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# REPORT

OF THE

# JOINT TREASURY-SEC-FEDERAL RESERVE STUDY

OF THE

# GOVERNMENT-RELATED SECURITIES MARKETS

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PRINTED FOR THE USE

OF THE

## COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS

## UNITED STATES SENATE

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SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

December 5, 1980

The Honorable Harrison A. Williams
United States Senate
Washington, D.C. 20510

Dear Sir:

We are enclosing a study undertaken jointly by staffs of the Treasury, SEC, and the Federal Reserve Board of the government-related securities markets. Appended to the study is draft legislation entitled "The Government-Related Securities Act of 1980" that would implement its recommendation. As you will recall, this study was undertaken in response to your inquiry about the need for regulation of the government-related securities markets.

The report was completed this summer. In the months following completion, accounts have appeared in the financial press describing its conclusions and recommendations. Under the circumstances, it seems desirable that the full report be transmitted and be made available to the public. It should be noted, however, that, although the Treasury staff has fully participated in the study, the Administration has not taken a position on it. The SEC and the Board of Governors of the Federal Reserve System have endorsed the recommendations.

Sincerely,

Harold M. Williams
Harold M. Williams
Chairman
Securities and Exchange Commission

Paul Volcker
Paul Volcker
Chairman
Federal Reserve Board

Enclosures

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

OFFICE OF THE CHAIRMAN

December 5, 1980

The Honorable Harrison A. Williams
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Dear Sir:

The Securities and Exchange Commission (the "SEC") and the Board of Governors of the Federal Reserve System ("Federal Reserve Board") have today transmitted under separate cover the Report of the Joint Treasury-SEC-Federal Reserve Board Study of the Government-Related Securities Markets (the "Report") and draft legislation entitled "The Government-Related Securities Act of 1980." I would like to take this opportunity, on behalf of the SEC, to provide some background into the Joint Study and to summarize its findings.

As you will recall, the Joint Study was undertaken as a result of your inquiry into the need for regulation of dealers in government-related securities. In January 1980, staff members of the three agencies began a comprehensive review of the government-related securities markets and analyzed the existing regulatory structure in light of the abuses that had occurred in those markets. On the basis of their findings, the Joint Study participants unanimously recommended specific legislation that would establish a new regulatory structure, that would be applicable to forward trading in securities guaranteed by the Government National Mortgage Association ("GNMA") and the Federal Home Loan Mortgage Corporation ("FHLMC"), and that could, as necessary, be extended to other government-related securities.

This Report and draft legislation were completed in July 1980, reflecting the unanimous views of staff members from each agency detailed to the Joint Study. At that time, both the SEC and the Federal Reserve Board by formal vote endorsed the results of the Study and the legislative proposal. While the Study has also been endorsed by the responsible senior officials at the Treasury Department and recommended favorably by them to the Office of Management and Budget ("OMB"), we understand that the Department is unable to express a formal position on the legislation without approval by the OMB. Although the Report and draft legislation were referred to the OMB in August, that Office has yet to reach a final decision.

In drafting the Report, the Joint Study participants gathered and analyzed data on the government-related securities markets, including markets for Treasury securities, government-sponsored agency securities and government-guaranteed securities. The Report concludes that regulation appears necessary at this time only in the case of forward trading in GNMA and FHLMC mortgage-backed securities. However, the legislative proposal would permit, under stringent procedures including unanimity among the Federal Reserve Board, the SEC, and the Department of the Treasury, an extension of regulation to the cash market in these securities or to the markets in other government-guaranteed securities.

A primary purpose of regulation in the government-guaranteed securities markets would be the reduction of abuses arising from the absence of uniform margin requirements for forward trading. Although recent public and private efforts have somewhat reduced the potential for abuse, it still remains possible to assume large, highly leveraged positions in GNMA or FHLMC securities with long delayed delivery dates without the deposit of margin either initially or at any point thereafter to meet adverse market moves. This practice has contributed to a high degree of speculative activity, and, thus, to losses incurred by dealers and investors in these securities.

