SECURITIZATION OF MULTIFAMILY LOANS

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ABSTRACT

Securitization of multifamily properties has been gaining popularity because of the lack of available conventional financing sources has forced borrowers to look to the capital markets. The characteristics of multifamily housing (consistent track record and identifiable risk factors) make a strong case for issuing mortgage backed securities. As the market continues to grow and evolve from the RTC's initial securitizations, it will add to the size and liquidity of the secondary multifamily mortgage market which will assist all participants and serve to attract others. The RTC has been a major innovator in multifamily securitized transactions and has furthered the development of securitization technology.

Securitization will continue to be a viable method for attracting nontraditional real estate investors to the market. However, this can only be accomplished by the issuance of loans that are ratable by the rating agencies which then can be sold in the private or public capital markets. The key to the underwriting process of these securities is to create a system which allows consistency in the underwriting process, practice and documentation. When loans become due and restructuring or refinancing takes place, lenders will have the opportunity to standardize mortgage terminology and underwriting criteria.

Finally, institutional investors are likely to be the most active purchasers of these securities. Given the losses these financial institutions have already incurred, they are unlikely to return to the speculative development of the 1980's. Commercial banks and life insurance companies will remain in the market because their continued involvement will be required to manage their restructured holdings. The multifamily mortgage security is one that can satisfy investment demands as well as meet risk capital objectives (tax, accounting and regulatory).

Thesis Supervisor: Lawrence Bacow
Title: Professor of Law and Environmental Policy

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CHAPTER ONE

Overview of the Mortgage Securitization Market

"Just as securitization revolutionized the financing of single family real estate in the 1970's, so too will it dramatically change the financing of commercial real estate in the 1990's."

Larry Diamond and Carl Kane

Securitization of mortgages involve a number of parties and each of them plays an important role in the end product. They include developers, owners, lenders, rating agencies, investment bankers and investors. Each player has their own set of goals and objectives. In order to have an efficient market it is important for everyone to understand . The desire for liquidity brings more complex financing arrangements which can provide a customized approach to different types of investors. The custom designed transactions and potentially lower cost of funds make it clear why securitization will attract new investors and fill the void left by traditional lenders..

The market for commercial mortgage securitization can be traced to the success of the securitization of single family mortgages. In the late 1970's and early 1980's single family mortgage securitization emerged as a major new business. Financial intermediaries, looking for new opportunities, identified the estimated $900 billion pool of commercial mortgages (includes multifamily mortgages) as the next new market .[1] This pool of commercial mortgages are secured by income producing properties representing a wide range of property types. Approximately 70% of this mortgage pool is secured by commercial property: predominantly office buildings, warehouses or shopping centers. The remaining 30% of commercial mortgages are secured by multifamily properties. The

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[1]Kane, Carl "Fundamental of Commercial Securitization," *Mortgage Banking*, (July 1992), p. 18.

commercial mortgage market refers to any type of income producing real estate. Therefore, the commercial mortgage market includes the multifamily mortgage market.

SECURITIZATION TRENDS

Other types of assets in the U.S. have been caught up in the securitization trend and display similar signs of potential growth. Asset backed securities (ABS) are securities backed by assets other than mortgages. They surged from $1.2 billion in 1985 to $10 billion in 1986. The ABS market has grown roughly at a 50% pace and exceeded the $50 billion issued in 1991.[2] These securities have been backed by automobile loans, credit card receivables, manufactured housing, equipment leasing, oil distribution rights, franchise loans, boat loans, home equity loans, commercial loans, time share loans, rental car loans and unsecured personal loans.

The commercial mortgage securities market has climbed from less than $1 billion in 1990 to over $12 billion in 1992 (see figure 1).

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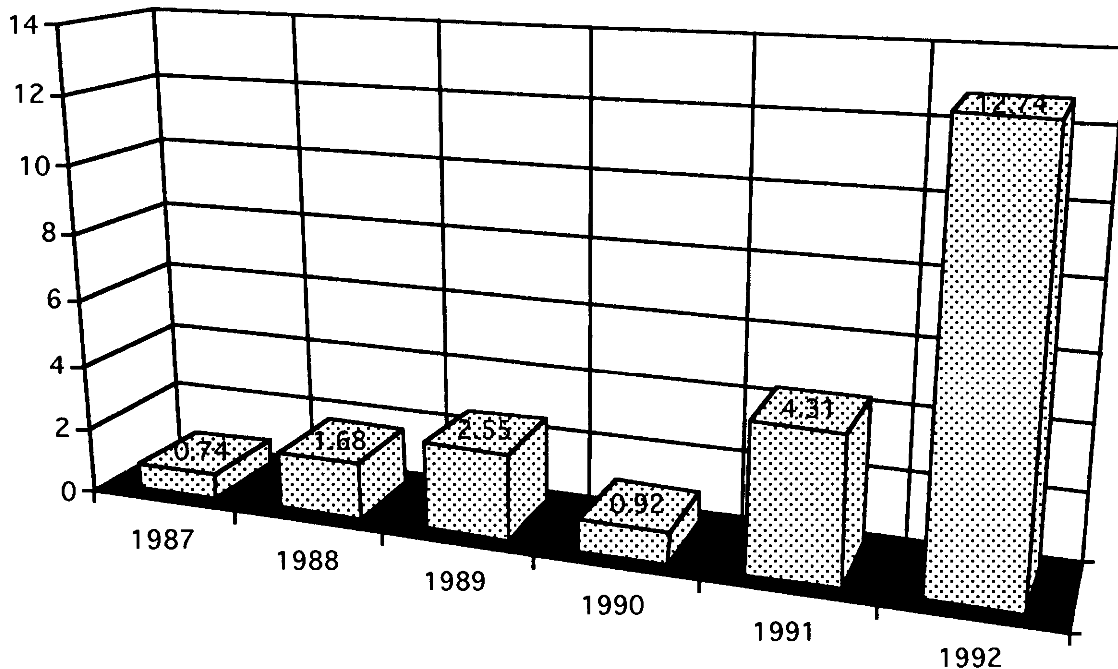
[2]Roberts, Blaine "Lassoing the Global Market", *Mortgage Banking*, (November 1991), p. 50.

Figure 1
Commercial Mortgage Securities Market
1987-1992



Sources: Inside Mortgage Capital Markets and Daiwa Securities America, Inc.

Driving this growth is the Resolution Trust Corporation (RTC). The RTC is the government agency responsible for disposing the assets of failed savings and loans. The agency has embraced securitization as an outlet for the mortgage assets of failed thrifts.[3] Since early 1991, the RTC has issued 12 multifamily and eight commercial mortgage pass-through securities, totaling $4.5 billion and $6.3 billion, respectively.[4] The sheer size of issuance by the RTC, with ratings and yields attractive to investors, has established a market for securities based on income producing properties. As a result of this growth in mortgage backed securities (MBS) there has been a trend away from the typical capital markets.

[3]Youngblood, M. D., "Multifamily Money," *Mortgage Banking*, (July 1993), p. 14.
[4]Darragh, Andrew J., “1993 Real Estate Outlook," The Balcor Consulting Group, (February 1993) p. 11.

TRADITIONAL CAPITAL MARKETS

The traditional capital markets for real estate have been short term construction loans from banks and other financial institutions. These loans were then followed by permanent loans from insurance companies, savings and loans and other institutional lenders. Other capital markets which have become available have been public offerings, private placements with institutional non-real estate investors (such as pension funds) and off shore markets (primarily Europe and Japan).[5]

In recent years, many traditional lenders such as banks, insurance companies and savings and loans have left the loan origination business. Together, these institutions held nearly half the multifamily mortgages as of year end 1991. However, due to poor portfolio performance, changes in the federal regulatory capital requirements and greater liquidity needs, they have sharply curtailed new financing activities.[6]

It was this lack of financing sources which allowed the securitization of multifamily mortgages to take place. Multifamily housing because of its approximate $300 billion market has become an untapped sector of the securitized mortgage market. One factor is a real and growing demand for multifamily housing. Another factor, which may be like comparing apples to oranges, is that vacancies in apartments have fallen to 9.7% while vacancies in the commercial sector are in the 15% to 20% range.[7]

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[5]Zenor, Donna J. and Dantzker, Steven R., "An Introduction to the Securitization of Real Estate Debt Financing" (January 1988) p. 3.
[6]Greco, Michael H., "Mortgage-backed Securities Financing Gains Popularity", *National Real Estate Investor*, (January 1993), p. 16.
[7]Bergman, Steve, " Multifamily Offers Unique Opportunities To Investors Looking For Solid Returns", *National Real Estate Investor*, (July 1993), p. 50.

The lack of financing activity by traditional lenders in the multifamily sector has created an opportunity for Wall Street to step in and fill the void by utilizing the capital markets. Wall Street has begun to capture that market with a new product, the multifamily mortgage backed security.

THESIS OVERVIEW

The purpose of this paper is to examine the securitization of the multifamily mortgage market and discuss the changes that have taken place since their introduction in 1991. In order to understand the securitization of the multifamily market, the origin of mortgage securitization must be presented. This thesis will present an overview of the securitization of the single family mortgage market and discuss its application to the multifamily market. The framework of securitizing the single family mortgage market has been applied to the multifamily market and in rapid succession, to the commercial market. The ability to securitize multifamily mortgages has been a direct result of the success and the government's role in the creation of a secondary mortgage market and investor acceptance of single family mortgage backed securities.

Chapter Two looks at the various participants in the single family market and examines their roles in constructing a secondary market for multifamily mortgage backed securities. This section discusses the elements used to successfully develop a secondary market for single family mortgages. A study of the market and how it operates will allow an understanding of what is necessary to create a market for multifamily MBS.

Chapter Three compares and contrasts single family mortgage backed securities with the multifamily mortgage market. The market for multifamily mortgage securities is rooted in its underlying collateral. Therefore, the attractiveness of apartments as an investment will be examined. The influence of the rating agencies will be looked at because investment grade rating are required to attract investors who typically would not invest in these types of securities. This chapter concludes with investment risks and how they are mitigated.

Chapter Four discusses 10 multifamily offerings which were examined to determine trends in securitizing multifamily loans. The bulk of multifamily mortgage securitizations to date have been done by the Resolution Trust Corporation. Therefore, they will constitute the majority of offerings reviewed to determine their influence on the market. This chapter highlights some of the recent innovations currently used in the multifamily market.

The last chapter summarizes the progress of the multifamily MBS market. The growth in this market has been due to the application of single family mortgage framework and the lack of conventional financing sources. Commercial mortgages, which represent the next generation of mortgage backed securities, are currently utilizing features successfully applied to the multifamily market.

CHAPTER TWO

The Mortgage Securitization Process:
From Single Family to Commercial Mortgages

"There are no copyright laws in investment banking and no way to patent a good idea. Pride of authorship is superseded by pride of profits. If Salomon Brothers creates a new kind of bond or stock, within twenty-four hours Morgan Stanley, Goldman Sachs and the rest will have figured out how it worked and will be trying to make one just like it. "

Michael Lewis "Liar's Poker"

This chapter highlights the process of pooling mortgages into mortgage backed securities. It begins by using a mortgage as a building block and moves through the government's involvement in the single family mortgage market. A brief history will be given of the "securitization" of single family mortgages and its correlation to the development of the secondary mortgage market. The growth and success of securitization in the single family mortgage market along with the lack of conventional financing sources has led to its application in the multifamily mortgage market.

SECONDARY MORTGAGE MARKET

A mortgage begins with a pledge of property to secure a payment of debt. The major mortgage originators (original lenders) of money are commercial banks, savings & loans, and mortgage companies. Once the originator has issued the loan, it then has the following options:

- hold the mortgage for its own portfolio
- sell the mortgage directly to investors or conduits as whole loans or as financial derivatives such as a collateralized mortgage obligations.

• use the mortgage as collateral for the issuance of a mortgage backed security

Investors are able to purchase these mortgage backed securities through dealers or investment bankers.

Selling mortgages to investors or conduits resulted in the emergence of a secondary mortgage market. A conduit is a government agency or a private company which purchases mortgages and sells them to investors as "pass-through" securities. They are called "pass-through" securities because undivided interests in the pool's principal and interest payments are sold.[8] The originator continues to service the mortgages, collecting payments, and "passing through" the principal and interest, less servicing and other fees, to the security holder. When a pool of mortgages is the collateral for a mortgage backed security, the mortgage is said to be securitized.[9] The secondary mortgage market process can be seen in Figure 2.

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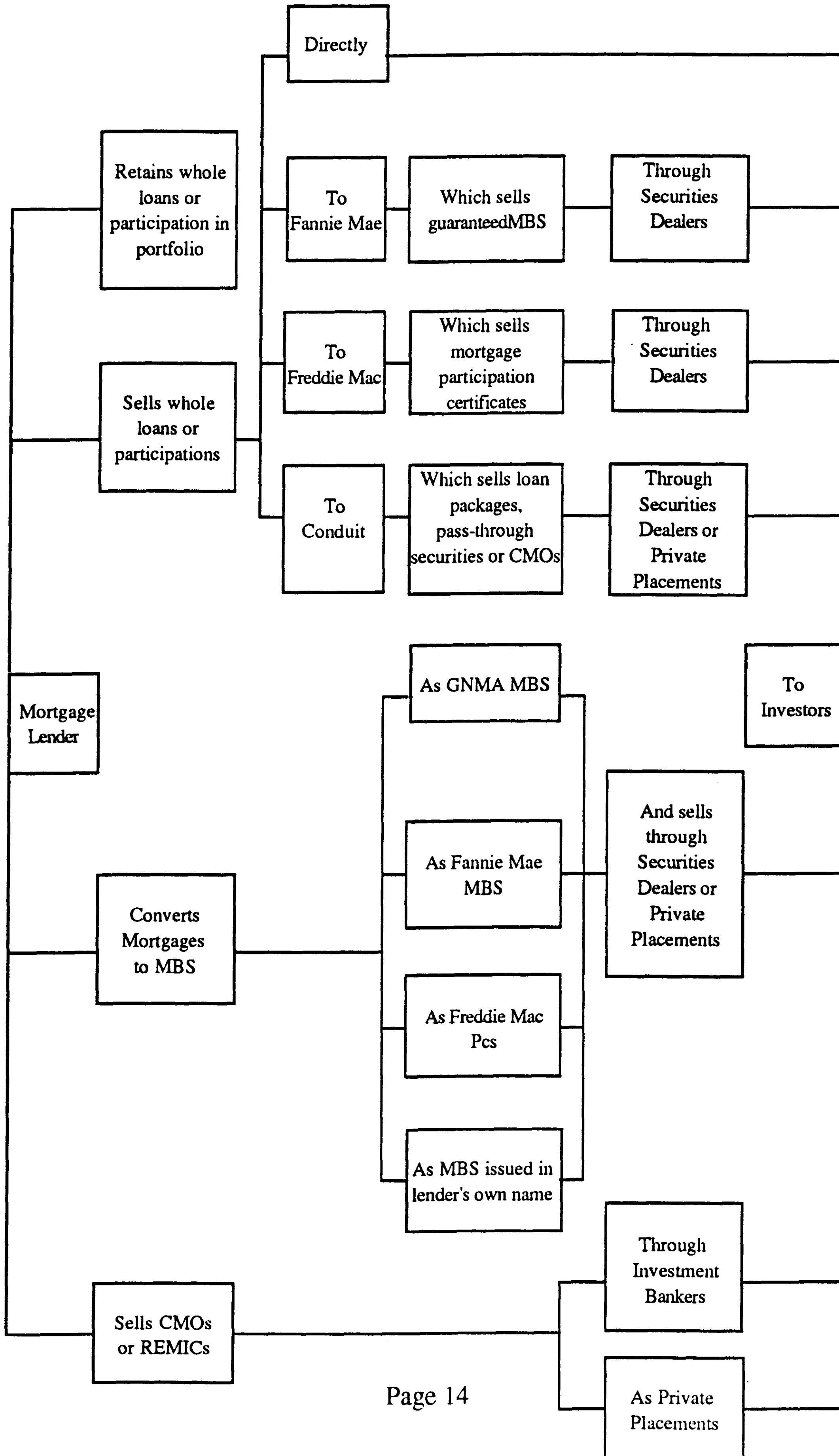
[8]Jaffee, Dwight M. and Rosen, Kenneth T. "Mortgage Securitization Trends", *Journal of Housing Research*, 1990, no. 1: 119.

