100% ownership of the underlying mortgages. As funds are received from the borrowers, they are passed-through to the CMBS classes. Typically funds are distributed as follows: interest to senior class, principal to senior class, interest to next lower class, principal to next lower class, etc. Realized losses will decrease the amount of the most junior outstanding class.
- Servicers typically have experience with the property type securing the commercial mortgages and are monitored by the trustee. The trustee generally has the authority to replace the servicer if certain predetermined performance criteria are not met.
- In addition to the features described above, CMBSs often include provisions which restrict the ability of the borrower to either sell the “better” assets from the pool of assets which back the CMBSs, and also restrict the borrower from placing additional debt on the properties pledged to the CMBS, even if the additional debt has a subordinated lien position.

As borrowers pay down outstanding balances of the mortgages it is reasonable for them to request a release of some of the mortgage collateral. The issuer, however, does not want all the better properties sold, and be left with the lower quality collateral. This condition is addressed by requiring one or more of the following criteria to be met:

- Owners being required to retire debt equal to 110% to 125 of the balance of the loan on property being sold
- Resulting debt service coverage ratios (DSCR's) having to be no lower than those prior to the sale
- Collateral substitution restrictions during non-call periods. Owners of multiple properties may wish to exchange one asset securing a note for another asset of comparable value, thus freeing the original asset for sale. This provision would not allow the borrow to perform such an exchange during any time which the original mortgage is not callable (no repayment allowed).

In order to successfully complete a CMBS offering, the transaction must be rated by an independent rating agency (the rating process will be described in greater detail in the following chapter). As noted above, CMBS issues are credit-driven, not prepayment-driven, transactions. Accordingly, the rating agencies are sensitive to the credit quality of the senior classes and may require additional credit enhancements in order to achieve the desired ratings.

“The forms of credit enhancement most often used in the securitization of commercial mortgages are: subordination, overcollateralization, reserve funds, corporate guarantees and letters of credit. Also, in single-borrower, multiple-property transactions, cross-collateralization and cross defaulting can further enhance collateral quality”.<sup>16</sup> The most common forms of credit enhancement are discussed in greater detail below:

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<sup>16</sup>Jacob, David P., Duncan, Kimbell R., page 33.

**Subordination.** Subordination is the process of creating a hierarchical class structure. It involves the creation of senior and subordinated classes. The junior or subordinated classes absorb all losses in until they are exhausted. When a borrower default occurs, cash flow is diverted from the junior classes to the most senior class until it is satisfied. Cash flow is then applied in a descending class order until all available cash flow is exhausted.

It should be noted that not all CMBS offerings involve multiple classes. While subordination is attractive means by which to achieve the desired rating it is not always required nor the best means of achieving the desired rating. The other methods of credit enhancement, discussed below, are often preferable to subordination.

**Overcollateralization.** This form of credit enhancement is often used by borrowers not needing to maximize their leverage, such as REITs. This form of credit enhancement involves the placement of minimal debt on the assets. Effectively, the borrower is issuing a senior debt class while maintaining the subordinated classes in its portfolio.

A typical example of this type of credit enhancement would be in the form of a REIT. A REIT typically has little incentive to place other than very highly rated, low cost debt on its balance sheet. REITs have a vested interest in keeping debt at lower levels so they can efficiently access the public capital markets; hence, the overcollateralization of debt secured by their properties.

Often the CMBS offerings associated with REIT debt are a single class. There is no need to create additional classes since the desired rating can be achieved as a result of the credit enhancement created through overcollateralization.

**Reserve Funds.** This form of credit enhancement requires the issuer to post an initial cash deposit. These funds, either separately or in conjunction with subordination, are in first loss position. Because these funds are invested in very liquid, high credit investments, which offer relatively low yield, this is very expensive form of credit enhancement.

**Corporate Guarantees.** This form of credit enhancement requires that the issuer of the CMBS issue a corporate typically guarantee in an amount equal to the required reserve funds. Like the required reserve funds, the corporate guarantee is in first loss position. Clearly, this form of credit enhancement is only viable to the extent that the issuer is a highly rated institution.

**Letters of Credit.** Another credit enhancement option is for CMBS issuer to obtain a letter of credit from a third party institution. A letter of credit is very similar to a corporate guarantee in that this instrument effectively requires the issuer to insure the CMBS against losses up to the amount of the letter of credit. Also like corporate guarantees, this form of credit enhancement requires that the issuer of the letter of credit have a very high credit rating.



## **CHAPTER 3**

### **I. The Role of Rating Agencies in the CMBS Market**

As noted above, the rating agencies have a significant impact on the success of a CMBS offering. “Rating agencies assign ratings on debt and other securitized transactions with regards to the capacity of an issuer to meet its debt obligations. In the view of the rating agencies, a AAA rating for a CMBS issue is equivalent to a AAA rating for a corporate issue with regards to the issuer’s ability to make debt payment”.<sup>17</sup>.

The combination of creating multiple investment classes, with different characteristics, and the rating of the investment classes has opened real estate debt investment to much broader class of investors. These two features have allowed investors to effectively divide the underlying mortgages into pieces whereby investors can purchase only the piece (risk level) which they desire.

With regards to rating a CMBS transaction, each of the rating agencies, Standard & Poor’s Corporation (S&P), Moody’s Investors Service, Fitch Investors Service, Duff & Phelps (D&P) use a different methodology to rate a transaction. While all the agencies look for credit enhancement, particularly in the form of subordination, each has a unique fashion of determining default risk.

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<sup>17</sup> Jacob, Duncan, 17

Critical to the rating process, and creating the appropriate credit enhancement for each class, is an understanding of default risk. Default risk is the probability that a given mortgage will cause a loss to holder. The loss can result from either a “work-out” or a property ownership transfer (foreclosure or deed in lieu of foreclosure) from the borrower to the lender with an eventual liquidation sale.

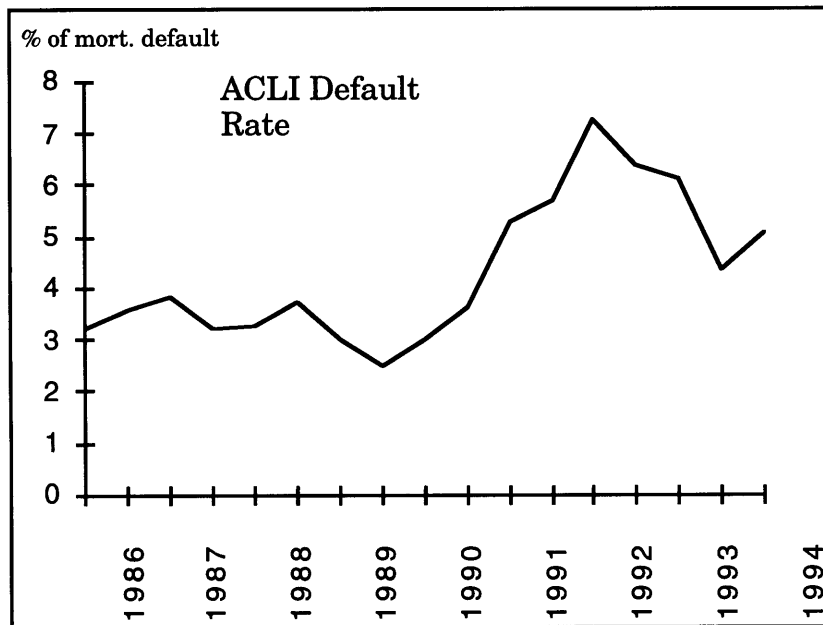
In a special report published by Fitch Investors Service (Fitch) in June, 1992, Fitch discusses in detail how they determine default probability. Like most of the rating agencies, Fitch analyzed the American Council of Life Insurance (ACLI) data set to determine default risk. The ACLI collects mortgage loan data from the life insurance companies, tracking approximately 87% of all such mortgages held by life insurance companies.

As the graph below illustrates, defaults on mortgages peaked in 1992, at approximately 7.2% . This is the highest delinquency rate since ACLI began collecting data in 1965. The graph further illustrates that delinquency rates dropped significantly in 1993. In the first quarter of 1994 default rates rose from 4.38% to 5.08%. Although the most recent ACLI Investment Bulletin does not address this condition of increasing defaults in a quantitative manor, they do note that a large percentage of the increase in delinquency activity was in the Pacific region, “where economic recovery is lagging the rest of the economy”.<sup>18</sup> An additional explanation has been given by Thomas Sczlidowski, Vice President, Fleet Management & Recovery (a firm which

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<sup>18</sup> American Council of Life Insurance, Investment Bulletin, No. 1259, May 25, 1994, 1

specializes in real estate loan work) who speculates that this condition is correlated to the increase in interest rates. <sup>19</sup>



Source: American Council of Life Insurance

Like Fitch, Mark Snyderman, formerly a Director of Aldrich, Eastman and Waltch, has used the ACLI data to investigate commercial mortgage default risk. In the Summer, 1994 issue of Real Estate Finance Journal Snyderman discusses how he derived his most recent projections on commercial mortgage default risk. This article is follow-up to Snyderman's previous study on the same topic published in The Journal of Portfolio Management, Fall 1991.

Although Snyderman sought the same goal as Fitch (i.e., default risk and severity of loss) and used a similar methodology, he used a different data set. The Fitch study looked at 1,178 loans from the ACLI data set, while Snyderman looked at 10,955 loans from the ACLI data set.

