United States General Accounting Office

GAO

Report to Congressional Requesters

September 1988

HOUSING FINANCE

Agency Issuance of Real Estate Mortgage Investment Conduits

043141

GAO/GGD-88-111

GAO

United States
General Accounting Office
Washington, D.C. 20548

General Government Division

B-230159

September 2, 1988

The Honorable Henry B. Gonzalez
Chairman, Subcommittee on Housing
and Community Development
Committee on Banking, Finance
and Urban Affairs
House of Representatives

The Honorable Guy Vander Jagt
House of Representatives

In response to your requests, we have examined the potential effects of allowing federal credit agencies to participate in the market for Real Estate Mortgage Investment Conduits. This report describes how Real Estate Mortgage Investment Conduits work and examines the changing response of this market to participation by the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation.

We are sending copies of this report to the appropriate House and Senate Committees, the Secretary of Housing and Urban Development, the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation, and other interested parties. We will also make copies available to others on request.

Craig A. Simmons
Senior Associate Director

Executive Summary

Purpose

Congressman Guy Vander Jagt and Congressman Henry Gonzalez, Chairman of the House Banking Subcommittee on Housing and Community Development, asked GAO to examine the implications of permitting two of the principal federal housing credit agencies, the Federal National Mortgage Association (FNMA) and the Federal Home Loan Mortgage Corporation (FHLMC), to issue Real Estate Mortgage Investment Conduits (REMIC). Specifically, GAO was asked to address whether (1) the federal credit agencies have the legal authority to issue REMICs; (2) they have a competitive advantage over private issuers in issuing REMICs; (3) agency issuance of REMICs may have beneficial effects on the housing and mortgage markets; and (4) agency-issued REMICs would lead to a loss of deposits by the thrift industry.

Background

Under the Tax Reform Act of 1986, changes in the tax treatment of multiple class mortgage-backed securities created the most recent product in the rapidly evolving secondary mortgage market, the REMIC security.

Shortly after the REMIC provisions of the Tax Reform Act of 1986 became effective, FNMA requested and received permission from the Secretary of HUD to issue REMICs. This authority was later increased to $20 billion, including the REMICs already issued. FHLMC did not formally seek authority to issue REMICs until February 1988, when it was granted authority to issue $15 billion in REMICs and long-term debt.

While the agencies' decision to enter the REMIC market was supported by some housing and mortgage banking groups, private REMIC issuers and some representatives of the thrift industry objected to FNMA and FHLMC participation on the grounds that quasi-agency status gave these groups an unfair competitive advantage which could be used to drive the private sector out of the market. There was also concern that the agencies could sell REMIC shares to small investors, thereby causing a loss of deposits by the S&L industry.

Results in Brief

GAO did not find any basis in the FNMA or FHLMC charters which would preclude them from participating in the tax advantages permitted by the REMIC legislation.

GAO found that federal agency issuers do have a competitive advantage over large private sector issuers of REMICs in terms of both pricing and cost advantages. There is some evidence, however, that a portion of

agency advantage is being passed on to mortgage originators in the form of better pricing on mortgages.

GAO found little basis to support the fear that agency REMICs will lead to a loss of deposits by the thrift industry. REMICs are not close substitutes for thrift deposits in individual investors' portfolios. Furthermore, the range of investment alternatives to deposits is sufficiently broad that REMICs should have only a marginal impact on the thrift industry.

GAO's Analysis

FNMA and FHLMC Charters Do Not Prohibit REMIC Issuance

The FNMA and FHLMC Charter Acts authorize FNMA and FHLMC to issue multiclass mortgage-backed securities. In addition, the legislative history of the Tax Reform Act of 1986 clearly indicates congressional support for FNMA and FHLMC authority to issue REMICs. (See pp. 40 to 41.)

Agencies Have Competitive Advantage in the REMIC Market

Agencies can produce REMICs at a slightly lower cost than can private issuers and can sell them at a higher price (lower yield); GAO estimates the cost advantage to be about 2 to 4 basis points in yield. GAO also found that the agencies enjoy a competitive advantage in marketing their REMIC securities. Analyses done by several investment banking firms suggest that agency REMICs have a yield advantage of 10 to 20 basis points over privately issued REMICs of similar quality. (See pp. 30 to 36.)

No Clear Consensus on the Potential Impact of FNMA and FHLMC Competitive Advantage

How the agency competitive advantage is used and distributed among participants in the mortgage and housing markets is still a subject of considerable debate. Given the short time frame during which FNMA and FHLMC have been allowed to issue REMICs, the rapidly changing size and structure of the market, the cyclical nature of the market, and the relative insignificance of the REMIC change in comparison to other developments in the market, it is difficult to reach definitive conclusions on the marginal impact of agency REMIC issuance. (See pp. 44-47.)

GAO found no indication at this time that the agencies are using their competitive advantage to drive private sector issuers out of the REMIC market. While agency competitive advantages could provide a basis for

future market domination, no current action or announced intention suggests that this will be a future problem. In addition, GAO analysis suggests that private issuers have their own market advantages in terms of their established distribution network and their ability to structure specialized REMIC classes, which may limit the agencies' ability to dominate the market. (See pp. 39 to 40.)

Benefits to Thrift Industry May Outweigh Cost

The thrift industry does not speak with a unified voice on the potential impact of agency REMIC issuance. The major concern typically voiced by thrift institutions that primarily originate and hold mortgages is that the agency REMICs will lead to further loss of deposits within the industry. GAO found little support outside this group of typically large savings and loan institutions (S&LS) to support this concern. Investment in multiple class mortgage-backed securities is primarily done by large institutional investors. Indeed, for the short-term REMIC classes, the thrift industry itself is the dominant class of investors. REMICs are relatively complex investments with interest rate and prepayment risks which do not make them close substitutes for thrift deposits. (See pp. 42 to 44.)

In fact, some components of the thrift industry view agency participation in the REMIC market as a potential advantage to the thrift industry. The FNMA or FHLMC REMICs represent another potential outlet for the sale of mortgages in the secondary market. To the extent that some of the agency competitive advantage is shifted forward to the mortgage originator, thrifts may be able to receive a higher price for their mortgages. (See pp. 44 to 45.)

Recommendations

This report contains no recommendations.

Agency Comments

Officials from FNMA, FHLMC, and the Department of Housing and Urban Development (HUD) generally agreed with GAO's analysis of the issues relating to agency issuance of REMICs. Both HUD and FNMA provided written comments on the draft report. (See apps. I and II). FHLMC provided oral comments which were of a technical nature.

HUD suggested two specific modifications of the report. HUD suggested including additional data reflecting changes in agency issuance of REMICs in recent months which GAO has included. GAO did not investigate the second issue raised by HUD concerning potential effects of agency REMICs

on the Government National Mortgage Association's (GNMA) share of the mortgage-backed security market and the relative prices of GNMA and agency mortgage-backed securities because such an analysis was beyond the scope of GAO's investigation.

Contents

Appendixes

Tables

Figures

Abbreviations

ARM	Adjustable Rate Mortgage
CD	Certificate of Deposit
CMO	Collaterized Mortgage Obligation
DIDMCA	Depository Institutions Deregulation and Monetary Control Act
FDIC	Federal Deposit Insurance Corporation
FHA	Federal Housing Authority
FHLBB	Federal Home Loan Bank Board
FHLMC	Federal Home Loan Mortgage Corporation
FNMA	Federal National Mortgage Corporation
GNMA	Government National Mortgage Association
HUD	Department of Housing and Urban Development
LIBOR	London Interbank Offer Rate
MBS	Mortgage Backed Security
PC	Participation Certificate
REMIC	Real Estate Mortgage Investment Conduit
SEC	Securities and Exchange Commission
S&Ls	Savings and loan institutions
VA	Veterans Administration
WAC	Weighted Average Coupon
WAM	Weighted Average Maturity

Introduction

The Real Estate Mortgage Investment Conduit (REMIC) is the newest form of mortgage-backed security (MBS) to emerge in the rapidly changing secondary mortgage market.[1] The 1986 Tax Reform Act eliminated tax obstacles that had made it difficult for some market participants to issue multiple-class MBSs.[2] The REMIC emerged as a vehicle for overcoming these obstacles. One of the critical issues raised both before and after this legislation permitted REMICs was whether federally sponsored agencies like the Federal National Mortgage Association (FNMA) and the Federal Home Loan Mortgage Corporation (FHLMC) should have the authority to issue REMICs. In April 1987, Housing and Urban Development (HUD) Secretary Pierce granted FNMA limited authority to issue REMICs. The Federal Home Loan Bank Board (FHLBB) granted FHLMC authority to issue REMICs in February 1988.

Objectives, Scope, and Methodology

After FNMA gained approval to issue REMICs, Congressman Guy Vander Jagt asked us to study the impact of allowing FNMA to become a direct issuer of REMICs. The issues to be addressed were whether

- FNMA has a competitive advantage over private issuers of REMICs,
- FNMA-issued REMICs would cause a loss of deposits from savings and loan institutions,
- FNMA is authorized under its charter to issue REMICs, and
- the FNMA Charter Act provides an exemption from federal securities rules for FNMA-sponsored REMICs.

He also asked us to consider the above issues as they relate to FHLMC's ability to issue REMICs.

Congressman Henry Gonzalez, Chairman of the House Banking Subcommittee on Housing and Community Development, later asked us to broaden the study in order to gain a comprehensive understanding of the benefits that homebuyers will realize from agency issuance of REMICs. Specific issues to be addressed included the (1) distribution of benefits between issuers and homeowners for both agency and private REMIC issues; (2) effects of agency participation on the size and structure

[1]MBS is the generic term for security issues which have mortgages as collateral for payment. Single class (pass-through) securities, in which all payments of principal and interest are passed through on a pro rata basis, are the most common type of MBS. Multiple class securities, including Collateralized Mortgage Obligations (CMOs) and REMICs, are more complex MBSs involving the creation of several investment classes which vary in timing of payments and interest.

[2]A more complete description of the REMIC provisions of the Tax Reform Act and the evolution and workings of multiple class mortgage-backed securities leading up to REMICs is found in chapter 2.

of the REMIC market; (3) effects of agency participation on liquidity and marketability of REMICs; and (4) possible effects of REMIC issuance on FNMA's efforts to strengthen its portfolio management.

We limited the scope of our analysis to the specific effects of REMICs on the secondary mortgage market. While there are other policy issues related to FNMA and FHLMC ties to the federal government, they are not the focus of this report.[3]

To assess the legal issues, we reviewed the FNMA and FHLMC Charter Acts and the legislative history of the Tax Reform Act of 1986's REMIC provisions. We also reviewed related legislation, such as securities laws, that could have a bearing on the issues.

Using several information retrieval systems and other sources, we did an extensive literature review relating to multiple class mortgage-backed securities and the role of agencies in the secondary mortgage market. We compiled data from regularly published reporting sources on secondary mortgage market activity.[4] We also reviewed reports and testimony related to REMIC legislation which were prepared by FNMA, FHLMC, and other interested groups.

We analyzed the issue of competitive advantage in the following manner. First, using data analyses provided by investment banking firms, we developed quantifiable estimates of the agencies' competitive advantage both in producing REMICs and in pricing them. Second, we examined other, less quantifiable advantages which accrue to the agencies as well as those enjoyed by private issuers. Finally, we evaluated the impact that these advantages have had on the REMIC market so far and what possible impacts might occur in the future.

Given the limited time frame during which REMICs have been authorized, there is very little empirical evidence available which addresses the economic impact of REMICs. We relied extensively on interviews with knowledgeable representatives from agency, government, and industry groups. Government agencies contacted included HUD, Treasury, Federal Home Loan Bank Board (FHLBB), Federal Deposit Insurance Corporation

[3]See The Federal National Mortgage Association in a Changing Economic Environment, (GAO/RCED-85-102, Apr. 15, 1985).