[9]Fabozzi, Frank "*The Handbook of Mortgage Backed Securities*", (Chicago, Illinois: Probus Publishing Company 1992), p. 61.

Figure 2
SECONDARY MORTGAGE PROCESS



THE GOVERNMENT'S ROLE IN CREATING A MARKET

The federal government has played a major role in the securitization of the single family mortgage market through the following agencies:

- Government National Mortgage Association
- Federal National Mortgage Association
- Federal Home Loan Mortgage Corporation

They support the secondary mortgage market through loan purchases and guarantees of mortgage backed securities. Without question, the development of the secondary market, would have been impossible without their support.[10] The following is a summary of each agencies role in the evolution of mortgage backed securities.

1. Government National Mortgage Association

The mortgage pools underlying GNMA pass-through securities are made up of FHA insured or VA guaranteed mortgage loans. The GNMA MBS program is the only one which provides the full faith and credit support of the federal government to mortgage backed securities collateralized with government insured or guaranteed home loans. Ginnie Mae's mission is to support the government's housing policies by assisting those who would not qualify for conventional financing. This federal agency originally supplied mortgage credit through the secondary mortgage market in three ways:

- operation of mortgage backed securities program
- operation of special assistance programs
- serving as a custodian of a federally owned portfolio of mortgages

Today, the only function of Ginnie Mae is the MBS program. Among the different agency and private pass-through programs, GNMA pools are the most homogenous. All mortgages in a pool must be the same type and be less than 12 months old.

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[10] Baldwin, Earl "Doc" and Stotts, Saundra "*Mortgage Backed Securities*" (Chicago, Illinois: Probus Publishing Company 1990), p. 33.

GNMA's mortgage backed securities program is viewed as a means of directing funds from the securities markets into the local housing markets which can be used by mortgage lenders to finance new loans. This allows an increase in the supply of credit for single family housing and ensures that credit will be available at a reasonable interest rates.[11]

2. Federal National Mortgage Association

Fannie Mae was created in 1938 to provide liquidity to single family lenders. FNMA was operated as a wholly owned government corporation until 1954 when a portion of it became owned by private shareholders. In 1968, Fannie Mae split into two entities under the National Housing Act. The first agency was a federally chartered corporation owned by private shareholders which retained the Fannie Mae name. The second agency, GNMA, was established within HUD.

Fannie Mae's mission was to provide a secondary market for conventional mortgages and Federal Housing Administration (FHA) and Veteran's Administration (VA) single and multifamily mortgages. The goal of the FHA and VA programs were to encourage lending and construction through the insurance of lenders against losses on privately made loans.

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[11]Fabozzi, Frank, op. cit., p. 63.

FNMA provides funds to the mortgage market by purchasing home mortgages from local lenders which allows these lenders to extend additional mortgages. Since Fannie Mae operates nationally, it redistributes mortgage funds from capital surplus areas to capital short areas.[12] Once Fannie Mae has purchased these mortgages, it does one of two things: keep the mortgage loans as an investment for its own portfolio, or conduct a mortgage backed securities program for conventional loans and seasoned (age of a security as a result of amortization and prepayment speed) FHA and VA loans.

In 1981 FNMA issued its first mortgage backed securities. Fannie Mae used Ginnie Mae's MBS as a model to create the FNMA MBS. Like GNMA, FNMA guarantees the timely payment of principal and interest for all securities it issues.[13]

3. Federal Home Loan Mortgage Corporation

Freddie Mac is a corporation owned by stockholders and was created in 1970 to increase the supply of money that mortgage lenders can make available to homebuyers. Freddie Mac's mission has been to establish and enhance lending markets for conventional mortgages in order to provide borrowers with an adequate supply of mortgage financing at a reasonable rate.[14] Freddie Mac also operates nationwide and purchases mortgages to help redistribute mortgage funds from capital surplus areas to capital short areas.

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[12]Baldwin and Stotts, op. cit., p. 35.
[13]Ibid., p. 102.
[14]Freddie Mac 1992 Annual Report, April 1993, publication 165, p. 21.

The principal activity of Freddie Mac involves purchasing conventional, single family mortgages from mortgage lending institutions and reselling them as securities. Money is then available to purchase more loans from the primary lenders (mortgage bankers, banks, etc.) and the cycle continues. Most of Freddie Mac's mortgage purchases are financed from the sale of guaranteed mortgage securities called Mortgage Participation Certificates (PCs). The PCs are not guaranteed or insured by the federal government. Freddie Mac assumes the risk of borrower default.[15]

4. Market Size of the Government Agencies

Mortgage securitization in the U.S. began when monthly payments on pass-through securities were guaranteed by the federal government with the first issuance of GNMA securities in 1970. A total of $450 million of GNMA securities were issued in that first year. The following year bought the formation of Federal Home Loan Mortgage Corporation, along with the issuance of $2.7 billion of GNMA securities.[16]

The tremendous growth in mortgage backed securities now evident in the marketplace did not begin until 1981, when Fannie Mae and Freddie Mac started their mortgage swap programs. These transactions involve swapping an institution's mortgages for Fannie Mae or Freddie Mac pass-through securities. As part of the swap, these government sponsored agencies guarantee, for a fee, the scheduled principal and interest payments, regardless of what amounts are collected from the underlying mortgages.[17] As evidenced by the graph in Figure 3 the growth in the market has continued with securities sold in 1992 totaling over $500 billion.

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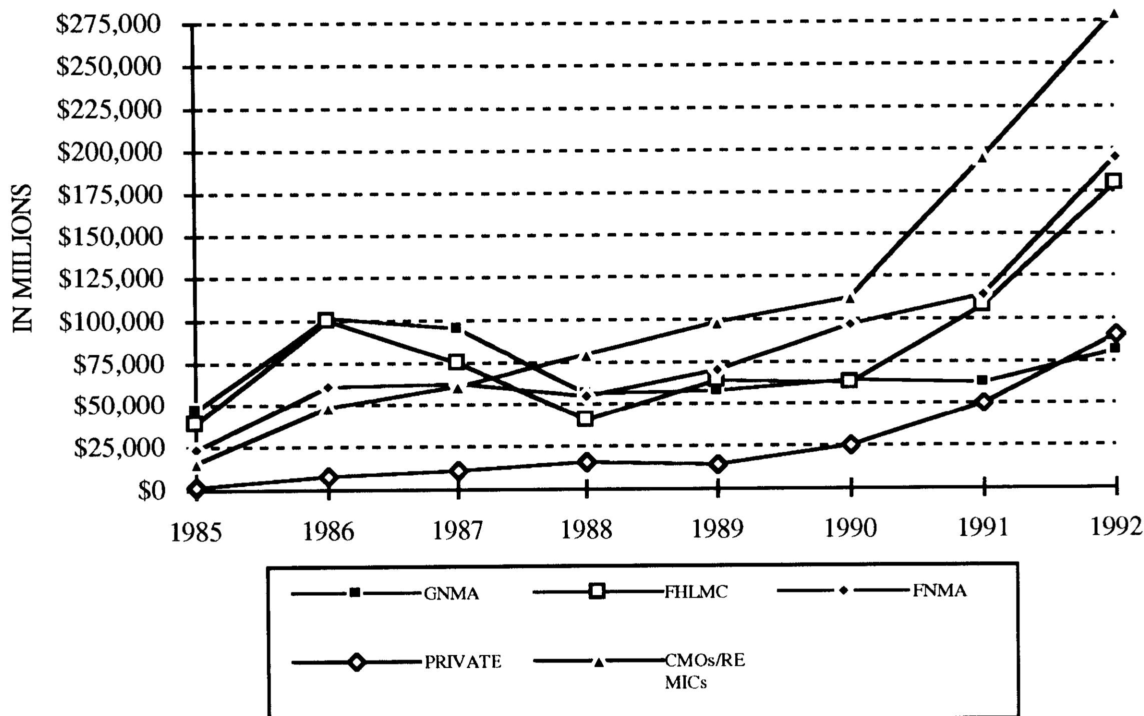
[15]Ibid., p. 21.
[16]Roberts, op. cit.,p. 49.
[17]Adler, Tamara L. and Ballard, Robyn L., "Mortgage Pool Technology Tests New Frontiers," *Savings Institutions*, (January 1989), S. 48

Figure 3
MORTGAGE SECURITY ISSUANCE BY TYPE



Sources: GNMA, FHLMC, FNMA, Inside Mortgage Securities

5. Agency Guarantees

The market classifies pass-through mortgages sold to government agencies into two groups: those guaranteed by Ginnie Mae and those guaranteed by Fannie Mae and Freddie Mac. Ginnie Mae is a branch of the U.S. government since it is a part of the Department of Housing and Urban Development (HUD). Therefore, a GNMA guarantee carries the full faith and credit of the U.S. government.

FNMA and FHMLC are not government agencies but government sponsored enterprises (GSEs). This important distinction means their guarantee does not carry the full faith and credit of the government but rather of the company itself. Freddie Mac and Fannie Mae both have the same charters, regulatory structure and congressional mandates. However, there are many differences between these two programs and a lender must examine each program's characteristics to determine which meet its objectives.[18]

PUBLIC OR PRIVATE CONDUITS

When a mortgage originator intends to sell the mortgage, it will obtain a commitment from a conduit. The two government sponsored enterprises, Freddie Mac and Fannie Mae purchase only "conforming" mortgages. A conforming mortgage can not exceed statutory loan limits or other financial ratios (loan to value, interest or tax) that otherwise do not meet the requirements of the government related agencies.[19] If an applicant does not satisfy these underwriting standards then the mortgage is called nonconforming. Government agencies cannot purchase any nonconforming mortgages for resale in the secondary market.

In the 1980's borrower's became requesting loan amounts greater than what Fannie Mae and Freddie Mac were willing to purchase and pool. Private conduits were formed to increase the availability of real estate financing by purchasing and selling nonconforming mortgages and MBS. Often mortgage loans may not conform to agency underwriting criteria because the original principal balance exceeds the government's prescribed limit as is the case with "jumbo" loans.[20] Other mortgages may not qualify due to non-standard documentation or the nature of the collateral.

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[18]Fabozzi, Frank, op. cit.,p. 62.
[19]Baldwin and Stotts, op. cit.,p. 37.
[20]Fabozzi, op. cit.,p. 134.

The private conduits profit from taking the risk of accumulating enough whole loans to issue a security. There are other risks which include pricing, operational control, underwriting and lender default. A conduit also profits from master servicing fees. Conduits require substantial capital and personnel expertise. Private conduits usually are subsidiaries of large financial service companies with access to capital and market technology.[21]

DEFINING SECURITIZATION

The term securitization is widely used yet there is not a uniform definition that adequately describes it. Securitization is based on an approach to real estate financing where there exist different capital markets with different appetites for financial instruments.[22] A larger market for debt financing may be come available at a lower cost of debt by creating an instrument geared toward a specific capital market.

Typically, a developer determines what kind of financing is required for a particular project and then tries to find the best terms. Securitization reverses that process. Investment bankers or sponsors determine what potential investors require in a security, and they then tailor the financing to satisfy those needs. The securitization process creates interests in existing mortgages that will be purchased by investors who would have been unwilling or unable to make the original loans.[23] This process allows developers or owners to access capital markets that would normally be unavailable for real estate financing. It also allows developers to access funds at a much lower cost than traditional sources, divides up the risk, and provides the only source of capital for borrowers who are seeking large amounts of capital.

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[21]Baldwin and Stotts, op. cit.,p. 39.
[22]Zenor and Dantzker, op. cit.,p. 1.
[23]Ibid., p. 2.

FINANCIAL DERIVATIVES

In the 1980's, single family mortgages were successfully securitized into financial derivatives such as collateralized mortgage obligations (CMO's) and real estate mortgage investment conduits (REMICs). These financial securities have subsequently been widely used to raise capital to finance single family residences and are now being used to securitize multifamily properties. These innovations have assisted the multifamily market in attracting investors.

1. Collateralized Mortgage Obligations

CMOs introduced by Freddie Mac in 1983 constituted a landmark in the evolution of mortgage backed securities. CMOs grew in volume, especially after Congress passed The Secondary Mortgage Market Enhancement Act of 1984. This law stimulated the development of the private mortgage backed securities market by amending federal securities laws and preempting certain state laws.[24] The CMO differed from the traditional pass-through securities because it enabled investors to choose among classes or tranches of securities bearing different interest rates and maturities.

A typical CMO has four tranches. The first three classes receive interest payments , with principal payments going to the first to the fast pay class of bonds. After the first class of bonds is repaid, principal payments are used to retire the remaining classes in sequential order. The fourth class, an "accrual" or "Z" bond does not receive any interest until all previous classes of bonds are retired. The "Z" bond was the first innovation to follow the creation of the CMO. This has the effect of retiring all other tranches much quicker than otherwise would be the case.[25]

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[24]Baldwin and Stotts, op. cit.,p. 8.
[25]Carron, Andrew S., "Understanding CMOs, REMICs, and other Mortgage Derivatives", (February 1992),p. 13.

