

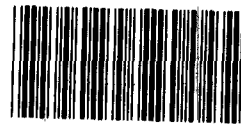
GAO

Briefing Report to the Chairman,
Subcommittee on Telecommunications
and Finance, Committee on Energy and
Commerce, House of Representatives

March 1993

GOVERNMENT-
SPONSORED
ENTERPRISES

Changes in Securities
Distribution Process
and Use of Derivative
Products



148752



General Government Division

B-236437

March 16, 1993

The Honorable Edward J. Markey
Chairman, Subcommittee on Telecommunications
and Finance
Committee on Energy and Commerce
House of Representatives

Dear Mr. Chairman:

You asked us to examine changes in the distribution of government-sponsored enterprise (GSE) debt securities and the use of GSE derivative products that are formed from GSE securities.¹ You were concerned about (1) inaccurate record-keeping and other improper practices in connection with the distribution of GSE securities and (2) the possibility that some investors may be exposed to unsuitable risks from improper sales practices concerning GSE derivative products. On March 11, 1993, we briefed your office on the results of our work. This report documents that briefing.

RESULTS IN BRIEF

Over the past year, agreements between GSEs and selling group dealers² were revised to ensure accurate reporting and improve allocation procedures by clarifying responsibilities and improving communications. For example, dealer reports on

¹The GSEs included in this report are the Farm Credit System (FCS), Federal Home Loan Bank System (FHLBS), Federal Home Loan Mortgage Corporation (Freddie Mac), Federal National Mortgage Association (Fannie Mae), and Student Loan Marketing Association (Sallie Mae). For simplicity of reference in this report, we classify real estate mortgage investment conduit (REMIC) securities, stripped mortgage-backed securities, swaps, and zero coupon bonds as derivative products. We recognize that these securities may not always be considered derivative products and that the GSEs may also use other derivative products.

²GSE securities are generally sold by securities firms and banks as part of their government securities operations. In this report, we refer to both types of organizations as dealers.

the distribution of securities are now subject to audit by the GSEs, independent auditors, and/or internal auditors. Generally, securities are now allocated among selling group dealers primarily on the basis of customer orders rather than the past practice of using historical performance by the dealers. If properly implemented, the revised agreements should improve the integrity of the GSE securities market.

Like many other investments, GSE derivative products have complex risk characteristics that may make them unsuitable for some investors. Prices and yields from certain GSE derivatives may be volatile and vary from expectations. Returns from these investments may vary with changes in interest rates and, for mortgage-backed derivatives, the rate at which the underlying mortgages prepay. Also, investors who purchase these derivatives from dealers regulated by the National Association of Securities Dealers (NASD) may not be protected from sales practice abuses because NASD is not permitted under law to apply most sales practice rules to the government securities activities of the dealers it examines.

We recommended in an earlier report that the Government Securities Act of 1986 be amended to allow NASD to, among other things, examine the sales practices of dealers selling government securities, which would include GSE derivative securities.³ We continue to support this recommendation.

OBJECTIVES, SCOPE, AND METHODOLOGY

Our objectives were to provide information on

- changes in the distribution of GSE securities since August 1991 (see app. I) and
- risks to investors and sales practice issues concerning GSE derivative products (see app.II).

To accomplish these objectives, we obtained information and data from the GSEs; the Department of Housing and Urban Development; the Securities and Exchange Commission (SEC); NASD; New York Stock Exchange (NYSE); eight dealers in New York City; and seven regional dealers in Memphis, Philadelphia, Richmond, and San Francisco.

³See U.S. Government Securities: More Transaction Information and Investor Protection Measures Are Needed (GAO/GGD-90-114, Sept. 14, 1990).

We spoke to officials from these organizations about (1) improper practices and violations of federal securities laws in conjunction with the sale of GSE securities; (2) changes made in the distribution process and implications of these changes for market fairness, integrity, and liquidity; and (3) the creation, risk characteristics, and marketing of GSE derivative products and known cases where investors have suffered losses from these products. We did not verify the documentary and oral information provided.

We did our fieldwork between July and October 1992 in accordance with generally accepted government auditing standards. We discussed the information provided in this report with the GSEs, SEC, NASD, NYSE, and the Public Securities Association. Their technical corrections were made where appropriate.

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We are sending copies of this briefing report to SEC, the GSEs, and other interested parties.

If you have any questions about the material contained in this briefing report, please contact me on (202) 512-8678 or Larry D. Harrell, Assistant Director, on (202) 512-7310. Other contributors to this report were Patrick S. Dynes, Senior Evaluator, and Gillian M. Martin, Evaluator.

Sincerely yours,



James L. Bothwell,
Director, Financial Institutions
and Markets Issues

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ABBREVIATIONS

CMO	collateralized mortgage obligation
FCS	Farm Credit System
FFIEC	Federal Financial Institutions Examination Council
FHLBS	Federal Home Loan Bank System
GFOA	Government Financial Officers Association
GSE	government-sponsored enterprises
IO	interest only
MBS	mortgage-backed securities
NASD	National Association of Securities Dealers
NYSE	New York Stock Exchange
OCC	Office of the Comptroller of the Currency
PSA	Public Securities Association
PO	principal only
REMIC	real estate mortgage investment conduit
SEC	Securities and Exchange Commission
SRO	self-regulatory organization

CHANGES IN THE DISTRIBUTION PROCESS

Improper Securities Market Practices

- Salomon admitted exaggerating customer orders in the GSE securities market.
 - SEC's investigation revealed widespread exaggeration by dealers of customer orders in the GSE securities market.
-

CHANGES IN THE DISTRIBUTION PROCESSIMPROPER GOVERNMENT SECURITIES MARKETS PRACTICES

In August 1991, a Salomon Brothers, Inc., internal investigation revealed that from July 1990 through August 1991 Salomon had submitted unauthorized customer bids in five Treasury auctions. Salomon also admitted that it had overstated the amounts of GSE securities for which it had customer orders when it reported to GSEs. A subsequent SEC investigation, with assistance provided by the Office of the Comptroller of the Currency (OCC), Federal Reserve System, NYSE, and NASD obtained trading data and other documentary evidence from all participants in the GSE securities market for the period January 1, 1990, through August 31, 1991. During that time, the amount of customer orders reported to GSEs by their selling group members far exceeded the amount of securities available so the securities had to be allocated among the members.