Based on the experience of the SEC and the Federal Reserve Board with implementing margin requirements for stocks, the Report recommends the adoption of minimum measures necessary to implement margin requirements for forward trading in GNMA and FHLMC mortgaged-backed securities. Effective margin regulation requires the registration of professionals effecting forward transactions, the adoption of recordkeeping provisions and a program of surveillance and inspections. Furthermore, to the extent that margin requirements involve the deposit of customer funds and securities with brokers and dealers, margin regulation must be accompanied by financial responsibility standards for non-bank government-related securities professionals in order to safeguard those funds and securities.

In addition to the problems associated with the absence of margin requirements, the Study participants identified a number of other seriously abusive practices which are described in Chapter IV of the Study Report. The findings of that chapter detail problems arising from the making of unsuitable recommendations, the employment of high pressure sales methods, the unauthorized execution of trades, and the misuse of customer funds and securities. Measured responses to these unfair practices would include suitability standards for recommendations, supervision requirements in order to reduce sales practices abuses, and standards for the safeguarding of customer funds and securities from unauthorized use. Many of these measures simply reflect good business practices and have, in fact, been advocated by the leaders of the industry.



To minimize federal intrusion into these markets the legislative proposal would provide supervised rulemaking authority to a self-regulatory organization called the Federal Mortgage-Backed Securities Rulemaking Board (the "Board"). The self-regulatory Board, modeled along the lines of the Municipal Securities Rulemaking Board created under the Securities Acts Amendments of 1975, would be composed of representatives of bank and non-bank securities dealers and public representatives. The expertise and understanding of the markets possessed by industry members, who would comprise a majority of the Board, should assure that any regulatory measures adopted will provide appropriately limited responses to specific problems in the markets for government-regulated securities. The Board would exercise its rulemaking authority subject to the oversight of a Council composed of the Secretary of the Treasury, Chairman of the Board of Governors of the Federal Reserve System, and Chairman of the SEC, or their designees. The Council would have the power to approve, disapprove, or alter the rules of the Board, and to adopt its own rules in certain areas. Before making its own rules, the Council would be required to consult with all interested agencies (e.g., GNMA and FHLMC).

In constructing a proposed regulatory framework for the government-guaranteed securities markets, the Joint Study participants carefully considered the potential costs and benefits of regulation. Because the current absence of regulation makes it difficult to develop precise figures, the Report draws upon the self-regulatory model for the municipal securities markets, on which the proposed legislation is largely patterned. Based upon the experience in the municipal securities markets since 1975, we believe that the costs of extending federally-supervised self-regulation to the government-guaranteed securities markets will be relatively modest. At the same time, direct benefits of deterring abuses in these markets should be substantial. Furthermore, the Report points out that legislation in this area will greatly increase public confidence in these markets and enhance investor protection, benefits which cannot readily be measured but which are nonetheless of great importance.

To help ensure that benefits will continue to exceed cost in the implemention of this regulatory scheme, the draft legislation contains explicit competitive standards to govern rulemaking by either the Board or the Council. A rule could be adopted by either only where it is demonstrated that regulatory purposes outweigh any competitive burden.

The SEC believes that this draft legislation, if enacted, would reduce substantially the incidence of abuses and restore public confidence in the government-guaranteed mortgage-backed securities markets. We are confident that the Joint Study's recommendations, reached after considerable review and analysis, are sound and closely tailored to achieve regulation necessary to deal with proven abuses, without imposing any undue burdens on the markets for these securities.

Sincerely,

Harold M. Williams

Harold M. Williams
Chairman



*PREFACE*

The following study of the government-related securities markets was prepared by the Department of the Treasury, the Federal Reserve System and the Securities and Exchange Commission (SEC) pursuant to a request by Senator Harrison A. Williams, Jr., Chairman of the Subcommittee on Housing and Urban Affairs, for information and advice on problems arising in these markets, particularly in the forward market for mortgage-backed securities guaranteed by the Government National Mortgage Association.