CMOs are an important innovation because they broaden the range of investment objectives that can be achieved by using mortgage securities. Prior to the introduction of the CMO, the mortgage securities market were dominated by 15 and 30 year final maturity pass-throughs. The problem with this structure was that some investors were excluded from a segment of the mortgage securities market. This is important because investors have few choices among high quality securities with yields higher than Treasuries.[26]

A CMO is a debt offering collateralized by single maturity pass-through mortgages. Early collateral prepayments are allocated to short term investors and intermediate and long term investors receive later prepayments. Investor's desires for multiple maturity securities are satisfied because this type of mortgage more accurately predicts cash flows. CMO's add value to the underlying mortgage loans by efficiently redistributing interest rate, prepayment and operational risk.[27]

2. Real Estate Mortgage Investment Conduit

A REMIC is a tax exempt entity created under the Tax Reform Act of 1986. Issuers of mortgage pass-throughs who elected the REMIC status were able to manage cash flows without being taxed twice. The decision to establish a REMIC allows the issuer to sell mortgages outright while offering investors call protection on their multi-class securities. The REMIC status only affects the treatment of federal taxes and does not change any of the generally accepted accounting principles (GAAP).[28] Taxable gains and losses are recognized by the issuer on the sale of interests in a REMIC mortgage pool, regardless of whether the interests are pass-through certificates, participations or bonds. The regular interest holders receive their interest payments according to coupon interest rates and not

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[26]Baldwin and Stotts, op. cit.,p. 185.
[27]Hu, Joseph C. "Secondary Market: The American Model", *Mortgage Banking*, (April 1991), p. 16.
[28]Ibid., p. 17.

according to the taxable income of the REMIC. The residual interest holders, on the other hand, receive taxable income relating to the REMIC.

Unlike a CMO, which is a general obligation of the issuer, the REMIC issuer either sells the collateral backing the certificates or issues debt. A CMO security is structured so that the bond cash flows do not appear similar to mortgage cash flows. The collateral is sold to investors for tax purposes which makes the investor rather than the issuer responsible for payment of taxes.

The mortgage pool of a REMIC is self liquidating. The REMIC can be organized in any number of ways including but not limited to a corporation, partnership, trust, pass-through or participation agreement. The collateral backing a REMIC can be any type of security backed by mortgage loans including whole or participation loans. 95% of a REMIC's assets must be "qualified mortgages", cash flow investments, and qualified reserve funds.[29] The basic type of collateral in a REMIC is a qualified mortgage loan. These qualified mortgage loans can be secured by single family, multifamily, commercial, industrial, farm, office and/or leasehold property.

SUCCESS OF SINGLE FAMILY MORTGAGE SECURITIZATION

The single family pass-through market grew dramatically in the 1980's due to the federal government's concern for the availability of housing and mortgage credit. The rapid formation by baby boomer households sustained a strong demand for housing. These strong demographic forces created a demand for single family mortgage credit.[30] The capital markets supplied the bulk of credit demand through the securitization of single family mortgages.

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[29]Baldwin and Stotts, op. cit.,p. 207

[30]Hu, Joseph C. "Housing and the Mortgage Securities Markets: Review, Outlook and Policy Recommendations", *Journal of Real Estate Finance and Economics*, 5: 1992, p. 167.

The growth of the single family mortgage securitization during the 1980's can be attributed to four reasons:

1. Mortgage Credit Gap

The supply of fixed rate mortgage loans fell below the loan demand for borrowers. This imbalance in the fixed rate mortgage market between demand and supply has been resolved by changing the terms on the mortgage loans (interest rate, loan to value and maturity), entry of other lenders, and the use of MBS. There has been a credit gap since 1985 which means that the thrifts must sell their mortgages or increase other borrowings. The large net loan sales has been the primary reason behind the growth in single family securitization.

2. Interest Rate and Credit Risk Tools

Thrifts have been selling most of their fixed rate mortgage loans and increasing their holdings of MBS. These securities are more liquid than mortgages and provide easier access to a wide range of interest rate risk management tools.

3. Government Involvement In the Mortgage Market

The involvement of the federal government has given the market stability, credit support and standardization of documentation to attract investors normally committed to Treasury and corporate bonds. The demand for single family mortgage MBS depends on the government's involvement in agency programs. Fannie Mae and Freddie Mac have acquired large market share due to the implicit guarantee of the government.

4. Derivative Securities Have Attracted Nontraditional Investors

The two most common types of mortgage derivatives are multi-class mortgage securities known as CMOs and REMICs. Investors are attracted to mortgage derivatives by their wide range of maturities.

The creation of derivative securities such as CMOs and REMICs have changed the legal, technical, and cash flow attributes of pass-through securities. These securities increased both the supply and demand for MBS. Interest rates are inversely proportional to the demand for derivative securities. This is due to one of the innovations of CMOs where the cash flow stream is separated into interest only and principal only parts. Prepayments affect the principal component and when interest rates and prepayment rates change, they generally move in opposite directions.[31]

MOVEMENT INTO THE MULTIFAMILY MARKET

The success of the single family mortgage market has led to its application in the multifamily market. Two developments in the capital markets spurred borrowers to seek alternative methods of financing which has been a key factor in the push to develop a multifamily MBS product. The first was the withdrawal of savings institutions as a funding source. The savings and loans have turned away from multifamily lending as a result of regulatory requirements and pressure put on banks regarding real estate loans.[32] These institutions are reassessing their roles in apartment housing and the overall real estate market. Thus, there is pressure to find alternative sources of funding for both construction and long term mortgages.[33]

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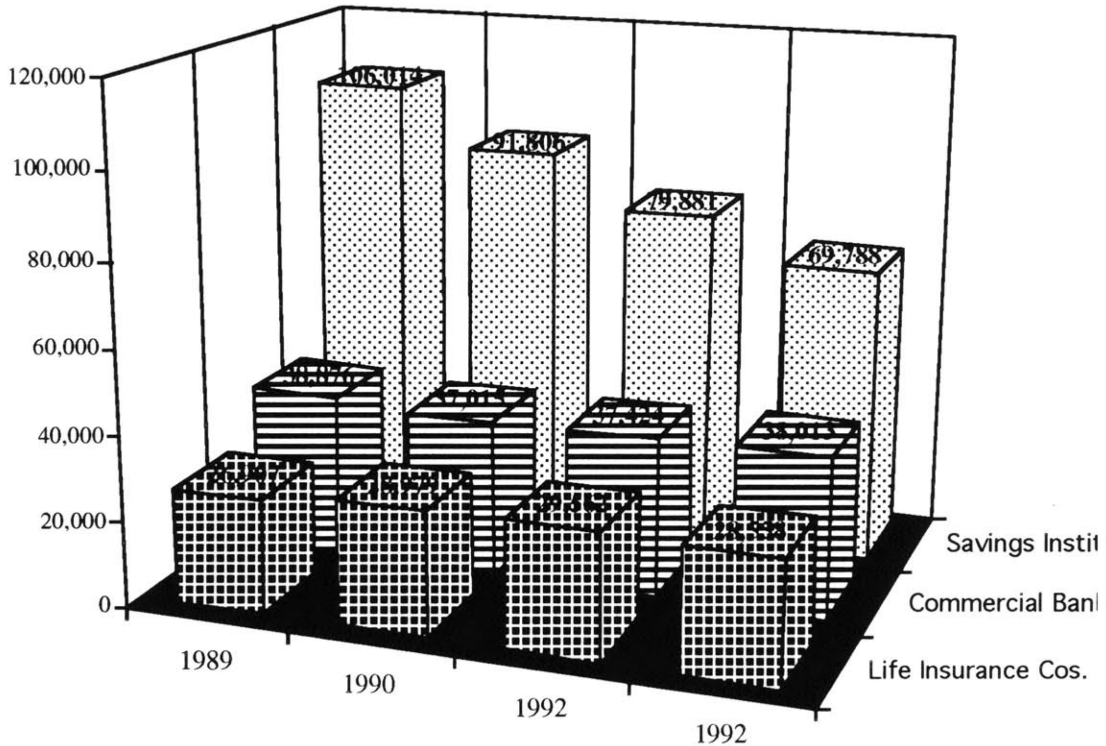
[31] Jaffee and Rosen, op. cit., p. 122.

[32] Frantz, James B., "Some Traditional Lenders Coming Back, Mortgage Securitization Gains Momentum," *National Real Estate Investor*, (October 1992), p. 36

[33] DiPasquale, Denise and Cummings, Jean L. "Financing Multifamily Rental Housing: The Changing Role of Lenders and Investors", *Fannie Mae*, (1992) p. 113.

As Figure 4 depicts, commercial banks and life insurance companies have not stepped in and replaced the savings and loans as a financing source.

Figure 4
MORTGAGE DEBT OUTSTANDING



Source: Federal Reserve Bulletin

The other development is the risk-based capital requirements imposed by bank and insurance company regulatory bodies. Risk based capital requirements give a 100% risk weighting to multifamily loans on properties of more than 36 units. Loans on properties with five to 36 units carry a risk weighting of 50% if they are 80% occupied and have a low loan to value ratio.[34]

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[34]Bush, Vanessa, "Market Pressures May Revive Multifamily MBSs," *Savings Institutions,* (July 1992), p. 31.

This risk based capital framework establishes two tiers of capital, Tier 1 or core capital and Tier 2 or supplementary capital. By year end of 1992, banks must attain a level of total capital equal to eight per cent of total risk-weighted assets. The amount of total risk weighted assets is calculated by assigning all on-balance sheet items to one of five risk categories (0%, 10%, 20%, 50%, 80% and 100%) and taking the sum of those items after multiplying them by their assigned risk category.[35]

These new guidelines should increase asset securitization for two reasons. The eight per cent capital requirement for risk weighted asset is higher than the old capital guidelines. Banks will be forced to raise capital or reduce assets in order to comply with new requirements. With capital becoming more expensive for banks to raise, asset securitizations may be more cost effective.[36] The second reason is depository institutions will have an increased incentive to sell or securitize assets in the higher risk categories.[37]

CONCLUSION

The securitization of the single family market took a significant amount of time, effort and expense by the federal government to put in place. The participants of the multifamily market are now benefiting by the securitization guidelines established by the federal government. Financial innovations such as CMOs and REMICs have allowed the MBS market to attract nontraditional real estate investors. Finally, the current lack of financing sources together with the new risk based capital adjustments effective in 1993 have contributed to the growth in the securitization trend. It is a combination of these factors in the last decade which have allowed securitization to move into the multifamily market.

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[35]Shenker, Joseph C. and Colletta, Anthony J. "Asset Securitization: Evolution, Current Issues and New Frontiers" Texas Law Review, (May 1991), p. 1414.
[36]Ibid., p. 1416.
[37]Ibid., p. 1416.

The next chapter will look at the influence the single family mortgage market has had on the securitization of the multifamily market. There are a number of obstacles specific to the multifamily market which will have to be overcome. The lack of consistent underwriting standards and the heterogeneous nature of multifamily properties have slowed the securitization process. Chapter Three will examine how the multifamily market has addressed these problems to move forward in the securitization process.

CHAPTER THREE

Securitization of the Multifamily Market

"Just as the innovations from the single family market impacted and nurtured the growth of the multifamily market may imply that changes from the multifamily market will affect the development of the commercial mortgage market."

James Frantz

The multifamily market has been targeted as the next growth area for securitization. After the dramatic growth enjoyed by the single family mortgage pass-through security, the multifamily market is the next untapped market brimming with potential growth. There are many factors which are pushing the multifamily market towards securitization on a larger scale. The two biggest ones are the lack of lending activity by savings and loans. The other is the regulatory changes imposed on the banking and life insurance industries.

This chapter will start by addressing the underlying characteristics of apartments as an investment. Next, the steps required to securitize a multifamily mortgage will be highlighted. The major players in the multifamily mortgage market will be identified along with the problems associated with multifamily securitizations. The last step in the puzzle is the role rating agencies play in providing investors a benchmark to compare investment grade securities. The application of the rating system to the multifamily market was one of the biggest innovations in allowing the securitization of multifamily mortgages.

MULTIFAMILY OUTLOOK

Apartments are considered 'hot' by investment professionals and this has led to a surge in purchasing of these assets. Virtually every institutional lender has them at the top of its "want" list.[38] The interest in apartments is due to the length of the leases. They are generally one year or less, thus marking apartment values to market every year. Office buildings, on the other hand, are filled with tenants with five and 10 year leases. Longer leases may reflect a higher rental rate than current market rental rates for new tenants. This contributes to the difference in opinion where borrower expectations are often greater than those of a lender. Since apartment leases are short, rents can be adjusted at the end of each lease, allowing owners and lenders to have a better understanding of current market value.[39]

Apartments are unique among real estate investments available in today's market. Much of this difference is due to the short term structure of the lease, the large quantity of individual leases per apartment complex and the fact that the leasehold interests are households rather than businesses. Michael Evans, National Director of Ernst & Young's Real Estate Advisory Services, citing recent studies says apartments provide lower risk and higher liquidity.[40] The reasons are as follows:

- Growth in rental demand is easily inferred from demographic trends.
- Cash flow is dependent on a large number of tenants which increases the predictability and lowers the variability of returns.
- Short term leases allow owners to adjust rents to market levels.
- Tenant improvement costs are smaller than for business tenants.

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[38]Levy, John B., " 'Hot' Apartments are at Top of Lender's 'Want' List," *National Real Estate Investor*,(July 1993), p.44.
[39]Ibid., p. 44.
[40]Bergman, Steve, " Multifamily Offers Unique Opportunities To Investors Looking For Solid Returns", *National Real Estate Investor*, (July 1993) p. 48.

• Steady cash flows make apartments somewhat more liquid than other property types.

Andrew Farkas, chairman and chief executive officer of Insignia Financial Group, states that once a multifamily asset is stabilized, cash flows are easily modeled for financial markets interested in the securitization of the asset. Insignia Financial Group is the largest manager and eighth largest owner of multifamily housing in the country. He believes the stabilization of the market will come with increased securitization.[41]

SECURITIZING A MULTIFAMILY MORTGAGE

The process of securitizing a multifamily mortgage represents a shift not only in the lending activity but the sources of capital.[42] The lending relationship is no longer solely between a Mortgagee and a Mortgagor. The process now involves rating agencies, investment banks, administrators of the mortgage and most importantly, investors. The securitization process now involves a number of different parties each with specific tasks and responsibilities. The securitization process depicted in Figure 5 is typically carried out in this order.