SEC's investigation revealed that nearly all selling group members engaged in one or more improper practices in connection with the primary distribution of GSE securities. These improper practices included reporting inaccurate customer orders and sales information to the GSEs and maintaining false books and records.¹

SEC concluded that while the selling group members prepared and maintained an accurate set of books and records regarding their activities in the sale of GSE securities, they also maintained a second inaccurate set of books and records for the worksheets and distribution reports submitted to the GSEs. SEC concluded that the creation of these inaccurate books and records by the selling group members was part of a scheme to inflate customer orders in an effort to maintain or increase their allocations. On January 16, 1992, SEC, the Federal Reserve, and OCC instituted administrative proceedings against 98 GSE selling group members for violating record-keeping requirements by preparing and maintaining records reflecting inflated indications of customer orders or sales. About the same time as the order instituting the proceedings, virtually all of these selling group members submitted offers of settlement, which were accepted. The terms of the settlements required each selling group member to (1) cease and desist from future violations of the record-keeping requirements; (2) pay civil money penalties of up to \$100,000 to

¹Department of the Treasury, Securities and Exchange Commission, and the Board of Governors of the Federal Reserve System. Joint Report on the Government Securities Market. Washington, D.C.: GPO, Jan. 1992.

the U.S. Treasury; and (3) devise, implement, and maintain policies and procedures designed to ensure future compliance with the relevant provisions of the Securities Exchange Act.

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Background

- GSEs facilitate lending for educational, agricultural, and housing purposes.
 - GSEs form selling groups composed of dealers to sell GSE debt securities to customers.
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BACKGROUNDGSEs Facilitate Lending

GSEs are financial intermediaries established pursuant to federal law to facilitate lending for purposes the federal government has deemed socially important, such as education, agriculture, and housing.² GSEs are privately owned, and the securities they issue are exempt from most federal and state securities laws. The total obligations of the GSEs as of September 1991 were more than \$1.1 trillion--about \$700 billion of which was off-balance sheet mortgage-backed securities. The remaining \$400 billion was primarily short- and long-term debt securities that were sold to investors.

Selling Group MembersLink GSEs With Investors

Selling groups consist of dealers who contract with GSEs to participate as selling agents in their debt offerings by (1) offering to sell GSE securities to investors, (2) providing GSEs with information about the market, and (3) advising the GSEs about prices for the securities. They range in size from 25 to 84 dealers. The GSEs use selling groups to ensure wide distribution of their securities and to ensure that the GSEs can issue debt in large sizes and a variety of structures, even in weak markets. Moreover, the GSEs use selling groups to achieve efficient distribution and pricing for their securities. Selling group members agree to abide by the terms outlined in each of the respective selling group agreements.

²See Government-Sponsored Enterprises: The Government's Exposure to Risks (GAO/GGD-90-97, Aug. 15, 1990) and Government-Sponsored Enterprises: A Framework for Limiting the Government's Exposure to Risks (GAO/GGD-91-90, May 22, 1991).

GSE Securities Distribution Process

- GSEs announce terms.
 - Selling group members call customers to obtain orders.
 - GSEs allocate securities and then price them.
-

GSE SECURITIES DISTRIBUTION PROCESS

Although the distribution process varies among GSEs and may vary by type of security, in general, the process is as described below. Before announcing the specific terms of an issue, such as size and date of maturity, the GSEs obtain information about the market from their selling group members. The Department of the Treasury, which approves Fannie Mae, Freddie Mac, FHLBS, and Sallie Mae security offerings and coordinates the offerings sold through selling groups, maintains a central calendar of GSE offerings. The Farm Credit Administration approves FCS borrowing, which is coordinated with the Secretary of the Treasury. A Fannie Mae official told us that the sale of GSE securities through selling groups is generally a multiday process. Before announcing the actual terms of the offering, GSEs generally engage in presale discussions regarding potential offering structures with selling group members. To facilitate these discussions, a Fannie Mae official said that selling group members often report indications of interest by investors in various debt structures. On the day of the offering, the GSEs announce the actual terms. Pricing does not occur until after the securities have been allocated among the selling group members.

After a GSE announcement, selling group members call on their investor customers to take orders for the securities. The members then contact the GSE and report their orders as being firm or conditional. If the order is conditional, the member gives the conditions, such as the price or yield at which the customer will buy securities. When the amount of orders exceeds the size of the offering, the GSEs allocate the securities among the selling group members. According to the GSEs, allocation is based on a variety of factors, including customer orders, the member's past activity in the GSE's offerings, and the member's commitment to participating in the secondary market for GSE securities. Should all of the securities not be sold to customers by the selling group members, the GSEs may ask some of the members to underwrite or purchase the securities for their own account and assume the risk of selling the securities in the secondary market.

After the securities have been allocated, the GSEs then set a price for the new issue. Pricing decisions are made by the GSEs based on their market analysis, which includes input from the selling group members and analysis of secondary market trading of comparable securities. Following pricing, the GSE makes a public announcement over the news wires. The selling group members then call the GSE back to confirm their final allocation.

In addition to selling groups, the GSEs use underwriting as a way

of selling securities. In an underwritten deal, the GSEs sell the securities to a dealer, who in turn sells the securities to customers. GSEs may use underwritten deals in order to issue smaller offerings; to meet the specialized needs of certain investors, such as large institutions; to acquire funds at times other than scheduled calendar offerings; and to finance their debt at lower prices.