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<sup>19</sup>Sczlidowski, Thomas, Vice President, Fleet Management & Recovery Corp., personal interview, June 28, 1994

Fitch's study concluded that commercial mortgages have approximately a 14% probability of default, while Snyderman in his update concludes that commercial mortgages have approximately a 13.8% probability of default. Snyderman, however, qualifies this default probability by noting that "this observed lifetime default percentage (13.8%) is lower than what should be used to estimate the historic riskiness of commercial mortgage lending, because many of the loans in the sample have yet to pay off or default".<sup>20</sup>

Snyderman discusses several methods by which default risk could be calculated, all of which suggest higher default risk for the holders of commercial mortgages. Specifically, Snyderman looked at default risk as a function of loan age. He found that although many of the commercial mortgage defaults occur during the first five years of the mortgage, a significant portion defaulted after year five. He found that the "sum of the average defaults over the period of the study indicated a default rate of 18.3%".<sup>21</sup> This projection is done by adding the average default rates by age for years 0 to 19. The average default rate is calculated by dividing the number of loans that defaulted during a given year in their lifetimes divided by the total number of loans that could have been in existence based on their year of origination.<sup>22</sup>

Snyderman also looked for a correlation between default and the year in which the commercial mortgage was originated. He "found that there is a significant relationship between lifetime default rates of a cohort and the cumulative

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<sup>20</sup>Snyderman, Mark P., "Update on Commercial Mortgage Defaults", The Real Estate Finance Journal, Summer 1994, 26

<sup>21</sup> Ibid, 26

<sup>22</sup> Ibid, 32

subsequent five-year change in property value”.<sup>23</sup> Snyderman stated that the change in property values in the five years after the mortgage was originated had a significant impact on the default probability.

That is, in times of increasing property values, default diminishes. While in times of decreasing property values, default occurrence increases. Snyderman suggests that this is a result of the option associated with most commercial property by which borrowers have the ability to put the assets securing a mortgage back to the lender. As properties decrease in value below the outstanding loan amount, asset owners have no equity left to lose and will turn the property over to the lenders.

Snyderman used the following equation to run a regression on the correlation between default and percentage change in property values over the five years after mortgage issuance:

$$\text{default rate} = 21.5\% - .312(\text{five year cumulative property value change})$$

This linear equation, with a y intercept of 21.5%, indicates that without appreciation in property values 21.5% of the commercial mortgages would default. Clearly, commercial lenders anticipate appreciation in property values.

Although this equation had high  $r^2$ , 0.88, the possibility of variable omissions should be considered. That is, there are more issues to consider when investigating default probability than percentage change in property value.

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<sup>23</sup> Ibid, 29

Issues such as DSCR, vacancy rate, local economy are likely to also have a significant impact on default probability.

After looking at default probability, Snyderman looked at loss severity. Snyderman separated the defaulted loans into two categories: those that were resolved in some fashion other than foreclosure; and those in which ownership changed from the mortgagor to the mortgagee through foreclosure or deed-in-lieu proceedings. Snyderman found that in the universe of defaulted mortgages approximately 46% resulted in a change of ownership, while 54% were worked-out in some manner short of title transfer.

For the properties in which title transferred, Snyderman applied the following formula to calculate loss severity:

$$\text{Severity of Loss} = \text{property sale proceeds} + \text{property revenue} - \text{principal owed upon default} - \text{foregone interest} - \text{expenses}^{24}$$

With exception of foregone interest, all the data comprising the equation was found in the annual statements associated with the mortgage. Foregone interest, imputed by Snyderman, was calculated as being equal to  $(0.5 + \text{number of years between default and sale}) \times (\text{treasury rate} + 2\%)^{25}$ .

“The results of this analysis show an average severity of loss on foreclosed loans of 36%”.<sup>26</sup> Snyderman does note, however that he found a high variance in this average. Snyderman suggests that variance is accounted for by the unpredictable length of foreclosure actions. On average, foreclosure was

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<sup>24</sup> Ibid, 27

<sup>25</sup> Ibid, 27

<sup>26</sup> Ibid, 27

found to take three and one-half years. Accordingly the foregone interest adds significantly to the severity of loss. If the foreclosure time was significantly reduced, through a deed-in-lieu proceeding for example, both the foregone interest and severity of loss would be significantly reduced.

If the borrower has equity value remaining in the asset, but has nonetheless defaulted on the loan there is very good chance that this loan will be “worked-out”. This condition is the least expensive to the lender, since the borrower has an incentive to work cooperatively and expeditiously with the lender. Although there is no data relating to this set of circumstances, Snyderman believes that defaulted non-foreclosed loans have half the loss severity of a foreclosed defaulted loan. He bases his contention on conditions described above.

Most importantly, Snyderman used the ACLI data to determine the risk-adjusted yield for commercial mortgages. Under the assumptions outlined above, Snyderman concluded that the average yield cost of defaults is fifty basis points. Snyderman projected cash flows under his scenarios to determine the cost of mortgage defaults in terms of yield. “The overall return impact is shown by the difference in the internal rate of return from the base year”.<sup>27</sup>

In his original article, which used similar methodology while investigating approximately 2,700 fewer loans over and stopped two years sooner, 1989, concluded that the yield cost was between 31 and 52 basis points. Further, he states that this yield cost of commercial mortgage default “is above the costs of defaults reported by researchers for investment-grade corporate bonds and

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<sup>27</sup> Snyderman, Mark P., “Commercial mortgages: Default occurrence and estimated yield impact, Journal of Portfolio Management, Fall 1994, 87

less than that observed for high-yield bonds, but well below the spread normally charged by lenders (150 to 300 basis points)”<sup>28</sup>

Severity of loss was also investigated by Fitch, in a study they performed on data from a large Midwestern life company. Fitch concluded that, on average, the sale of foreclosed assets resulted in a recovery of approximately 79% of the original balance. Fitch does qualify their findings by stating that an overall recovery rate of 79% “represents the recovery range’s upper end, since this data represent the disposal of the assets with the highest sale potential. Properties that would yield lower returns presumably remain in the portfolio”.<sup>29</sup>

When Fitch investigated the loss severity associated with other sellers of foreclosed real estate, such as the RTC and FDIC, they found a much higher experience. Fitch reports that the RTC bulk sales resulted in loss severity of 32%-57.5%, while the U.S. General Accounting Office (GAO) reported that the RTC recovered approximately 61% of face value (39% loss severity). Freddie Mac reported loss severity of 45%, and FNHMA reported loss severity of 25%-30%. It is important to remember that this data was gathered during the peak of the real estate recession, and that it is likely that more recent sales have resulted in lower losses. This is a result of the raising real estate values and declining mortgage defaults associated with the economic recovery in the real estate industry.

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<sup>28</sup> Ibid, 28

<sup>29</sup> Fitch Investors Service Inc., Special Report, Commercial Mortgage Stress Test, June 8, 1992, 4.



Fitch ultimately concluded that for the loans under study during this time period the loss severity is between 40%-50%, if the loan has a LTV ratio greater than 100%. Fitch uses this data to determine the credit enhancement requirements for a CMBS offerings.

## **II. Determining amount of Credit Enhancement**

Although each of the rating agencies determine levels of required credit enhancement in a different fashion, this discussion will continue to follow Fitch's analysis. This will be followed by brief discussion of the methods used by other rating services.

Fitch is the only rating agency to say explicitly "that credit enhancement is based on each security's ability to withstand various degrees of economic recession or depression".<sup>30</sup> Fitch stated that the current real estate recession (during which they believe there has been an approximately 30% default rate in the portfolio of life insurance companies' commercial mortgages) is an 'A' recession. Securities with an 'A' rating should have enough credit quality so as not to default in a recession of this magnitude. Accordingly, 'AA' and 'AAA' securities would have even more credit quality.

Specifically, Fitch multiplies the expected default rate of the pool which would occur during an 'A' recession times the loss severity which would occur during an 'A' recession to determine the expected losses for this class. "The resulting expected loss represents the benchmark for the rating. For example, the Default Probability section indicates a 30% benchmark default rate for life company loans in an 'A' level recession scenario, while the Loss Severity

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<sup>30</sup> Ibid, 10

section indicates 45% average loss. Multiplying these factors provides an expected loss of 13.5%. Therefore, the benchmark credit enhancement level for an 'A' rated pool would be approximately 13.5% prior to adjustments for qualitative features of the transaction".<sup>31</sup>

Although the other rating services use different methodology to determine the credit enhancement required for the different classes, they all seek to determine the default risk and loss severity associated with each class. Of the two, default risk and loss severity, the harder to quantify is default risk.

Because Fitch and Snyderman have performed the most extensive research on the ACLI data base, their methodology has been described in greatest detail. Other rating agencies, such as Moody's Investor Service, look at the pool being underwritten to determine its quality. Moody's proceeds to assign a credit rating to the pool, for example A, B, or C. Based on the rating of the pool, Moody's then states the required credit enhancement for each class. Overall pool rating is based on quantitative factors such as LTV and debt service coverage ratios (DSCRs), as well as qualitative factors. Credit enhancement levels are determined by the desired rating of the pool. "For example, a C quality pool in an average market would require 15% credit support for a Aaa rating and 8% for a Baa rating".<sup>32</sup>

Qualitative factors are of important to all the rating agencies, including Fitch, when determining final credit enhance requirements. Fitch may revise their

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<sup>31</sup> Ibid, 6

<sup>32</sup> Quigg, 30

credit enhancements based on review on qualitative elements. These qualitative characteristics include:

**Geographic Diversity:** The greater the geographic diversity of the mortgage pool the lower the expected default risk and, therefore, the lower the required credit enhancement. The supposition is that real estate recessions effect different markets to different degrees and at different times. Therefore, investing in different geographic markets reduces overall default risk. Susan Hudson-Wilson, director of portfolio strategies at Aldrich, Eastman, and Waltch notes that this argument has validity so long as lending across geographic boundaries recognizes the similarities in local economies. That is, diversity is not achieved if mortgages are held in markets which are dominated by the same industry, such as oil.<sup>33</sup>

**Property Type:** Rating agencies such as Fitch find product type diversity within a pool of mortgages is desirable. The logic for this diversity is very similar to that of geographic diversity. Economic forces effect different properties differently, even in the same region.