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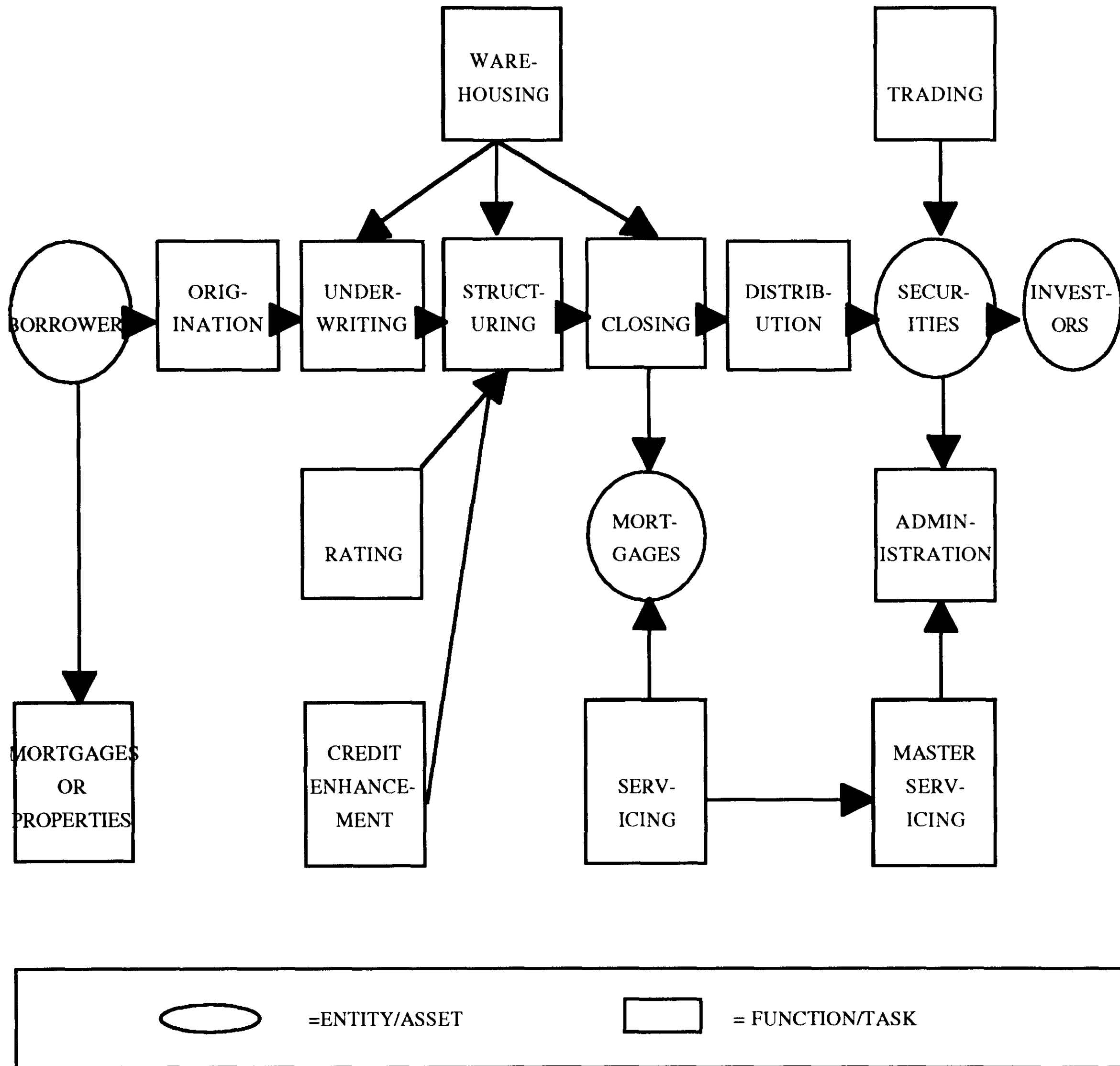
[41] Ibid., p. 61.

[42] Kane, Carl "Fundamental of Commercial Securitization" Mortgage Banking, July 1992, p. 20.

Figure 5



These tasks are usually carried out by a number of different parties although some functions may be grouped together. Some of the key points in this process are as follows:

- Borrowers: The borrower may be one or many borrowers acting together. They can include developers or financial institutions seeking to restructure their existing portfolio.
- Structuring: This is an important function which links both the borrower and the investor. Consideration must be given to striking a balance between both groups' objectives.

Warehousing: This activity includes the traditional lending process prior to receiving proceeds of MBS.

Credit enhancement: Some type of enhancement is usually required through subordination or cash reserve funds.

Investor: MBS are structured according to risk, term, and type of interest rate.

Securitization has benefited every participant in the capital market including: banks and other financial institutions looking for alternative sources of funds and fee income, investment bankers generating revenue by underwriting, creating new markets and trading asset backed securities, and investors looking for investment grade securities with yields greater than securities of comparable credit quality.[43]

THE MULTIFAMILY MORTGAGE MARKET

The multifamily securitization market has grown steadily over the last three years since the first introduction of RTC issues. To date the vast majority of multifamily securities have come from the RTC. Since the U.S. government does not have balance sheet and capital reserve requirements, the RTC has securitized large mortgage pools by

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[43]Ibid., p. 21.

establishing large reserve accounts to back its financings.[44] The RTC has made a definite impact on the market with its innovative approaches in disposing of its assets. These innovations have begun to liquefy the commercial mortgage market as private issuers pool multifamily mortgages into securities and provide much needed liquidity to owners.

Table 1 below provides an interesting story of the movement away from traditional funding sources for apartment properties.

Table 1
The Market for Multifamily Mortgage Loans in 1992

	1970	1975	1980	1985	1990	1992
Households	13.2	5.5	8.6	5.9	8.5	8.3
Businesses	0.5	0.5	1.5	4.1	2.9	2.7
State & Local	3.6	6.8	6.9	10.9	13.6	13.3
Government	5.1	6.0	6.6	4.2	7.5	10.9
Agencies	0.5	6.4	4.8	4.0	4.3	4.9
Pools	0.1	1.2	3.9	3.3	9.6	10.4
Banks	5.5	5.9	8.9	10.9	12.1	12.1
Thrifts	36.0	39.1	39.2	41.7	29.9	25.0
Life Companies	26.6	19.5	14.1	9.3	9.4	9.8
Pension Funds	2.0	0.5	0.3	0.5	0.3	0.2
State & Local Funds	3.3	2.3	2.6	2.8	0.3	0.2
Finance Companies	2.0	1.6	1.5	0.9	1.2	1.5
REITs	2.1	4.8	1.1	0.8	0.7	0.7
Sources: Federal Reserve Board and Daiwa Securities America, Inc.						

[44]White, Gregory A. "Everything You Wanted to Know about Commercial Mortgages but Were Afraid to Ask" (1993) p. 14.

Thrifts (Savings and Loans) accounted for 42% of all multifamily mortgage loans in 1985 but only 25% in 1992. Other traditional lenders such as banks and insurance companies have not filled the void left by thrifts and have only modestly increased market share over that same period. On the other hand, the two sources which have achieved the greatest increase in market share have been the federal government and mortgage pools. The government, through the RTC, as conservator for failed thrifts has collected 10.9% market share. Mortgage pools, had the greatest increase in market share, increasing from 3.3% in 1985 to 10.4 % in 1992.[45] The RTC has accounted for a large portion of this increase by using securitization as a means of selling assets from failed thrifts.

1. Wall Street's Role

James Rickards, general counsel of Greenwich Capital Markets Inc., says: "The securities firms deserve enormous credit for helping the government cope with one of the biggest asset disposal jobs in history. The securitization program helped the RTC save substantial sums of money by unloading troubled loans fast."[46] Securities firms are providing advice on structuring, pricing, and underwriting the sale of these new offerings. The market share of the RTC and of mortgage pools reflected in Table 1 substantiates Wall Street's belief that it is filling the void left by traditional lenders who have reduced their financing activities.

2. Fannie Mae and Freddie Mac Play Minor Role

The government agencies, Fannie Mae and Freddie Mac, have had a relatively small but stable market share at 4.9%.[47] But unlike the engine behind the single family MBS market, the agencies have played a relatively minor role in the development of the

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[45] Youngblood, M. D., op. cit., p. 16.
[46] Karr, Albert R. and Connor, John, "Wall St. Cashes in on RTC's Program", Wall Street Journal, June 8 1993, p. C1
[47] Youngblood, M. D., op. cit., p. 16.

secondary mortgage market for multifamily securities.[48] Freddie Mac shut down its multifamily purchase activities in late 1990 due to unacceptably high multifamily portfolio credit losses. Freddie Mac expects to reenter the market in 1993 with a program aimed only at refinancing.[49]

Fannie Mae purchases or swaps $3 billion to $5 billion in multifamily mortgages each year under two different programs.[50] The first is the Delegated Underwriting and Servicing (DUS) program, FNMA purchases multifamily mortgages, without prior review, from lenders who receive special approval. These preapproved lenders, operating within FNMA guidelines, are able to underwrite, close and sell mortgages to Fannie Mae. In turn, these special lenders share with Fannie Mae any loss should there be a default. This shifts more of the risk to the lender doing the underwriting by making them more accountable.[51] This recourse arrangement deters participation by many institutions because the new risk based capital rules requires the lender to maintain capital reserves for loans sold under a partial risk sharing arrangement.[52]

The other product line which Fannie Mae purchases multifamily mortgages is its Prior Approval (PA) program. Under PA, Fannie Mae underwrites and approves the transaction prior to the purchase of the mortgage. Unlike the DUS program, Fannie Mae assumes all risk of loss.[53]

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[48]Bush, op. cit., p. 31.
[49]Freddie Mac 1992 Annual Report, (April 1993), publication 165, p. 23.
[50]Bush, op. cit., p. 31.
[51]Fannie Mae Housing Impact Report 1992-1993, (1993), p. 28.
[52]DiPasquale and Cummings, op. cit., p. 99.
[53]Fannie Mae Housing Impact Report 1992-1993, (1993), p. 30.

SLOW GROWTH IN THE MULTIFAMILY MARKET

The potential growth in the securitization of the multifamily market is tremendous. Currently, securitized financings represent less than 12% of the multifamily financing market. Approximately, $37 billion out of the $313 billion total has been securitized, leaving a potential market of $276 billion.[54]

There is some speculation that the lack of interest in multifamily securitization by the capital markets is due to misperceptions about risks that have grown out of the history of multifamily lending.[55] In the early 1980's, lenders committed underwriting mistakes that led to losses and the perception that multifamily lending is risky. There are three factors which explain why the securitized multifamily mortgage market has not experienced the same growth as the single family mortgage market.[56]

1. Lack of Standard Documentation

An MBS requires that the underlying mortgages be similar in many respects. Lack of standardization in multifamily mortgages then makes it more difficult to package them into securities.

2. Credit Risk

Properties are heterogeneous and differ according to size, type and lease terms. As a result the mortgages vary widely according to maturities, loan terms and underwriting criteria. This lack of homogeneity makes it tougher to measure and predict the performance of these mortgages.[57] The converse is true in the single family market where actuarial data is available to predict prepayment and default rates.

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[54]Greco, op. cit., p. 16.
[55]Bush, op. cit., p. 32.
[56]Jaffee and Rosen, op. cit., p. 133.
[57]Ibid.

3. Lack of Default Data

Reliable data on commercial mortgage performance is not widely available and evaluation of diverse assets is difficult. Unlike the single family mortgage market, a lack of broad historical data makes it difficult to determine default frequency and loss severity for a particular pool. Due to the heterogeneity of commercial real estate assets, commercial mortgage performance studies cannot provide assess default risks as adequately as studies for single family mortgages.[58]

CONTROLLING THE RISKS

The multifamily market overcame these hurdles by determining what investors required in order to invest in a multifamily MBS. The securitization process has addressed investor's concerns by creating financial benchmarks which must be adhered to when structuring or purchasing a multifamily MBS. The key methods for controlling risks in multifamily securitizations include prepayment protection, underwriting guidelines and credit enhancements.

1. Prepayment Protection

Single family mortgagors have the option of prepaying their mortgages at par value at any time. As a result, investors in the past had a major problem with the uncertainty of the actual maturity date. Usually, mortgages are prepaid when interest rates drop significantly. However, investors do not want their principal returned when this happens because it subjects them to reinvestment risk. The opposite is also true. Investors would like their principal returned when interest rates rise so they can reinvest it at a higher yield.

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[58] Ibid

Multifamily mortgage investors are typically protected from prepayment risk through prepayment protections (yield maintenance).[59] A schedule of penalties and prepayment lockouts provides the investor with some reliability during the yield maintenance period which can be anywhere between five and 10 years. Payment is always possible at any time after the expiration of the prepayment period. Prepayment affects the performance of a multifamily security since fewer mortgages in a mortgage pool as compared to a pool of single family mortgages which may have hundreds of mortgages.

2. Underwriting Standards

The underwriting provides a basis for understanding how lenders view the risks associated with the multifamily mortgages. To the extent that there are industry standards in underwriting multifamily mortgages, they have been defined by Fannie Mae and Freddie Mac guidelines.[60]

3. Credit Enhancements

This involves enhancing the creditworthiness of the underlying loans without doing anything to the underlying collateral. There are several types of credit enhancement used to secure an investment grade rating. The RTC issues use a cash reserve fund which protects the interests of investors by allowing them to receive cash payments immediately if payment is delinquent or in default.

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[59]DiPasquale and Cummings, op. cit., p. 98.
[60]Ibid.

Under the traditional senior subordinate structure, a pass-through security is divided into two portions with the subordinate portion used to create a reserve fund that protects the senior or Class A portion. This structure allows the issuer to obtain a higher rating without incurring the additional costs of third party enhancements. Other methods of credit enhancement are overcollateralization, obtaining a third party letter of credit or surety bond, mortgage insurance or a combination of these techniques.[61] The term credit enhancement is defined in more detail in Appendix B.

There are several distinct differences between the single family mortgage market and the multifamily mortgage market when trying to control risk. The biggest difference is that multifamily mortgages are generally not guaranteed by the U.S government. The lack of guarantee requires an in depth credit analysis to support the securitization process. The multifamily mortgage market also lacks the standardization of underwriting and documentation common to the single family mortgage market. In addition, there is not a significant amount of historical data to predict long term performance such as prepayment history. This is why rating agencies play such an important role in the multifamily MBS market. Investors look at credit ratings to compare a multifamily MBS with a corporate bond issue and determine which best fits their investment objectives.

ROLE OF THE RATING AGENCIES

Perhaps the most important development in establishing a multifamily mortgage market was the introduction of credit ratings by the ratings agencies: Moody's Investors Service, Standard & Poor and Duff & Phelps.[62] These agencies have been rating securities backed by single family mortgages as early as 1975 yet it was not until 1987 that a rating

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[61]Stevenson, Eric "Securitizing Low Income Multifamily Mortgages", *Mortgage Banking*, (May 1992), p. 84.
[62]Fascitelli, Michael and Hacker, Scott, "Time is Right for Mortgage Securities", *National Real Estate Investor*, (March 1992), p.118

took place for a pool of commercial mortgages.[63] Credit ratings expanded the market by providing a comparable gauge of risk for non-traditional investors with limited real estate expertise. Ratings opened the real estate debt market to investors who previously had to limit their investments to rated securities.[64] Carl Kane, managing director of Kenneth Leventhal, described the rating agencies as the ultimate underwriting committee. They decide what passes and what doesn't."[65]

To date, the volume of multifamily activity has been limited to the RTC and the investment banks which have put pools of multifamily mortgages together. This is due, in part to their underwriting requirements and the minimum size of the transaction given their fee structure.[66]

The main reason for creating mortgage standards is to create an efficient rating system. Rating agencies can assign a rating based entirely on the properties' characteristics such as rent roll, ownership, management and position in the marketplace. A securities rating addresses the likelihood of receipt by bondholders of all entitled principal and interest payments. A credit rating examines the mortgage collateral characteristics and the securities' structural, legal and tax components. A securities' rating does not constitute the likelihood or frequency of payments on the mortgage loans or the possibility that a prepayment on the security might result in a lower yield.