[4]Inside Mortgage Capital Markets, published weekly by Financial World Publication, Washington, D.C.; Real Estate Finance Today, published weekly by the Mortgage Bankers Association; and Secondary Mortgage Markets, published quarterly by the Federal Home Loan Mortgage Corporation.

(FDIC), and the Federal Reserve. We interviewed officials currently or previously employed by several of the large investment banking firms involved in the secondary mortgage markets and one of the major Wall Street securities rating firms. We had several meetings and telephone interviews with officials from FNMA and FHLMC. We also interviewed officials from trade associations representing depository institutions, mortgage bankers, realtors, and home builders.

In addition, we made specific requests for data on recent REMIC transactions and breakdowns of costs and yield spreads from FNMA, FHLMC, and several of the investment banking firms. We did not independently verify the quality and accuracy of all of this data, although we requested similar data from more than one source where deemed necessary to serve as a check on data validity.

FNMA and HUD provided written comments on a draft of this report. These comments are included in appendixes I and II. In addition, FHLMC officials provided comments during an exit conference. These comments addressed items of a technical nature and were incorporated into the report where appropriate.

Securitization of the Secondary Mortgage Market[5]

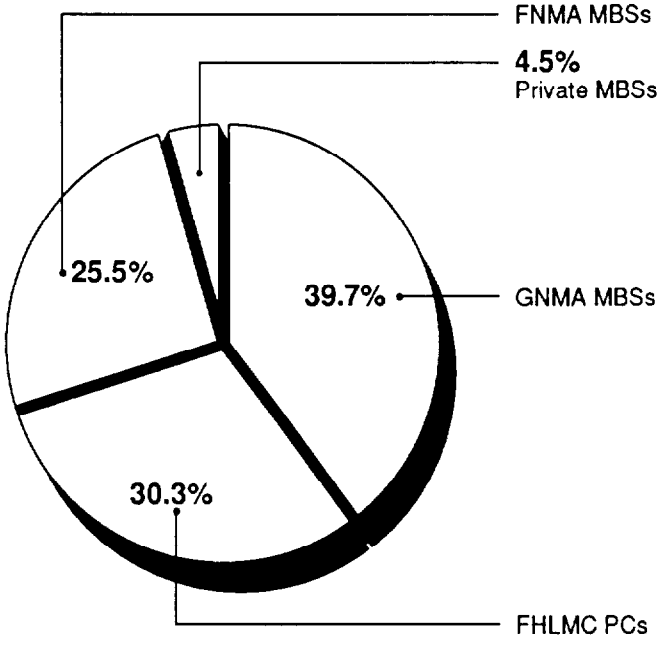
REMICs are the newest form of mortgage-backed security in a market that has grown to an annual issuance volume of over $300 billion. This market had its beginnings in 1970 when the Government National Mortgage Association (GNMA) and FHLMC first issued single class MBSs. In 1981, FNMA also began issuing MBSs. FHLMC and FNMA securities carry what is widely perceived to be an implicit government guarantee.

These federal agencies currently dominate the market for pass-through MBSs. (See fig. 1.1.) Private issuers account for less than 5 percent of this MBS market, with most of their issues backed by nonconforming conventional mortgage loans.[6] GNMA securities are typically backed by FHA-insured or VA-guaranteed loans. FHLMC and FNMA securities generally are backed by conventional mortgage loans which meet agency underwriting standards and fall within the conforming loan limits. The combined impact of the loan packaging process, underwriting standards, and the implicit or perceived government guarantee is widely credited with broadening the investor base for mortgages.

[5]Readers unfamiliar with the terminology used in this section should refer to the Glossary.

[6]FNMA and FHLMC are permitted to purchase single family loans which fall below the loan limit authorized by Congress. The current loan limit is $168,700.

Figure 1.1: Pass-Through MBSs: Share of Activity by Issuer in 1987



Total Issued In 1987: $247.8 billion

Source: Inside Mortgage Capital Markets

In April 1987, HUD granted FNMA limited authority to issue REMICs under the following conditions:

1. FNMA can issue REMICs backed by portfolio and non-portfolio mortgages in a maximum total amount of $15 billion until July 20, 1988.

2. With regard to any REMIC issuance, the minimum denomination must be $100,000 and FNMA must not intentionally sell, directly or indirectly, FNMA REMICs to mutual funds.

3. Because of the concern that FNMA now enjoys certain benefits which hinder private competition, Secretary Pierce imposed the further condition that FNMA cooperate with HUD in the development of a serious study of appropriate privatization legislation.

4. HUD also immediately lowered the required debt to capital ratio for FNMA from its present level of 30:1 to 25:1, with the further intention of lowering this ratio to 20:1 by December 31, 1988.

On April 20, 1988, HUD extended this authority through September 30, 1989, with a limit of $20 billion, including the REMICs already issued. HUD also removed the restrictions related to mutual fund sales and minimum denominations.

In February 1988, FHLMC sought and was granted permission by FHLBB to issue REMICs. Its authority permits it to issue $15 billion REMICs and other long-term debt between February 1988 and September 1989.

The conditions placed on FNMA were designed to ameliorate most of the concerns voiced by participants in the housing and mortgage markets. The imposition of the minimum denomination cap and restrictions on sales to mutual funds were designed to address concerns about loss of thrift industry deposits. The volume cap and, to some extent, the privatization study were also designed to deal with concerns voiced by other private issuers over the dominance of this market by agency issuers.

Not all participants in this market were concerned about FNMA participation in REMIC issues. Some housing and mortgage market participants welcomed agency participation in the REMIC market. Homebuilders, mortgage bankers, and even some thrift institutions and investment banking firms pointed to lower mortgage interest rates to consumers, better prices for mortgage originators in the secondary market, and an enhanced level of activity in the REMIC market as potential advantages of agency participation.

Evaluation of the effects of agency participation in the REMIC market should be examined within the context of competing public policy goals. In particular, the policy objective of stimulating the housing sector of the economy must be balanced against the expressed goal of the administration to permit the private sector to determine the appropriate allocation of resources among housing and other sectors of the economy. This privatization objective was explicitly addressed in Secretary Pierce's decision to grant FNMA REMIC authority. In part, the privatization argument assumes that private capital markets will ultimately yield the most efficient allocation of resources. According to this view, policies which stimulate the flow of mortgage credit create gains for the housing sector but at a cost of underallocation of resources to other sectors of the economy.

We do not intend to assess in this report the merits of the opposing points of view on these policy goals. Rather, we are providing Congress with information on how the REMIC market works to assist it in assessing the trade-offs between these competing policy objectives.

The remainder of this report is organized as follows. Chapter 2 provides a detailed description of the evolution and workings of REMIC and can be omitted by a reader who is familiar with the topic. Chapter 3 discusses the significance of FNMA's and FHLMC's competitive advantage in the REMIC market, and offers a brief discussion of agencies' legal authority to issue REMICs. Chapter 4 examines the effects of agency REMICs on housing and mortgage markets. A glossary of terminology appears at the end of this report.

The Evolution and Workings of REMICs

In this chapter, we explain what REMICs are, how they came into being, how they compare to other, older (and more simple) mortgage-backed securities, and who is currently involved in issuing REMIC securities. Additionally, in order to give the reader some insight into how REMIC securities operate, we have also provided a step-by-step description of an actual REMIC security. (See the glossary for more detailed definitions of terms.)

REMIC Evolution - From Simple MBSs to the More Complex

In the early 1970s, GNMA, a wholly owned government agency, issued the first publicly traded simple pass-through securities. A pass-through security is simply a collection of mortgages that are pooled and used as collateral for securities that are sold to investors. The investors receive the stream of principal and interest payments flowing from the packaged mortgages. Using GNMA pass-through securities ("Ginnie Maes") as an example, mortgage originators, such as mortgage bankers and savings and loan institutions (S&LS), assign mortgages to GNMA, which guarantees the securities. Mortgage originators then sell the securities to investors. The investors have beneficial ownership of the underlying mortgages and they receive interest and principal payments on a pro rata basis as the mortgages are paid off.

The interest rates received are less than those on the underlying mortgage pools to allow for mortgage servicing, pool administration fees, and a normal profit for the issuers of the security. The principal payments which are received include scheduled payment of principal and prepayments of principal. Prepayments of principal may arise if mortgagors pay off their mortgages before the scheduled maturity date, e.g. 30 years after taking out the loan. For example, mortgagors are more likely to prepay principal if interest rates fall because they may wish to refinance and take advantage of these lower rates. Also, the mortgagor may move, and thus pay off the mortgage, before the scheduled maturity of the loan.

Because of the possibility of prepayment, it is not possible to know exactly when a mortgage-backed security will mature. This uncertain maturity makes it difficult, if not impossible, to predict when one's initial investment is returned and how long interest payments (at the stated coupon rate of the security) will be received. These pass-through securities are, however, usually priced under the standard industry assumptions regarding prepayment rates.

The pass-through securities just described have only one class; each piece of the security sold has the same coupon rate and the same expected maturity. In 1983, however, FHLMC issued the first Collateralized Mortgage Obligation (CMO), a multiple class mortgage-backed security. It was recognized that since different types of investors have preferences for different maturities of securities and because investors are at times willing to accept a lower yield for shorter-maturity instruments than on longer-term instruments,[1] it was possible to structure a mortgage-backed security with classes of varying yields and maturities which would appeal to different types of investors.

To create a CMO, one essentially takes a simple pass-through security and slices it up into several classes or "tranches" of varying maturities and yields. (This, in essence, creates a variety of securities from one security.) Normally, as the expected maturity of the class increases, the yield of the class also increases.

By creating this type of multiple class instrument out of a single class instrument, arbitrage profits can be realized. In general, when the Treasury yield curve is sloped steeply enough (i.e., when there is sufficient difference between what the short-term and long-term maturity investors are willing to receive), the issuer of the CMO security can make a profit.[2] This profit is essentially derived from the difference between what is received when the individual CMO classes are sold and the cost to the issuer of purchasing the single class pass-through security. In other words, a profit is made when the value of the sum of the parts (CMO classes) is greater than the value of the whole (single class pass-through).

It is not always more profitable to issue CMOs instead of simple pass-through securities. The shape of the Treasury yield curve, which fluctuates from moment to moment, must be acceptable and the timing of the issuance of this type of security is crucial if a profit is to be made.[3]

[1]The normal upward sloping shape of the Treasury yield curve indicates that as the maturity of the security increases, investors require greater compensation. In light of the possibility that interest rates may rise during the life of the longer-term bonds (and thus lower its return relative to current interest rates), they may be considered to be riskier investments than the shorter- term instruments.

[2]During times of a highly sloped yield curve, investors are usually willing to pay more for a REMIC tranche than in times of a flatter yield curve.

[3]The availability of buyers for the less popular tranches, especially the residual class, is frequently a determining factor in deciding whether or not to issue a REMIC security.

Before the Tax Reform Act of 1986, significant problems existed which limited the issuance of multiple class mortgage-backed securities. To avoid double taxation, multiple class MBSs were constructed as debt instruments as opposed to sales of assets.[4] This meant that the issuer had to retain ownership of the underlying mortgages and pay the investors from the cash flow as it was received. This type of structuring caused a number of difficulties.

First, it meant that some of the income stemming from the payments on the underlying mortgages would be taxed at two levels. Any cash flows generated by the mortgage assets that were not needed to pay regular interest holders would be treated as net income to the issuer and taxed at the issuer level.[5] When payments were later made, the income was also taxed at the investor level. While it was possible to create a trust structure so that a multiple class security could be treated as a sale of assets, such structures were awkward to set up and expensive to maintain.