The study deals only with the cash and forward markets for certain government-related securities and does not attempt an evaluation of either the futures market for these securities or the proposed options market in the same securities.

It should be noted that, although the Treasury staff has fully participated in this study, the Administration has not taken a position on the study's recommendations. The SEC and the Board of Governors of the Federal Reserve System have endorsed the recommendations.

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# CHAPTER I

## INTRODUCTION AND SUMMARY OF STUDY'S CONCLUSIONS AND RECOMMENDATIONS

This report presents the results of a study of markets for government guaranteed securities and other related securities that has been conducted jointly by the U.S. Treasury, the Federal Reserve and the Securities and Exchange Commission (SEC). The study was prompted by the widespread problems--attributable in great part to abusive trading practices--recorded in government guaranteed securities markets in recent years, particularly the market for mortgage-backed securities guaranteed by the Government National Mortgage Association (GNMA). Trading activities in these markets are currently exempt from federal regulation--except for the SEC's antifraud authority. The purpose of the study was thus to consider whether federal regulation should be extended to these markets, and, if so, to develop proposals for how this might best be accomplished.

In the course of the study, interviews were conducted with federal agencies that either guarantee or issue securities currently exempted from SEC regulations or are responsible for regulating financial institutions that invest in such securities. Interviews were also held with various entities in the private sector including interested trade associations, issuers, dealers and investors in government guaranteed securities. 1/ The cases in which the SEC has instituted actions in response to complaints about abusive practices in government related securities have also been reviewed. Other background information was obtained from within the agencies conducting the study.

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1/ See list of those interviewed at the end of this chapter.

The following chapters present the results of these efforts. Chapter II provides a broad overview of federal and federally assisted borrowing and reviews the history of legislation that has exempted such debt securities from SEC regulation. Chapter III presents a summary review of the major characteristics of securities, the market participants, and the trading practices in the government related securities markets. The discussion is supplemented by five appendices that provide more detail on the market sectors described. Chapter IV provides a review of problems and abuses that have developed in various sectors of the government related securities market and an analysis of regulatory measures that, if imposed, would reduce such abusive practices. An appendix providing a detailed review of cases in which the SEC has instituted legal actions accompanies this chapter. Chapter V reviews the various actions taken by federal agencies charged with regulating issuers of and investors in government guaranteed mortgage-backed securities and other government related securities, and also discusses the efforts made by the securities industry to establish a self-regulatory framework.

Finally, Chapter VI examines the question whether regulation should be extended to brokers and dealers in government related securities and sets forth conclusions and recommendations. These conclusions and recommendations are summarized in the following sections of this chapter. They are also embodied in a legislative proposal that is being submitted by the three agencies in connection with this study. That legislative proposal is presented as Appendix B to Chapter VI.



## Conclusions

After carefully reviewing and evaluating problems which have arisen in the trading of government related securities and taking into account the opinions of other interested federal agencies and market participants, it is the joint view of the Treasury, Federal Reserve and SEC that there is need to extend government regulation to forward trading in GNMA guaranteed mortgage-backed scurities. Losses suffered by market participants trading in these securities have been substantial. It is recognized that the potential for problems to develop in the future has been reduced as a result of the rules and guidelines imposed by GNMA on issuers and by federal regulatory authorities on financial institutions that invest in these securities. Prospects for serious abuse, however, appear to remain unacceptably great. In particular, it is still possible to assume large positions in GNMA securities for long delayed delivery without being required to provide an initial or maintenance margin--the practice that has contributed to a high degree of speculative activity and, thus, to losses incurred by dealers and investors in these securities.