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[63]Frantz, James B., "Securitization - The Capital Source for the 90's", *National Real Estate Investor*, (July 1992), p. 62
[64]Ibid.
[65]Statement made at Mortgage Banker Association conference, 8/10/93.
[66]DiPasquale and Cummings, op. cit., p. 103.

Credit ratings allow investors to compare the risk of owning multifamily mortgage securities with corporate bonds or other investments. Offerings can be structured so that there may be less risk in owning the securities then the underlying assets. For example, credit enhancements are sometimes used to guarantee payments to investors on risky underlying assets.[67]

For instance, one of the rating agencies, Fitch, incorporates default probability, loss severity and qualitative factors into its analysis of performing multifamily pools.[68] Loss severity is an examination of information to estimate losses when loans default. A qualitative review includes such factors as geographic diversity, borrower concentration and collateral quality. Fitch's real estate analysis is based on debt service coverage ratios (DSCR). Net operating income (NOI) is the most relevant measure of a property's ability to cover operating expenses and debt service. Properties with cash flow insufficient to cover debt service likely will default at some point as owners are unlikely to make cash infusions indefinitely. The DSCR and NOI are the two most important ratios when determining the necessary level of credit enhancement for a particular rating.[69]

1. Problems with the Rating Agencies

One problem in getting refinancing for multifamily portfolios is the bottleneck that occurs at the rating agency. The rise in securitization has resulted in the rating agencies processing more deals causing a backlog. The biggest obstacle in refinancing a portfolio is interest rate risk. Interest rates may rise from the level it was at when the deal began thus killing the transaction.[70]

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67 Diamond, Larry and Kane, Carl, "Converting Commercial Real Estate into Marketable Securities", Urban Land, December 1992, p. 14.
68 Fitch Investors Services, "Commercial Mortgage Stress Test", (June 8, 1992), p. 8.
69 Ibid., p. 9.
70 Bergman, op. cit., p. 62.

CONCLUSION

The success of the single family mortgage market has led to the securitization of other types of real estate. Wall Street and the real estate industry are starting to package billions of dollars of mortgages on U.S. office buildings, shopping centers and apartments as collateral for securities. These securities can be structured so that there may be less risk in owning them than the underlying assets they represent. Issuers can use different types of credit enhancement to guarantee payments to investors. These events have stimulated investors to be interested in multifamily securities because of their higher yields with comparable risk levels.

It is clear that the market for multifamily mortgage securities is gaining market share. This trend is likely to continue as a result of the credit crunch and risk based capital requirements. Multifamily MBS are also considered attractive due to the consistent track record and identifiable risk factors of multifamily housing. Multifamily securities can also be structured to better meet the requirements of investors. The changes to pass through securities can be seen in CMOs, senior/subordinated debt and other structures to segment cash flows by credit risk, maturities and other criteria.

The multifamily market has a number of risks such as credit risk and lack of standardization in documentation. These are distinct differences from the single family mortgage market because they cannot be overcome by government guarantees. However, credit ratings developed by the rating agencies allow multifamily or commercial mortgages to be rated as investment grade securities with the proper credit enhancements. This innovation allowed nontraditional real estate investors to invest in these types of securities. Thus, credit ratings for multifamily MBS significantly expanded the market for potential investors.

CHAPTER FOUR

Analysis of Multifamily Prospectuses

"A quiet revolution is going on in the way apartment buildings are financed. New money is being pulled in from the capital markets around the world to finance this arguably most stable of income producing properties. The RTC has made the market wake up to securitization as a permanent source of new funding for multifamily properties."

M. D. Youngblood

The financial innovations created in the single family MBS have been applied to the multifamily market. This can be seen in the structure and security type used to securitize a pool of multifamily mortgages. The trends highlighted below build upon the strength, size and longevity of the single family mortgage market. For investors, the multifamily MBS marked a significant point in the evolution of the MBS It allowed the mortgage backed securities market to begin securitizing income producing real estate.

SCOPE OF STUDY

This chapter will examine 10 multifamily securitization offerings issued in the last three years to identify trends in the securitization of multifamily loans. The total dollar size of these 10 issues is approximately $2.1 billion. In order to appeal to as many investors as possible, these issues are packaged as mortgage pass-through certificates, trusts or collateralized mortgage obligations.

A detailed description of each multifamily prospectus can be found in Appendix A. The following is a summary of the prospectuses analyzed for changes in the structuring of a multifamily mortgage backed security.

Name	Securities Offered	Collateral	Structure Type
1. LB Multifamily Mortgage Trust	$81.5 million mortgage pass through certificates	Variable rate first mortgage loans	Senior/Subordinate mortgage pass-through
2. Resolution Trust Corporation	$354.6 million multifamily mortgage pass-through certificates	Adjustable first rate mortgage loans	Reserve fund supported mortgage pass-through
3. Resolution Trust Corporation	$398.3 million multifamily mortgage pass-through certificates	Adjustable rate first mortgage loans	Reserve fund supported senior subordinated mortgage pass-through
4. Resolution Trust Corporation	$442 million multifamily mortgage pass-through certificates	Combination of adjustable rate and fixed rate mortgage loans	Reserve fund supported senior subordinated mortgage pass-through
5. Structured Assets Securities Corporation Trust I	$254.3 million collateralized mortgage obligations	Fixed rate bonds secured by first and second mortgages on each property	Senior/Subordinate first and second mortgages are cross defaulted
6. DLJ Mortgage Acceptance Corp., Series 1993 - MF1	$117.1 million multifamily mortgage pass-through certificates	Adjustable rate senior class with cap, remaining classes are fixed rate	Senior/Subordinate with cross default and cross-collateralization
7. DLJ Mortgage Acceptance Corp., Series 1993-MF7	$127 million multifamily mortgage pass-through certificates	Fixed rate, blanket first mortgage	Senior/Subordinate with cross default and cross-collateralization
8. First Boston Mortgage Securities Corp., Series 1993-3	$67.8 million multifamily mortgage pass-through certificates	Adjustable rate and fixed rate mortgage loans	Senior/Subordinate with full recourse on each of the mortgages
9. First Boston Mortgage Securities Corp., Series 1993-4	$115 million multifamily mortgage pass-through certificates	Adjustable rate bonds	Senior/Subordinate with cross default and cross-collateralization
10. Structured Assets Securities Corporation Trust III	$ 121.3 million collateralized mortgage obligations	Adjustable rate bonds	Over collateralization of the total trust size

The changes documented below are subtle and pertinent to the commercial mortgage market. Rather than compare and contrast each offering, the following is a list of players in the multifamily mortgage market and the issues faced when securitizing a pool of mortgages:

• Resolution Trust Corporation: The sheer size of their mortgage portfolio holdings made them an instant force in the securitization market.

• Rating Agencies: The rating agencies dictated the terms of the offering by the size of the credit enhancement required. If the credit enhancement is too large it makes the offering to expensive to securitize. If it is too small, the securities are priced closer to comparable Treasuries and therefore not an attractive investment.

• Conduit Programs: The use of a conduit program in the multifamily market is an indicator of how quickly the market is replicating the single family market. The conduit program allows mortgage lenders to issue additional mortgages which should result in lower interest rates for mortgagees.

• Investors: Pension funds are looking at multifamily mortgages as a way of securitizing existing portfolios. Multifamily MBS are structured not only for the sponsor's current investment goals but for future investors' objectives as well.

• Legal: The legal profession has advised and structured many different MBS starting from the single family mortgage market and moving to the commercial mortgage market. They have made an important contribution to the securitization of multifamily mortgages.

RESOLUTION TRUST CORPORATION

The RTC had been very innovative in its attempt to liquidate as many loans as efficiently as possible. The first four prospectuses described involve the Resolution Trust Corporation as either the seller or packager of multifamily securities. These offerings were brought to market in late 1991 and mid 1992. The RTC multifamily pass-through series 1991-M1 was the first multifamily security issued by the agency. These four offerings had a market valuation of $1.276 billion and placed the RTC as the largest seller of multifamily housing securities.

Three RTC issues used a credit enhancement combination of cash reserve funds and senior subordination to obtain an investment grade 'AAA' rating. The RTC multifamily mortgage transactions all had large reserve funds (i.e. up to 35% of the initial scheduled principal balance of the mortgage loans) to cover any credit losses. Only the federal government can afford such a large cash reserve fund. The liquidity provided by the reserve fund permits the trust or REMIC to immediately realize losses. The rating agencies have sought to front-load losses to the fullest extent possible. Recognizing losses up front rather than covering the shortfall as they occur significantly enhances the amount of coverage of the reserve fund.[71]

The RTC sold the assets from these failed thrifts on a regional or institution by institution basis. This process is riskier than picking the best assets for securitization or assembling pools with geographic, property type or borrower diversification.

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[71]Giesecke, Karsten, "Strategies for Structuring Multifamily and Mortgaged Backed Securities," (February 17, 1992) p. 16.

Use of Special Servicer to Maximize Loan Recoveries

The fourth securitization issue, Series 1992-4, utilized an innovation the RTC had used earlier in 1992 in an all commercial mortgage offering (Commercial Mortgage Pass-Through Certificates, Series 1992-C1). The Special Servicer diffused investors' concerns about loan default. It created an environment which encouraged the servicers to work to keep the loans current and, in the case of a default, to work to obtain the best recovery. The RTC accomplished this by dividing the Servicer's role into two separate and defined roles, a Master Servicer and a Special Servicer, and then hired a specialist to handle each part.

The Master Servicer is responsible for servicing all performing loans in the pass-through offering. Once a mortgaged loan goes into default, the Master Servicer's fee with respect to that loan is reduced. The Master Servicer, therefore, has an incentive for timely payments of debt service..

The Special Servicer, whose principal business is the management and capital recovery of distressed and underperforming mortgages, is responsible for servicing defaulted loans. In order to deal with problem balloon loans, the RTC extended considerable flexibility in allowing the Special Servicer to modify any mortgages in default if it meant a better recovery on a present value basis than a foreclosure and liquidation.[72] The Servicer's fee is made up of three components:

- Basic Fee: Small fixed rate fee based on the principal balance of all mortgage loans - both performing and defaulted.
- Supplemental Fee: A larger fixed rate fee based only on the principal balance of the defaulted mortgage loans being serviced and is payable only if the fixed rate on the balance of defaulted loans exceeds the Basic Fee.

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[72]Ibid., p. 15.

• Workout Fee: Fee payable only on a loan by loan basis solely from collections on the workout mortgage loan.

The Special Servicer has an incentive to maximize the present value proceeds of the mortgage loans which aligns him with the interests of certificate holders who want the highest possible return.

INFLUENCE OF RATING AGENCIES

In all of the multifamily mortgage issues, the rating agency plays an integral role in the structure of the security, but probably more so in the RTC's case due to the perceived risk of the securities and the circumstances in which the assets are acquired. There are many real estate and mortgage investors who assume that since the RTC is in possession of a mortgage loan from a failed institution, it must be of poor credit quality. This poor credit assumption in conjunction with stories detailing poor underwriting, lack of documentation and in some instances, lack of any collateral justified the concern of many investors.[73]

All of the issues examined in this study were rated 'AAA'. However, in most cases the securities received this favorable rating due to the use of credit enhancements. The likelihood of losses due to poor underwriting standards and lack of documentation were a few reasons why rating agencies required large reserve funds and subordinate classes. The amount of subordination has been a point of contention between the rating agencies and the investment banks that are structuring these deals. The rating agencies have had to undergo a steep learning curve in rating commercial mortgages. This oftentimes has been done at the expense of conservative reserve or subordination guidelines.[74]

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[73]Franzetti, Joseph C. " Movements in Commercial Mortgage Securitization", Mortgage Banking, July 1991, p. 66.

[74]Interview with Brian Baker, Lehman Brothers, July 20, 1993.

Structure Types of MBS

The securities examined in this thesis have been one of three types: senior/subordinated pass-throughs, agency guaranteed pass-throughs (RTC) or mortgage backed bonds. The structure for multifamily securitization gave investors several methods of protection. The most important component, in the case of RTC issues, was to create a credit enhancement vehicle in which a reserve fund equal to 30% or more of the securities face value was set aside to protect investors against potential defaults. The securitization of these multifamily mortgages provides a new way to liquidate real estate holdings and may prove valuable when banks and others seek to readjust their portfolios.

The structure chosen to securitize a multifamily mortgage pool is a function of the issuer's objectives and the characteristics of the collateral. The underlying collateral may include a wide variety of properties and mortgages. In the case of SASCO III, it includes a combination of office buildings, retail centers and industrial warehouse properties. The wide range of property types also require different handling procedures than a typical multifamily mortgaged backed security. There is both a Servicer and a Master Servicer to manage the offering. A risk of these securities is the ability to refinance the balloon mortgages at the end of their maturity. The Servicer has the flexibility to extend loans and modify mortgage loans which are in default.

USE OF CONDUIT PROGRAMS

The creation of commercial mortgage conduit programs fills the void left by thrifts, banks and insurance companies. A conduit is defined as a channel connecting those who need to borrow money and those who want to invest in mortgage securities. Money is raised from the capital markets by issuing bonds or pass-through certificates. A conduit will either originate the mortgage loans themselves or through an existing network of

thrifts, banks, or insurance companies.[75] The DLJ multifamily offerings are examples of conduit programs used by investment banks to raise proceeds from the capital markets. In the prospectuses examined using a conduit format, a small number of properties (between 10 to 15) with large outstanding mortgages are securitized.

A conduit program provides several features that security buyers find attractive. Loans are underwritten in a consistent manner which reduces the risk that they will create problems in the future. A conduit program requires less analysis because of the standardized underwriting procedures. There is also a reduction in risk is due to the small number of mortgages within an offering. If one mortgage is greater than 10% of the total size of the mortgage pool it could pose a problem.[76] Investors are able to accurately predict cash flow, prepayments and yield with a greater degree of certainty.

These programs are not a panacea for investors trying to receive a higher yield without the commensurate level of risk. Neither the originator nor the conduit are holding the mortgage for their own account. The originator may be writing the loans in accordance with the underwriting guidelines but one has to question their incentive to scrutinize each item due to the fee driven nature of the business. The same is also true of the underwriter's attention to compliance on the part of the originator when their fees are driven by the ability to securitize a mortgage pool. Based on the level of offerings generated by Wall St. in the past year, the conduit format has a great deal of appeal.[77]

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[75]Franzetti, op. cit., p. 65.
[76]Fitch Investors Services, op. cit., p.7.
[77]Bull, Clive and Cohen Lawrence, "Residential Conduits Revisited", *National Real Estate Investor*, (May 1993) p. 28

Fortunately, some of the problems that confronted single family conduits and slowed their growth will not hinder multifamily conduits. The tax law changes introduced in the 1980's will benefit multifamily mortgages. On the other hand, there are problems which are unique to the multifamily area and by far the biggest of those is the lack of a mature agency program. It took five to eight years for single family conduits to reach their maturity.[78]

RECENT INNOVATIONS

The state of Connecticut securitized the first commercial mortgages originated and held by a pension fund in its portfolio. The state securitized $195 million of its commercial mortgage portfolio into a $121 million CMO bond offering. About $74 million (approximately 38%) in junior subordination debt or overcollateralization will provide the credit enhancement for the bond offering. Overcollateralization has seldom been used as a means of credit enhancement because losses on the additional collateral tend to come at the same time and for the same reason as the remaining collateral for securities.[79]

This securitization is unique because it allowed a pension fund to reduce its real estate allocation in a soft market while at the same time providing liquidity to its portfolio at a premium. A portion of the proceeds will be used to originate new mortgages but under more conservative underwriting guidelines. The loans in the mortgage pool were underwritten during the period 1987 to 1992 when loans were oftentimes based on appreciation as a means for repayment or refinancing balloon loans.