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Selling Group Agreements

- Each GSE has a selling group agreement with each of the dealers in its group.
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SELLING GROUP AGREEMENTS

Each GSE has a selling group agreement with its dealers. These agreements outline the responsibilities of the selling group member to the GSE. For example, selling group members are expected to assist the GSEs by providing them with reports about the results of offerings and "market intelligence"--information such as market developments that could affect the pricing or distribution of the securities. The agreements also specify when and how often selling group members should communicate with the GSEs and investors, what records and forms must be maintained by selling group members, and any additional actions, such as training of traders and salespersons, that selling group members must take. The selling group agreements also describe the audit rights of GSEs.

Key Changes to the Selling Group Agreements

- Standardization of definitions and reporting requirements
 - Selling group members must adopt internal policies that ensure compliance with the agreements.
 - Selling group members are subject to audit to ensure
 - compliance with policies
 - accuracy of information.
-

KEY CHANGES TO THE SELLING GROUP AGREEMENTS

To remedy the problem that selling group members overstated the amount of their customer orders to GSEs, the GSEs now require that the selling group members report actual orders instead of anticipated orders. All of the GSEs require selling group members to use a Public Securities Association (PSA) prepricing report or a similar form to keep track of customer orders when reporting to the GSEs.³ This form, which PSA designed to address many of the problems identified with GSE security sales, contains categories for classifying customers by type, such as a bank trust or money manager, and for describing orders as either firm or conditional. Within 10 days after the date when the GSE announces the price of the security, or within 10 days of settlement for FCS and Sallie Mae, selling group members are required to submit a distribution report showing the type of customers that actually received the securities, the number of transactions with each type of customer, and the amount each type of customer received. These reports must be reconciled with the prepricing report form. The GSEs require selling group members to use a distribution report form, each with certain variations from the form suggested by PSA. Compliance with these requirements is to be checked through the audit process.

Internal Procedures

All five GSEs require their selling group members to maintain written procedures designed to ensure the accuracy of the reports and other information submitted to the GSEs and the accuracy of any books and records that are maintained pursuant to the selling group agreement. Except for Sallie Mae's agreement, each agreement requires selling group members to provide the GSE with

³PSA is an international trade organization of banks, dealers, and brokers that underwrite, trade, and sell state and local government securities, mortgage securities, U.S. government and federal agency securities, and money market instruments. PSA formed a task force to address the problems associated with GSE debt sales. The PSA task force issued a report and recommendations for improving the selling group process. Many of the recommendations were incorporated into the revised selling group agreements.

copies of written procedures, along with any updates or revisions as they occur. Sallie Mae requires that each member maintain written policies and procedures but does not require that such information be provided to Sallie Mae.

To ensure that selling group members adhere to their internal procedures, their GSE activities are subject to audit. Fannie Mae and Freddie Mac require the member's internal auditors or other personnel who are not involved in or responsible for the purchase or sale of the securities to examine and confirm at least annually that internal procedures have been and are being followed and that any problems will be corrected promptly. Reports of these exams, including the disposition of the issues raised, are to be maintained and made available to Fannie Mae or Freddie Mac upon request. For FHLBS selling group members, compliance with internal procedures is checked by either FHLBS or the member's independent auditor.

Sallie Mae and FCS require the selling group member's independent auditor to provide assurance that such procedures have been and are being followed. The independent auditors must annually provide such assurances in writing to Sallie Mae and FCS.

Additional Requirements

In addition to complying with their own internal procedures, selling group members are required to comply with the record-keeping provisions of the selling group agreement and are responsible for the accuracy of information and reports submitted to the GSEs. Four of the five GSEs, excluding Sallie Mae, require their members to maintain for a period of 3 years written records necessary to document customer orders, types of customers, and actual distribution of securities. Sallie Mae's agreement does not specify a period for keeping records or the type of records to be kept by the selling group member.

The selling group agreements specify the audit options available to each selling group member. Fannie Mae, Freddie Mac, and FHLBS give members of their selling groups the choice of being audited either by the GSE or by an independent auditor approved by the GSE. FCS and Sallie Mae require their selling group members to use an independent auditor, but they do not give up their right to review a member's records at any time. Generally, all the GSEs seek assurance from either the member's independent auditor or their own auditors that the member's oral and written reports are reasonably accurate and supported by and based upon actual

transactions and communication with the member's customers. In some cases, customers may be contacted to verify certain information.

Audit Activity

- Audits by GSEs differ.
 - GSEs plan to continue audits of selling group members.
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AUDIT ACTIVITY

Implementation of the audit provisions vary among the GSEs. According to a Fannie Mae official, Fannie Mae, or its selling group member's independent auditor, audited all selling group members in 1992. Freddie Mac, or its selling group member's independent auditor, audited 18 of 25 members in 1992. According to a Freddie Mac official, the remaining seven selling group members were not scheduled for audit in 1992 because of their relatively minor participation in Freddie Mac's 1992 allocated offerings. The seven will be audited in 1993 if their participation is more substantial.

FHLBS officials told us that the FHLBS' Office of Finance completed ticket audits⁴ of all their selling group members between November 1991 and October 1992. According to FCS, it did not start any audits in 1992 but expects the selling group members' independent auditors to complete reviews of the members' internal GSE security procedures during the members' financial audits of 1992 operations. A Sallie Mae official told us that they will rely on annual audits done by each of its selling group member's independent auditor.

GSEs PLAN TO CONTINUE AUDITS OF SELLING GROUP MEMBERS

The GSEs have established guidelines and timetables for future audits of selling group members. FCS recently established the Department of Dealer Surveillance and Credit within the Federal Farm Credit Banks Funding Corporation to undertake dealer audit/examinations. This new department plans to visit all selling group members during 1993 and 1994 to ensure that the procedures required by the new selling group agreement have been implemented properly and to discuss any findings by the member's independent auditor related to GSE securities operations. Future audits and examinations of FCS selling group members are to be scheduled on the basis of FCS concerns regarding both (1) compliance with the selling group agreement's terms and conditions and (2) the selling group member's performance in selling group offerings.

FHLBS said that their Office of Finance plans to audit all selling group members annually to ensure the integrity of the selling group process and review compliance with the new selling group agreement.