To date, there have been only a few instances in which investors have incurred losses in forward transactions in mortgage-backed securities guaranteed by the Federal Home Loan Mortgage Corporation (FHLMC) because of abusive trading practices. Nevertheless, these securities are also traded on a forward delivery basis without margin, and thus the potential exists for serious problems to develop in this market sector similar to those recorded in GNMA forward trading. Accordingly, it has been concluded that forward trading in FHLMC guaranteed mortgage-backed securities should come under the same mantle of regulation as that imposed on GNMA forwards.

As for the other sectors of the government and government related securities markets, it appears that the small number of problems in these sectors does not presently warrant elimination of the exemption of these securities from formal federal regulation (except for the SEC's antifraud statutes). There have been only a few cases of abusive practices that have involved these other sectors, and losses have been relatively small compared with those recorded in mortgage-backed securities as well as with the total volume of transactions in these markets. Moreover, a major portion of these markets is subject to the informal oversight of the Federal Reserve System and the Department of the Treasury.

Recommendations

The regulatory system that appears best suited to extend regulation over forward trading in GNMA and FHLMC guaranteed mortgage-backed securities is one based on self regulation with governmental oversight, a system that has worked well in other sectors of the financial markets. Accordingly, it is proposed that a new self-regulatory organization, which would be named the Federal Mortgage-Backed Securities Rulemaking Board (Board), be established to promulgate rules to be followed by brokers and dealers trading on a forward basis in GNMA and FHLMC guaranteed mortgage-backed securities. This "Board" would be composed of representatives of bank and nonbank securities dealers and public representatives, including investors. It would have



authority to set initial margin and margin maintenance requirements for forward transactions in GNMA and FHLMC securities. In addition, if deemed necessary, it could establish financial and fair practice standards and other rules.

The proposed Board would exercise rulemaking authority subject to the oversight of a Council composed of the Secretary of the Treasury, the Chairman of the Federal Reserve Board, and the Chairman of the Securities and Exchange Commission, or their respective designees. The Council would have the power to approve or disapprove the rules of the Board and to abrogate, add to, or delete from such rules. Before taking actions that would affect trading practices in markets for GNMA and FHLMC securities, the Council would be required to request and consider the views of GNMA and FHLMC. Brokers and dealers, including bank dealers, trading in GNMA and FHLMC securities on a forward basis would be required to register with the Council, although the Council would delegate this registration function, in the first instance, to the SEC. Clearing agencies for forward trading in GNMA and FHLMC securities would also be subject to registration and oversight.

Governmental entities other than the Council would also be assigned certain direct rulemaking responsibilities. While the Board's margin setting authority would be exercised under the general review of the Council, the Federal Reserve Board would be given residual rulemaking authority in this area, and any margin rules it might promulgate would take precedence over those of the Board. Also, the SEC would have antifraud rulemaking authority. All nonbank securities dealers trading in GNMA and FHLMC securities on a forward basis, moreover, would be required to become members of the Securities Investors Protection Corporation (SIPC) and subject to its requirements.

To assure compliance with the rules promulgated by the Board, primary inspection and enforcement authority would be allocated to the National Association of Securities Dealers (NASD), national securities exchanges, and the federal bank regulatory agencies, with concurrent enforcement authority in the SEC. This is similar to the division of responsibilities currently followed in ensuring compliance with rules established by the Municipal Securities Rulemaking Board. Thus, such an approach would appear likely to minimize costs associated with such activities for both the government and securities dealers.

It is proposed that the Board be given authority, subject to unanimous approval of the Council, to extend regulatory controls to cash transactions in regulated securities where necessary or appropriate with respect to the regulation of forward transactions. Further, the Council would have the authority, by unanimous vote, to extend regulation to transactions in other government related securities (but not to Treasury securities). While such an extension of federal regulation does not appear to be necessary at the present time--except perhaps to the extent that effective regulation of forward transactions in GNMA and FHLMC securities may require some regulation of the cash markets--the availability of this authority would facilitate such actions, should this be warranted by future developments.