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[78]Ibid., p. 29
[79]Stevenson, op. cit., p. 84.

This provides a situation where the pension fund is receiving an average yield on its commercial mortgages of 9.25% while only paying a weighted average of 6.35% on its LIBOR (London Interbank Offered Rate) based bonds. In essence, the state increased its effective yield by 3% which is the spread between the payment stream it receives and the bond's cash outflow . Mark Snyderman of Aldrich, Eastman and Waltch stated that the market for buying bonds securitized by commercial mortgages has become much more liquid due to sales by the RTC.[80]

Courting Foreign Investors

A movement in the securitization of multifamily mortgages has been the use of LIBOR based floating product regardless of the underlying collateral. This illustrates the strong desire to attract foreign investors. These investors are accustomed to floating rate instruments based on LIBOR. Joseph Hu, senior vice president and head of mortgage research, said "They are like U.S. investors. They want yields: they like call protection and high yields."[81]

LIBOR has been the only interest rate used in the securitization of multifamily mortgages that has not been based on an American standard. This fact is not so much an innovation as it is an awareness of who are your potential investors and what features may appeal to them.

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[80] Williams, Terry, "Connecticut securitization may be a first", *Pension & Investment*, (June 28, 1993), p.34

[81] *Savings Institutions*, (October 1991), p. 19

Benefits of CMO/REMIC Structure

One of the structures used by Wall St. to attract investors is the use of collateralized mortgage obligations in two of the offerings. One of these issues was not a REMIC because the bonds do not represent "qualifying" loans in a real estate mortgage. The bonds constitute indebtedness and not equity interests. This is an important distinction because thrifts cannot count these as interests in real qualifying property loans. It also means that other vehicles such as real estate investment trusts cannot invest in them because they do not constitute real estate assets and the interest on such bonds will likely be not considered as interest on obligations secured by mortgages on real property.

The CMO structure eliminates the uncertainty as to their actual maturity. The advantages of a CMO structure are clear. The multiple maturity classes reduce the uncertainty of cash flows for any particular maturity class, allow investors to adapt to different shaped yield curves, and provide a degree of call protection for the longer maturity classes.[82] Thus, the CMOs attracted nontraditional investors to the mortgage market by offering a wider maturity range of investments with less repayment uncertainty and greater call protection.

Shelf Registration

Amongst the offerings reviewed, Lehman Brother's SASCOs I and III certificates were issued under a $3 billion shelf registration. This allows Lehman to acquire a pool of mortgages which meet the requirements approved by the shelf registration and bring it to market as soon as demand warrants it. Thus, the advantage of the shelf registration is that it dramatically reduces the time it takes to bring a security to market. It also helps when trying to beat a competitor to the market when the size of the market is unknown and sooner is better than later when doing so.

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[82]Jaffe and Rosen, op. cit., p. 123

The advent of shelf registration plays a major role in the offering of securities. Shelf registration allows an issuer to register securities with the Securities Exchange Commission (SEC) for sale any time after the date of registration statement. Mortgage securities may be registered without time limit whereas most other types of securities are limited to two years.[83] Once the shelf registration is declared effective, securities may be taken down from the shelf by filing a prospectus supplement without SEC review. Thus, shelf registrations allow an underwriter to respond immediately to market demands without waiting for the approval of the SEC.

Under certain circumstances an issuer must update the shelf registration through a prospectus supplement. This is required when there is a fundamental change in the registration statement. For issuers of mortgage backed securities, all offerings should require the shorter prospectus supplement. If certain changes occur and time is of the essence, the issuer may have the option of renting shelf space from another bank which has a shelf registration similar to the one being issued.[84]

LEGAL RAMIFICATIONS

Lawyers play an important role in structuring a multifamily security. These offerings involved the documentation of underwriting standards, creation of trusts and blanket mortgages. They are responsible for ensuring that the MBS qualifies as a real estate mortgage investment conduit or a fixed income trust to avoid entity level taxation. Lawyers also created special purpose, bankruptcy remote financing subsidiaries in these offerings to protect lenders against problems associated with their borrowers rather than the properties they are financing. The theory behind bankruptcy remote subsidiaries is that if the subsidiary has no other debts, it can only become insolvent if a monthly payment on the

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[83]Zenor and Dantzker, op. cit., p. 27
[84]Interview with B. Baker, July 20, 1993.

collateral is missed.[85] The collateral will usually have some type of credit enhancement which makes that scenario unlikely.

The rating agencies will require legal opinions to the effect that the transfer of assets from the parent company to the subsidiary is really a sale. A legal opinion is required by the rating agency to ensure that the subsidiary is sufficiently separate from the parent company in the event of insolvency to prevent "substantive consolidation."[86] Institutional investors such as public pension funds require legal opinions as to their right to purchase multifamily securities under ERISA (Employee Retirement Income Security Act). These are a few of the legal services required by others to meet their fiduciary responsibilities in the securitization process.

RISK CONSIDERATIONS OF MULTIFAMILY MBS

There are numerous issues that investors must consider and be aware of prior to investing in a multifamily MBS. These factors are not encountered in the single family market where standardized documentation and consistent underwriting practices have become the norm. Each offering is based on a unique set of characteristics which determine the security structure which will be offered to investors. The following is a list of factors that investors must consider when deciding to purchase any multifamily security:

1. Limited or No Information: Many of the prospectuses do not contain material information or current information regarding the underlying mortgage loans. Lack of information may be more common to RTC deals than other offerings. But regardless of the seller, lack of information may be offset by greater credit enhancement or subordination.

[85]Zenor and Dantzker, op. cit., p. 20.
[86]Zenor and Dantzker, op. cit., p. 22.

2. Balloon Mortgage Loans and Extension Risk: Balloon loans typically represent a greater risk to the lender because the Borrower's ability to make a balloon payment is dependent upon either refinancing the loan or selling the mortgaged property. The ability to accomplish either one of these goals will be affected by a number of factors: the available mortgage rate at the time of sale or refinancing, the amount of equity in the property, financial condition and operating history of the property, tax laws and general economic conditions. One approach to managing such a risk is to create a Master Servicer. If the borrower is unable to refinance or sell the property, the Master Servicer may modify the loan. Any modification of the scheduled maturity date may cause the weighted average life of the certificates to be longer than if the loan had paid under its original terms. This extension will influence the yield an investor will receive on their investment.

3. Size of the Loan: In general, the size of a multifamily loan exposes the lender to a greater risk of loss than single family lending. The repayment of loans secured by income producing properties is dependent upon the successful operation of the project. If the cash flow from the project is reduced, the borrower's ability to repay the loan is severely affected. This is particularly true for commercial properties. Market values may vary as a result of economic events or local regulations outside of the control of the borrower or lender. The adoption of a rent control law may affect the future cash flow of the property and ultimately its resale value. These are a few reasons why there is greater lending risk and a corresponding higher interest rate for multifamily mortgage lending than for single family lending.

4. Mortgage Loan Concentration: Due to the concentration of larger mortgage balances on multifamily projects, losses, prepayments or modifications are likely to have a greater effect on yield or the expected weighted average lives of the securities.

5. Geographic Concentration: Mortgage loans are usually secured by properties located within one region or state. As a result, a decline in local or regional economy may have a greater impact on a portfolio than would be the case if properties were more diversified.

6. Indices Risk: Mortgage loans often bear interest at rates that are adjusted according to various indices. Alternatively, securities may be tied to indices calculated at different intervals. The pass-through indices and the offering indices may respond differently to economic and market conditions. It is possible that the pass-through indices may rise when the offering indices are stable or even falling. Another possibility is the pass-through indices and the selected indice rise during the same period but the pass-through indice may increase at a faster rate than the targeted indice.

7. Yield, Prepayment and Maturity Considerations: The yield to maturity on the securities will be affected by the principal payments and any modifications to the mortgage loans. Prepayments can occur for a variety of reasons including repurchase of property, condemnation, insurance or foreclosure. Prepayment penalties are intended to replicate the same yield to maturity had the securities not been prepaid. However, there are various scenarios, such as a mortgage default, where the prepayment penalty is not payable.

The underwriter of multifamily mortgage securities must overcome these issues when determining the structure of a security. Since the multifamily security is still a relatively new security, it will take time for investors to become comfortable with these securities. It will also take time for rating agencies to understand the performance characteristics of the multifamily MBS.

CONCLUSION:

The capital markets provided a variety of financing vehicles to assist owners and developers raise capital in the multifamily market. These vehicles included CMOs and conduit programs. Changes to the structure of an offering occur rapidly and are incorporated into the next issuance of securities. As this market matures, small owners will become active participants and it will no longer be limited to the largest developers and owners. Nor will they be limited to large pools of mortgages. Donaldson, Lufkin & Jenrette's conduit program plans to provide financing for owners of only one multifamily property.[87] This is yet another example of the evolution of the MBS market.

The above offerings suggest each securitization is unique. Brian Baker, multifamily mortgage trader for Lehman Brothers, reasoned that the complexity of the underlying assets are why no two offerings are exactly alike. Each multifamily project is different because its economic characteristics are distinct to that particular property.

The success of the RTC in disposing of its assets has led others such as pension funds and real estate advisors into investigating avenues of securitizing their mortgage portfolios. The RTC's strategy of lumping together mortgages of property that is considered below investment grade to broaden the pool of prospective investors will continue to attract followers. As the market matures, insurance companies, commercial banks, private developers and investors will expand their efforts into this field.[88] This type of creativity on the part of sponsors and acceptance by investors will only lead others into securitizing their portfolios and market acceptance of these securities. The securitization of commercial mortgages will continue long after RTC has finished its handling of the failed savings and loan thrifts.

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[87]Bergman, op. cit., p. 62.
[88]Fitch Investors Services, op. cit., p. 1.

CHAPTER FIVE

The Future of Multifamily Mortgage Securitization

"... no securitization will happen at all unless investors for these securities step forward in great numbers. Without investors, securitization is just another fancy restaurant without customers."

Joseph Franzetti

The securitization of real estate started with the issuance of GNMA securities in 1970 and evolved to securitizing commercial mortgages in the 1990's. Investor confidence in commercial mortgage securities are enhanced by the success of the single family securities. Without the creation of GNMA and their participation in the secondary mortgage market, it would have been more difficult and time consuming to establish the liquidity and market confidence for other MBS programs.[89]

As the market for securitized product continues to grow, the challenge to the investment community is to continue its financial engineering expertise to design and distribute products to investors who can benefit most. The RTC's presence has proven that securitization is a very effective disposition technique that meets the needs of today's markets. Securitization issues through January 1993 totaled approximately $32.5 billion, including $7.6 billion in commercial issues.[90]

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[89]Baldwin and Stotts, op. cit., p.48.
[90]Watkins, Birge "RTC finds Assets More Manageable," *National Real Estate Investor*, (April 1993), p. 66.

Much like single family mortgage backed securities, the multifamily market offers a number of different ways to provide liquidity to a mortgage portfolio or a borrower looking for financing. Currently less than 10% of multifamily mortgages are securitized. This may be why the future of multifamily securitization is so promising. The number of multifamily securities issued in their short life span is evidence of the potential of the market. Well located, fully leased apartments with solid cash flows, reasonable LTV ratios, adequate debt service ratios provide strong collateral for multifamily mortgage backed securities.

REASONS FOR CONTINUED GROWTH

There are many fundamental reasons for growth in the multifamily market to continue. Market acceptance of multifamily MBS is a result of a viable rating system used by the rating agencies. The multifamily mortgage market does not have any mortgage guarantee programs on the same scale as exists for the single family market. Mortgage securitization has stood on its own merit and provides owners and investors with a proven option. The success of the multifamily market is due in large part to the following events or market participants:

Influence of the RTC

The success of the RTC in securitizing its commercial real estate assets has sparked the interests of owners, lenders and investment bankers in securitizing their privately owned assets. The RTC, in addition to their multifamily securities, has completed issues backed by both performing and nonperforming mortgages on commercial properties. The successful track record of the RTC has given investors the comfort level as well as the liquidity to make these securities attractive investments. Most importantly, the RTC multifamily MBS has allowed private multifamily MBS to get a toehold in the portfolios of institutional investors.

Rating Agencies

Borrowers have discovered that the capital markets offer better price execution and the opportunity to refinance a large percentage of their holdings in a single transaction. This is possible due to the rating systems in place for rating mortgage pools. The rating system allows nontraditional real estate investors to access the market. In the past, they were unable to do so because of their investment criteria which limited investment to rated securities.

Capital Markets

The void created by the traditional real estate lenders has created an opportunity for others to not only originate mortgages but to securitize mortgages. Investment firms have much more flexibility when compared to banks and insurance companies because of the risk based capital requirements and regulatory pressures placed on them. With the retreat of saving and loans, investment banks have gained market share. The market is changing due to the incentive to securitize assets which increases liquidity and reduces capital reserve requirements.

Investment banks are also quick to market new securities which carve up the cash flow according to risk and maturities. No one else has that capability and so the next growth area might be an increase in derivative products. The derivative product market is quite large and this might continue into the future.

The success of the multifamily market to date is due to the growth and acceptance of single family mortgage market. The continued success of the multifamily market will depend upon the capital markets creating ratable securities which are then accepted by the investment community. If this is achieved then market participants of any size will be able to securitize their multifamily mortgage.

Appendix A - 10 Multifamily Prospectuses

The following are transaction summaries of 10 multifamily securitizations over the last three years:

1. LB MULTIFAMILY MORTGAGE TRUST
Mortgage Pass-Through Certificates, Series 1991-4

Transaction Summary:

Seller/Packager:	Resolution Trust Corp. acting as receiver for Columbia Savings and Loan Association.
Securities Offered:	$81.5 million mortgage pass through certificates.
Collateral:	Variable-rate first mortgage loans secured by multifamily properties
Lead Underwriter:	Lehman Brothers

Background: LB Multifamily Mortgage Trust's pass through certificates series 1991-4 classes A-1 and A-2 are assigned an AA rating based on the 23% credit support or enhancement provided by the class B, C, and D certificates. The class B certificates are not a part of this offering and were privately placed. The credit support can be thought of as a reserve fund to cover shortfalls in collections on mortgages' principal and interest payment due to losses and delinquencies.