A second problem involved the reporting of debt on the issuer's balance sheet. With the sale of asset treatment, there is no need for debt—the underlying mortgages have been sold to the investor. With a debt structure, however, the additional liability must be reported on the balance sheet; the issuer has an obligation to pay off the investors. At that time (1983), FNMA was not willing to take on any collateralized debt and it therefore did not issue CMOs. Additionally, other potential issuers that would have liked to have issued multiple class securities could not do so because the additional debt on their balance sheets would have meant a lowering of their credit ratings by the rating agencies.

The Workings of REMICs

As a result of lobbying efforts, primarily by FNMA and Wall Street firms, the REMIC provisions were passed along with the Tax Reform Act of 1986.[6] The REMIC provisions allowed, as of January 1, 1987, multiple

[4]A 1984 IRS regulation known as the "Sears Regulation," (26 CFR § 301.7701-4(c)(1984), provided that multiple class mortgage-backed securities structured as sales of assets could not be issued through a tax-exempt trust vehicle because they were actively managed. Thus, they were subject to taxation at the corporate as well as investor level.

[5]CMOs backed by discount mortgages were also subject to a phenomenon known as "phantom income" in which excessive income is recognized for tax purposes in the early years of the life of the security. The problems associated with phantom income were essentially eliminated in the passage of the REMIC legislation.

[6]Sections 671-675 of the Tax Reform Act of 1986 adds Sections 860A-860G to the Internal Revenue Code.

class mortgage-backed securities which met certain criteria to be treated as sales of assets for tax purposes. As a sale of assets, the REMIC is not subject to corporate taxes. Thus, the cash flows to both residual and regular holders are not subject to taxation prior to distribution to investors. A REMIC security, therefore, can be considered as simply a CMO with an alternative tax treatment. In fact, many experts in the MBS field use the terms REMIC and CMO interchangeably.[7]

In order to qualify as a REMIC according to the Tax Reform Act of 1986, an MBS must meet the following conditions. It must contain at least one "regular" class and one and only one "residual" class. (A description of these classes appears in the step-by-step REMIC example on pp. 20 to 28.) The collateral for a REMIC security may consist of "qualified mortgages," which are interests in real property, and "permitted investments," which include cash flow investment assets, qualified reserve assets, and real property acquired in connection with foreclosure. Most multiclass mortgage-backed securities are, however, backed by simple GNMA, FNMA, or FHLMC pass-throughs. (See fig. 2.1.) Additionally, the pool of assets must be fixed at the outset and the REMIC security must be self-liquidating.

Over $60 billion worth of CMO/REMICs were issued in 1987 (compared with $4.7 billion in 1983) and $140 billion worth of these securities were outstanding by the end of the year. (See fig. 2.2.) Another $30 billion were issued in the first 5 months of 1988. In 1987, private issuers (mainly Wall Street firms, large thrifts, and mortgage conduits) dominated the CMO/REMIC market, issuing 97.7 percent of these securities in 1987. (See fig. 2.3.) In the first 5 months of 1988, their market share had fallen to 68.8 percent. (See fig. 2.4.)

Multiclass mortgage-backed securities which qualify as REMICs can take on a wide variety of structures. Each individual offering can differ in the number and relative size of classes, the coupon rates and expected maturities of these classes, and the types of underlying collateral. While there can be substantial variation among issues, at least one fairly standard type of multiple class MBS has emerged. This MBS is often referred to as the "plain vanilla" or "ABCZ" CMO structured REMIC.[8]

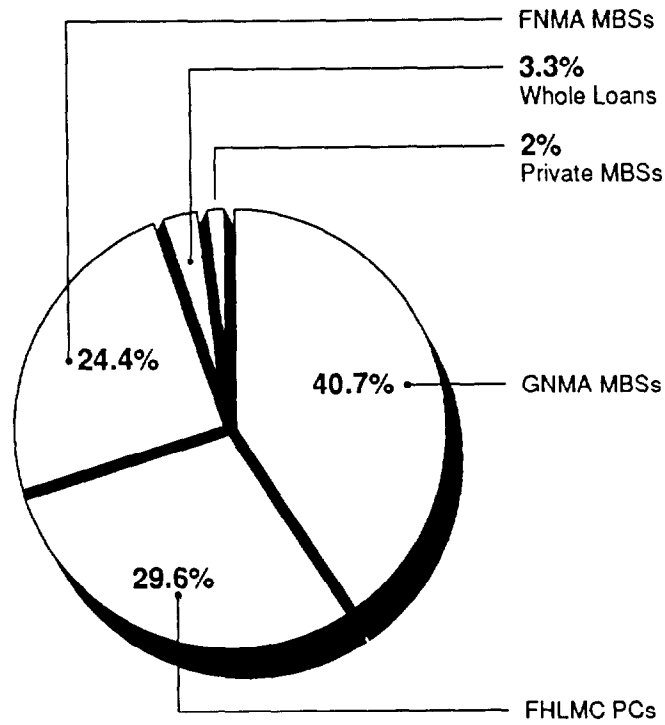
[7]The term REMIC technically refers to the conduit or trust structure which issues the security; however, the term is often used as a shorthand name for the securities issued by the conduit. This shorthand terminology is used throughout this report.

[8]As the REMIC market changes and expands, this form is declining in importance; however, it remains a good starting point from which to begin discussion of the REMIC structure.

An Illustrative Example

For purposes of illustration, we examined the structure of the first REMIC issued by FNMA in August, 1987. It is similar to a "plain vanilla" CMO structured REMIC in most respects with only minor differences, due in part to FNMA's quasi-agency status. An overview of this offering is provided in table 2.1. The A, B, C, and Z classes are the "regular" classes, while the R class is the "residual" class.

Figure 2.1: Publicly Offered CMOs/ REMICs by Type of Collateral in 1987

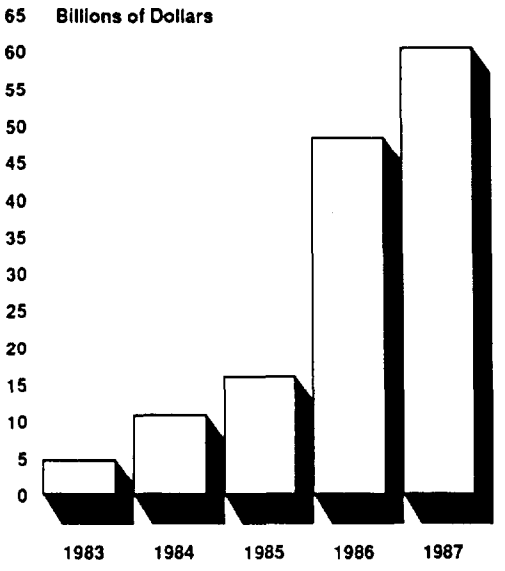


Source: Inside Mortgage Capital Markets

The Underlying Collateral

Similar to most multiple class mortgage-backed securities, FNMA's first REMIC security issue has been structured out of several agency issued single class MBSs—in this case an FNMA pass-through securities with a weighted average coupon of 9.99 percent.

Figure 2.2: Total CMOs/REMICs Volume by Year: 1983-87



Total Issuance 1983-87: $140.13 billion

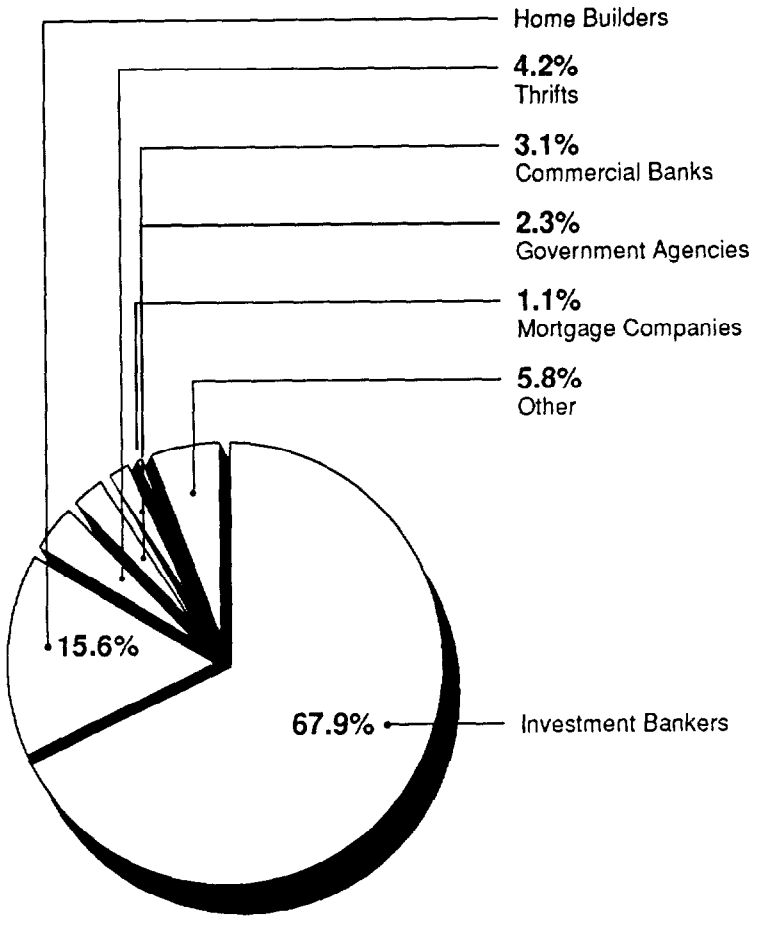
Source: Inside Mortgage Capital Markets

The First Class - A Short Term Mortgage Related Investment

The first, or "A" class, of most REMIC securities is typically a short-term instrument with an expected maturity of 2 to 5 years. The first class is generally marketed to banks and thrift institutions. However, this short-term tranche is especially attractive to thrifts because it provides them with a mortgage-related investment which closely matches the maturity of their deposits. This particular FNMA tranche has been aptly named the "Thrift Plus" tranche in that it counts as a qualifying asset[9] and liquidity for thrifts and because its short expected life, 1.6 years (and guaranteed maturity of 5 years), makes it a useful instrument to match and offset short-term deposits (liabilities).

[9]To take advantage of certain regulatory benefits, S&Ls are required to hold a certain proportion of liquid assets. A 5-year guaranteed maturity government-backed agency REMIC issue counts as a qualifying asset for liquidity purposes, while a private issue would need a guaranteed maturity of not more than 3 years to count.