**Portfolio Size:** The pool of commercial mortgages should contain at least thirty mortgages, with no single mortgage making up more than 5% of the pool. If these conditions are not meet then most rating agencies will find the pool exposed too much risk from a single asset, and will require additional credit enhancement.

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<sup>33</sup> Hudson-Wilson, Susan, Direct of Portfolio Strategies, Aldrich, Eastman & Waltch, presentation November 1993.

**Borrower Concentration:** Concentrations of loans to a single borrower greater than 10% will negatively impact the rating of a commercial mortgage pool. In this regard, it is important to look at the underlying control of the assets (equity value) and not just legal ownership. The attention of controlling entities can be diverted by problems outside the pool, which could have a negative impact on the entities' assets within the pool.

**Property Operating Statements:** If the rating agencies do not have access to operating statements of the properties underlying the commercial mortgages, then the rating agencies will have to make very conservative estimates about cash flow. Assumptions regarding DSCRs will be very conservative, resulting in the need for significant additional credit enhancement.

**Amortization and Balloon Risk:** If the pool of underlying mortgages are not amortizing or, even worse, are negatively amortizing, the credit enhancement requirements will increase. The timing of balloon maturities are also considered. If the maturities of the mortgages are clustered around the maturity of the security then it will have negative impact on credit enhancement requirements. However, if this is not the condition and the servicer has the ability to extend the underlying loans, then the impact on credit enhancement requirements will be lessened.

**Fixed vs. Floating Rate:** The rating agencies take a much more conservative approach to pools of floating rate notes. The rating companies will perform their stress tests on the pools assuming much higher future interest rates (lower DSCRs) than those currently in place on the mortgages.

**Collateral Quality:** The rating agencies will visit each property or at least a statistically representative sample of the pool, to determine the quality of the underlying real estate assets. If the underlying assets have significant deferred maintenance or were poorly constructed, then additional credit enhancement will be required.

**Basis Risk:** If the support collateral is not tied to the same index as the debt, then additional credit enhancement will be required.

**Excess Spread:** If there is a positive spread between the amount paid by the borrower on the mortgage and the amount paid on the security, then this amount can be used to reduce the required credit enhancement.

**Seasoning:** Loans with a payment history, particularly with amortization (an decreasing LTV ratio) will diminish the required credit enhancement. The consideration given seasoning is minimal, however, since both Fitch's and Snyderman's research indicate that default patterns do correlate with payment history.

**Environmental Risk:** Rating agencies assume that all the assets within the pool will have clean hazardous waste reports. If this is not the case, then additional credit enhancement will be required. Rating agencies take a very conservative approach to this issue. Accordingly, "dirty" properties may significantly increase the required credit enhancement.

**Economic Trends:** The rating agencies will take into consideration the overall economic condition of the region(s) represented by the commercial mortgages within the pool. Issues such as the level of new construction, vacancy rates, and rental rates will be carefully reviewed.

**Underwriting Standards:** If the pool of commercial mortgages was underwritten by a single underwriter who had a track record of conservative underwriting practice, then the credit enhancement requirements will be diminished.

**Servicer:** As described above, the role of the servicer is critical in the CMBS transaction. Accordingly, the rating agencies will require additional credit enhancement if the servicer does not have adequate financial strength, or an adequate history with a particular product type, to leave the rating agency confident of its abilities.

In summary, rating agencies look at many factors when determining required levels of credit enhancement. Typically, they will begin by looking at the default risk and loss severity associated with each investment class offered, in order to determine the initial required amount of credit enhancement. These credit enhancement amounts are then adjusted upward or downward depending upon a qualitative review of the mortgages within the pool.

If the pool of mortgages is so large as to preclude a review of every asset within the portfolio, then the rating agencies will take a representative statistical sample of the pool and use it to make their determination.

One last feature to note about the CMBS rating process is the recent changes to the rating categories. The Wall Street Journal reported that Standard & Poor's (S&P) will start be modifying their rating categories. In addition to the traditional ratings such as triple-A or double-B, S&P will start, as of July 12, 1994, adding an "r" for risk to those securities which "it views as facing a bigger risk than just a change in credit quality".<sup>34</sup>

The 'r' rating is a move by S&P to warn investors that high credit rating does not necessarily mean that the investment is a conservative investment. Given the extreme volatility which has occurred in the bond market as of late, the new rating is an attempt to identify for investors investments which may have more volatility than typical assets carrying an investment grade rating. That is, the 'r' rating does not flag credit risk, rather it indicates a higher sensitivity to market-related risks.

Over half of the securities which will carry the 'r' rating are mortgage-backed securities. S&P has stated that this new rating feature "will be attached to interest-only and principle-only mortgage strips, leveraged inverse floaters and inverse floater and inverse floater linked to exotic indexes, certain so-called REMIC residuals, currency-linked debt, principal-linked hybrids, as well as an array of proprietary "structured" securities including those nicknamed Percs, Decs, Prides, Aces and Steers".<sup>35</sup>

The majority of these products are associated with residential mortgage backed securities and have not been incorporated into the CMBS market. As

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<sup>34</sup> Vogel, Thomas T., Jr., First Movies, Now Bonds Get An 'R', Wall Street Journal, July 12, 1994, C1

<sup>35</sup> Ibid

such, it is likely that the new 'r' will have stronger impact on MBS market than on the CMBS market.



## **CHAPTER FOUR**

### **The Future of the Commercial Mortgage Backed Securities Market**

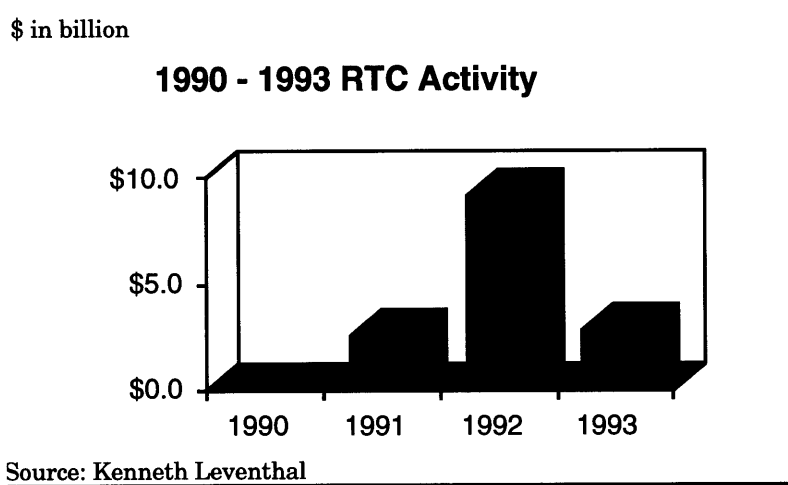
One of the most important issues related to the CMBS market is its ongoing economic viability. As mentioned earlier, the CMBS market has largely been the result of the sales efforts of the RTC and FDIC. These Federal agencies have effectively subsidized the tremendous growth in the CMBS market by selling their commercial loan portfolios at amounts far below both their book , and presumably market, values. This is not to say the actions of these agencies have been inappropriate. The CMBS market has allowed these agencies to liquidate their troubled portfolios by accessing a broader class of investors in the capital markets.

Currently the RTC and FDIC are withdrawing from the CMBS as their portfolio of troubled assets shrinks . As will be illustrated below, these agencies have largely sold off the assets of their distressed accounts and, over the next several years, will likely become minor contributors to the CMBS market. In order for the CMBS to continue to grow, it must provide an economically viable means of acquiring and pooling commercial real estate debt in an arguably more stable, non-distressed real estate environment.

Before discussing the future of the CMBS market, it is important to review its growth over the past several years. Kenneth Leventhal & Company reports that “in 1991 and 1992, the Resolution Trust Corporation (RTC) securitized more than \$11.6 billion of real estate assets, giving a powerful boost to the fledging market for securities backed by mortgages on income-producing

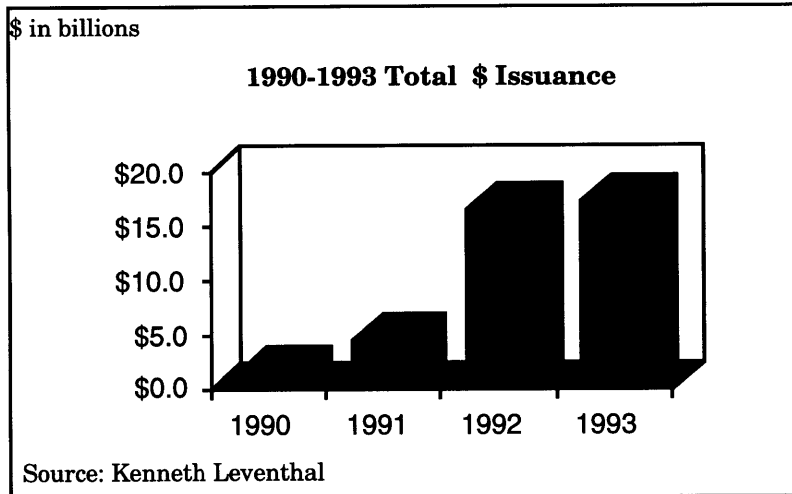
properties (commercial properties). In 1993, the RTC began to wind down its asset-disposition program and issued only \$2.8 billion of securities”.<sup>36</sup>

Leventhal’s comments are illustrated by the graphs below. The RTC issues grew from no securitized debt in 1990, to peak of \$9.1 billion in 1992. By 1993 RTC CMBS issues had been reduced to \$2.8, and 1994 projections, according to Laura Quigg, of Lehman Brothers, are approximately \$3 billion. Clearly, the RTC is retreating from as the CMBS market as the S&L industry experiences fewer failures.