Fannie Mae plans additional audits of its selling group members after the first year of the new selling group agreement. The top

⁴A ticket audit involves tracing orders back to customers.

25 percent of the selling group members, by volume of sales and allotments, will be audited twice a year with the remaining 75 percent audited annually. Freddie Mac plans annual audits of its selling group members with priority on dealers with the largest allocations.

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Additional Changes to Ensure Integrity

- Senior officers are responsible for integrity of sales process.
 - Dealers must be familiar with agreement and train staff.
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SENIOR OFFICER RESPONSIBILITIES

Four of the five GSEs require the selling group members to file a statement each year, signed by the chief executive officer or senior officer acceptable to the GSE certifying that (1) the selling group member is aware of its obligations under the agreement (2) the member has taken affirmative action to ensure the integrity of the sales process and (3) the member's compliance program will monitor its obligations under the agreement. Freddie Mac's selling group agreement does not require a signed statement. In addition, selling group members for four of the five GSEs are required to designate a senior officer responsible for each member's relationship with the GSE and the accuracy of information submitted to the GSE. Sallie Mae considers the chief executive officer certification to serve the same purpose as the senior officer designation. Fannie Mae, FCS, and FHLBS also require the senior officers or their designee to attend an annual meeting held with the GSE to review, among other things, the obligations of the selling group member.

TRAINING OF TRADERS AND SALESPERSONS

All of the selling group agreements require the members to ensure that their traders, salespersons, and other appropriate personnel have read the selling group agreement and the member's written procedures before taking part in that GSE's security sales activities. The agreements also require that the selling group members ensure that their traders, salespersons, and other appropriate personnel have received training covering the member's obligations to the GSE under the selling group agreement.

PSA Survey of Firms Active In The GSE Market

- Respondents indicated that compliance with new procedures increased their expenses.
 - Respondents were evenly split on whether customers were better protected with new policies and procedures.
-

PSA SURVEY OF FIRMS ACTIVE IN THE GSE MARKET

In August 1992, PSA sent a survey concerning the impact of new selling group member procedures to 217 PSA member firms that had professed some interest or participation in the agency security market during 1991. Forty-three firms responded to the survey for about a 20 percent response rate. Approximately one-third of the 43 respondents were large Wall Street national firms, and the remaining respondents were various sized regional firms. Even with the low response rate, the results of this survey can serve as examples of what some firms in the agency security market think about the changes in the distribution process.

PSA members responding to the survey indicated that compliance with the new selling group procedures increased their expenses. Twenty-three of the 43 respondents found the requirement for an independent outside audit extremely burdensome and expensive. The other 20 respondents expressed a preference for the option of using an independent auditor to protect customer confidentiality.

Survey respondents were evenly split on whether the customer was better protected as a result of the new policies and procedures. About half of the respondents said that customers were never at risk before the changes and, therefore, remained unaffected. The others responded that customers were better protected.

Implication for the Market

- Integrity for GSE securities market should increase.
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IMPLICATION FOR THE MARKET

The integrity of the GSE securities market depends on the perception of market participants that the process works fairly and evenly for all. Several selling group members and all five GSEs told us that the changes in the distribution process resulting from the revised selling group agreements should improve the integrity of the GSE securities market. The revised agreements give GSEs the authority, primarily through the audit provisions, to ensure the integrity of the market. Naturally, long-term improvements will depend on how well the agreements are implemented.

INFORMATION ON GSE DERIVATIVE PRODUCTS

Risks of GSE Derivative Products

- Primary risks for GSE derivatives are interest rate risk, prepayment and extension, and credit risk.
 - GSE derivatives may decrease or increase the risk in a portfolio of securities.
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INFORMATION ON GSE DERIVATIVE PRODUCTSRISKS OF GSE DERIVATIVE PRODUCTS

The risk of individual GSE derivative products needs to be examined in the context of an investor's overall investment portfolio. Here, we discuss the basic concepts concerning these risks. Taken in isolation, a GSE derivative product may increase an investor's risk exposure. However, investment portfolios generally involve complex combinations and variations of these risks. When examined in the context of the overall risk level of the portfolio, a GSE derivative product may reduce risk by creating a hedge against the risk of another security or group of securities in the portfolio. In addition, the value of GSE derivative products may relate to the liquidity of the overall market for that type of product. For example, the value of securities is generally affected when (1) the market does not have ample buyers and sellers and (2) prices are not widely quoted.

Interest Rate Risk

Interest rate risk is the risk of loss due to variability in the level of interest rates. For a simple example, when an investor owns a bond yielding 10 percent interest, needs to sell it before maturity, and the interest rate on a comparable bond has risen to 12 percent, the owner of the instrument will have to sell it at a price less than its face value. If this same investor was selling the bond into a market with an interest rate for comparable instruments of less than 10 percent, the value of the bond would be greater than the face value because the bond would yield interest payments greater than the going rate of return.

Prepayment, Extension, and Credit Risk

Prepayment risk is the risk that a security will prepay sooner than expected, forcing the investor to reinvest prepaid funds at different terms than the original investment. For example, home owners may prepay their mortgages when interest rates decrease, which may cause investors to reinvest their funds at lower rates of return. Extension risk is the risk that a security will pay later than expected. For example, home owners may continue to repay their mortgages according to the mortgage terms rather than refinance them when interest rates increase, preventing the investor from reinvesting expected funds at higher rates. Credit risk--or counterparty risk--is the risk of loss from a counterparty failing to fulfill its side of an agreement. For example, a party may fail to make interest payments or fail to repay the principal.