Figure 2.3: Publicly Offered CMOs/ REMICs by Type of Issuer: 1987



Total Issued in 1987: $60.367 billion

Source: Inside Mortgage Capital Markets

Figure 2.4: Publicly Offered CMOs/ REMIC by Type of Issuer: 1988 (Through May)

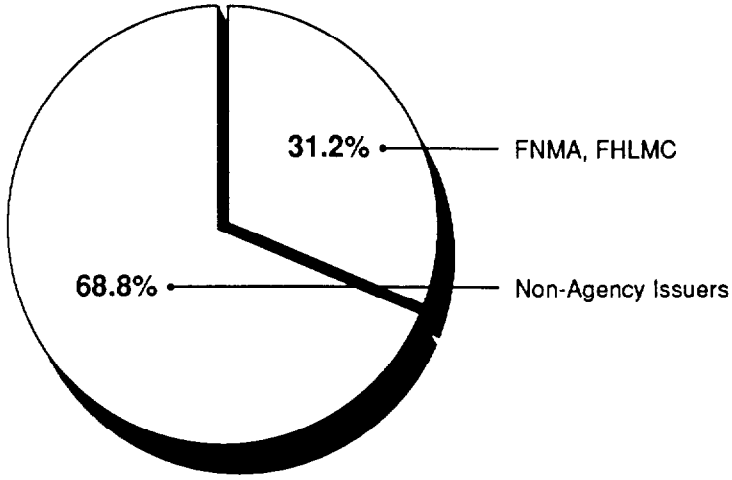


Table 2.1: Fannie Mae REMIC Trust 1987-I

Dollars in millions

Collateral Type	Coupon	Amount	Original term	Average remaining term	Assumed prepayment rate
FNMA	9.99%	$500	360 Mos.	349 Mos.	200% PSA
Bonds Class	**A**	**B**	**C**	**Z**	**R**
Amount	$150.9	$238.6	$85.5	$24.0	$1.0
Bond type	Fixed	Fixed	Fixed	Accrual	Residual
Coupon (percent)	7.95	9.35	9.60	9.99	503.88
Price	99.8099	99.3083	N/A	89.4978	1445.1121
Yield (bond equivalent)	7.85	9.55	N/A	10.86	10.30
Weighted average life (yrs.)	1.6	5.9	11.2	18.4	3.6
Benchmark Treasury (yr.)	2	5	N/A	20	N/A
Spread over Treasury (basis points)	15	125	N/A	180	N/A

Note: All data on the above table is as of the pricing date. FNMA has retained Class C.

Pricing Date: 8/18/87
Accrual Date: 9/01/87
First Payment: 10/25/87
Payment Frequency/Delay: Monthly pay, 25-day delay

The short-term class is usually priced in relation to short-term Treasury securities. Given normal upward sloping yield curves (discussed on p. 17), in which yields increase as maturity increases, the short tranche will be priced to yield somewhat less than the other, longer-term

tranches. In the FNMA REMIC offering, the yield of the first or "A" class to the investor is expected to be 7.85 percent, about 15 basis points above a Treasury security with a similar expected maturity. From the standpoint of the investors, this yield spread compensates them for the additional risk of uncertain timing and amount of returns as well as for credit and liquidity risk. Note also that the yield is 2.14 percent lower than the coupon rate of 9.99 percent on the FNMA single class pass-through security that serves as collateral for the FNMA REMIC.

Investors in the first tranche, similar to other "regular" classes, receive both the stated interest rate plus all scheduled payments and prepayments of principal made on the mortgages as they come in. (Investors in CMOs are usually paid their pro rata share of principal and interest quarterly or semiannually; however, in this case, investors are paid monthly.) Given expected prepayment rates used to price the REMIC, investors in the first tranche of the FNMA REMIC security can expect their investment to have an average weighted life of 1.6 years and an expected final maturity of 3 years. Once the principal has been paid off in full, the class is "retired" and the investor receives no more income from this security.

If interest rates drop sharply during the life of this "A" class, prepayments of principal from the underlying mortgages can be expected to increase; principal payments to the first class will thus be made faster and the expected term of the first tranche will be shortened. If interest rates rise, fewer mortgage holders will prepay on their mortgages and the expected term of the first tranche investment will increase.

The Second Class - A Medium Term Investment

The second tranche of typical REMIC and CMO securities is a medium-term investment with an expected life of about 5 years. The second tranche of the FNMA issue, for example, has an average expected life of 5.9 years This second or "B" class appeals primarily to pension funds and insurance companies, although some banks and thrifts have shown interest ir this medium-term class as well.

This particular class has been priced to yield 9.55 percent —lower than the 9.99 percent FNMA underlying collateral, but higher than the expected yield of 7.85 percent of the first tranche. The 9.55 percent yield is 125 basis points higher than a similar maturity Treasury security priced on the same day. As the first tranche is receiving interest and principal payments, the second tranche is receiving interest only. It is only after all of the principal due to the first class is paid off that the

second class begins to receive principal payments along with its regular stated interest. Again, as with the first tranche, scheduled payments and prepayments of the principal of the underlying mortgages are used to pay off the principal portion of the second tranche as they come in. When the specified amount of principal has been paid off ($238.6 million for this FNMA second tranche), the class is retired. In this case, the second class has an average weighted life of 5.90 years. At the prepayment rate assumed at pricing of the issue, the investors of the second class will receive interest only on their investments for the first 3 years (the years that the first tranche is outstanding) and then will receive their principal back, beginning in year 3 and for the next 6 1/2 years. (It would mature 9-1/2 years after the REMIC was issued; see table 2.1.[10])

The Third Class - A Long-Term Investment

The third or "C" class is normally a longer-term investment with an expected life generally between 7 and 12 years. The longer-term third classes appeal to insurance companies, pension funds, and thrifts as fairly secure long-term investments. The third class of the FNMA issue has an average weighted life of 11.20 years and was retained by FNMA for its own portfolio.

The third tranche behaves similarly to the first two tranches in that it receives interest payments at the stated coupon rate, in this case 9.60 percent, during its entire life while it receives principal payments only after the first and second classes have been retired. In this issue then, it is expected that principal payments will begin 9-1/2 years after the REMIC is issued and mature by the thirteenth year. Similar to the previous tranches, the third tranche, depending on prepayment patterns, may mature later or earlier than anticipated. Should prepayments be slower than expected on the first two tranches, the third tranche may mature much later than the average weighted life of 11.20 years.

As the maturity of the classes lengthen, investors face a greater possibility of variation from their expected return due to uncertain prepayment

[10]For this specific FNMA issue, the B class incorporates an innovative feature in order to ensure that the maximum maturity of the A tranche is 5 years. Should prepayments be slower than expected during the life of the A class (the maturity of the class is lengthening), the B class will behave as an "accrual" bond. It will accrue rather than receive interest; the interest normally allocated to the B class will be used to pay off the principal of the A tranche until the principal balance of the A tranche is reduced sufficiently to ensure a maximum maturity of 5 years. Any interest of the B class accrued during the life of the A class will be paid to the B class investors along with their regular principal payments. FNMA has structured the B class in such a way as to minimize any variation in expected yield should it become necessary for the B class to behave as an accrual bond.

patterns; they thus require greater compensation for taking on this additional risk. If this tranche had been priced and sold, the basis point spread over a comparable Treasury security would have been greater than the spreads seen on the earlier tranches.

The Last Class - A Long-Term Investment With a Difference

The last "regular" class, the "Z" class, normally has the longest expected life of all the classes, about 18 to 20 years. The Z tranche appeals largely to pension funds and insurance companies; however, FNMA's Z tranche, with an expected maturity of 18.40 years, was sold entirely to a large thrift.

The Z tranche differs from the first three (A, B and C) in that it has been structured as an accrual bond. This means that it accrues rather than receives interest while the first three classes are paying down. After the A, B, and C classes have been retired, the Z class receives regular interest and principal payments along with the interest accrued during the lives of the first three classes. Therefore, in this case, one expects to see principal and interest payments paid between the 13th (the final maturity of the third tranche) and the 29th year of the life of the REMIC. The weighted average life for this tranche is 18.4 years.

Similar to the other tranches, the class is retired when all the principal ($24.0 million in the FNMA example) has been paid down. As the tranche with the longest maturity, this Z class is subject to the greatest possible amount of variation in prepayment rates, i.e., the actual maturity of this security may differ greatly from original expectations. The 180 basis point spread over a comparable Treasury instrument reflects the additional compensation which investors required to take on the risk of variation in return. While the Z tranche is usually the longest maturity class as in this "plain vanilla" example, Z classes can be of varying maturities and can be placed between other nonaccrual (A, B and C) classes. The placement of the Z class affects the payment patterns of all of the classes of the REMIC security; therefore, the final placement of this class depends on investor needs as well as issuer expectations of prepayments.

The Residual Class

When the classes of the REMIC security are structured and priced, very conservative prepayment assumptions are made in order to ensure that the cash flow from the collateral is sufficient to cover the cash flow to the CMO/REMIC classes. If actual prepayments deviate from the expected

excess cash flow can be generated. This excess or "left-over" cash goes to the residual class.

Using the FNMA REMIC as an example, the earlier "regular" classes have been priced to yield less than the 9.99 percent FNMA single class collateral (see table 2.1) and the difference between the incoming cash flow from the collateral and the regular classes will flow to the residual class. For instance, as the first class is receiving interest and principal, the second and third classes are receiving interest only and interest to the Z class is accruing. The total cash flow to these classes is expected to be less than the cash flow generated from the underlying collateral. Other excess income not needed to pay the CMO/REMIC classes, such as temporary reinvestment of monthly mortgage cash flows pending transfer to the class holders, is also allocated to the residual class holders.[11]

Should prepayments be slower than assumed at the time of issuance, as would be expected in a period of rising interest rates, the lives of the earlier classes are extended. When this is the case, the time period when the rates on the underlying collateral is greater than those on the REMIC classes is extended—residual holders can expect their allocation of "excess" cash flow for a longer period of time. Their total return is greater than expected when the security was priced. Similarly, should prepayments be faster than anticipated, the return to residual investors would occur over a reduced length of time and total return would be less than anticipated. This FNMA residual class has been priced to yield 10.30 percent according to expected prepayment patterns, although its actual return could vary greatly.

The residual class is mainly purchased by thrifts and banks to be used as a hedging instrument. In periods of rising interest rates when the relative returns on mortgages are declining, the returns on the residual class are increasing. This increase can be used to offset the relative decline in mortgage rates.

The residual class is, however, considered to be a very risky investment, partially because its return can vary widely with fluctuations in prepayment patterns and, just as importantly, because it is very poorly understood. It is a very complex instrument, its behavior depends on the structure of the regular classes (in some structures the residual returns

[11] FNMA's residual class is atypical in that it has been allocated a portion of the mortgage principal payments; it has been structured in this way, as a bond, in order to increase marketability.

can move similarly to the mortgage returns in relation to changing interest rates), its pricing is difficult to understand,[12] and debate continues over how to treat this class for accounting purposes.

Other Configurations of REMICs

While the ABCZ multiple class (CMO) structure is the most familiar REMIC form, it is not the only one. As discussed previously, securities may qualify to be treated as REMICs if they meet certain specified conditions. These conditions, however, allow for an almost infinite variety of multiple class forms. Some are fairly straightforward and some are more exotic.

For example, REMIC securities may have fewer than the four regular classes or many more. (Some have been issued with as many as 17 classes.) Such structures usually operate in the same serial payoff pattern as the "plain vanilla" security described above.

REMIC securities may also contain one or more floating rate (as opposed to fixed rate) tranches which pay interest at rates which are adjusted at specified intervals, e.g. 3 months. These rates are usually determined in relation to the London Interbank Offer Rate (LIBOR). Floating rate tranches have been very popular in the Euromarket and are growing in popularity. In fact, most REMICs issued currently contain at least one floating rate tranche.

REMICs may also be structured as "strip" securities[13] . A stripped security is one in which interest and principal payments are allocated in varying proportions to separate tranches. The "principal" class and the "interest" class receive payments simultaneously and enjoy the same priority of claim. These two classes behave differently under varying interest rate environments and therefore appeal to different classes of investors.

In a senior-subordinated structure, one regular class is held as the junior class and one or more as a senior class. The junior class can be used to support the other class or classes and ensure that principal and interest

[12]For example, the residual class of this issue has been priced at a very high premium. The residual holder thus must be paid a high coupon rate (503.88 percent) in order to realize the expected 10.30 percent yield. The pricing of the residual class differs from that of the other classes since the income received in this class is primarily in the form of interest with very little principal.

[13]These securities are also referred to as interest only/ principal only (IO/PO) securities.

are paid on time even in the event of delinquencies or losses due to foreclosure. This type of structure can eliminate the need for private mortgage insurance.