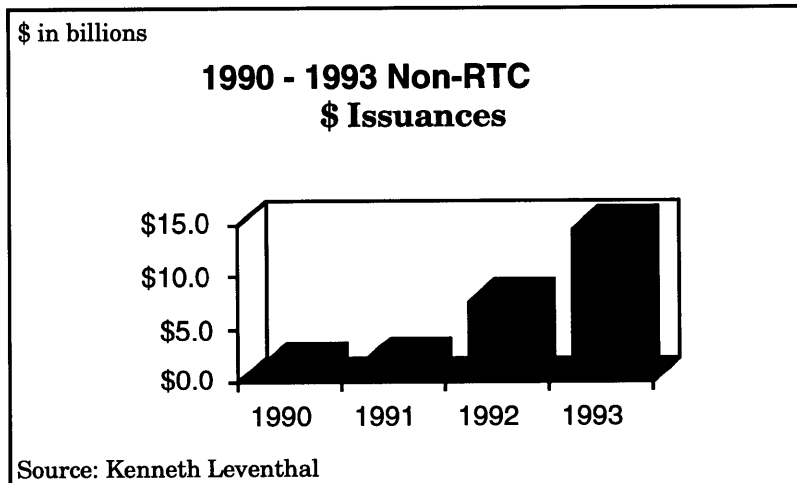


Although the RTC's role has diminished in the CMBS market, the graph below illustrates that overall issuance activity in CMBS market has not diminished.

<sup>36</sup> Kenneth Leventhal & Company, Income Property Securitization Survey 1993, 1



The void left in the CMBS market by the withdrawal of the RTC has been largely filled by insurance companies, owners/developers, conduits, REITs, and commercial banks. The graph below illustrates the dollar volume these combined entities have contributed to the market.

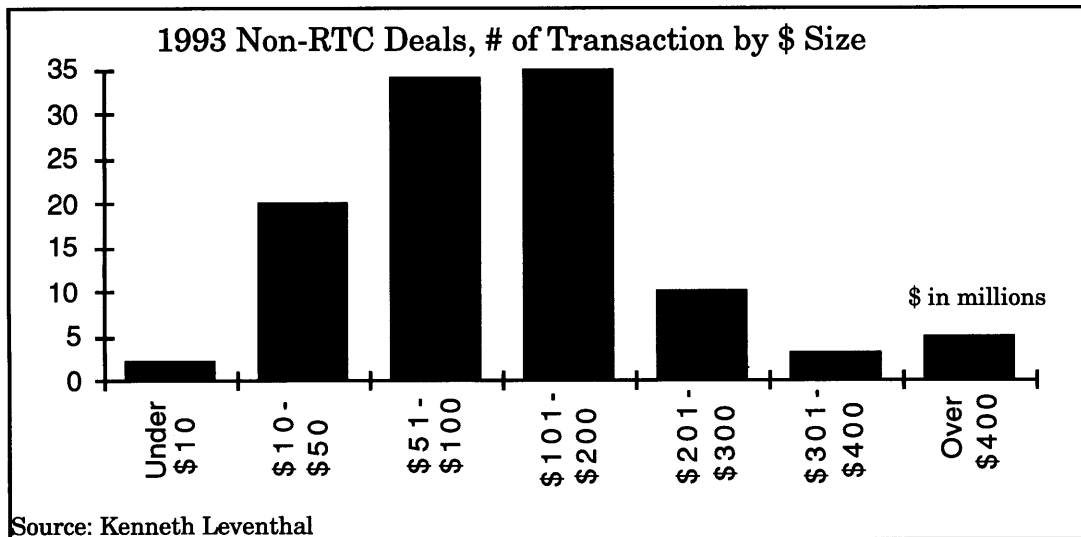


Leventhal believes that the private sector has “eclipsed the RTC as the dominant force”<sup>37</sup> in the CMBS market. Leventhal evidences the evolution and maturation of the CMBS market by pointing to the increased capital and

<sup>37</sup> Ibid, 7

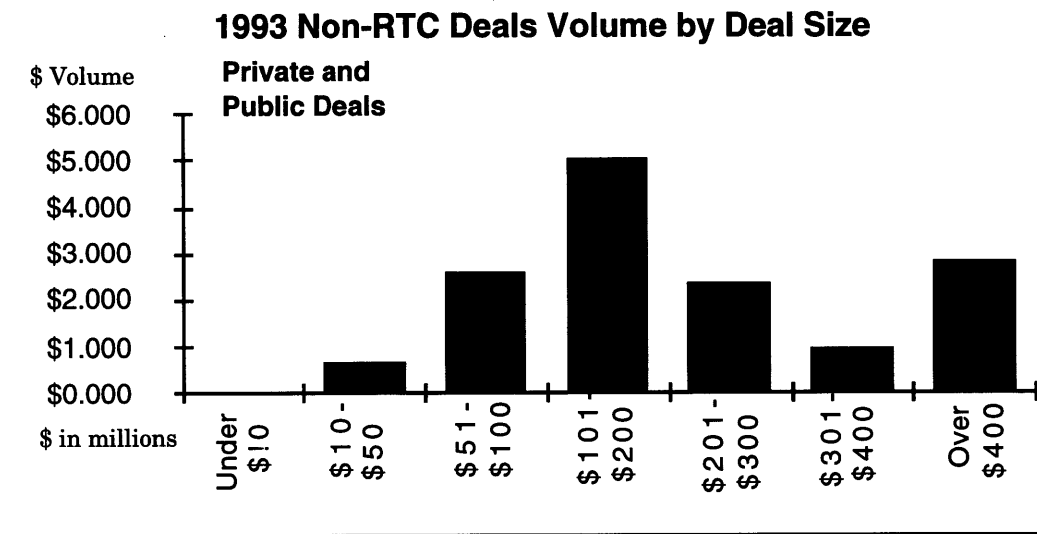
resource commitment on the part of underwriters, investors, and rating agencies as well as the volume and scope of private sector activity.

Leventhal segmented the data to illustrate the volume of CMBS transactions by dollar size. As illustrated below, the majority of the CMBS transactions, when measured by number of transactions, were between \$50-\$200 billion. Almost evenly spread between the two intervals, with 34 deals in the \$50-\$100 million range and 35 deals between \$100-\$200 million range.



When the same data is looked at in terms of the total dollar amount transacted in each category, the majority of money raised in CMBS transactions was raised in transactions which ranged in size from \$100-\$200 million

Source: Kenneth Leventhal



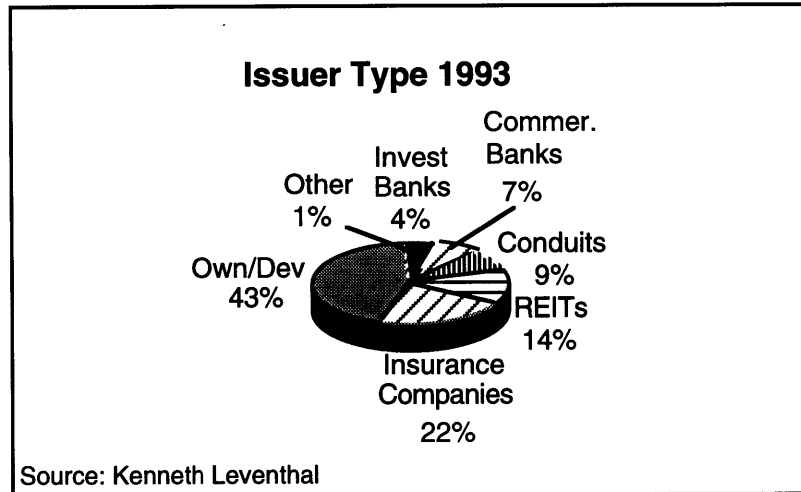
Although Leventhal is confident that private CMBS issuers will enter the market as the RTC retreats, significant obstacles exist which may block this growth. Hence, the question remains, can the CMBS market, which could not have developed into its current size and strength without the RTC, continue to survive without the RTC activity.

The balance of this paper will look at the CMBS market from both a supply and demand perspective to determine its ongoing feasibility and prospects for growth.

### **I. Supply Side Analysis**

Kenneth Leventhal estimates that \$200-\$400 billion in commercial mortgages will mature over the next several years. Leventhal believes that traditional sources of financing will not be able to supply this magnitude of funds to the commercial real estate market. Accordingly, there must be a significant

increase in the supply of CMBSs.<sup>38</sup> The graph below illustrates who the major CMBS issuers were in 1993, and their percentage contribution to the growth of the CMBS market. These issuers will be reviewed on a case by case basis to assess their future potential contributions to the market and identify obstacles which may slow or limit such contributions.



### **Life Insurance Companies**

Life insurance companies, which accounted for 22% of the CMBS issues in 1993, are a unique component of the CMBS market. They are, in fact, a significant participant in the issuance of CMBS, competitor to the CMBS market, as well as purchaser of senior CMBS classes.<sup>39</sup>

Changes to risk based capital (RBC) requirements of insurance companies have had dramatic impact on the investment and divestment strategies of insurance companies. It is important to understand the nature of these reserve requirement changes because of the influences they have exerted on insurance companies' investment practices.

<sup>38</sup> Ibid, 7

<sup>39</sup> Beck, Susan, Travelers Realty, personal interview, July 21, 1994

In December 1992 National Association of Insurance Commissioners (NAIC) approved model legislation which effected the RBC requirements of health insurers. This legislation was subsequently enacted into law on a state by state basis retroactive to January 1, 1993. Similar legislation, effecting property and casualty insurers went into effect in January 1994.