REMICs

- REMICs are multiple class mortgage cash flow securities.
 - The issuer creates classes with different characteristics.
 - The minimum investment in most REMICs is \$1,000.
 - REMIC classes have different kinds of risk.
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REAL ESTATE MORTGAGE INVESTMENT CONDUITS

After the Tax Reform Act of 1986 changed the tax and accounting treatment of multiple class mortgage-backed securities (MBS), Fannie Mae, Freddie Mac, and private issuers such as securities dealers or dealer banks started to create real estate mortgage investment conduits (REMIC). By creating different cash flow periods from the principal and interest payments of underlying MBS collateral, the issuer of a REMIC can create classes with different yields, average lives, prepayment sensitivities, and final maturities.⁵ Investors are able to select classes that have maturities, yields, and expected prepayments that fit into the risk characteristics of their specific portfolios. For example, to match the expected maturities of assets and liabilities, classes with expected short-term average lives of 2 to 5 years may be marketed to thrifts because they closely match the maturity of many of their certificates of deposit. Classes with longer term maturities of 7 to 12 years appeal to insurance companies and pension funds as fairly secure long-term investments. The minimum investment for most REMICs is \$1,000.⁶

REMICs HAVE RISK

REMIC cash flows are directly related to the payments of the principal and interest for mortgages which underlie the REMIC. REMICs allow investors to purchase the class that has the characteristics of the interest rate risk and prepayment and extension risk of the underlying mortgages that are appropriate to that investor. Some REMIC classes, such as a class with a long-term maturity that does not start to repay until after other classes have been retired, have higher interest rate and prepayment risk and commensurate higher yields than the underlying mortgages. Other REMIC classes, such as a class with a short-term maturity, have lower interest rate and prepayment risk and lower yields than the underlying collateral.

Because the GSEs guarantee payment of interest and principal for their MBS, credit risk for REMICs backed by GSEs is generally considered to be minimal. Interest rate, prepayment and

⁵The MBS which underlie REMICs are organized pools of residential mortgages whose principal and interest payments are passed from the mortgage originators to investors through intermediaries that pool and repackage the payments in the form of securities.

⁶For a more detailed description of REMICs and their risk characteristics, see Housing Finance: Agency Issuance of Real Estate Mortgage Investment Conduits (GAO/GGD-88-111, Sept. 2, 1988).

extension risk can vary substantially for different REMIC classes. When interest rates for new mortgages decline, people are likely to refinance causing the rate of prepayment for REMIC mortgages to increase and the timing of cash flows going to some REMIC classes to accelerate. As the mortgages prepay, the interest payments on those mortgages stop, thus reducing future REMIC cash flows. In this situation, an investor in a higher risk REMIC class may not receive the expected cash flow for the expected period of time. Assuming the investor in the higher risk REMIC class was using the REMIC cash flows to pay longer term liabilities, the investor would have to reinvest funds from the REMIC to generate new cash flows. When invested in an interest bearing security, cash inflows will be reduced because interest rates have declined. This is often called reinvestment risk. To compensate for this risk, higher risk REMIC classes carry higher expected returns. An investor in a lower risk REMIC class is less affected by mortgage prepayments than an investor in a higher risk class and therefore receives a more stable cash flow. Thus, an investor in a higher risk REMIC class needs to be sophisticated enough to evaluate and manage interest rate risk and prepayment and extension risk of each REMIC class to the risk level of the investor's overall portfolio.

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Stripped MBS

- Strips are securities created by separating MBS into principal and interest components and selling pieces separately.
 - Strips have interest rate risk and prepayment risk.
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STRIPPED MBS

Strips are securities that separate MBS into principal only and interest only pieces that can be sold separately. The process of stripping enables the issuer to provide an investment product to a broader base of investors. Interest only (IO) strips are one or more securities entitling the owners to all interest cash flows from the underlying MBS. Principal only (PO) strips are one or more securities entitling the owners to all principal cash flows from the underlying MBS.

STRIPS HAVE RISK

IO- and PO-stripped MBS can be volatile investment vehicles. Some investors in IO and PO strips may be accepting higher risk in exchange for higher expected returns. Other investors may be using strips to hedge against risks from other securities in their portfolios. Thus, depending on the profile of an investor's portfolio, an investment in IO and PO strips can either reduce or increase the investor's overall risk. The GSEs guarantee the payment of principal and interest, but the value of IO and PO strips is very sensitive to changing interest rates and prepayments. The amount of interest received from an IO strip varies directly with the outstanding mortgage principal, which in turn depends on the prepayment rate of the underlying mortgages. A rise in prepayments reduces the outstanding principal more quickly than expected, leading to smaller than expected future interest payments and a decrease in value of the IO strip. PO strips increase in value when principal is returned at a faster rate. This occurs when interest rates fall and prepayments accelerate. Prepayment rates are influenced by a number of factors, including general economic conditions, the regional economy, homeowner mobility, the assumability of underlying mortgages, and movements in interest rates. A fall in interest rates will tend to increase the number of refinancings and the expected life of a stripped MBS will decrease. A rise in interest rates will slow the number of refinancings and increase the expected life of stripped MBS. Total payments received by investors in a PO strip is fixed--only the timing varies with the prepayment rate. For an IO strip, both the total amount of interest received and its timing depend on the prepayment rate. It is possible to have a loss on an investment in an IO strip when the total cash flow from it is less than the initial purchase price.

Interest Rate Swaps

- Interest rate swaps are contractual agreements between two parties to exchange a series of cash flows.
 - Interest rate swaps have credit risk.
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INTEREST RATE SWAPS

Interest rate swaps are contractual agreements between two parties to exchange a series of cash flows (interest payment obligations). In its simplest and traditional form, the two parties exchange their interest payment obligations on two kinds of debt instruments, such as variable rate and fixed rate instruments, so that each party can better match the resulting cash flows to its assets and liabilities. Interest rate swaps allow each party to borrow funds using one type of instrument and then swap the interest payments for another type. For example, to match cash inflows that reprice every 91 days, Sallie Mae could issue a 5-year, fixed-rate bond and then exchange the interest cash flows with a bank issuing certificates of deposit paying interest tied to 91-day Treasury bill rates.

SWAPS HAVE RISK

The most significant risk in interest rate swaps is that the counterparty will default on its swap obligations. A party's credit exposure is a function of the counterparty's financial position and the present market value of the party's swap position, which generally is much less than the notional amount of the swap.⁷ For GSE swaps, counterparties might see this risk as small because of the GSEs' ties with the government. Also, counterparty credit risk in swaps can be mitigated through the use of credit enhancement arrangements. For example, some swaps have provisions for the posting of collateral if the credit rating of a counterparty drops.