The Significance of FNMA's and FHLMC's Competitive Advantage in the REMIC Market

We were asked to determine whether FNMA and FHLMC, as direct issuers of REMICs, have a significant competitive advantage in REMIC issuance, and whether such an advantage would limit the ability of private issuers to participate in the REMIC market. We found that the agencies do have certain cost and pricing advantages as a result of their quasi-federal status. However, we found that private issuers also have advantages which make them more competitive in certain areas of REMIC issuance. Our analysis suggests that while it may be possible for the agencies to use their competitive advantage to dominate the REMIC market, investment bankers remain the major issuers of REMICs and the heterogeneity of the REMIC instrument may make it easier for private issuers to market their product by differentiating it on the basis of its structure rather than on its price. We also briefly discuss whether FNMA and FHLMC are authorized to issue REMICs and whether FNMA and FHLMC REMICs are exempt from federal disclosure rules.

The Extent of Agency Competitive Advantages

Our analysis has provided the following results:

1. The agencies have the following advantages over private REMIC issuers in that they

- have an estimated cost advantage of about 2 to 4 basis points,
- can issue REMICs at yields which are 10 to 20 basis points lower than those for comparable private issues, and
- have the ability to more efficiently offer a short-term tranche with a guaranteed maximum term. Investments in this tranche can also be used by thrift institutions to meet liquidity requirements.

2. Investment banking firms, which make up the bulk of private REMIC issuers, also have advantages in REMIC issuance. These generally have arisen from their daily contacts with investors. Investment firms are able to customize REMICs to certain investors' needs, move quickly into niches which make REMIC issuance profitable, and have the freedom to shift their activities to other types of investments when returns from mortgage-related investment activities decrease.

3. The competitive advantages enjoyed by the agencies are not currentl impeding private sector participation in the REMIC market. Private issuers of REMICs have put out 90 percent of total REMIC volume issued between the time of FNMA's entrance in the market (in mid-August 1987 through the end of 1987. Over 80 percent of the REMICs issued during that period were directly comparable to agency REMICs because they

were backed with agency or GNMA collateral. While there is a feeling among some market experts that the agencies, by virtue of their size and competitive advantage, could dominate the market in the future, others suggest that the needs of market investors for customized REMICs will allow any large issuer to participate in the use of the REMIC vehicle.

The Agencies Have a Cost Advantage of 2 to 4 Basis Points in REMIC Issuance

Lower REMIC issuing costs are one source of competitive advantage for the agencies. These savings accrue mainly as a result of the quasi-government status ascribed to these agencies, rather than from their having greater efficiencies than private issuers.

While all market participants with whom we spoke agree that the agencies do enjoy some cost advantages, estimates of their size vary widely. For example, the U.S. League of Savings Institutions claims that reduced underwriting costs and guarantee fees contribute to providing the agencies a yield advantage of 35 to 40 basis points over other multiple issuers of REMICs. Alternatively, FNMA claims that they pay the same underwriting and guarantee fees as do the private issuers. Their analysis suggests a cost advantage of only 2 to 3 basis points.[1] (See table 3.1.)

On the basis of consultations with industry experts, we have concluded that the actual cost savings are probably in the lower range of these estimates. We have found that on a $250 million issue, the agencies have cost advantages of about $190,000 in one-time costs and $35,000 in annual expenses. This translates to between 2 and 4 basis points of cost advantage.[2] As outlined in table 3.1, we find these cost savings primarily come from the following three sources:

[1]The most direct comparison to an agency REMIC is one put out by a large, multiple issuer. First-time issuers bear higher costs (of 1 to 2 basis points on a $250 million issue). Smaller issuers are not always able to enjoy the economies of scale associated with REMIC issuance, and therefore their REMIC costs may not be comparable with those incurred by the agencies.

In order to maintain comparability, all of the market comparisons made in this analysis assume that the REMICs are backed by FNMA, FHLMC, or GNMA collateral.

[2]One-time cost savings are converted to changes in yield by applying an industry rule-of-thumb that 1 percentage point in cost is equal to about 20 basis points in yield. Therefore, agencies' one-time costs savings of $190,000 which are about 0.08 basis points of the issuing cost, provide a yield advantage of about 1.5 basis points. Alternatively, annual cost savings are translated to yield advantages by dividing the value of the annual savings into the total volume. In this example, the agencies' annual cost advantage of $35,000 is equivalent to about 1.5 basis points in yield.

Table 3.1: Estimated Agency Cost Advantage on a $250 Million REMIC

One-time costs: (Expense type)	Level of agency advantage calculated by: U.S. League[a]	FNMA	GAO
Underwriting fees	$925,000	$0	$0
SEC registration	50,000	50,000	50,000
Rating	105,000	85,000	120,000
Trustee set-up and counsel	15,000	13,500	13,500–15,000
Other	145,000	5,000	5,000
Total	**$1,240,000**	**$153,500**	**$188,500–190,000**
Annual costs: (Expense type)			
Guarantee fee	$625,000	$0	$0
Trustee fee	50,000	33,000	35,000
Accounting and bond administration	25,000	0	0
Total	**$700,000**	**$33,000**	**$35,000**

[a]U.S. League of Savings Institutions

- Exemption from SEC registration. Private issuers are required to register their securities with the Securities and Exchange Commission (SEC). In doing so, they incur costs both in gathering documentation relevant to the registration, and in paying the SEC registration fee of .02 percent of the issue volume. FNMA and FHLMC are exempt from the SEC registration requirement, but since they provide their investors with the same type of information which private issuers have on file at SEC, they can be expected to bear the same type of costs in gathering the appropriate documentation. Thus, their only cost savings in this area come from their exemption from the registration fee, which is $50,000 on a $250 million issue.
- Agencies do not pay rating costs. In order to sell their securities on the market, private issuers need to have the securities rated for investment quality. According to an official of one of the major rating firms, FNMA and FHLMC do not have to pay this fee because of the market perception that the securities carry an implicit government guarantee. On the basis of information obtained from FNMA and from private REMIC issuers, we estimate the cost savings of not having to pay rating fees to be about $120,000.[3]
- Agencies act as their own trustee. Private issuers bear costs of establishing an outside trustee that acts as the conduit between MBS funds paid to the REMIC and the disbursements from those funds which are to be paid

[3]This estimate is based on the assumption that the industry standard is to have REMIC securities rated by two rating firms. FNMA contends that this cost advantage is lower than $120,000 because only one rating is required on REMIC issues.

to the investor. Trustee set-up costs are estimated to be between $13,500 and $15,000, and annual costs are estimated to be about $35,000. Because of their status as quasi-government agencies, FNMA and FHLMC each are able to act as their own trustee and do not have to bear these costs.

We find that the agencies have, at most, only a slight advantage in other one-time costs, such as accounting, legal, and printing expenses. This contrasts with the U.S. League of Saving Institutions' claim that the agencies receive significant cost savings in these areas by virtue of the economies of scale associated with their size. We agree, however, with FNMA's contention that the agencies use the same firms and are charged the same rates for legal and accounting services as the major Wall Street issuers. We also accept FNMA's finding that they may receive a $5,000 saving in printing costs.

We did not find any evidence of the agencies receiving discounts for underwriting costs. In fact, as announced on the prospectus supplement of FNMA's first two REMICs, the agency was charged 63.9 basis points for underwriting, which is about the same amount that private issuers would be expected to pay. We discussed this issue with officials of several underwriting firms, all of whom confirmed that quasi-agency status does not provide advantages in underwriting fees.[4] While some issuers fear that the agencies may reduce costs in the future by doing their own underwriting, officials of FNMA have said that they do not believe that they can ever acquire the type of underwriting capabilities which would allow them to compete with the major Wall Street firms.

We also conclude that FNMA has no competitive advantage in guarantee fees, which are paid to guarantee timely payment of interest and principal on the mortgages underlying an MBS. FNMA claims that when they issue a REMIC backed by its own collateral, this fee becomes an internal charge. Because FNMA must continue to make required payments to investors on defaulted securities, we find FNMA's argument persuasive

[4]One firm said that underwriting fees are sometimes negotiated on the basis of the quality of the collateral, but that additional discounts might be offered if the collateral has floating rates or short maturities.

and, therefore, do not believe that FNMA's failure to pay an external guarantee fee confers any cost advantage.[5]

We also find that the agencies receive no cost advantages in the area of accounting, legal fees, and bond administration since the agencies use the same firms for these services which are used by private issuers.

The Agencies Also Have a Market Advantage, Providing Them With a Premium of 10 to 20 Basis Points Over Identical Issues

Industry experts with whom we spoke agree that investors are willing to pay more for an agency REMIC than for an otherwise identical REMIC issued by a private dealer, despite the fact that both might be backed by identical collateral. There are several reasons for this. First, the financial community widely perceives FNMA and FHLMC securities as being backed by the full faith and credit of the federal government; and therefore will be valued more highly than a private security with a similar structure. Second, some investors, such as state pension funds, do not invest in private securities. For these investors, agency REMICs represent a unique opportunity to invest in mortgage securities, and they may be willing to pay a premium for this privilege. Third, the FNMA REMIC offers two unique features which add to their value. The first, which is partially associated with their quasi-federal status, is that they have the ability to use the Federal Reserve wire to electronically transfer payments to investors. FNMA estimates that the increased liquidity and greater efficiency associated with the wiring capability may be worth up to 5 basis points to the investor. The second feature, which is not associated with FNMA's quasi-federal status, is that it offers additional information to investors through periodic updates on the Weighted Average Coupon (WAC) and Weighted Average Maturity (WAM) of the collateral underlying the REMIC. This is a new feature which, to date, is unique to FNMA REMICS.

[5]According to FNMA, the guarantee fee covers three components: default risk, administrative costs of providing the guarantee, and a return on equity. When a lender swaps mortgages for an MBS, the guarantee fee that they pay covers these three cost components. If the lender has a history which indicates a lower default risk, then they receive a discount for the default risk component of the fee. Some industry experts suggest that this discount may be about 15 basis points of the standard fee (FNMA claims that this figure is an overestimate). Some of these experts claim that when an agency issues a REMIC from mortgages which it is holding, the agency either does not have to pay itself any of the fee, or pays only the part which covers the actual costs of providing that guarantee. However, FNMA claims that they still must provide the same guarantee against default that they demand from any outside borrower, for if the mortgages go into foreclosure, FNMA must still make the required payments to the investor. In addition, as a REMIC issuer, FNMA still must pay for administrative costs incurred in providing the guarantee as well as for the return on equity that the agency would receive from an alternative type of investment. Therefore, FNMA claims, they must pay internal charges of 25 basis points for the guarantee fee.

Because of these features, industry experts contacted said that private issuers must charge a lower price for their REMICs to compete with an agency REMIC. This is confirmed by observing the pattern of market valuations of private and agency REMICs through an analysis of investment houses' daily arbitrage runs. These runs provide dealers with information on how much they should be willing to pay on any given day for a variety of investments.

We obtained information from arbitrage runs of three of the major investment houses which revealed how the prices of FNMA REMICs compared to hypothetical private issues which were of the same structure and backed by the same collateral as the FNMA REMIC.

While these prices can vary from day to day depending on market conditions, an analysis of the arbitrage runs suggests that dealers generally would be willing to pay between 10 and 20 basis points more for a share of a FNMA REMIC than for an otherwise identical private issue. The exact difference in price depends on the structure of the REMIC, the tranche, and the date of the run. This range between agency and private issues was found as well in an analysis of CMO pricing. Results from a 1986 study by GoldmanSachs, supplemented with additional information provided by FHLMC, suggest that FHLMC CMOs were sold at a premium of about 15 to 20 basis points over privately issued CMOs.[6]

The Development of the "Thrift-Plus" Tranche Gives the Agencies an Additional Advantage Over Private Issuers

The "Thrift-Plus" tranche is a feature which was developed as part of the first FNMA REMIC. Designed specifically as an investment for thrift institutions, it provides thrifts with a short-term investment which has a guaranteed 5-year maximum term and meets both liquidity and qualifying real estate investment requirements. According to an analysis done by a major brokerage house, the "Thrift-Plus" tranche has a market premium of about 40 basis points over a similarly structured private issue which does not carry the guaranteed term.