FIRMS AND ORGANIZATIONS INTERVIEWED

I. Government Securities Dealers
- A.G. Becker, Inc., New York
- Carty & Company, Memphis
- The First Boston Corporation, New York
- Merrill Lynch Government Securities, Inc., New York
- Paine, Webber, Jackson & Curtis, Inc., New York
- Salomon Brothers, Inc., New York

II. Regulatory Agencies
- Arkansas Securities Department
- Bradford Securities Processing Corporation
- Federal Deposit Insurance Corporation
- Federal Home Loan Bank Board
- Federal Home Loan Mortgage Corporation
- Federal National Mortgage Association
- Government National Mortgage Association
- Municipal Securities Rulemaking Board
- National Association of Securities Dealers, Inc.
- National Credit Union Administration
- Office of the Comptroller of the Currency
- Securities Investor Protection Corporation
- Small Business Administration
- Texas Securities Board

III. Mortgage Issuers
- Cameron-Brown Company, Raleigh
- The Lomas & Nettleton Company, New Haven

IV. Trade Associations
- Mortgage-Backed Securities Assocation
- Public Securities Association

V. Investors
- Greater New York Savings Bank, New York
- Several individual investors, Memphis

VI. Others
- Arthur Young & Company, Houston
- Baker & Botts, Houston
- Francis J. Scott, Memphis (Presently co-trustee in bankruptcy for G. Weeks Securities, Inc.)
- Mortgage-Backed Securities Clearing Corporation

## CHAPTER II

## OVERVIEW OF FEDERAL AND FEDERALLY ASSISTED BORROWING IN SECURITIES MARKETS

This chapter provides a brief overview of the major categories of federal and federally-assisted obligations that are exempt from regulation by SEC, their growth over the past decade, and the general trends in the methods of Federal financing in the securities markets. This chapter also discusses the role of the Federal Financing Bank in determining the future development and growth of programs of guaranteed obligations financed directly in the securities markets. A fuller discussion of the characteristics of these securities is presented in Chapter III.

### Classes of Obligations

The market for federal and federally-assisted obligations consists of (1) obligations issued by federal agencies (currently the Treasury is the only federal agency issuing obligations in the market, although a small amount of debt previously issued by other federal agencies remains outstanding in the market), (2) obligations issued by government-sponsored agencies (i.e., federally chartered but privately owned agencies), and (3) obligations guaranteed by federal agencies. These three classes of obligations, which are described below, are referred to in the U.S. Budget documents as "borrowing under federal auspices" or as "federal and federally-assisted borrowings". The amounts of these various obligations outstanding over the past ten years are shown in the tables attached to this chapter.

### SEC Exemption

These federal and federally-assisted obligations, as well as obligations of international financial institutions, such as the International Bank



for Reconstruction and Development, are exempt from regulation by the Securities and Exchange Commission, except for the anti-fraud provisions of the SEC statutes. However, the issuance of federal and federally-assisted obligations is subject to the supervision of federal agencies, other than the SEC, with direct responsibilities to the Congress to provide for the efficient financing of the public debt and of various programs to assist housing, agriculture, small business, education and many other sectors of the economy.

As discussed in Chapter IV, the laws administered by the Securities and Exchange Commission generally exempt from regulation "any security issued or guaranteed by the United States". 1/ Moreover the laws authorize the SEC to exempt either by rule or regulation certain securities, as necessary or appropriate in the public interest or for the protection of investors. Using this authority, the SEC has adopted a rule classifying mortgages and interest in mortgages sold by the Federal Home Loan Mortgage Corporation as exempted securities. 2/ The Securities Exchange Act of 1934 authorizes the Secretary of the Treasury to exempt securities issued or guaranteed by corporations in which the United States has a direct or indirect interest. Under this authority

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1/ See, for example, section 3(a)(2) of the Securities Act of 1933 (15 U.S.C. 77 c(a)(2)), section 3(a)(12) of the Securities Exchange Act of 1934 (15 U.S.C. 78 c(a)(12)), and Section 304(a)(4) of the Trust Indenture Act of 1939 (15 U.S.C. 77 ddd(a)(4)).