RBC requirements are the “financial standards related to the risks of a particular business. These standards are used to establish the amount of capital needed to run that business”.<sup>40</sup>

For life insurance companies, the calculation is based on four broad categories of risk:

- C1, Asset default Risk. The insurance risk associated with the loss of interest or principal on loans or mortgages and the possible decline in the value of common stocks, property or other investments.
- C2, Insurance Risk. The risk that insurance benefit claims may exceed actuarial estimates of claims.
- C3, Interest Rate Risk. Representing the possible losses which would result from asset liability term structure exposure to interest rate-sensitive investments.
- C4, General Business Risk. The risk associated with losses stemming from litigation or changes in tax policy.<sup>41</sup>

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<sup>40</sup> Zinngrabe, Claude J. Jr., Real Estate Investment by Insurance Companies, How Risk-Based Capital Requirements Affect It, Urban Land Journal, March 1994, 12

<sup>41</sup> Ibid, 13

"To determine the total RBC for a life insurance company, the RBC for categories C-1, C-2, C-3 and C-4 are entered into the following formula:

$$\text{RBC} = (C-4) + \sqrt{\{(C-1) + (C-3)\}^2 + (C-2)^2}$$

Regulators base their level of intervention of the Total Authorized Control Level Risk Based Capital. The Total Authorized Control Level RBC Ratio is determined by dividing the Total Adjusted Capital by the Total Authorized RBC and multiplying the result by 50%."42

Regulatory agencies will use the categories described above to determine the risk-based capital ratio for each insurer. This ratio serves as a benchmark for triggering levels of regulatory action ranging from:

- Company Action. If the insurance company's adjusted capital is less than 200 percent of authorized control level risk- based capital (a ratio of 1:2), then the insurance company must provide regulators with a multiyear financial statement outlining how it plans to diminish risk by raising capital or disposing of risky assets.
- Regulatory Action. If the ratio is below 1:1.5, regulations allow for the examination of the insurer and the issuance of specific orders for corrective actions.
- Authorized Action. If the ratio drops below 1:1, the regulator is authorized to take control of the insurer.<sup>43</sup>

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<sup>42</sup> Merrigan, Peter, "RISK BASED CAPITAL REGULATIONS FOR THE LIFE INSURANCE INDUSTRY AND THEIR IMPLICATIONS FOR REAL ESTATE", MIT Thesis, MS in Real Estate Development, September 1993, 9

<sup>43</sup> Ibid, 13



- Mandatory Action. A ratio below 1:0.7 requires the state to take control of the insurer.

These changes have modified the asset allocations of life insurance companies. “Essentially, they [insurers] are changing their strategic goal from optimizing the return on assets to optimizing the return on capital”.<sup>44</sup> No longer can a life company focus exclusively on yield, they must incorporate risk and look at yield on "an after RBC requirements basis".

To a degree, changes in RBC requirements have had different short term impacts on life insurance companies, depending upon the general health of the company. For example, The Travelers Insurance Company, with an RBC ratio of 133.4% and an asset allocation of 5.6% in foreclosed real estate, will most likely be more willing to pursue a bulk sale strategy than would Massachusetts Mutual Life Insurance Company, with a 172.9% RBC ratio, and 1.3% of its assets in foreclosed real estate.<sup>45</sup> The more financially healthy the company, the less likely they are to pool their troubled real estate assets and issue securitized debt.

This diversity was confirmed by Susan Beck, of Travelers Realty, who highlighted the different lending strategies between the large and mid-sized life companies currently in effect. She noted that the mid-sized firms, such as Principle and Northwestern, were placing high quality mortgages into their portfolios in historic percentages. She attributed this renewed interest to the

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<sup>44</sup> Ibid, 13

<sup>45</sup> The Townsend & Schupp Company, “Risk-Based Capital Ratios for the Year Ended December 31, 1991, Life Executive Observations (Vol. 5, No. 3), p. 140

relatively high yield on the mortgages, the recovering real estate industry, and the minimal competition from large life insurance companies who are continuing to shrink their problem loans before aggressively seeking new business.<sup>46</sup>

Insurers and commercial banks are expected to reduce their inventory in commercial mortgages by \$130-\$160 billion according to Robert Zulkosky, Managing Director of General Capital.<sup>47</sup> Diminishing inventories by such a significant amount will impact virtually all life companies who will depend heavily on the CMBS market to achieve their targeted RBC ratios.

Insurers have several options when deciding how to securitize their portfolios. These include selling the entire pool to a third party which will securitize the debt; securitizing the pool themselves and selling off the higher-rated, lower risk classes while retaining the higher-yielding, higher-risk classes; or securitizing the pool themselves and selling off the higher-yielding, higher risk classes while maintaining ownership of the lower-risk classes. "From a risk-based capital and credit rating agency perspective, only the first and third options will reduce the actual real estate risk and improve the RBC ratio".<sup>48</sup>

If the second alternative were acceptable to regulators, insurance companies would have the ability to meet lower risk based capital requirements without reducing the risk of their portfolios. Anticipating this action by insurance

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<sup>46</sup> Beck, Susan, Travelers Realty, personal interview, July 23, 1994

<sup>47</sup> Feinberg, Phyllis, "Real Estate Finance: All Roads Lead to Wall Street", Real Estate Forum, May 1994, 33

<sup>48</sup> Merrigan, 42

companies, Regulators require comprehensive details on all securitized debt offerings to prohibit this from occurring.

The disincentive for insurance companies to hold the lower yielding, lower risk, senior classes of securitized debt offering has had a significant impact on the real estate investment strategies of life companies. As noted above, the immediate impact is a large incentive for life companies with lower risk-based capital ratios to become issuers of CMBSs. “For the first time since mortgage loan data have been collected, the life insurance industry’s commercial loans outstanding have declined by almost \$20 billion over the past two years. It is reasonable to assume that this decline is the result not only of unfavorable real estate market conditions, but also of investment management decisions taken in anticipation of the implementation of risk-based capital requirements”.<sup>49</sup> As these companies empty their portfolios of their higher risk assets their incentive to continue issuing CMBSs will diminish.

Also contributing to the expected reduced CMBS activity by life insurance companies is the fact that the life companies “are showing a growing propensity to restructure loans rather than carry them as delinquent or foreclose”.<sup>50</sup> The RBC requirements allow life companies to show mortgages as being “reinstated in good standing”. A mortgage with this designation has much lower RBC requirement than a delinquent loan or loan in foreclosure. Again, this policy is more beneficial to healthy life company than one with high RBC standards since the re-worked mortgage must “season” for two years prior to receiving the revised RBC rating.<sup>51</sup>

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<sup>49</sup> Zinngrabe, 12

<sup>50</sup> Ibid, 14

<sup>51</sup> Beck, Susan, Travelers Realty, personal interview, July 23, 1994

Cliff Brown, of Aldrich, Eastman Waltch expressed his concern about life companies ongoing contributions to the CMBS market when he stated that insurance companies have become increasingly yield hungry. The life insurer can underwrite mortgages with a low default risk (low RBC requirement) which it will hold in its portfolio which will have a higher yield than acceptable CMBSs. Intuitively, this makes sense because the life insurance companies are being rewarded for the risk associated with the lower class securities which, in effect, are still incorporated into the whole commercial mortgage.<sup>52</sup>

This more traditional and aggressive role by life insurance companies will not only diminish their role as a CMBS issuer, it has also raised concerns in the overall mortgage market. An anonymous wall street banker was quoted as saying “If anyone creates problems [in the valuation of real estate], it will be the banks and life companies coming in with money and thinking that they’re smarter than the market’. This same banker noted “Since it’s hard for them [life insurance companies] to compete on a price basis -- the rate they charge -- they are starting to compete on proceeds or the amount of money they will lend”.<sup>53</sup>

This strategy of selling troubled loans to the CMBS market in the short term while directly competing against the CMBS market in the long term was confirmed by Susan Beck of Travelers Real Estate. Beck also discussed the ongoing ability of life insurance companies to act as real estate lenders. She believed that the large life companies would soon look to compete for the high

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<sup>52</sup> Cliff Brown, Senior Vice President, Aldrich, Eastman Waltch, personal interview, June 29, 1994.

<sup>53</sup>Feinberg, 33

quality loans to incorporate into their portfolios. She also described how the large life companies would soon be forming conduit like products, which would allow them to generate fees on non-investment grade mortgages while feeding them to the CMBS market.<sup>54</sup>

Since the early 1950's life insurance companies have been losing market share of national savings due to increased specialization of other non-regulated financial intermediaries, and a lack of insurance product competitiveness.<sup>55</sup> According to Blake Eagle, Chairman of MIT's Center for Real Estate, the whole life insurance products have become increasingly non-competitive with alternative investment vehicles. This condition may ultimately limit the funds with which life companies can compete in the commercial mortgage market.<sup>56</sup>

In summary, over the next several years life companies will use the CMBS market to dispose of their trouble assets. Once they remove these assets from their balance sheets, it is unlikely that the life companies will continue to securitize their debt since the yield from CMBSs is lower than what they can otherwise generate.

As a competitor to the CMBS market, the life insurance companies will again dominate the low risk, high quality lending transactions. According to Andy Neher, TA Realty Associates, the interest rate charged by life companies, on transactions not greater than \$100 million, was very competitive. Further, the borrowing process from the life companies is much simpler and shorter

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<sup>54</sup> Beck, Susan, Travelers Realty, personal interview, July 23, 1994

<sup>55</sup> Merrigan, 61

<sup>56</sup> Eagle, Blake, Chairman, Massachusetts Institute of Technology, Center for Real Estate, personal interview, June 14, 1994

because the debt does not need an independent rating and underwriting.<sup>57</sup> As will be illustrated below, the ability of the life companies to compete diminishes as the deal size increases or the quality of the assets and cash flows lessens.