Two factors limit the ability of private REMIC issuers to offer instruments which would compete with the "Thrift-Plus" tranche. First, the

[6]Richard Roll, "Collateralized Mortgage Obligations: Characteristics, History, Analysis," Goldman Sachs Mortgage Securities Research (April 1986). The study actually found that FHLMC CMOs were priced at about 35 basis points over privately issued CMOs backed by similar collateral. Part of this difference is attributable to an additional prepayment guarantee which differentiated FHLMC CMOs from those issued by private firms. According to officials at FHLMC, the value of this guarantee is between 10 and 15 basis points. In addition, FHLMC provided semiannual rather than annual payments to investors. This service was valued at about 5 basis points. Separating out the impact of these two components, the remaining premium for the agency name is about 15 to 20 basis points.

FHLBB regulations that allow thrift institutions to count 5-year agency securities as liquidity investments restrict thrifts from counting privately issued securities as liquidity unless their terms are 3 years or less. Second, private issuers may be unlikely to offer tranches that conform to the FHLBB liquidity requirements, since the level of guarantees associated with the 3 year terms would subject the holders of the later tranches to unacceptable levels of prepayment risk.

Major Brokerage Houses Also Have Advantages in REMIC Issuance

As is shown in table 3.2, activity in REMIC issuance is predominantly in the hands of large issuers. Just 10 firms did over 70 percent of REMIC activity in 1987. Investment bankers, in particular, have been among the largest issuers of multiple class mortgaged-backed securities. As shown in table 3.3, investment banks issued between 22 and 32 percent of all CMO volume between 1983 and 1985, and over half the total REMIC/CMO volume in 1986 and 1987. Eight of the top 10 REMIC/CMO issuers in 1987 were investment bankers that together issued 59.4 percent of REMIC/CMO volume and the top 10 Wall Street issuers put out over 63 percent of REMIC/CMO volume in 1987.

Table 3.2: Ranking of Top 20 Multiclass CMO and REMIC Issuers in 1987

Dollars in millions

Rank	Issuer	1987 Volume
1	First Boston Corporation	$7,834
2	Salomon Brothers	7,763
3	Merrill Lynch	5,703
4	Goldman Sachs	3,715
5	Ryland Acceptance Corporation	3,428
6	M.D.C. Investors	3,396
7	Morgan Stanley	3,124
8	Kidder Peabody	2,721
9	Shearson Lehman	2,581
10	Drexel Burnham Lambert	2,434
11	Oxford Acceptance Corporation	1,901
12	Citicorp/Citibank and affiliates	1,763
13	American Southwest Financial	1,742
14	Paine Webber	1,224
15	Federal National Mortgage Association	1,116
16	Bear Stearns	1,100
17	Santa Barbara FS & LA	900
18	EF Hutton	600
19	L.F. Rothschild	550
20	Thomson McKinnon	468
Others		6,303
[a]Total		**$60,367**

[a]Figures may not sum to total due to rounding.

Source: Inside Mortgage Capital Markets

Table 3.3: REMIC/CMO Issuers by Share of Market, 1983 Through 1987

Percent of market

Issuers	1983	1984	1985	1986	1987
Investment Bankers	32.1%	27.9%	22.1%	50.5%	67.9
Federal and state govt. agencies	36.0	16.7	19.7	4.0	2.3
Home builders	22.4	20.1	26.7	20.0	15.6
Mortgage companies	9.6	11.7	0.8	9.7	1.2
Thrifts	0.0	7.2	30.7	12.5	4.2
Commercial banks	0.0	4.7	0.0	0.0	3.1
Insurance companies	0.0	11.7	0.0	0.0	0.4
Others	0.0	0.0	0.0	3.3	5.4
Total[a]	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0**
Total volume (billions)	**$4.7**	**$10.8**	**$16.0**	**$48.3**	**$60.4**

[a]Columns may not add to 100 percent due to rounding.

Source: Inside Mortgage Capital Markets

Some market experts argue that the major brokerage firms have an established distribution network to different types of investors that provides them with a competitive advantage in some aspects of REMIC issuance. This network allows the firms to design customized REMICs that can suit the needs of specific investors. In addition, these firms have experience in dividing up REMICs into the most profitable structure for any given set of market conditions. In fact, some observers foresee the development of two REMIC markets—one for customized REMICs, in which Wall Street investment firms will dominate, and one for standardized REMICs issued primarily by FNMA and FHLMC, which may appeal to investors who are more risk averse or who lack a great deal of market sophistication and prefer investments in a standardized type of security. However, the agencies are not precluded from operating in the customized sector of the market, and many of their recent REMICs can be characterized as a customized issue.

An additional advantage for investment firms is the ability to move in and out of the mortgage market. The agencies note that they are always present in the mortgage market, in good times as well as in bad, while the investment houses can shift their investments out of MBSs when their return falls relative to alternative investments.

While Agencies Are Increasing Their Market Share, Their Competitive Advantage Does Not Appear to Be Impeding Private Sector Participation

Judging from the level of activity in the first 5 months of 1988, the agencies have become an important force in the REMIC market, together capturing a 31.2 percent market share. During this period, FNMA issued $5.0 billion of REMICs, while FHLMC, which entered the REMIC market in February 1988, issued $4.5 billion of REMIC volume. These levels of activity represent a significant change from 1987 when FNMA, the fifteenth largest issuer of multiple class MBS in that year, issued only 1.8 percent of total REMIC/CMO volume.

Clearly, the REMIC market is subject to rapid change, and it is difficult to evaluate the extent to which agency activity might be crowding out private sector REMICs. Our analysis suggests that, by virtue of their size and cost advantages, the agencies could dominate the market for standardized REMICs backed by agency collateral. But while the agency market share has been growing, so too has the size of the total REMIC market. The $31.4 billion of REMICs issued between January and May of 1988 almost equals the total 1987 volume of $31.8 billion. As is shown in table 3.4, much of the increased volume from early 1988 has come from agency activity, with private issuers maintaining about the same levels of absolute volume that they had in January. In fact, market experts have admitted that FNMA's participation is bringing some new investors into the REMIC market, especially those who are restricted from investing in privately issued MBS.

Table 3.4: 1988 REMIC Issuers, by Share of Market (Through May 1988)

(Dollars in millions)

	FNMA		FHLMC		Private Issuers		
	Volume	Share	Volume	Share	Volume	Share	Total volume
January	$403.10	8.6%	0.00	0.0%	4,307.05	91.4%	**4,710.15**
February	450.00	8.3	800.00	14.8	4,152.52	76.9	**5,402.52**
March	1,250.00	17.0	1,125.00	15.3	4,985.60	67.7	**7,360.60**
April	1,325.30	19.9	1,000.00	15.0	4,347.43	65.2	**6,672.73**
May	1,600.00	21.9	1,550.50	21.3	4,143.76	56.8	**7,294.26**
5-Month total	5,028.40	16.0	4,475.50	14.2	21,936.36	69.8	**31,440.26**

Note: Due to rounding, percentages may not add to 100 percent.

It is difficult at this time to determine the extent to which the agencies are taking some of the business which might otherwise go to the private sector, or if their activity is merely contributing to a still-growing REMIC market. On the basis of conversations with market participants, we believe that so long as there is a market for customized REMICs, Wall

Street investment firms could still play a large role in REMIC issuance, regardless of agency cost advantages. Many market experts have told us that they believe there is still much room for innovation in the REMIC market, so that a dealer could structure a unique, marketable REMIC which could effectively compete with agency issues.

Finally, we do not see FNMA or FHLMC being able to acquire, legally or physically, the underwriting capabilities which would allow them to drive the major investment firms out of the customized segment of the market. We believe that in order for FNMA and FHLMC to compete as underwriters, they would have to expand their activities outside the housing sector into other components of general investment activity. This expansion may require a change in the agency charters, and we have no reason to believe that such a change will be made in the foreseeable future.

Agency Issuance of REMICs and Exemption From Securities Disclosure Regulations Is Consistent With Their Respective Charters

A fundamental question raised in Congressman Vander Jagt's request is whether FNMA and FHLMC are permitted to issue REMICs under their respective charter acts. We reviewed these charter acts and the legislative history of REMIC authorization. Section 304(d) of the FNMA Charter Act, 12 U.S.C. Section 1719(d), and Section 306(a) of the FHLMC Charter Act, 12 U.S.C. Section 1455(a) authorize FNMA and FHLMC respectively to issue multiple class mortgage-backed securities.[7]

In addition, we have examined the REMIC provisions of the Tax Reform Act of 1986 and conclude that its legislative history indicates congressional support for the idea that both FNMA and FHLMC are authorized to issue REMICs.

Sections 671-675 of the Tax Reform Act of 1986 created REMICs and clarified the tax consequences associated with their issuance. These provisions eliminate technical tax impediments and they do not expressly authorize nor exclude any institution from participating in REMICs. During hearings on various bills which eventually culminated in enactment of REMIC authorization, the Treasury Department proposed restrictions on the authority of FNMA and FHLMC to issue REMICs a number of times. These restrictions, however, were not adopted by the Senate Finance Committee, the House Committee on Ways and Means, or the conference committee on the final bill.

[7]FHLMC had been issuing such securities under this authority since 1983.

Agency Securities Exempt From SEC Registration Requirements

We were also asked to determine whether section 304(d) of the FNMA Charter Act provides an exemption from the federal securities rules for FNMA REMICs in view of the fact that REMIC investors are treated as purchasing an interest in the underlying mortgage rather than an FNMA-issued investment secured by such mortgages. We believe that Congress has made it clear that REMICs are mortgage-backed securities which come within the exemption to federal securities laws provided in Section 304(d) of FNMA's Charter which, in part, provides that

"Securities issued by the corporation [FNMA] under this subsection shall, to the same extent as securities which are direct obligations of or obligations guaranteed as to principal and interest by the United States, be deemed to be exempt securities within the meaning of laws administrated by the Securities and Exchange Commission."

We also believe that similar provisions in FHLMC's Charter Act make REMICs issued by FHLMC exempt from these securities rules.

Effects of REMICs on Housing and Mortgage Markets

We also examined the potential impact of agency issuance of REMICs on the thrift industry, mortgage bankers, investment bankers, and the housing and mortgage markets. It is difficult to find good empirical evidence to fully assess these impacts given the limited time frame during which agencies have issued REMICs. The actual effects on activity in the housing and mortgage markets is generally perceived to be quite modest. The effects on specific groups participating in the market, such as thrift institutions or investment bankers, were more difficult to gauge. Expectations differ markedly even within these groups as to how agency participation would affect their organizations.

Thrift Industry: Opposition and Support for Agency REMICs

While depository institutions, particularly thrifts, have developed strong views on agency issuance of REMICs, the industry does not speak with a uniform voice. Some thrifts, particularly those which originate and hold mortgages, are adamantly opposed to agency involvement in the REMIC market. They contend that the short tranches of agency REMICs could serve as substitutes for thrift deposits, and thus could lead to an erosion of their deposit base. In addition, to the extent that agency REMICs lead to reductions in mortgage rates, the thrifts contend that agency REMICs would also lead to an erosion in the spread between yields on thrift industry investments in mortgages and their cost of funds. These institutions argue that this reduces income in the thrift industry, and could lead to further problems with maintaining solvency in the Federal Savings and Loan Insurance Corporation.