2/ Rule 3a12-1, 17 CFR 240.3a12-1. The SEC adopted this rule in light of "the congressionally determined public need for more capital in mortgages, FHLMC's abilities and desire to regulate this field to the extent necessary and the probable lack of small investor participation." 37 Fed. Reg. 25166-67 (Nov. 28, 1972).

the Secretary of the Treasury has designated certain obligations issued by government-sponsored agencies, such as the Federal Land Banks, and the Federal Intermediate Credit Banks, as exempt securities. 3/

In addition to the general exemptions contained in federal securities laws, the charter acts for several federal agencies 4/, federally-sponsored agencies 5/, and international financial institutions 6/ provide that securities issued or guaranteed by these agencies shall be treated as exempt securities.

The exemption of federal and federally-assisted securities from SEC regulation is based in part on the unquestioned integrity of federal agencies and the credit quality of their securities, which eliminates the need for disclosure of information relating to the financial condition of the issuer 7/ and also makes these obligations less subject to abuses in secondary market trading compared to other securities which are more speculative in nature.

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3/ Securities Exchange Act Releases No. 34-14853 (June 27, 1978) (Farm Credit Investment Bonds); 34-13190 (Feb. 1, 1977) (consolidated systemwide bonds); 34-11258 (Feb. 19, 1975) (notes); 34-8829 (May 6, 1970) (Farm Credit Investment bonds).

4/ E.g., Government National Mortgage Association, 12 U.S.C. 1723c; Federal Financing Bank, 12 U.S.C. 2290(b).

5/ E.g., Federal National Mortgage Association, 12 U.S.C. 1719(d), 1723c; Student Loan Marketing Association, 20 U.S.C. 1087-20(1).

6/ E.g., International Bank for Reconstruction and Development, 22 U.S.C. 286K-1(a); Inter-American Development Bank, 22 U.S.C. 283h(a).

7/ Hearings before House Comm. on Interstate and Foreign Commerce on H.R. 7852 and H.R. 8720, 73d Cong., 2d Sess. 818 (1934) (Federal government has "strongest credit of all [issuers]"); Hearings before the House Comm. on Interstate and Foreign Commerce on H.R. 4314, 73d Cong., 1st Sess. 110 (1933) (Federally-issued securities "unquestionably sound").



## Growth of Exempt Securities Markets

The pre-1970 period. Prior to 1970 the exempt government securities markets consisted almost entirely of (1) direct Treasury debt issues under the surveillance of the Treasury and its fiscal agents, the Federal Reserve Banks, and (2) sponsored agency debt issues under the surveillance of the privately-owned issuing agencies (and their federal supervisory agencies): Federal National Mortgage Association (Department of Housing and Urban Development), the Federal Home Loan Banks (Federal Home Loan Bank Board) and the Federal farm credit banks (Farm Credit Administration). These markets were well-established and highly competitive.

While guaranteed obligations prior to 1970 were financed largely by traditional mortgage lenders, rather than in the securities markets, there were several notable exceptions such as the Government National Mortgage Association (GNMA) participation certificates (PCs--not to be confused with GNMA mortgage pass-through certificates) in pools of loans sold in the late 1960's, public housing bonds, Farmers Home Administration notes, and small business investment company (SBIC) debentures. These guaranteed security issues in the market have since been discontinued, not for regulatory reasons, but for budget and debt management reasons. The GNMA participation certificates were discontinued after the adoption of the Unified Budget in 1968, which required that GNMA PCs be treated as a means of financing rather than as asset sales (which reduced budget outlays), the effect of which was to eliminate the immediate budget advantage of PC sales. The marketing of guaranteed securities had resulted in excessive financing costs and competition with direct Treasury issues, and these concerns led to the enactment of the Federal Financing Bank

Act of 1973, which created the Federal Financing Bank ("FFB") and provided for consolidated financing by the Treasury of obligations issued, sold, or guaranteed by federal agencies. Consequently, new issues of guaranteed public housing bonds, SBIC debentures, Farmers Home notes, and certain other guaranteed securities are no longer financed in the market. While the volume of these guaranteed securities issued in the market had been substantial, they were sold mainly by the federal guaranteeing agencies themselves, by means of asset sales and other consolidated financing techniques, and these markets were largely free of reported abuses.