Credit Risk: The certificates are secured by first mortgage loans that are secured by multifamily properties located in California. The majority of these properties are in southern California with a few in the San Francisco and Sacramento areas. The properties range in size from five to 36 units and are described as being in average condition. The loans were purchased from the RTC which acquired the loans upon dissolution of Columbia Savings and Loan, Beverly Hills, CA.

Loan Pool Characteristics: The pool consists of 138 variable rate multifamily mortgages. The largest loan is approximately $3.9 million or approximately 3.7% of the total pool. The majority of the pool, about 80%, are fully amortizing. The remaining 20% amortize over a 25 to 30 year period with an average loan period of 11 years. The rating agency determined that the average default risk is greater for the balloon mortgages than for the fully amortizing loans by a factor of two times.

Payment Structure: The issue is structured as a multi-class mortgage pass through. The class A-1 and A-2 certificates were sold publicly with the A-2 class as an interest only class. The LB trust has elected to be treated as a real estate mortgage conduit for income tax purposes. The securities pay monthly on the 25th of each month. All principal payments are paid sequentially to the Class A certificates until they are paid in full, then to the Class B certificates are paid in full and so on. The class D certificates are accrual interest certificates which means the accrued and unpaid interest on the Class D certificates are used to accelerate the repayment of the class A certificates.

2. RESOLUTION TRUST CORPORATION

Mortgage Pass-Through Certificates, Series 1991-M1

Transaction Summary:

Securities Offered:	$354.6 million multifamily mortgage pass through certificates
Collateral:	Adjustable rate first mortgage loans secured by multifamily properties.
Seller:	Resolution Trust Corporation
Master Servicer:	Equitable Real Estate Investment Management Inc.
Trustee:	State Street Bank and Trust Co.
Lead Underwriter:	Salomon Brothers Inc.

Background: An 'AA" rating is assigned to the RTC's series 1991-M1 class A-1 certificates based on the 40% loss coverage provided by the reserve fund and the A-2 subordinate class. The A-2 class which is equal to 5% of the issue amount is rated 'A+' based on the reserve fund equal to 35% of the issue amount. The reserve fund is equal to 35% of the issue amount. The reserve fund is available to offset the loss, if any, of principal in the event of foreclosure. If total losses are in excess of 35%, additional losses will be allocated to the class A-2 certificates. The reserve fund may also be used to cover any shortfalls in the monthly distributions resulting from delinquent mortgage payments.

Credit Risks: The certificates are backed by 219 adjustable rate first-mortgage loans secured by multifamily properties located in 12 states. Approximately 70% of the loans are collateralized by properties in the Los Angeles area. The properties range in size from five units to over 800 units. A summary of the loan fact sheets indicates about one-third of the loans were underwritten using below market rates and that many of them showed signs of needed maintenance.

Loan Pool Characteristics: A majority of the properties did not have current financial information available. About one-third of the properties have debt service coverage ratios less than 1.0 which are due to high levels of vacancies. The rating agency, Standard & Poor, factored in the needed maintenance on many of the properties and the low debt coverage ratio into their credit enhancement requirements. S&P assumed a higher level of defaults resulting in greater losses than an average pool when determining the size of the reserve fund. All of the loans are current as of the closing date, however the low debt service coverage ratio indicates that the owners are subsidizing the properties. Only 20% of the loans in the pool are fully amortizing. The remaining 80% partially amortize, mostly over a 30 year period with a 15 year maturity.

Payment Structure: The issue is structured as a multi-class pass through security. The trust has elected to be treated as a real estate mortgage conduit for tax purposes.

3. RESOLUTION TRUST CORPORATION

Multifamily Mortgage Pass-Through Certificates, Series 1992-M2

Transaction Summary:

Closing Date:	September 1991
Securities Offered:	$398.3 million multifamily mortgage pass through certificates series 1991-M2 classes A-1, A-2, A-3, X-1, X-2, and X-3.
Collateral:	Adjustable rate first mortgaged loans secured by multifamily properties
Reserve Fund:	Cash reserve fund supported by senior/subordinated mortgage pass through certificates
Seller:	Resolution Trust Corp.
Servicer:	G.E. Capital Asset Management Corp.
Trustee:	State Street Bank & Trust Co.
Lead Underwriter:	Lehman Brothers

Background: The "AA" rating assigned to the RTC multifamily mortgage pass through certificates is based on the 39% loan loss coverage provided by the reserve fund of 27% and the 12% class B subordination. The class B certificates, which are equal to 12% of the underlying mortgage balances, were sold privately. The reserve fund is used to offset any loss of principal due to a foreclosure. If total losses exceed the 27% cash reserve fund, then additional losses will be allocated to the class B certificates. The reserve fund can also be used to provide liquidity to the issue to cover shortfalls in the monthly distributions resulting from delinquent mortgage payments.

Credit Risks: The certificates are backed by 520 adjustable rate first mortgage loans on multifamily properties. All but one loan are located in California. About 70% of the loans are fully amortizing with the majority of the remaining loans partially amortizing over a 30 year period with a 15 year maturity.

Current financial information was only available on approximately 75% of the mortgage pool with only original information on the remaining loans. Close to two-thirds of the loans have debt service coverage ratios below 1.0 times (x). The low debt service coverage ratio indicates a high level of vacancy which led the rating agency to assume a higher level of defaults. This assumption results in a 39% loss coverage at the 'AA' level. While the loans were current at closing, the below 1.0x coverage indicates that the owners have had to invest additional equity in order to keep the loans current. This is in conjunction with the fact that many of the same properties also showed signs of deferred maintenance.

Payment Structure: The issue is structures as a multi-class pass through security. The A, X, and B classes are interest classes and the R class is a residual interest class. The class X is certificates are interest only certificates. The residual interest was retained by the RTC.

The underlying mortgage pool is segregated into three separate groups of assets. The first mortgage loan group consists of class A-1, X-1, B, and R certificates and has loans with rates tied to the six month treasury index. The second mortgage group consists of class A-2, X-2, and R certificates and has loans which are tied to the 11th District cost of funds index. Finally, the third mortgage loan group is tied to the one year treasury index and consists of loans which are secured by the class A-3, X-3, and R certificates.

The RTC has guaranteed that none of the properties collateralized by any of the mortgage loans are affected by any environmental hazard. If an environmental hazard that existed prior to the closing is discovered at a later date, the RTC will repurchase the loan from the trust.

4. RESOLUTION TRUST CORPORATION

Multifamily Mortgage Pass-Through Certificates, Series 1992-4

Transaction Summary:

Closing Date:	May 28, 1992
Securities Offered:	$442 million multifamily mortgage pass-through certificates
Master Servicer:	Midland Data Systems, Inc.
Special Servicer:	J.E. Robert Company
Trustee:	Bankers Trust Company of California
Lead underwriter:	Goldman Sachs, & Co.

Background: The mortgage loans were acquired by the RTC, acting in its capacity as conservator, of 75 failed federally chartered depository institutions. The Seller creates a reserve fund equal to 27% of the principal balance of the mortgage collateral to provide security for delinquent payments. In addition, the offering is structured in a subordination issue where distributions of the Class B Certificates are limited to excess interest, if any, on the distribution date until the principal balances of all other certificates are reduced to zero. The Class B certificates are an additional 8.75% of credit enhancement which when added to the cash reserve provides an approximate total of 35.75% of reserves in the event of delinquent or foreclosed mortgages.

The certificates are based on two classes, Class A, which has four sub-classes, and Class B which are segregated into four different mortgage loan groups as follows:

1. Class A-1 and Class B Certificates: Based on Mortgage Loan Group 1 (consists of group 1A and 1B). The Class A-1 certificates have a fixed pass through rate of 8.0%. The Class B certificates have a fixed pass-through rate of 7.20%. Their are approximately 362 loans in the Group 1 Mortgage loan pool and of those 259 (71.5% of the Group 1 loans) are balloon mortgage loans. Generally these loans are fixed rate mortgage loans, some of

which have a periodic resetting, and adjustable rate mortgage loans which have minimum rates equal to 9% per year. Approximately 32 mortgage loans representing 19.7% of the principal balance of group provide for a periodic resetting of the interest rate.

2. Class A-2 Certificates: Based on Mortgage Loan Group 2 which has an initial pass-through rate of 7.35% per year for the first six months then it is based on the Eleventh District Cost of Funds Index plus 1.55% subject to a maximum rate of 12.25% per year. The mortgage loans in group 2 are adjustable rate mortgage loans which adjust at either at one month, six month, one year or five year intervals thereafter. Approximately 59 of the Group 2 loans representing 94.1% of the scheduled principal balance are balloon mortgage loans.

3. Class A-3 Certificates: Based on Mortgage Loan Group 3 which has an initial pass through group of 6.58% per year for the first 12 interest accrual periods. Thereafter, it is based on the one year treasury index plus 1.95%, with a ceiling of 12.0% per year. The mortgage loans are adjustable rate mortgages which is adjusted to a designated index plus a specified margin which is subject to a maximum rate. Approximately 94 of the Group 3 loans representing 64 % of the scheduled principal balance are balloon mortgage loans.

4. Class A-4 Certificates: Based on Mortgage Loan Group 4 which has an initial pass-through rate of 4.6125% per year for the first year. Thereafter, LIBOR plus 0.8% with a maximum rate of 11.50% per year. The mortgage loans in this group are adjustable rate mortgages which are adjusted to the LIBOR index plus the above margin. The adjustments are subject to maximum rate and in the case of a portion of Group 4 loans, a minimum rate as well. Approximately 26 loans representing 74% of the loans are balloon mortgage loans.

Other Credit Risks: Approximately 438 loans, representing 73.4% of the scheduled principal balance are not fully amortizing over their terms to maturity and thus will have balloon payments due at their stated maturity. Also, 26.4% of the mortgage loans are secured by property in the state of Texas.

Payment Structure: An election was made to treat the Trust Fund as a REMIC for tax purposes.

5. STRUCTURED ASSETS SECURITIES CORPORATION I

Collateralized Mortgage Obligations, Series 1992-M1

Transaction Summary:

Closing Date:	November 20, 1992
Securities Offered:	$254.3 million collateralized mortgage obligations
Collateral:	Fixed rate first and second mortgages secured by multifamily properties
Master Servicer:	Bank of America National Trust & Savings Association
Trustee:	Marine Midland Bank, N.A.
Lead Underwriter:	Lehman Brothers

Background: SASCO's collateralized mortgage obligations are assigned an 'AAA' rating based on the 22% subordination of the classes B, C and D bonds. The Class D bonds are not offered but retained by a subsidiary of the lead underwriter. The following is a summary of the bond characteristics:

Credit Risk: The bonds are secured by the mortgage collateral which consists of 110 fixed rate, first and second balloon mortgage loans. These 55 multifamily properties are located in 13 states. The number of rental units at each site ranges from 64 to 904 units with an average of 248 units at each location. The mortgagor is Insignia Financial Group, Inc. which acquired all of the originated by First Commonwealth and Standard Federal. An environmental assessment revealed the presence of asbestos containing material in 54 of the 55 properties. An operation and maintenance plan is in the implementation stage to manage and/or remove the asbestos. No other adverse environmental conditions are likely to require expenses above the operation and maintenance budget.

Loan Pool Characteristics: The mortgage pool consists of 55 mortgage pairs of fixed rate balloon loans. The largest loan pair is approximately $16.4 million or 6.27% of the total pool. The pool is not concentrated with mortgaged properties spread over 13 states with only one state having more than 10 properties. The first mortgages are fully amortizing over a term of 21.4 years with a 10 year term to maturity. Each of the second mortgages are interest only which means that a substantial amount of principal will be due at the stated maturity.

Payment Structure: This issue is structured as a collateralized mortgage obligation. The trust has elected to be treated as a REMIC for tax purposes. Payments are made on the 25th of each month pro rata for Class A and sequential for classes B, C, and D.

6. DLJ MORTGAGE ACCEPTANCE CORPORATION

Multifamily Mortgage Pass-Through Certificates, Series 1993-MF1

Transaction Summary:

Closing Date:	January 29,1993
Securities Offered:	$117.1 million multifamily mortgage pass-through certificates
Collateral:	One blanket deed trust loan secured by a first deed of trust blanket lien on 10 multifamily apartment complexes
Servicer:	Bankers Trust Company
Trustee:	Union Bank
Lead Underwriter:	Donaldson, Lufkin & Jenrette

Background: The 'AAA' rating assigned is based on the 40% credit support of the subordination of the junior classes. The series 1993 MF1 consist of two classes of which the Class A group is made up of the Class A-1 certificates and Class A-2 certificates. Class B is made up of class B-1 and B-2 certificates which are subordinate to the senior Class A certificates. The certificates represent undivided interests in a Trust fund, established by DLJ Mortgage Acceptance Corp. to facilitate an agreement among the trustee and servicer. The trust fund will consist of a single mortgage loan secured by a first deed of trust blanket lien on a total of 15 multifamily apartment complexes.

The certificates offer a mixture of fixed and variable rate mortgages. The Class A-1 certificate's initial rate is 5.1875% per annum at a rate adjusted monthly to be equal to 2.00% over the London Interbank Offered Rate for one month U.S. dollar deposits (LIBOR) with a cap of 11.25%.

The following is a summary of the bonds:

Class	Rating	Amount	Coupon	% of Offering	% of Mortgage	Credit Support
A-1	AAA	$73,200,000	LIBOR + 2.0%	62.5%	60.0%	40%
A-2	AA	$17,690,000	8.90%	15.1%	14.5%	25.5%
B-1	BBB	$26,230,000	9.90%	22.4%	21.5%	4.0%
Total Offered		$117,120,000		100%	96.0%	
B-2*		$4,880,000	7.0%		4.0%	
R*		0			0%	
Total Issued		$122,000,000			100%	

*The Class B-2 certificates and the Class R Certificates are not being offered.

Credit Risks: The apartments comprise a total of 2,929 rental units located in Virginia and Maryland. The debt under the Mortgage Loan is consolidated into a single note with four payment components (A-1, A-2, B-1, B-2).

The release of collateral is allowed if two conditions are both satisfied. The first one is the mortgagor can prepay the loan in an amount equal to 125% of the principal balance. The other requirement is that the DSC ratio on the remaining properties is at least equal to 1.35 and will not be less than the DSC ratio prior to such release.

Payment Structure: The payment pattern is sequential starting with the senior class and moving down. The mortgage loan is a nonrecourse loan and not insured or guaranteed by any private mortgage insurer or government entity.

7. DLJ MORTGAGE ACCEPTANCE CORPORATION

Multifamily Mortgage Pass-Through Certificates, Series 1993-MF7

Transaction Summary:

Closing Date:	May 27, 1993
Securities Offered:	$127 million multifamily mortgage pass-through certificates
Servicer:	Bankers Trust Company
Trustee:	Union Bank
Lead Underwriter:	Donaldson, Lufkin, & Jenrette

Background: The senior/subordination of the Class R, Class B and Class A-2 components provide a credit enhancement of 29.13%. In that order, they will bear the primary risk of interest shortfall and loss on the mortgage loan.