⁷The notional amount of a swap is the base amount on which the swap interest payments are calculated. This amount never changes hands, and therefore is referred to as notional.

Zero Coupon Bonds

- Zero coupon bonds carry no periodic interest payments or coupons.
 - Zero coupon bonds have interest rate risk and prepayment risk.
-

ZERO COUPON BONDS

Zero coupon bonds have risk characteristics that differ from more typical bonds in that they carry no periodic interest payments, or coupons, before maturity. Zero coupons are sold at a deep discount from face value. The buyer of such a bond receives a return by the gradual appreciation of the security, which is redeemed at face value at maturity. The discount from face value represents the aggregate interest the holder receives if the security is held to its stated term of maturity. Issuers can raise funds without making current debt service payments. Zero coupon bonds can eliminate reinvestment risk for the investor, which is the risk that the principal or interest may have to be invested at rates lower than the appreciation rate that the bond pays. Zero coupon bonds are particularly popular with investors who have a debt due in a certain number of years or need funds for purposes, such as retirement.

ZERO COUPON BONDS HAVE RISK

Zero coupon securities can be extremely volatile. The prices of zero coupon bonds fluctuate dramatically with moves in general interest rates. Zero coupon bondholders do not receive an interest payment until maturity, and the rate of return depends on the price paid, time held, and price received for the bond. Also, when interest rates rise the value of zero coupon bonds falls more dramatically than bonds that pay interest on a regular basis. Conversely, when interest rates decline the value of zero coupon bonds increases more dramatically than a bond that pays interest on a regular basis. Thus, an investor who purchases and then sells a zero coupon bond before its maturity date can achieve a significant loss or gain. However, if an investor holds a zero coupon bond until its maturity date, the investor is guaranteed a yield regardless of how interest rates move. In addition, since Fannie Mae has issued zero coupon bonds that Fannie Mae can repay before maturity under certain conditions, zero coupon bonds can also exhibit prepayment risk. Again, partially because of the GSEs' ties to the government, credit risk is considered small for the zero coupon bonds they issue. Also, SEC officials said that, as a general matter, credit risk is higher at the time of issue for zero coupon bonds than other securities because there is no right to receive payment until a distant future date.

GSE Derivative Products Have a Variety of Customers

- REMIC, strips, and zero coupon bonds are available for both institutional and individual investors.
 - Swaps are generally used by financial institutions and large corporations—including GSEs.
-

GSE DERIVATIVE PRODUCTS HAVE
A VARIETY OF CUSTOMERS

REMIC, strips, and zero coupon bonds are used by individual retail investors and institutional investors such as banks, insurance companies, investment advisors, mutual funds, pension funds, and state and local governments. GSE swaps are generally made with financial institutions, securities firms, large corporations, and other institutional investors. Aggregate data on the amounts of derivative products used by the different kinds of customers are not available.

GSEs Offer or Participate in REMICs Strips, Swaps, and Zero Coupons

- **REMICs and strips offered by Freddie Mac and Fannie Mae**
 - **All five GSEs participate in interest rate swaps.**
 - **Fannie Mae and Sallie Mae have offered zero coupons bonds.**
-

**GSEs OFFER OR PARTICIPATE IN
REMICs, STRIPS, SWAPS, AND
ZERO COUPON BONDS**

Billions of dollars of these financial instruments have been issued by the GSEs, as shown in table II.1.

**Table II.1: Notional/Contract Amounts of Outstanding GSE
Derivative Products**

Dollars in billions

Product	FCS	FHLBS	Freddie Mac	Fannie Mae	Sallie Mae	Total
REMICs ^a	\$0	\$0	\$217	\$265.9	\$0	\$482.9
Strips	0	0	7.1	31.6	0	38.7
Interest Rate Swaps ^b	12.5 ^c	50 ^c	.2	17.3	25.4	105.4
Zeros ^d	0	0	.5	13	.6	14.1
Total	\$12.5	\$50	\$224.8	\$327.8	\$26	\$641.1

Note: Data is as of August 31, 1992 or later.

^aInformation on REMICs issued by organizations other than Fannie Mae and Freddie Mac was not available.

^bDollar amounts for swaps are notional principal amounts. The principal itself is not part of the swap agreement.

^cSwaps are booked individually by FCS and FHLBS banks.

^dDollar amounts for zero coupon bonds are face amounts.

Source: GSEs

GSE Information Available to Investors

- Printed offering circulars, prospectuses, and information statements which describe securities are available.
 - Networks containing information on the security are available through electronic market systems.
 - Some GSEs maintain services to answer specific questions.
-

GSE INFORMATION AVAILABLE
TO INVESTORS

Fannie Mae publishes REMIC prospectuses, prospectus supplements, data statements, and information statements that discuss REMIC structures and the MBS used to back REMIC transactions. Fannie Mae also has an automated information network accessible by computer modem, which for a one-time fee of \$100, provides new transaction announcements, REMIC structures, and other information. Fannie Mae has a telephone service that investors can call with specific questions concerning MBS pools, REMIC classes, and strips. Fannie Mae also will provide investors with a software program that contains general information on a REMIC and analyzes classes under a variety of interactive scenarios.

Freddie Mac makes available offering circulars that describe the general payment terms and other characteristics of its securities as well as data about unique characteristics of a particular derivative of an MBS.⁸ Freddie Mac provides by telephone free recorded disclosure information on the characteristics of a security and free disclosure information that can be received through a computer modem. Freddie Mac has an investor inquiry department with a staff of five full-time professionals to answer investors' questions. Freddie Mac sponsors seminars, sometimes in connection with a particular government securities dealer, to describe the risks and rewards of Freddie Mac securities. Freddie Mac officials said that the target audience for seminars is large institutional investors.

Sallie Mae provides zero coupon offering circulars that describe the structure of the instruments. Sallie Mae also has an investor inquiry department.