The post-1970 period. The decade of the 1970's was a period of extraordinary growth in federal and federally-assisted borrowing because the Treasury was required to finance a succession of large budget deficits (the last budget surplus was in fiscal year 1969) and off-budget federal credit assistance programs were expanded in virtually all sectors of the economy.

With growing pressures to reduce budget deficits, and as record increases in market rates of interest led to disintermediation and the drying up of traditional sources of mortgage funds, federal agencies turned increasingly to the use of guaranteed securities, rather than direct budget loans, as a means of tapping the bond market to fund their programs. Agency guarantees of obligations issued directly in the securities markets served to by-pass both the Treasury (and thus the budget) and to some extent the financial intermediaries which had traditionally been the main source of funds for many programs.

In the fiscal years 1970-1979, total federal and federally-assisted borrowing from the public increased by $604 billion, from $409 billion outstanding at the end of fiscal 1969 to $1,013 billion outstanding on September 30, 1979



(see table 1). Three fifths of the amount outstanding on September 30, 1979, or $645 billion, was direct federal debt, virtually all in the form of Treasury securities. Federal agencies other than the Treasury (e.g., Tennessee Valley Authority, U.S. Postal Service, and Export-Import Bank) reduced their outstanding borrowings from the public over the period by about $6 billion. These agencies now finance their activities through the FFB.

The outstanding Treasury debt included $64 billion of Treasury issues required to finance the activities of the Federal Financing Bank. As discussed more fully below, in the absence of the FFB, most of these activities would have been financed with a variety of government-guaranteed securities issued directly in the securities markets and, like Treasury securities, would have been exempt from SEC regulation.

Federally-guaranteed borrowing increased from $110 billion in 1970 to $228 billion in 1979, including $70 billion of GNMA guarantees of mortgage-backed securities (see table 2). Over the period, the FFB purchased $47 billion of guaranteed obligations. In fiscal year 1979, GNMA and the FFB accounted for about 80 percent of the net increase in outstanding guaranteed loans.

Borrowing by federally-sponsored agencies increased from $32 billion to $140 billion over the 1970-79 period, largely because of the housing support activities of FNMA and the FHLBB system (see table 3).

## Government-Sponsored Agency Debt

The federally-sponsored credit agencies consist of seven federally chartered but privately-owned agencies which provide credit for agriculture, housing, and education. They are essentially financial intermediaries,

Table 1
OUTSTANDING FEDERAL AND FEDERALLY ASSISTED BORROWING FROM THE PUBLIC
(Fiscal years; billions of dollars)

| | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 |
|---|---|---|---|---|---|---|---|---|---|---|
| Federal borrowing | 284.9 | 304.3 | 323.8 | 343.0 | 346.1 | 396.9 | 479.8 | 551.8 | 610.9 | 644.6 |
| FFB holdings of: | | | | | | | | | | |
| Agency debt | -- | -- | -- | -- | 0.5 | 7.0 | 10.0 | 12.3 | 14.3 | 17.1 |
| Guaranteed debt | -- | -- | -- | -- | 0.1 | 6.3 | 12.4 | 23.1 | 33.8 | 47.1 |
| TOTAL FFB 1/ | -- | -- | -- | -- | 0.6 | 13.3 | 22.4 | 35.4 | 48.1 | 64.2 |
| Guaranteed borrowing 2/ | 110.3 | 123.7 | 139.5 | 154.6 | 161.0 | 166.8 | 177.2 | 194.4 | 205.4 | 228.1 |
| GNMA | 0.4 | 3.4 | 6.8 | 9.2 | 12.9 | 17.7 | 25.6 | 42.9 | 53.0 | 70.6 |
| Other | 109.9 | 120.3 | 132.7 | 145.4 | 148.1 | 149.1 | 151.6 | 151.5 | 152.4 | 157.5 |
| Sponsored agency borrowing 3/ | 32.1 | 32.7 | 37.4 | 50.6 | 65.4 | 73.6 | 77.9 | 91.0 | 115.1 | 140.0 |
| Total federal and federally assisted borrowing from the public | 427.3 | 460.8 | 500.7 | 548.3 | 572.5 | 637.3 | 735.0 | 837.3 | 931.5 | 1,012.7 |