Other thrifts, particularly those whose operations would be characterized as mortgage banking, are in favor of agency participation in the REMIC market. Members of this group generate their income more from origination, sale, and servicing of mortgages rather than from the holding of such mortgages in their portfolios. A larger share of their investment portfolio is in mortgage securities rather than in whole mortgages. These thrifts welcome agency involvement in the REMIC market, believing that they can obtain a better price for mortgages they sell in the secondary market. They also feel that agency involvement will eventually expand the size of the secondary market. The enhanced liquidity and the advantages conferred by regulatory authorities on agency securities make agency REMICs more attractive investments for thrifts that invest in securities as opposed to whole mortgages.

Agency REMICs Are Unlikely to Cause Erosion of the Deposit Base

With the exception of concerns expressed by some depository institutions, we found little support for the belief that agency issuance of REMICs would lead to any significant erosion of the deposit base of thrift institutions. Among the major reasons given as to why agency REMICs would not serve as a major substitute for savings deposits were that

- REMICs are very different investments than thrift deposits,
- a large menu of more similar investment alternatives to thrift deposits already exists, and
- most REMIC investments are made by large institutional investors.

Loss of deposits (disintermediation) became a prominent issue in the late 1970s when interest rates rose well above regulatory ceilings, causing traditional thrift depositors to withdraw funds in favor of investments provided by other financial intermediaries. However, beginning with the Depository Institutions Deregulation and Monetary Control Act of 1980 (DIDMCA), the situation began to change rapidly. DIDMCA set up a schedule for removing deposit ceilings at thrift institutions. The Garn-St. Germain Depository Institutions Act of 1982 authorized depository institutions to issue federally insured money market accounts that could compete with money market funds. Thrifts were also granted authority to expand into a broader range of investments as well as to introduce a greater variety of savings instruments.

REMICs are not close substitutes for thrift deposits because they pose greater risks for the investor and their complex structure makes them difficult to evaluate, even for sophisticated institutional investors. Even if the agency guarantee were perceived to be equivalent to the insurance underlying thrift deposits, the REMIC investor is still confronted with the prepayment risk inherent in mortgage securities. While an investor in a 3-year certificate of deposit can lock in the current yield for 3 years regardless of the direction in interest rates, the REMIC investor is not as well protected. A sharp drop in rates would increase prepayments and thus shorten the time period for which the investor locks in the higher initial yield. The longer-term tranches of a REMIC are clearly not close substitutes for thrift deposits since the prepayment risk is greater.

The principal concern of those depository institutions that fear increased disintermediation is that the short tranche of the REMIC could become a substitute for certificates of deposit with maturities of 2 to 3 years. There is also some concern that the agencies might try to retail REMIC-based securities by carving them up into smaller pieces and retailing them directly through mutual funds, or through the smaller thrift

institutions. We have found no evidence that this type of behavior has occurred either for REMICs or CMOs. The initial FNMA authorization to issue REMICs prohibited FNMA from selling them directly to mutual funds or in shares of less than $100,000. Most of the experts we interviewed indicated that multiple class mortgage-backed securities have not been an effective investment for mutual funds. Those funds specializing in real estate investment have focused on purchasing pass-through securities.

To confirm these findings, we asked investment bankers who market multiple class MBSs about the profile of their investors in CMOs, REMICs, and in particular, the initial FNMA REMICs. They all indicated that there were few, if any, individual investors in REMICs and CMOs. Institutional investors dominate the market. In the few instances where individuals did purchase CMOs, they tended to be extremely wealthy individual investors who would not be drawing funds away from thrift CDs.

We asked two lead underwriters for the first FNMA REMIC to identify the types of investors purchasing the security. The first tranche, which was specifically designed to appeal to thrift institutions, was indeed sold to the thrift industry. The intermediate- and longer-term tranches also generated purchases from the thrift industry. These tranches also attracted investments from a large commercial bank, pension funds (including a state pension fund that would have been precluded from investing in non-agency REMICs), insurance companies, and a large money market manager. The underwriters could not point to any investments in the initial offering that were made by individual investors.

Agency REMICs Can Lead to Better Pricing for Fixed Rate Mortgages

To the extent that agency REMICs have a competitive advantage, there is the potential that some portion of that advantage will be transferred to mortgage lenders and homebuyers. The result could be higher prices paid for home mortgages in the secondary mortgage market. If the higher prices are consistently available to mortgage originators, home mortgage interest rates could ultimately be driven down.

Thrift institutions which are predominantly portfolio investors would be adversely affected by this type of effect. If mortgage interest rates fall a few basis points as a result of agency participation in the REMIC market, it reduces the spread between the cost of funds raised by thrifts and the return on their mortgage portfolios.

On the other hand, thrift institutions which are more involved in the mortgage banking types of activities are actively engaged in mortgage origination for sale into the secondary market. They welcome agency involvement because it provides another potential outlet and better pricing for their mortgages.

Specific evidence on better pricing of mortgages that became collateral for agency REMICs is sparse given the low number of agency REMICs issued thus far. Representatives from the mortgage banking industry said that mortgage originators were getting somewhat better pricing on FNMA REMIC deals. FNMA indicated that they offered originators slightly better prices than their standard MBS prices for their initial REMIC offerings. In the first REMIC offering by FNMA in 1988, the agency was able to provide a higher price for the underlying collateral than was available through the investment banking community. In the transaction, the investment banker sought out FNMA to market a REMIC that otherwise would not have taken place. FNMA was able to pay more for a portfolio of Adjustable Rate Mortgages (ARMS) originated by a large savings and loan association. The S&L sought to sell the MBS publicly through several Wall Street firms but did not receive a sufficiently high bid to enable it to sell the mortgages.

Will Investment Bankers Lose Market Share to Agencies?

While investment bankers are potentially the group with the most to lose from agency participation in the REMIC market, the investment banking community has by no means spoken with a single voice on this subject. Our review of the legislative history indicated that before passage of the REMIC legislation, investment banking firms were unopposed to agency issuance of REMICs and in some cases endorsed it. However, some of the investment banking firms which were active in the mortgage securities market did voice their objections to agency involvement shortly after passage of the legislation.

In 1987, investment bankers dominated the REMIC market, issuing over two-thirds of all REMICs. They are concerned that agency REMICs will supplant those issued in the private sector by investment banking firms, and that the agency REMICs will eat into their profits. A related concern is that fewer agency-backed MBSs will be available in the secondary market for use as arbitrage REMICs. Arbitrage REMICs are collaterized by agency MBSs purchased in the secondary market for the sole purpose of issuing the REMIC. If agencies sharply reduce their production of MBSs in favor of directly issuing agency REMICs, investment bankers fear that there will not be enough of the raw material available in the form of

agency MBSs in the marketplace available for conversion into REMICs by private issuers.

FNMA and some investment bankers would argue that this is an unlikely scenario, pointing to the fact that single class MBSs will still represent the best execution in the marketplace under a variety of interest rate conditions. Furthermore, there are GNMA securities being produced as well as a large inventory of existing MBSs.

The investment bankers opposed to agency issuance of REMICs are concerned about the competitive advantages conferred upon the agencies by virtue of their ties to the federal government. They contend that a private market has developed for multiple class securities without substantial federal involvement. They point to the privatization goal of public policy as a further basis for keeping federally supported credit agencies out of the REMIC market. FNMA points out that investment bankers are quite willing to permit agency involvement up to a point. Almost all of the multiple class mortgage-backed securities issued by investment bankers utilize agency-backed securities as collateral. FNMA contends that in order to operate and compete in the mortgage market, they must be allowed to use the most efficient investment technologies possible, including REMICs.

Potential Effects on the Homebuyer

Will agency issuance of REMICs have any effect on the homebuyer? To the extent that the agency competitive advantage results in higher mortgage prices for mortgage originators, some portion of that benefit would be translated into lower mortgage interest rates. How much lower is difficult to assess. The marginal impact of agency issuance of REMICs on mortgage rates would probably be quite small. In an earlier report,[1] we pointed to evidence suggesting that the net impact of all federal agency involvement in the secondary mortgage market was to reduce fixed rate mortgages by about 60 basis points relative to corporate securities. REMIC authority represents just a marginal change in the value added by agencies to the secondary market.

Agency REMICs may also have some modest impact in preserving the fixed-rate mortgage as a viable option for homebuyers. Again, the full range of secondary mortgage market activities in which the agencies

[1] The Federal National Mortgage Association in a Changing Economic Environment (GAO/RCED-85-102, Apr. 15, 1985).

participate has contributed to this effect. REMIC authority represents a marginal increase in the relative value of fixed-rate mortgages.

It would not be feasible to measure the impact of a change such as agency REMIC authority on the level of mortgage interest rates or the value of fixed-rate mortgages relative to adjustable-rate mortgages. The advantages of agency status are distributed among several components of the economy. FNMA and FHLMC will each retain some of the advantage. Mortgage originators, homebuilders, and homebuyers may enjoy some benefits. REMICs are, however, too small and too recent a phenomena for us to attempt to measure the extent of the advantage or how it would be distributed.

Comments From the Federal National Mortgage Association

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

3900 Wisconsin Avenue, NW
Washington, DC 20016-2899
202 752 6770

David O. Maxwell
Chairman of the Board and
Chief Executive Officer

June 14, 1988

FannieMae

Mr. Richard L. Fogel
Assistant Comptroller General
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Fogel:

I would like to commend the fine work of Michael Gutowski, David Gross, and others on your staff who contributed to GAO's draft report, Housing Finance: Agency Issuance of Real Estate Mortgage Investment Conduits, which we received with your cover letter dated May 27, 1988. Their evenhanded analysis of the issues surrounding REMICS, in itself a highly complex instrument, is most impressive. And, their ability to separate rhetoric from facts is perceptive.

The report largely dispels the concerns underlying the issues GAO was asked to examine. These were whether Fannie Mae has a competitive advantage over other issuers; the potential for thrift disintermediation; Fannie Mae's authorization under its charter to issue REMICs; and whether Fannie Mae REMICs are exempt from federal securities rules. You were also asked to consider the application of these issues to Freddie Mac.

The report recognizes that the benefits of agency status do not translate automatically into domination of the REMICs market. The report finds no indication that agency status is currently leading to market domination and notes that "no current action or announced intention suggests that this will be a future problem." The report minimizes the likelihood of such a development in the future noting the offsetting advantages of private issuers. GAO concludes, "We believe that so long as there is a market for customized REMICs, Wall Street investment firms could still play a large role in REMIC issuance, regardless of Agency cost advantages."

The report finds "little basis" for the suggestion that Fannie Mae or Freddie Mac REMICs may lead to disintermediation. Finally, the report explicitly refutes any challenge to Fannie Mae's or Freddie Mac's legal authority to issue REMICs, as well as any suggestion that

Fannie Mae and Freddie Mac REMICs might not be exempt from securities disclosure regulations.

We believe, and the overwhelming majority of mortgage finance participants agree, that our participation as a REMICs issuer serves the market. I am gratified that the report supports this view, noting the special benefits to thrifts that our "thrift plus certificates" provide, the broadened investor base attributable to agency status, and initial evidence that our participation in REMICs has resulted in better pricing. Fannie Mae's participation in the REMICs market also enhances competition and innovation. In this regard, the report specifically refers to the monthly WAC and WAM updates Fannie Mae REMICs uniquely offer.

See comment 1.