The following is a summary of the bond characteristics:

Class	Rating	Amount	Coupon	% of Offering	Credit Support
A-1	AAA*	$90,000,000	7.40%	70.87%	29.13%
A-2	A*	$18,585,000	7.95%	14.63%	14.5%
B	BBB**	$18,415,000	9.40%	14.5%	
R					
Total Issue		$127,000,000			

* Standard & Poor
** Duff & Phelps

Credit Risk: The securities offered are $127 million multifamily mortgage pass through certificates. The certificates will represent undivided interest in a trust fund consisting of a single mortgage loan secured by a first lien on a total of 15 multifamily apartment complexes. The debt service requirements from the mortgage loan will be paid from the rental income from the underlying mortgaged properties and the refinancing or sales proceeds obtained from the mortgagors at the maturity of the mortgage loan.

The mortgaged properties comprise a total of 3,674 rental units. Twelve mortgaged properties are located in Maryland and three mortgaged properties are located in Virginia and each of the mortgaged properties is at least 100 units in size. The average age of the properties is 24 years old. All of the mortgaged properties provide the security for the mortgage loan. Southern Management Corporation, the property manager, states that in 1989 it went on a three year capital improvements program for these properties. Close to $5.3 million was spent on improving 13 of the 15 projects. If new apartment buildings are built in the general area during the 10 year term of the loan or other apartment complexes are updated and refurbished, it will be difficult to refinance the loan or to sell a mortgaged property to make the balloon payment.

Payment Structure: The issue is structured as a Trust Fund and will be treated as a REMIC for federal income tax purposes. The mortgage loan is a non-recourse loan and is not insured by any governmental entity or private insurer. The distribution of payments is sequential starting with the senior most class and subsequently paying all other classes. The maturity date is November 25, 1997 for the entire issue.

8. FIRST BOSTON SECURITIES CORP.

Multifamily Mortgage Pass-Through Certificates, Series 1993-3

Transaction Summary:

Closing Date:

Master Servicer: Wells Fargo Bank, National Association

Trustee: State Street Bank and Trust Company

Lead Underwriter: First Boston Corporation

Securities Offered: These Certificates are backed by five Classes of Certificates in which only the Class A Certificates are offered. The following is a list of Classes:

Class	Amount	Offered
A-1	$50,838,665	
A-2	Interest Only	
B-1	$6,778,488	No - Privately Sold
B-2	Interest Only	
C	$7,863,046	No - Privately Sold
D	$2,304,686	No - Privately Sold
R-1	Residual - kept by issuer	
R-2	Residual - kept by issuer	

The Certificates represent ownership in a trust fund created by the underwriter consisting of a pool of adjustable rate and fixed rate mortgage loans secured by mortgages on apartment buildings.

Credit Risk: All of the mortgaged properties are located in the state of California. All of the mortgage loans with the exception of one have On the 25th of each month, payments of interest and principal, if any, on the Class B, C, and D Certificates will be subordinated to payments of principal and interest on the Class A Certificates. There are 35 mortgage loans, three of which are fixed rates mortgages which have a balance of $5,650,398, and the other 32 are adjustable rate mortgages with an aggregate balance of $62,134,490. There are a total of 1,939 apartments in 35 buildings ranging in size from 5 units to 250 units. In addition, nine of the buildings were built prior to 1964.

None of the mortgage loans are guaranteed by any governmental agency or insured by any affiliate involved in the securitization process.

9. FIRST BOSTON SECURITIES CORP.

Multifamily Mortgage Pass-Through Certificates, Series 1993-4

Transaction Summary:

Closing Date:	June 18, 1993
Securities Offered:	$115 million of multifamily mortgage pass-through certificates
Servicer:	Bankers Trust Company
Trustee:	Union Bank
Lead Underwriter:	The First Boston Corporation

The Certificates have four Classes, A, B, C and R, of which only the first three are offered in the secondary market. This trust fund is similar to those created by other investment banks where the Certificates provide ownership in a Trust Fund. The principal asset in the fund is a single adjustable rate mortgage loan with a balance of $115 million. There are 28 mortgage notes secured by first priority mortgage liens on each of the 28 multifamily apartment buildings or complexes. All of these buildings are located in and around the cities of Tacoma and Seattle in the state of Washington.

The Class A Certificates are rated 'AAA' by Standard & Poor and Fitch Investor, Services Inc. The Class B Certificates are rated 'AA' by each of the rating agencies and the Class C Certificates are rated 'A' by S&P and 'A-" by Fitch.

Credit Risks: The Certificates are secured by 28 multifamily residential properties comprised of a total of 4,439 rental units all located in the Puget Sound region in the state of Washington. The average age of the rental properties is 3.1 years and built between 1986 and 1992 with the exception of one complex constructed in 1980. The lack of geographic diversity in the mortgaged properties may result in higher losses than if the properties were geographically spread out over a number of states. The same problem is evidenced in the mortgage notes payable by one borrower. The inability of the borrower to

make the balloon payment will likely cause greater losses on the certificates than if the loan was not payable by a single party. The aggregate LTV ratio for the mortgage loan is 53.7%. The mortgage loan is not insured or guaranteed by any governmental entity, private insurer, or any other party and the mortgage loan is a non-recourse loan to the mortgagor.

Payment Structure: The issue is structured as a multiclass mortgage pass through certificate. All three classes are interest only classes and sold publicly. The trust has elected to treated as a REMIC for income tax purposes. The Certificates provide for monthly interest payments with the principal payable in a single balloon payment on June 24, 1998. Optional principal payments are allowable after June 24, 1995 with a prepayment premium of 1% of any amounts prepaid. Any prepayment premium are distributed to the Certificate holders as increased yield on the certificates.

10. STRUCTURED ASSETS SECURITIES CORPORATION TRUST III
Collateralized Mortgage Obligations, Series 1993-C2

Transaction Summary:

Closing Date:	June 21, 1993
Servicer:	Aldrich, Eastman, & Waltch, L.P.
Trustee:	Marine Midland Bank, N.A.
Master Servicer:	Bankers Trust Company
Lead Underwriter:	Lehman Brothers

Credit risks: SASCO is a trust offering one class of CMO bonds with an interest rate equal to one month LIBOR plus 0.90% subject to a cap of 10%. The bonds will be collateralized by a pool of 13 loans, 10 of which are fixed rate balloon loans, with an aggregate balance of $195,591,578. The mortgage loans are a portion of the assets that AEW manages for the State of Connecticut. Each of the mortgage loans is held by a separate trust where the state of Connecticut is the sole beneficiary. Each separate trust is the seller of its mortgage loan and will receive Certificates in the new Trust in proportion to its mortgage loan divided by the total balances of all the mortgages sold to the Trust. The mortgaged properties consist of three multifamily rental properties, two office/retail buildings, one office/restaurant building, six shopping centers, two light industrial buildings and four mobile home parks.

The bonds are not insured or guaranteed and will be non- recourse thus the bondholders must rely solely on the senior lien and security interest in the Trust and whatever overcollateralization the debt service on the bonds the Trust may provide. SASCO will have no assets other than the collateral to satisfy the bond obligations. In the event of a default by the mortgagor, the servicer may foreclose on the defaulted loan.

Credit Risks: 10 of the 13 mortgage loans, representing 72.3% of the bonds, do not fully amortize over the term to maturity and therefore will have balloon payments due. All of the mortgaged properties are income producing properties and the repayment of loans are dependent on the successful operation of the project. Repayment of the loan is also affected by the supply and demand in the market for the type of property securing the loan. This is cause for concern when the entire project is leased to one tenant as is the case for two of the mortgage loans with a principal balance of approximately $16.3 million.

Loan Pool Characteristics:

Payment Structure: The offering will not be a REMIC because the bonds do not represent qualifying real property loans which is a requirement under the Internal Revenue Code.

Appendix B Definitions:

Credit Enhancement: Credit enhancement covers foreclosures and severe losses caused by foreclosure. Loss coverage is provided by credit enhancement and is necessary to obtain an investment grade rating. There are several ways which issuers package the MBS to ensure investors that their interests are protected.

1. Pool Insurance: The reason a pool policy is required is to insure investors against the credit risk associated with a potential default on any of the underlying mortgages. The amount of the pool policy is determined by the rating level desired and is determined by the rating agencies.

2. Letters of Credit and Parent Company Guarantees: These guarantees may be obtained instead of pool insurance. This kind of loss coverage is used by some of the major pass through issuers such as Citibank. This type of guarantee obligates the guarantor to make up any shortfalls to investors due to delinquent principal and interest payments.

3. Subordination: The subordination of a pass through security is simply designed by dividing the issue into senior and junior classes. Senior certificate holders receive their scheduled principal and interest payments first. Junior certificate holders receive their principal and interest payments only after payment has been made to the senior certificate holders. The senior subordinate relationship allows an investment grade rating to be obtained by the underwriter which allows institutional investors to purchase this type of security.

ERISA: The Employee Retirement Act of 1974 governs pension fund administration and investments and prohibits certain investments. Transactions with plan assets by trustees, servicers and sponsors are restricted. Sale of certificates to ERISA plans are generally feasible only if an exemption is available. Exemptions are obtained by investment banks

which cover securities backed by specified secured debt obligations which include commercial mortgage loans.

Master Servicer: This company is responsible for collecting all payments of principal and interest from the loan servicer. The master server sends these payments to the trustee for distribution to investors according to the servicing agreement. The master servicer's primary responsibility is to monitor the monthly servicing and reporting of the other servicers. Other responsibilities would include loan status, delinquency reports and calculation of payments.

The master servicer must have a credit rating at least equal to one category below the required rating of the securities. A master servicer is also utilized when there is more than one servicer or when the servicer does not have adequate financial capacity to satisfy the rating agencies or investors.

Mortgage Backed Securities: Financial instruments designed to channel funds from capital market investors to mortgage borrowers.

Mortgage Derivatives: Derivative mortgage securities divide the principal an/or interest cash flows from a pool of mortgage loans and allocate the cash flows to two or more classes of investors in a non pro-rata fashion.

Secondary Mortgage Market Enhancement Act (SMMEA)of 1984: SMMEA was designed to enable private issuers of mortgage securities to compete more effectively with government related agencies which had dominated the market.

Special Servicer: Responsible for maximizing recoveries on defaulted loans. Works with balloon loans when repayment is an issue. The RTC developed a compensation schedule

to provide incentives to make prudent restructuring decisions which minimize liabilities of the RTC. The special servicer is used in the securitization of commercial loans.

Trustee: Its primary function is to protect the investors by acting as a fiduciary.

Bibliography

Adler, Tamara L. and Ballard, Robyn L., " Mortgage Pool Technology Tests New Frontiers" Savings Institutions, January 1989, S. 48-55

Baldwin, Earl "Doc" and Stotts, Saundra "Mortgage Backed Securities" Chicago, Illinois: Probus Publishing Company 1990

Bergman, Steve, " Multifamily Offers Unique Opportunities To Investors Looking For Solid Returns", National Real Estate Investor, July 1993 p.48-73

Bull, Clive and Cohen Lawrence, "Residential Conduits Revisited", National Real Estate Investor, May 1993 p.28

Bush, Vanessa "Market Pressures May Revive Multifamily MBSs", Savings Institutions, July 1992, p.30-35

Carron, Andrew S., "Understanding CMOs, REMICs, and other Mortgage Derivatives", First Boston Fixed Income Research, February 1992.

Darragh, Andrew J., "1993 Real Estate Outlook," The Balcor Consulting Group, Chicago, IL

Diamond, Larry and Kane, Carl, "Converting Commercial Real Estate into Marketable Securities", Urban Land, December 1992, p. 14-16

DiPasquale, Denise and Cummings, Jean L. "Financing Multifamily Rental Housing: The Changing Role of Lenders and Investors", Fannie Mae, 1992

Downs, Anthony "Securitization is One Answer to Liquidity Problem", National Real Estate Investor, August 1992, p.46

Fabozzi, Frank "The Handbook of Mortgage Backed Securities", Chicago, Illinois: Probus Publishing Company 1992.

Fannie Mae Housing Impact Report 1992-1993, 1993

Fascitelli, Michael and Hacker, Scott, "Time is Right for Mortgage Securities", National Real Estate Investor, (March 1992), p.118

Fitch Investors Services, "Commercial Mortgage Stress Test", June 8, 1992

Fitts, C. Austin "RTC Offers Multifamily Opportunities", National Real Estate Investor Magazine, January 1992 (p. 56-7)

Frantz, James B., "Some Traditional Lenders Coming Back, Mortgage Securitization Gains Momentum," National Real Estate Investor, (October 1992), p.36-50

Frantz, James B., "Securitization - The Capital Source for the 90's", National Real Estate Investor, July 1992, p. 61-8

Franzetti, Joseph C. " Movements in Commercial Mortgage Securitization", Mortgage Banking, July 1991, p. 65-69

Freddie Mac 1992 Annual Report, April 1993, publication 165,

Giesecke, Karsten, "Strategies for Structuring Multifamily and Mortgaged Backed Securities", February 17, 1992

Greco, Michael H., "Mortgage-backed Securities Financing Gains Popularity", National Real Estate Investor, January 1993, p.16

Hu, Joseph C. "Secondary Market: The American Model", Mortgage Banking, April 1991, p. 14-23

Hu, Joseph C. "Housing and the Mortgage Securities Markets: Review, Outlook and Policy Recommendations", Journal of Real Estate Finance and Economics, 5: 167-179, 1992.

Jaffee, Dwight M. and Rosen, Kenneth T. "Mortgage Securitization Trends", Journal of Housing Research, 1990, no. 1: 119-139

Kane, Carl "Fundamental of Commercial Securitization" Mortgage Banking, July 1992, pages 18-24

Karr, Albert R. and Connor, John, "Wall St. Cashes in on RTC's Program", Wall Street Journal, June 8, 1993, p. C1

Levy, John B., " 'Hot' Apartments are at Top of Lender's 'Want' List", National Real Estate Investor, July 1993, p.44

Roberts, Blaine "Lassoing the Global Market", Mortgage Banking, November 1991, p. 49-53

Savings Institutions, October 1991, p. 19-21

Shenker, Joseph C. and Colletta, Anthony J. "Asset Securitization: Evolution, Current Issues and New Frontiers" Texas Law Review, Vol. 69 No. 6 p. 1369-1429, May 1991

Standard & Poor's Credit Week, "Multifamily Mortgage Securitization to Rise", October 1991 p.1-11

Stevenson, Eric "Securitizing Low Income Multifamily Mortgages", Mortgage Banking, May 1992, p. 81-85

Watkins, Birge "RTC finds Assets More Manageable" National Real Estate Investor, April 1993, p.66

White, Gregory A. "Everything You Wanted to Know about Commercial Mortgages but Were Afraid to Ask" 1993 p.11-17

Williams, Terry, "Connecticut securitization may be a first", Pension & Investment, June 28, 1993, p.34

Zenor, Donna J. and Dantzker, Steven R., "An Introduction to the Securitization of Real Estate Debt Financing" January 1988.