Because swaps are customized contractual transactions and not considered public offerings, specific information on the counterparties and other features is not publicly available. However, when considered material, information on the notional amount of swaps outstanding and certain other information is included in GSE annual reports to shareholders; the reports are publicly available.

⁸We noted that some circulars provided by Freddie Mac state that the investments described are not suitable for all investors and that investors should not purchase the security unless they understand its structure and are able to bear its risks. However, we did not evaluate the accuracy or sufficiency of the information provided by GSEs or the dealers that sell GSE products.

Other Information Available to Investors

- Information vendors, for a fee, provide detailed risk scenarios
 - PSA publishes information on REMIC risks.
-

OTHER INFORMATION AVAILABLE TO INVESTORS

Investors can subscribe to information services that provide detailed information on the risks of GSE derivatives under various market conditions. For example, one service analyzes the risks and returns under multiple possible market scenarios. It also provides securities prices. The service provides details of GSE backed REMIC transactions, including class sizes, interest rates, final maturities, average lives, and other information. It also permits analysis of REMIC classes under different prepayment scenarios.

PSA INFORMATION

PSA publishes a brochure as a retail investor's guide to REMICs issued by Fannie Mae, Freddie Mac, and other REMIC issuers. This brochure explains the REMIC features and attendant risks, including the effect of changing interest rates on the value of securities, prepayment rates, and liquidity. It also suggests questions that the investor should ask before investing in REMICs.⁹

⁹Public Securities Association. An Investor's Guide to Real Estate Mortgage Investment Conduits. New York: PSA, 1992.

Some Investors May Not Adequately Understand The Risks

- Investors in GSE derivatives are principally institutional investors.
 - Some smaller and less experienced investors participate in this market.
-

SOME INVESTORS MAY NOT
ADEQUATELY UNDERSTAND THE
RISKS OF GSE DERIVATIVE PRODUCTS

Although the GSE securities market is still principally a wholesale market in which brokers, dealers, large commercial banks, and institutional investors participate, a number of smaller and less experienced investors also participate in the market. NYSE officials told us that REMICs, strips, and zero coupon bonds are being marketed to individual investors. Like many other financial instruments, REMICs and strips can be used to support a risk management strategy or as vehicles for speculation. They pose particular hazards to investors who are unfamiliar with their complexity and risks. SEC officials told us that many individual investors purchase GSE derivative securities as speculative investments, not to manage portfolio risk.

Investor Losses and Complaints

- GSEs were not aware of customer complaints.
 - NASD and NYSE said they rarely receive complaints.
 - We identified some examples of problems.
-

INVESTOR LOSSES AND COMPLAINTS

We asked the GSEs, NYSE, NASD, and the Government Financial Officers Association (GFOA)¹⁰ for information on investor losses and other complaints concerning GSE derivatives and found that aggregate data were not available. The GSEs told us that they were not aware of any investor complaints. NYSE and NASD told us they rarely receive complaints from investors concerning GSE derivative products. The following examples of problems with GSE derivative securities were provided by GFOA members, NASD, and Moody's Investors Service, Inc.:

- Officials of a county in a midwestern state told us that the county lost \$80,000 on an IO strip of an MBS purchased at \$500,000. The investment was made by the financial officer, with the approval of the board of supervisors, but the securities were later determined to be inappropriate for the financial objectives of the county.
- NASD officials said that a dealer sold \$30 million of an IO strip to a customer without meaningful disclosure of the volatile and speculative nature of the security.
- NASD penalized a dealer \$99,201 for an excessive markup on a PO strip that was sold to a savings and loan institution.
- According to a November 1991 Moody's Special Comment, in May 1987, Merrill Lynch disclosed that it had suffered a \$377 million loss through dealings in PO strips of an MBS because it did not have an adequate risk management system for derivative products. The losses were caused by unauthorized trading activity and market volatility. The volatility was related to the significantly reduced market value of POs due to fears of slower prepayments of POs in a rising interest rate environment. The lack of appropriate hedges against the PO positions exacerbated these losses. After this event, Merrill's trading risk controls were reviewed and tightened.

¹⁰GFOA is an association of financial officers from state and local governments.

Investment Guidelines

- **Federal Financial Institutions Examination Council (FFIEC) has a supervisory statement providing guidance for certain type of investments.**
-

INVESTMENT GUIDELINES

On December 3, 1991, the Federal Financial Institutions Examination Council (FFIEC)¹¹ released a revised supervisory statement covering all insured depository institutions on (1) the selection of securities dealers; (2) portfolio policies, strategies, and practices; and (3) securities that are generally unsuitable for investment. Under the statement, insured financial institutions are supposed to have complete knowledge of a dealer's operating philosophy and reputation before transacting business. Certain products with significant price and yield volatility, including strips, high-risk REMIC classes, and long-term zero coupon securities, are considered unsuitable investments unless they reduce the institution's overall interest rate risk. A security that exhibits greater price volatility than a standard fixed-rate 30-year MBS generally is not considered a suitable investment for depository institutions. Such securities may or may not be appropriate for other types of investors.

¹¹FFIEC is composed of representatives from the following agencies: Federal Reserve System, Federal Deposit Insurance Corporation, OCC, Office of Thrift Supervision, and National Credit Union Association.

Sales Practice Concerns

- There are a variety of possible sales practice abuses
 - failure to meet suitability standards
 - excessive trading
 - failure to obtain customer authorization
 - deceptive advertising
-

SALES PRACTICE CONCERNS

According to NASD officials, there are several types of potential sales practice abuses that may occur in securities markets, including GSE derivative securities markets. The first involves excessive markups or charging prices to a customer that are above the prevailing interdealer price. The sale by a dealer of a security at a price that does not bear a reasonable relationship to the prevailing market price without disclosing this fact to the customer generally violates the antifraud provisions of the securities laws. Second, dealers may fail to meet suitability standards by not ensuring that their purchase recommendations are appropriate for the customer's investment objectives and financial expertise. For example, customers with short-term obligations generally should not be sold long-term securities. Third, dealers who have authorization to trade on a customer's behalf might trade excessively in customer accounts in order to generate commission income. Fourth, dealers might fail to obtain proper customer authorization before trading. Finally, a dealer might advertise in a way that is false, deceptive, misleading, or does not adequately explain the risks of the investment product.