There are, however, several points in the report where we differ. We believe the summary, as distinct from the body of the report, understates the strong level of industry support for Fannie Mae's and Freddie Mac's participation as REMICs issuers. We also dispute the level of savings attributed to our not having to pay rating costs. There are other points of this nature. However, such differences are more a matter of degree than of substance, and the report's conclusions are sound.

See comment 2.

I am pleased that Fannie Mae's views have been supported by GAO's research, and I hope that your report resolves any lingering questions about our role. Your fine work adds significantly to the understanding of both REMICs themselves and the operation of the REMICs market. You and your staff are to be complimented on a difficult job well done.

Sincerely,

David Maxwell

DOM/pa

GAO's Comments

1. We did not address the comment regarding the level of industry support for agency issuance of REMICs because of its vague nature. The "industry" can be interpreted in several ways. For instance, while members of the housing industry generally favored agency activity in REMICs, many members of the finance industry that compete with the agencies in the REMIC market have, at different times, gone on record against agency issuance. And, as is mentioned in the report on page 42, some representatives of the thrift industry also oppose agency activity in REMICS.

2. FNMA claims that most issuers still use one rating firm to rate their REMIC securities. In a telephone survey of major private sector REMIC issuers, we found that the use of two ratings on REMIC issues has become an industry standard.

Comments From the U.S. Department of Housing and Urban Development

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, D.C. 20410

ASSISTANT SECRETARY FOR
POLICY DEVELOPMENT AND RESEARCH

June 28, 1988

IN REPLY REFER TO

Mr. J. Dexter Peach
Assistant Comptroller General
United States General Accounting
Office
Washington, DC 20548

Dear Mr. Peach:

Your draft report, "Housing Finance: Agency Issuance of Real Estate Mortgage Investment Conduits," was sent to my office for reply. Both my staff and others within the Department have reviewed your report. The report provides a careful and informative analysis of the implications of permitting the Federal National Mortgage Association (FNMA) and the Federal Home Loan Mortgage Corporation (FHLMC) to issue Real Estate Mortgage Investment Conduits (REMICs). Your analysis recognizes that many of the important policy issues can be addressed only after more data are available. We agree with your main conclusions that the agencies have a cost advantage over private issuers of REMICs and that agency REMICs will not lead to a loss of deposits by the thrift industry.

See comment 1.

We would make two modifications in the report. First, the data on agency issuances of REMICs should be updated beyond December 31, 1987. As you note in Chapter 3, the agency share of the REMICs market increased substantially in early 1988. The data throughout the report should be updated to reflect this change, and later changes, in market share.

See comment 2.

Second, recent changes in prices of mortgage-backed securities (MBSs) should be analyzed in Chapter 4's discussion of the potential impact of agency issuance of REMICs on the mortgage market. Prices of FHLMC and FNMA MBSs have risen in recent months relative to GNMA prices, despite GNMA's guarantee of full faith and credit by the United States Government. The extent to which these price shifts are related to agency REMIC activity should be discussed in Chapter 4. Potential effects on GNMA's share of the MBS market should be examined in this context.

In addition to providing the above comments, I have noted some minor changes in an enclosed copy of the report.

Again, I think that you have presented a fine analysis of the important issues surrounding agency issuance of REMICs. The Department very much appreciates the opportunity to review the report prior to its release.

Sincerely,

Kenneth J. Beirne

Enclosure

GAO Comments

1. We now have complete data on all REMIC issuances through May, 1988. Such data are presented in table 3.4 on page 39, and are referenced in the report, as appropriate.

2. This issue was not addressed because it was outside the scope of our report.

Glossary

Accrual Bond	A bond which accrues interest at its stated coupon rate until its maturity. At maturity, the investor receives the accrued interest which has been compounded at set intervals during the life of the bond.
Adjustable Rate Mortgages (ARMs)	A mortgage in which the interest rate is adjusted periodically according to a preselected index. The terms, adjusted schedule, and index used can be negotiated by the borrower and lender.
Arbitrage	In mortgage banking, the simultaneous purchase and sales of mortgages, futures contracts, or mortgage-backed securities in different markets to profit from differences in price. Arbitrage tends to eliminate such price differences.
Basis Point	One one-hundredth of one percent. Used to describe the amount of change in yield in many debt instruments, including mortgages.
Bond	An interest-bearing certificate of debt with a fixed maturity date. A real estate bond is a written obligation usually secured by a mortgage or a trust deed.
Call Provision	In a mortgage, it refers to the mortgagee's ability to speed up payments of the obligation under certain conditions. In bonds, it refers to the issuer's right to redeem the bond before maturity.
Capital Markets	The financial complex of institutions, securities, and communications involved in long-term borrowing.
Certificate of Deposit (CD)	A form of time deposit at a bank or or savings institution; a time deposit cannot be withdrawn before a specified maturity date without being subject to an interest penalty for early withdrawal. Small denomination CDs are often purchased by individuals. Large CDs of $100,000 or more are often in negotiable form, meaning they can be sold or transferred among holders before maturity.

Collateralized Mortgage Obligation (CMO)	A bond structured with classes of varying maturities and coupon rates which is secured by mortgage cash flows.
Conventional Mortgage	A mortgage loan not insured by the FHA nor guaranteed by the VA or FHA.
Coupon Rate	In mortgage banking, the annual interest rate on the face of a note or bond.
Discount	When a price for a mortgage or mortgage-backed security is lower than the unpaid principal amount, it is said to be discounted. The lowering of the price of the mortgage principal results in increasing the yield of the security.
Fixed-Rate Mortgage	A mortgage in which the interest rate is set for the term of the loan.
Floating Rate Mortgage-Backed Security	A mortgage-backed security which is structured with one or more variable rate classes; the rates are adjusted periodically according to a preselected index, usually the London Interbank Offer Rate (LIBOR).
Grantor Trust	A device used to allow CMO issuers to remove mortgages from their books while still using multi-class securities to sell them. The securities issuer simply sets up a trust and transfers all the pooled mortgages to the trust, thereby making it the owner.
Hedge	The matching of assets to liabilities of a similar nature; the assumption of one risk calculated to offset another.
Interest	Consideration in the form of money paid for the use of money, usually expressed as an annual percentage.
Maturity	The date on which an agreement expires; termination of the period a note or obligation has to run.

Mortgage	A loan secured by some form of real property.
Mortgage-Backed Security (MBS)	The generic term for security issues which have mortgages as collateral for payment. MBSs may take the form of asset transactions or debt holdings.
Multiple-Class Mortgage Backed Securities	A type of mortgage-backed structured financing which involves the creation of classes which vary in the amount and/or timing of principal and interest payments. In this type of structure, the classes typically differ from the underlying mortgages with respect to coupon rate and timing of payments. These securities allow the issuer to provide a security (class) with investment characteristics that best meet the needs of the investors.
Nonconforming Loans	Conventional mortgage loans (not FHA or VA) which are too large to be eligible for purchase by either FHLMC or FNMA; currently, any single family home loans greater than $168,700.
Over-collateralization	Sufficient mortgages must be placed in a collateral pool so that their discounted value can cover the bond or security, plus a reserve. This over- collateralization is designed to ensure that the investor will receive required payments of interest and principal in full.
Participation Certificates (PCs)	A modified pass-through security, issued and guaranteed by the Federal Home Loan Mortgage Corporation (FHLMC), that represents ownership in residential mortgages. The underlying mortgages are conventional, i.e. not insured or guaranteed by the federal government. Investors are guaranteed monthly interest payments and pro rata share of the principal.
Par Value	A situation where the face value of the mortgage (or bond) principal equals its actual selling price—that is, with no discount or premium.
Pass-Through Securities	With a pass-through security, investors hold interests in a pool of mortgages and receive pro rata shares of the cash flows, i.e. interest and

	principal payments emanating from the underlying mortgages. Each pool has a coupon or a pass-through rate which is generally lower than the interest rates on the underlying mortgages in the pool.
Premium	The amount, often stated as a percentage, paid in addition to the face value of a note or bond.
Prepayment Rate	Speed at which mortgages are paid off before their specified maturity date. A frequently used standard is the Public Securities Administration (PSA) Model.
Primary Market	The original sale of securities is said to occur in the primary market.
Principal	The amount of debt, exclusive of any accrued interest, remaining on a loan. Before any principal has been repaid, the total loaned amount is the principal.
Regular Class	Holders of a regular class of a REMIC obtain an unconditional right to receive interest, at a fixed or variable rate, and specified principal payments whose timing can be made contingent upon the actual prepayments of the underlying mortgages. Generally, most have the characteristics of pass-through mortgage obligations.
Refinancing	The repayment of debt from the proceeds of a new loan using the same property as security. Borrowers often refinance when interest rates drop.
Regulation Q	Federal Reserve Board ceiling on the rates that banks and other savings institutions can pay on savings and other time deposits. The Depository Institutions Deregulation and Monetary Control Act of 1980 provided for phasing out Regulation Q by 1986.

REMIC	(Real Estate Mortgage Investment Conduit) - A tax exempt entity allowed to issue multi-class securities which are backed by mortgages on real estate.
Reserve Fund	Amount needed to make payments of principal or interest to the extent cash is not otherwise available.
Residual Class	Any cash flows left over after the regular classes of a REMIC are paid off go to the residual class. Residual interest holders receive a pro rata return on the return on the REMIC's permitted investments, contingent payments received, or the prepayments received on the REMIC's mortgage portfolio.
Secondary Market	A market in which existing mortgages and mortgage-backed securities are bought and sold. Lenders and investors buy existing mortgages and MBSs and in so doing provide greater availability of funds for additional mortgage lending by banks, mortgage bankers, and savings and loan associations.
Senior/Subordinated Securities	This mortgage-backed security contains at least two classes, a senior class and a junior class. The senior class holders receive principal and interest payments first, the reserve fund second, and the junior class holders last. Such a structure is designed to ensure that the senior class receives timely payment of principal and interest.
Stripped Mortgage-Backed Securities	Mortgage-backed security issues in which the principal and interest flows are separated (or "stripped") from the pool mortgages in order to create different classes of securities which can receive repayments simultaneously.
Swap	The exchange of mortgages for mortgage-backed securities. FNMA and FHLMC will both exchange mortgages held by S&Ls and mortgage banks for FNMA or FHLMC mortgage-backed securities respectively.
Tranche	Refers to the different classes of a security.

Underwriting	Conducted by investment banks, involves providing a corporation (issuing entity) a guarantee of a certain price on its securities and then selling the securities to the public.
WAC	Weighted average coupon of the mortgage pool backing a mortgage-backed security. The pool's WAC will change as the pool ages and the loans in the pool amortize and prepay.
WAM	The weighted average maturity of the mortgage pool backing a mortgage-backed security gives an indication of when the security could be expected to mature. A pool's WAM will change as the loans in the pool prepay and age.
Whole Loans	In the secondary mortgage market, the purchase or sale of an entire loan, as opposed to the purchase or sale of a participation or share in a loan.
Yield	The return to an investor on a debt instrument expressed as interest. The yield calculates the effect of the "coupon rate" (or stated interest rate), the loan price, and the expected actual life of the mortgage.
Yield Curve	A graph of yields and maturities of securities that are similar in most respects (especially risk) except for maturity.

U.S. G.P.O. 1988-201-749:80250

Requests for copies of GAO reports should be sent to:

U.S. General Accounting Office
Post Office Box 6015
Gaithersburg, Maryland 20877

Telephone 202-275-6241

The first five copies of each report are free. Additional copies are $2.00 each.

There is a 25% discount on orders for 100 or more copies mailed to a single address.

Orders must be prepaid by cash or by check or money order made out to the Superintendent of Documents.

United States
General Accounting Office
Washington, D.C. 20548

Official Business
Penalty for Private Use $300

First-Class Mail
Postage & Fees Paid
GAO
Permit No. G100