### **Owner/Developers**

As the pie chart above illustrated, Owners/Developers have been a significant issuer in the CMBS market. According to Thomas Arnold, Salomon Brothers, the increase has been largely the result of the lack of capital available to real estate from traditional sources, such as life companies and commercial banks.<sup>58</sup>

As life insurance companies re-enter the real estate debt market Owners/Developers of high quality assets have the option of acting as a CMBS issuer or choosing more traditional capital sources. When describing his decision criteria for deciding whether to issue CMBSs or borrow from traditional sources a real estate fund manager, who wished to remain anonymous, listed four criteria by which he made his decision. These were:

**Timing:** A CMBS transaction would take 5 to 6 months, while borrowing from institutional sources would require 3 to 4 months. Arnold, of Salomon Brothers, confirmed this typical timeline while further stating that the additional time related to the rating process required for a CMBS transaction.

**Flexibility:** The fund manger stated that he was certain that he had more flexibility when negotiating with the traditional debt sources. He attributed

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<sup>57</sup> Neher, Andrew, Chief Financial Officer, TA Reality Associates, personal interview, July 12, 1994

<sup>58</sup>Arnold, Thomas, Vice President, Salomon Brothers, personal interview, July 5, 1994

this to the rating agencies as well. This manager was concerned that the rating agencies could not address his need to modify mortgage covenants in a timely fashion. Alternatively, the life company could quantify the cost of modifying the covenants in a very short time period.

**Amount:** As mentioned above, life insurance companies are finding a competitive advantage in terms of offering higher loan proceeds in exchange for higher yields. This was confirmed by this fund manager. He stated that the life companies were prepared to accept a higher LTV ratio, while offering a competitive interest rate.

Again, the fund manager attributed this to the conservative underwriting procedures of the rating agencies. He believes that rating agencies would adjust all leases, regardless of their term to maturity, to current market rates, and view all tenant improvement and capital expenditures as recurring annualized outflows and not accounted for just in the specific year of occurrence.

**Rate:** This is where the fund manager expected to see a clear advantage to the CMBS market. Although initial quotes by “Wall Street” indicated that the CMBS market could be 35-45 basis points less than the traditional debt sources, the fund manager found it to very difficult to obtain a firm quote in the CMBS market. He was concerned that in an increasing interest rate environment the CMBS rates could quickly meet or exceed the fixed rate he was being quoted by life insurance companies.

Further diminishing the spread between traditional and securitized sources of debt were the fees associated with each type of offering. In case of institutional sources, fees were approximately \$150 thousand (marginal transaction costs). The fees associated with a CMBS offering were estimated to be \$1.5 million for a loan estimated to be at least \$10 million less than that offered by institutional sources. The fund manager estimated that over a seven year period, these additional fees associated with the CMBS offering translated to an increase in the cost of funds by approximately 20 basis points. By the fund managers calculations, this left the CMBS with an approximately 15- 25 basis point advantage over traditional financing. In the fund manager's opinion, this lower yield did not offset the risks associated with the CMBS offering.

**Other Issues:** The fund manager noted that the competitive status of traditional financing sources has been a fairly recent phenomenon, occurring within the last 12-18 months. Prior to that time, the lending terms of institutions such as life companies were not competitive. As the real estate industry has recovered insurance companies and commercial banks have become much more focused and aggressive in their real estate lending activities.

This renewed interest from these lenders has led to several issues which could further separate the CMBS market from traditional debt sources. These include:

- CMBS issues require new appraisals or derived investment values (DIVs).
- Principal amortization is not required by many of the life companies.



- Additional capital reserves for improvements and potential debt service shortfalls are standard for the CMBS issues.
- CMBS issues are a new and unfamiliar process making it difficult for the issuer to control once set in motion.

In summary, it appears that owners/developers have chosen to issue CMBSs in the absence of alternative financing. As traditional financing has returned to the market, the need to issue CMBS may be diminishing. Owners/developers seeking debt for high quality/low risk transactions (in particular, multi-family and retail) will likely obtain funds from traditional institutional investors for the reasons listed above. As the quality of the transaction diminishes or the size increases, however, the likelihood of becoming a CMBS issuer increases.

Both Neher and Arnold confirmed that the CMBS transactions are not competitive for transactions below approximately \$100 million. Above this benchmark the number of sources of capital diminishes and forms an oligopoly like condition.<sup>59</sup>

### **Conduits**

In 1993 conduits accounted for 9% of the CMBS offers. Although the conduit programs have a vested interest in seeing the CMBS market grow, these funding sources are feeling the pressure of traditional lenders reentering the lending market.

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<sup>59</sup> Ibid

“Conduits run by combinations of mortgage brokers and Wall Street investment banks are expected to provide billions of dollars for real estate financing”.<sup>60</sup> Quigg of Lehman Brothers stated that although the conduits would not achieve the amount she projected the beginning of 1994, they would still contribute billions of dollars to the CMBS market in 1994. She stated that the primary reason for the downward revision in conduit CMBS projections related to the increased competition from traditional lenders”.<sup>61</sup>

The conduit programs, which did not make any contributions in 1992, contributed \$1.2 billion to the CMBS market in 1993.<sup>62</sup> While most informed sources agreed that conduits will continue to contribute to the CMBS market, it is uncertain how much this market segment can support and what types of real estate will collateralize the mortgages incorporated into the CMBS issues.

The following excerpt from Feinberg’s article, “All Roads Lead to Wall Street” illustrates the evolution going on in the conduit CMBS market:

“While the majority of conduits have heretofore stuck to one property type, with multifamily being the most popular, Merrill’s conduit is going a step forward according to C. J. DeSantis. ‘We would like to have every property type - hotels, office buildings, strip shopping center, light industrial facilities - and mix them all together. Clients like diversification,’ he says”.<sup>63</sup>

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<sup>60</sup> Feinberg, 37

<sup>61</sup> Quigg, Laura, Lehman Brothers, personal interview, July 6, 1994.

<sup>62</sup> Kenneth Leventhal & Company, 10

<sup>63</sup> Feinberg, 37

Clinton Fisch, partner, Carr Capital Corporation, a Boston based conduit, expressed a similar view of the evolution of the conduit market. He noted that competition from the life companies has changed the niche in which the conduits are most competitive.<sup>64</sup>

Fisch noted that at the earliest stage of the conduit market, approximately 12-18 months ago, the conduits were funding predominately multi-family product. Since that time, life insurance companies have returned to the multi-family market and have aggressively sought this business, offering funds for these types of transactions at 60-90 basis point discount over the conduit market.

At this point, according to Fisch, the conduits changed direction and sought a different niche in which they would not compete head to head with life companies and life companies. The conduits began offering financing to lower quality or less desired property types, such as low 'B' and 'C' grade office building, industrial building and some specialty product such as hotels.

Interestingly, Fisch sees another evolution underway in the conduit market. He believes that the diminishing spread between CMBSs and comparable treasuries is allowing conduits to compete more effectively on higher quality properties.<sup>65</sup>

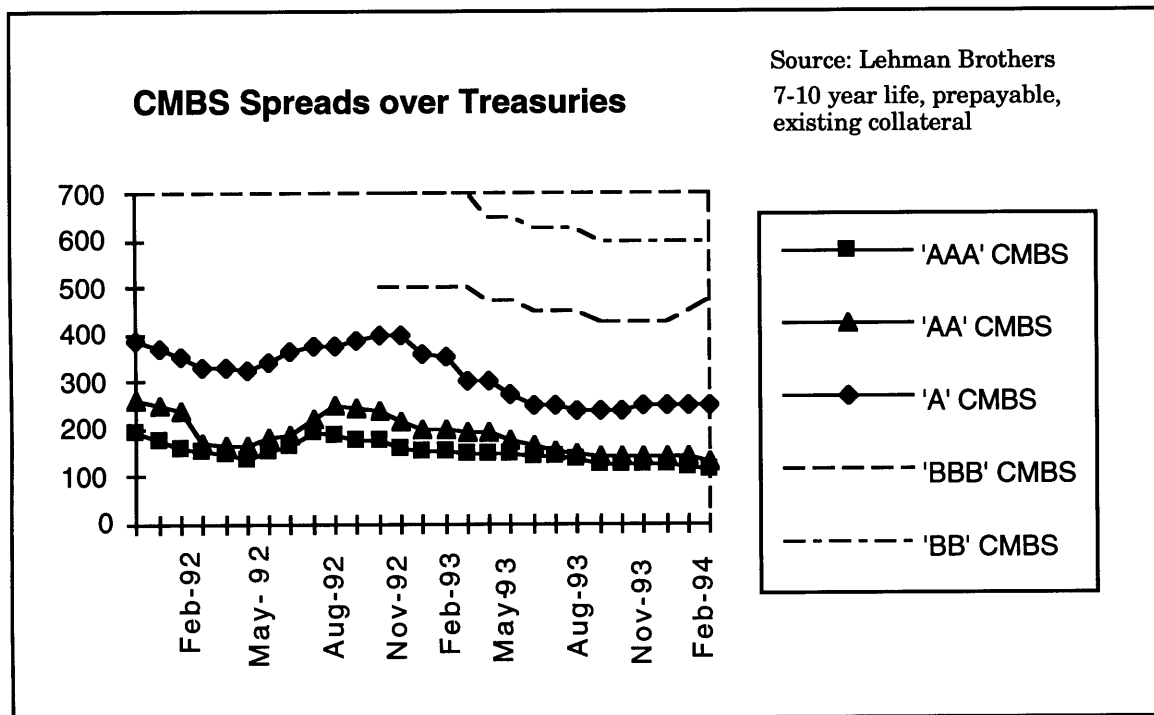
The graph below illustrates Quigg's comments that the spread between 'AA' CMBSs and comparable maturity treasuries had diminished from 260 basis points to 130 basis points between February, 1992 and March, 1994. She

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<sup>64</sup> Fisch, Clinton, Partner, Carr Capital Corporation, personal interview July 11, 1994

<sup>65</sup> Ibid

noted that this was largely a result of investors becoming more comfortable with CMBS transactions. Early investors received a premium for investing in a new product. As the product becomes more understood and prevalent, the CMBS premiums are being arbitrated away. <sup>66</sup>



Fisch also noted additional competitive features of the conduit products. These include:

- **Non-recourse debt.** To the extent that traditional lenders are willing to consider offering debt, they now generally require recourse to the borrower. Alternatively, the conduits are willing to provide non-recourse debt.
- **Timing.** Relative to commercial banks (and to a lesser degree, life insurance companies), the conduits can provide funding faster and more

<sup>66</sup> Quigg, personal interview, July 6, 1994

efficiently. This is not so much a testament to the conduits as it is an indication of the conservative lending policies of commercial lenders.