CONCERN OVER ADVERTISING PRACTICES

NASD officials told us they have become increasingly concerned about misleading advertising for collateralized mortgage obligations (CMO).¹² CMOs are multiple class debt obligations collateralized by a pool of mortgages.¹³ The underlying cash flows of the collateral are used to fund the debt service on the security. NASD reported that CMOs are complex investments that need full and fair disclosure for the investor to understand them. NASD officials said there has been an increase in the number of customer complaints associated with advertisements for CMOs. Officials said that advertisements generally are brief and emphasize high yields, safety, government guarantees, and liquidity.

¹²The Government Securities Act of 1986 gave NASD specific authority to regulate its members' advertising of government securities, including GSE derivative securities.

¹³In 1983, Freddie Mac issued the first CMO. The Tax Reform Act of 1986 allowed CMOs to be issued in the form of REMICs, creating certain tax and accounting advantages for issuers and for certain large institutional and foreign investors. Today almost all CMOs are issued as REMICs.

After a study of CMO sales practices of its member dealers, in July 1992 NASD recommended to its members that any advertisement for these securities that contains an anticipated yield should disclose the underlying prepayment assumption and disclose that the advertised yield may fluctuate.¹⁴ SEC published for comment NASD's proposed rule amendment to require its members to obtain NASD approval for advertisements concerning certain CMO securities.

¹⁴Notice to Members 92-36. This notice proposes amending article III, section 35 of NASD's Rules of Fair Practice and section 8 of NASD's Government Securities Rules.

APPENDIX II

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APPENDIX II

Sales Practice Rules and Suitability

- Sales practice rules set acceptable business standards.
 - Investment objectives and financial capability determine suitability.
-

SALES PRACTICE RULES SET
ACCEPTABLE BUSINESS STANDARDS

Sales practice rules developed by the self-regulatory organizations (SRO) set standards of practice for dealers operating in securities markets. Regulators can cite dealers for violations of the rules without having to prove that the dealer intended to defraud a customer. If intent can be established and the violations are egregious, SEC and the SROs can take action against abusive sales practices under the antifraud provisions of the Securities Exchange Act or under an SRO's own antifraud rules. Section 10(b) of the Securities Exchange Act gives SEC the authority to promulgate rules to prohibit fraudulent, manipulative, and deceptive acts and practices. SEC Rule 10b-5 prohibits such practices. When SROs cannot establish the intent to commit fraud, then they have to rely on their sales practice rules for enforcement.

DEALERS ARE REQUIRED TO
ENSURE THAT INVESTMENTS
ARE SUITABLE FOR INVESTORS

Although many investments do not perform as expected or hoped, and securities regulators do not attempt to protect investors from losses, dealers are supposed to recommend only securities that are suitable based on their customers' investment objectives and financial situation. In this regard, members must try to understand the investment objectives and financial status of the customer, seek to recommend only securities that meet these needs, and provide investors with information that explains the structures and risks of securities. Several dealers told us that senior officials at their firms review the sales of certain high-risk securities to less sophisticated customers. The customer is also to be notified that the securities being purchased are considered high risk by FFIEC.

SRO Application of Sales Practice Rules

- NYSE can apply sales practice rules to GSE derivative products.
 - NASD cannot apply most sales practice rules to GSE derivative products.
-

SRO APPLICATION OF SALES PRACTICE RULES

The Government Securities Act does not prohibit registered securities exchanges, such as NYSE, from applying their sales practice rules to sales practice abuses of their members that are government securities dealers.¹⁵ NYSE applies sales practice rules to its 319 members who offer government securities to customers, including GSE derivatives. NYSE officials told us they were currently examining 12 NYSE members' sales to individual investors of GSE stripped securities and zero coupon bonds. These examinations are looking at disclosure, markups, customer suitability standards, advertising, and other sales practice issues.

NASD CANNOT ENFORCE MOST SALES PRACTICE RULES FOR GSE DERIVATIVES

The majority of dealers¹⁶ who offer government securities, including GSE derivative securities, are not NYSE members and therefore their sales of GSE securities are not subject to most sales practice rules prescribing just and equitable principles of trade. The Government Securities Act continued a Securities Exchange Act restriction placed on NASD rule-making and enforcement authority over government, including GSE, securities sales practice abuses. In particular, the Securities Exchange

¹⁵Although bank regulators do not have explicit authority to impose sales practice rules on the institutions they supervise, the Office of the Comptroller of the Currency currently applies the Municipal Securities Rulemaking Board's (MSRB) sales practice rules as benchmarks for the government securities transactions of national banks. See MSRB rule G-17.

¹⁶As of August 30, 1991, NASD had 1,138 members registered to transact government securities business in combination with other activities and 66 members registered to transact an exclusive business in government securities.

Act prevents NASD from applying its normal rules on abusive sales practices to the government securities activities of its members, except in the case of misleading, deceptive, or false advertising.¹⁷

We recommended in an earlier report that the Government Securities Act of 1986 be amended to allow NASD to, among other things, examine the sales practices of dealers selling government securities, which would include GSE derivative securities.¹⁸ We continue to support this recommendation.

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¹⁷Section 15A(f) of the Securities Exchange Act severely limits NASD's role in government securities regulation, providing, with very limited exceptions, that "nothing in this section shall be construed to apply with respect to any transaction by registered broker or dealer in any [government] security." Section 15A(g)(3)(D) restricts NASD from imposing standards of training, experience, and competence for associated persons of brokers and dealers that engage exclusively in government securities transactions.

¹⁸See U.S. Government Securities: More Transaction Information and Investor Protection Measures Are Needed (GAO/GGD-90-114, Sept. 14, 1990).

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