Although Fisch's comments regarding timing seem to contradict Neher's comments on acquiring funds through a securitized offering, this is not the case. Most of the conduit programs have an affiliation with an investment bank which will pool the mortgages for a CMBS offering. Currently, many of the investment banks are willing to "warehouse" the mortgages while waiting to acquire enough debt to make a CMBS offering.

Clearly there is the opportunity for growth in the conduit market. But not everyone is sanguine about the conduit market. "A word of caution about the conduit boom is offered by GE Capital's Bob Zulkowsky: 'I don't know if the current structure of the conduit is the right answer [to real estate's capital requirements]. There are so many conduits now that there could be a falling out. Some of them could be the S&L's of the [mid-] 1990's'"<sup>67</sup>

Similar concerns about the future of the conduits were echoed by Brown of Aldrich, Eastman & Waltch: "Ten years ago there were hundreds of residential mortgage conduits, today there are two. I believe the commercial mortgage conduits will follow this same path". Brown noted that many forces at play which would force this occur, including the diminishing fees for the conduits as well as the need for standardized documents.

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<sup>67</sup> Feinberg, 38

In summary, it appears that conduits will continue to contribute to the CMBS market in a limited, albeit increasing amount. They appear to have filled the niche left vacant by the demise of the thrift industry.

### **Real Estate Investment Trusts (REITs)**

REITs accounted for 14% of the CMBS issues in 1993, or approximately \$2 billion. Like conduits, REITs did not contribute at all to the CMBS market in 1992.<sup>68</sup> The REIT CMBS activity in 1993 “corresponded with an increase in initial public offerings (IPOs) of REITs in the stock market”.<sup>69</sup> This correlation was explained by W. Blake Baird, managing director of Dean Whitter Reynolds, “Many REITs are finding that in connection with going public, they can take their existing debt, securitize it -- and buy down the interest rate”.

The current REIT market is filled with many young public companies which have yet to achieve an institutional grade credit status. This condition has fostered the REIT activity in the CMBS market. “Securitized debt has been sold for ‘younger REITs that may not quite have the credit rating to sell unsecured debt, like an individual who can’t go to the bank without hocking his car or some other asset’ explained CJ. DeSantis, managing director Merrill Lynch”.

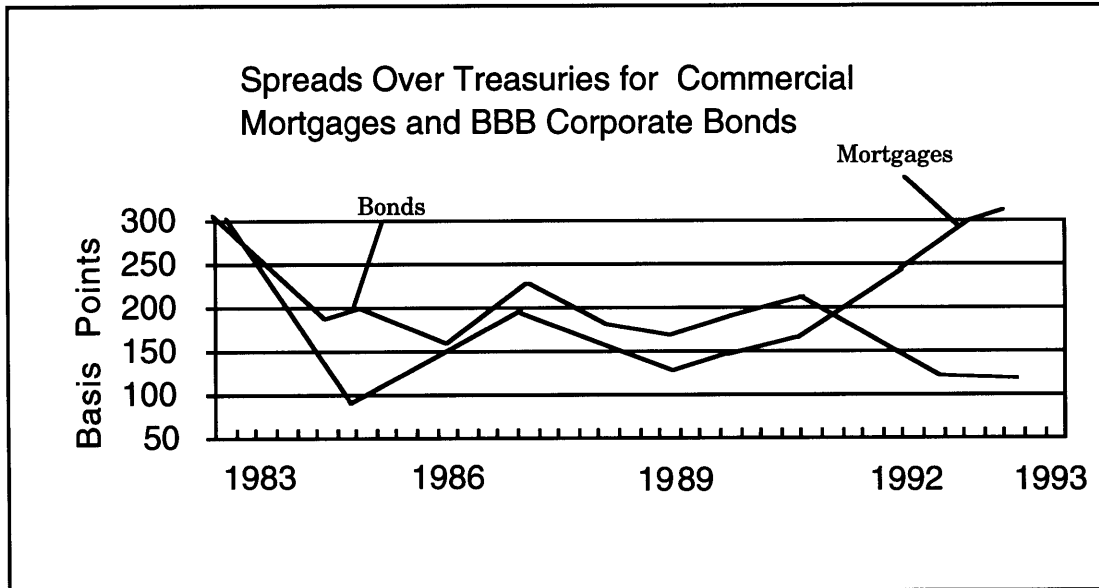
As the newly established REITs mature and establish higher credit ratings, they may not be as willing to use the CMBS market to acquire debt financing.

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<sup>68</sup> Kenneth Leventhal, 1

<sup>69</sup> Ibid, 10

As the graph below illustrates, it is much more expensive for REITs to raise funds through the CMBS market rather than issuing corporate debt.



Sources: Salomon Brothers, Standard & Poor's, American Council of Life Insurance and John B. Levy Mortgage Survey. Note: Spreads are annual averages. Mortgages are on a bond equivalent basis. 1993 data is through June 1993

There are several explanations for the spread in yields between these debt instruments. These include:

- A “real estate premium” in the marketplace. Investors in the capital market have strong memory of the recent real estate recession, and the poorly constructed mortgage transactions of the 1980's, and are drawn away from this investment.
- Increased regulatory constraints which limit institutional lending in commercial mortgages.

- The relative illiquidity of commercial mortgages relative to corporate debt.<sup>70</sup>

This spread between the cost of debt certainly leaves the long-term REIT contributions to the debt market suspect. But, as pointed out above, the cost of raising funds in the CMBS market is dropping. If this trend continues the REIT market may find it to its advantage to continue its practice of raising debt in a securitized form.

Further, the recent LTC Properties REIT offering may indicate an additional reason for increased REIT activity in the CMBS market. In its offering, LTC Properties offered shares of their hybrid health care REIT to the public. Effectively, LTC Properties is a debt REIT which “invests in long-term care and other health care facilities through a variety of transactions including mortgage loans, facility purchase/lease transactions, and other investments.”<sup>71</sup>

In particular, LTC holds \$96.3 million, or 58% of its total real estate investments, in mortgage loans and an additional \$40.7 million, or 24% of its portfolio, REMIC certificates. The REMICs were created through the securitization of approximately \$114.7 million in mortgages.

This offering, like most REMIC offerings, was “broken into tranches, including two senior pieces (rated ‘AAA’ and ‘AA’) with a total face value of roughly \$75.7 million and a blended rate yield of 7.1%, and the other subordinated pieces with a \$39 million face amount and an effective interest rate of 17% over the term

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<sup>70</sup> Jacob, David P., Duncan, Kimbell R., page 43

<sup>71</sup> Smith Barney Shearson, offering summary “LTC Properties, Inc. #(LTC-NYSE), April 19, 1994, 3



of the REMIC”.<sup>72</sup> LTC sold the \$75.7 tranche to third party investors while keeping the subordinated classes in their portfolio. “The investments retained by LTC included pieces that were rated ‘AAA’ (interest only piece), ‘A’, ‘BBB’ and an unrated piece.

It appears that LTC does not believe that its assets, participating commercial mortgages securing health care facilities, are being properly priced by the capital markets. This condition is largely factor of default risk. The capital markets and LTC Properties apparently disagree on the default risk of the mortgages and therefore on the value of LTC’s equity shares. Because LTC properties has industry experience and access to detailed property specific information, they believe they understand the default risk associated with the underlying mortgages better than the capital markets, which tend to look at the mortgage pools in more conservative terms.

Accordingly, LTC can increase the yield of their portfolio by securitizing their mortgages and selling off the lower yielding, senior classes, while keeping the higher yielding, junior classes. They believe this is a sound structure to increase the yield on their portfolio, since they have an unparalleled understanding of the default risk of the mortgages in the portfolio.

In terms of LTC Properties’ share price, the incorporation into the REIT has been acceptable because of LTC’s debt/equity (D/E) ratio, “the company’s debt as a percentage of total capitalization is only around 25%, below the health care REIT industry average of roughly 30.4%”.<sup>73</sup>

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<sup>72</sup>Ibid, 8

<sup>73</sup> Ibid, 11

It appears that LTC Properties has established an investment strategy which generates higher yields and is acceptable to the capital markets. If this is the case, it is likely that other debt REITs, either existing or to be formed, will implement a similar strategy. This, in turn, will contribute to the growth of the CMBS market.

While it is clear that REITs are a contributor to the CMBS market, it must be understood that REITs, like life companies, also act as competitor to CMBSs. As Quigg notes “real estate investment trusts (REITs) are the primary capital market alternative to CMBS transactions for investing in real estate”.<sup>74</sup> In addition to being a source of mortgages for securitization, REITs provide an alternative to the CMBS market, which attracts capital from the CMBS market. Investors seeking more liquid real estate investments may choose an equity or debt REIT in lieu of investing in the CMBS market.

In summary, the REITs are currently a significant contributor to the CMBS market. REIT activity stems largely from their inability to borrow against their corporate balance sheet. As the REITs mature, and their credit ratings increase, they will likely diminish their CMBS activity. In the interim, product specific debt REITs, like LTC properties, are likely to make increasing contributions to the CMBS market.

**Investment Banks**

It is important to distinguish between the different roles performed by investment banks in the CMBS market. For the most part, investment banks

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<sup>74</sup> Quigg, 19

provide two services to the CMBS market. First, they act as an intermediary for the conduit programs. As described above, in this role, investment banks provide access to the capital markets for conduits by acting as the intermediary between (i) the conduits, who originate the mortgages and (ii) the purchasers of the CMBS issues, who, effectively, act as the lender.

In their other role, investment banks act as a CMBS issuer. Investment banks have been active in the purchase of pools of commercial mortgages from institutions such as the RTC, FDIC, commercial banks and life insurance companies. Typically, these loans are no longer meeting investment grade criteria for reasons such as the borrower has defaulted or the loan no longer meets required LTV ratios. In order to make their balance sheet more acceptable to both regulators and investors, institutional owners of these distressed mortgages have chosen to pool these mortgages and sell them at discount from book value.

Investment banks have seen this as an opportunity for arbitrage. Investment banks have purchased the commercial mortgage pools, securitized the mortgages, and made significant profits from the sale of the CMBS issues.

Although the availability of pools of distressed commercial mortgages is dwindling as the real estate industry recovers from its recession, opportunities still exist to participate in this niche. Georgina McDonald, President of Fleet Management and Recovery, explains that the opportunities for pool acquisition are shrinking but not vanishing. She expressed a greater concern about pool pricing. Initially, pools of distressed commercial mortgages sold at deep discounts from book value. As it became evident that the initial purchasers of

the loan pools were earning substantial profits on their investments , new investors entered the market.

Between the diminishing number of pools being offered for sale and the increasing number of interested purchasers, the price of the commercial mortgage pools has increased. Macdonald feels this may lead to a minor increase in the number of pools being offered for sale. But more importantly, she is concerned about the viability of securitizing the pools as prices increase. Macdonald stated that CMBS issues stemming from the purchase of distressed assets have a limited horizon, perhaps two to three years.<sup>75</sup>

### **Commercial Banks**

Large, diversified commercial banks like J.P. Morgan and Banker's Trust have entered the market in much the same capacity as the investment banks. It is important to note that very few commercial banks have the power to issue securities. The FDIC Improvement Act of 1991 prevents all commercial banks, except those who have obtained a waiver, from offering securities. To the extent that commercial banks have obtained this waiver, they have competed against the investment banks and purchased pools of commercial mortgages for below book value, securitized these mortgages and issued CMBSs.

The long term future activity of commercial banks to act as a CMBS issuer (as it relates to purchased pool of distressed commercial mortgages, and not

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<sup>75</sup> Macdonald, Georgina, President, Fleet Management & Recovery, personal interview, July, 1994

warehoused conduit commercial mortgages) is limited for all the same reasons it is for investment banks, which were discussed above.

In summary, investment banks and commercial banks are likely to continue to contribute to the CMBS market as an issuer. Both commercial and investment banks will continue to securitize pools of commercial mortgages which were purchased at below book value, but the future of this activity is limited. The sellers of the distressed commercial mortgage pools do not have an unlimited inventory. As the real estate industry recovers and the institutions sell their lower rated mortgages, there will be fewer commercial mortgages whose value is below their book value. Accordingly, there will be fewer pools of commercial mortgages offered for sale, which will have a negative impact on CMBS activity.

As noted before, this diminishing segment of commercial and investment bank CMBS issuance is offset by the willingness of these institutions to “warehouse” loans from the conduit market. When these banks take on this function they are acting as more than an intermediary, having become a CMBS issuer.

## **II. Demand Side Analysis**

Like the supply side of the CMBS market, the demand for CMBS issues is evolving as this market matures. Early investors in the CMBS market were “compensated to participate in a young market that is paying a yield premium to attract new capital”.<sup>76</sup> As the CMBS market matures the range of investors in this market has expanded. William Bruggeman, professor of real estate at Southern Methodist University states that “Regarding placement

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<sup>76</sup> Jacob, David P., Duncan Kimbell R., page 43

and sale [of CMBS issues], an investor market beyond the scope of overseas investors, hedge funds, and private domestic investors is developing. As occupancy rates and underlying property values continue to strengthen, the risk/return investment characteristics of these securities are becoming increasingly attractive to certain pension funds and some life insurance companies with a low exposure to real estate”.<sup>77</sup>

As Bruggeman points out, the attractive yield which initially attracted more speculative investors, is now attracting more conservative investors to the CMBS market. As these more conservative investors, such as life insurance companies and pension funds, become more comfortable with the CMBS market, they have increased their stake in CMBS issues. As these new investors have entered the CMBS market, demand for CMBSs has increased and CMBS yield has decreased.

The decrease in yield and appeal to a broader investor class are essential for the future growth of the CMBS market. The decrease in yield accepted by investors has allowed CMBS issues to effectively compete with traditional sources of real estate debt financing, while the broader investor base has created a investor class willing to accept the decreasing yield.

As noted above life insurance companies have exhibited, for both regulatory and duration matching reasons, a willingness to purchase the senior CMBS classes. The lower classes are beginning to find investors in the REIT market. Kenneth Leventhal points out that “the market’s continued development

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<sup>77</sup>Bruggeman, William B., “Improving Conditions In the Commercial Mortgage Market”, The Real Estate Finance Journal, Summer 1994, 18

depends on continuing increases in the number of investors in mezzanine and junior debt pieces”.<sup>78</sup>

Another potential purchaser of these classes, not yet discussed, are pension funds. Historically, pension funds have not been an active participant in real estate debt markets. From 1980 to 1993, pension funds held an average 1.35% of their portfolio in commercial mortgages.<sup>79</sup> Of the total commercial mortgage market, approximately \$3.4 trillion, pension funds investment represents only 1.16%. Blake Eagle, formerly of the Frank Russell Company, believes that minimal investment by pension funds in real estate debt stems almost entirely from the lack of rating associated with whole commercial mortgages.

Eagle explained that the Employment Retirement Income Security Act of 1974 (ERISA) holds pension fund investors to “prudent man” standards. “Plan fiduciaries are directed to discharge their duties for the exclusive purpose of providing plan benefits with the care, skill, prudence, and diligence that a prudent man acting in a like capacity and being familiar with such matters would use in conducting a like enterprise having like goals”.<sup>80</sup>

Eagle stated that most pension fund investors believed that investing in unrated commercial mortgages did not meet the prudent man standard. When asked if he thought the ratings associated with CMBS would increase pension fund activity in real estate debt, Eagle said that it was possible, but that it

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<sup>78</sup> Kenneth Leventhal, 7

<sup>79</sup> Federal Reserve System “Flow of Funds Account” (March 9, 1994)

<sup>80</sup> Lore, Kenneth G., “Mortgage -Backed Securities - Developments and Trends in the Secondary Market”, 5-8

would be driven by investment advisors to the pension funds and not the pension funds themselves.

CMBS issues will compete for funds from the fixed-income portion of pension fund portfolios. Pension funds make allocations to fixed-income, but the specific investment decisions would be made by the pension fund investment advisors. As the CMBS market matures, and investment advisors become more confident in the CMBS rating process, additional funds will enter the CMBS market from the pension funds. But, Eagle believes this will be slow process.<sup>81</sup>

### **III. Additional CMBS Obstacles**

Although CMBSs have brought liquidity to the commercial mortgage market, critics are quick to point out there are several major obstacles would could limit the growth of this type of security. The two most commonly sited obstacles are:

1. Lack of consistent underwriting standards and lack of homogeneity among property types. The RTC was successful in its securitization efforts because it had the ability to make its commercial mortgages uniform. The lack of consistent underwriting resulting from the large number of commercial mortgage issuers and many different asset types, has been very large problem for the CMBS market.

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<sup>81</sup> Eagle, Blake, personal interview, July 19, 1994



Most followers of CMBS market agree there will be a consolidation in the conduit and servicer segment of the CMBS market. As this occurs, the ability to underwrite more standardized commercial mortgages will likely increase.

2. Insufficient data on project risks, products, and servicers. The CMBS market is very young, and dissemination of this information describing these characteristics of the CMBS has been slow. As interest in CMBS issues has increased, so has the flow of information. As noted above, the conduit and servicer market are likely to see a considerable amount of consolidation, and this will make the flow of information all the more efficient.

## **CONCLUSION**

It appears that the CMBS market is here to stay. The RTC and other lending institutions may have subsidized its creation but the CMBS market has become an economically viable means of raising real estate debt in the capital markets.

Spreads between CMBS issues and Treasury issues have reached a point where they are attractive to investors, offering yield in excess of corporate debt. But these yields are not so great as to make the supply of new CMBS issues infeasible. For certain niches, the CMBS market offers a very attractive means of raising real estate debt.

The CMBS market can offer the lowest cost funds for lower quality categories of real estate, such as hotels, and office buildings, as well as for lower quality assets within higher categories, such as multi-family and retail. Given the new regulatory constraints facing life insurance companies and commercial banks, it is unlikely that these institutions will re-gain a competitive advantage in these niches of the lending market.

The CMBS market is also very competitive for borrowers seeking large sums of capital, in excess of \$100 million. The ability of CMBS to access a broader investor class allows them to offer very competitive funds in this niche.

The CMBS market is not competitive in lending funds for high quality assets in amounts less than \$100 million. RBC capital requirements, which keep the life

insurance companies and commercial banks away from of lower quality assets, make lending on higher quality assets very attractive.

The CMBS market will continue to grow, perhaps not a tremendous rate once suggested before traditional debt sources re-entered the real estate debt market. The CMBS market has established a viable niche and should continue to flourish within these parameters. It is important to remember that the value of the CMBS market currently makes up only 4-5% of the commercial mortgage market, leaving room for significant growth opportunities.

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