Office of the Secretary of the Treasury, Office of Government Financing — March 28, 1980

1/ The Federal Financing Bank borrows from the Treasury, which increases the amount of Treasury (federal) borrowing from the public.

2/ Excludes guaranteed borrowing from sponsored agencies and from the FFB and other federal agencies. See table 3 for details.

3/ Excludes sponsored agency holdings of federal and sponsored agency obligations, and federal loans to sponsored agencies. See table 4 for details.

NOTE: Figures may not add to totals due to rounding.



Table 2
OUTSTANDING FEDERALLY GUARANTEED BORROWING
(Fiscal years; billions of dollars)

| | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 |
|---|---|---|---|---|---|---|---|---|---|---|
| Funds appropriated to the President | | | | | | | | | | |
| Military Assist./ Int'l Security Assistance | 0.4 | 0.4 | 0.3 | 0.2 | 0.3 | 1.0 | 2.3 | 4.0 | 4.5 | 5.7 |
| Economic Assist./ Int'l Dev. Assistance | 0.2 | 0.2 | 0.5 | 0.5 | 0.5 | 0.6 | 0.2 | 0.8 | 0.8 | 0.9 |
| Agriculture Farmers, Home Administration | 5.0 | 5.4 | 6.9 | 9.4 | 9.8 | 14.9 | 17.8 | 21.9 | 28.2 | 37.1 |
| Commodity Credit Corporation | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.1 |
| Rural Elect. Administration | -- | -- | -- | -- | -- | 0.3 | 1.1 | 2.9 | 4.8 | 7.5 |
| Commerce | 0.6 | 0.9 | 1.1 | 1.3 | 1.7 | 2.4 | 3.6 | 4.9 | 5.5 | 6.7 |
| Health, Education & Welfare | 2.0 | 2.6 | 3.8 | 4.8 | 6.7 | 7.7 | 7.9 | 9.5 | 10.4 | 12.4 |
| Housing & Urban Dev. | | | | | | | | | | |
| FHA | 67.6 | 77.2 | 85.0 | 86.9 | 85.3 | 85.4 | 89.0 | 93.8 | 98.1 | 110.1 |
| GNMA | 0.4 | 3.4 | 6.8 | 9.2 | 12.9 | 17.7 | 25.6 | 42.9 | 53.0 | 70.6 |
| Public housing | 8.1 | 9.5 | 10.7 | 11.8 | 12.4 | 13.2 | 13.6 | 14.2 | 14.6 | 15.1 |
| Other | 3.0 | 3.3 | 4.0 | 4.6 | 4.9 | 4.4 | 3.3 | 1.9 | 0.9 | 0.6 |
| Veterans Admin. | 36.0 | 37.6 | 42.0 | 47.2 | 52.9 | 58.0 | 64.1 | 71.9 | 80.8 | 89.2 |
| Export-Import Bank | 1.2 | 1.5 | 2.1 | 2.7 | 3.4 | 4.5 | 5.3 | 5.3 | 5.4 | 6.6 |
| Small Bus. Admin. | 0.8 | 1.0 | 2.0 | 3.1 | 4.0 | 4.1 | 5.0 | 5.8 | 7.7 | 8.5 |
| Other | 0.2 | 0.5 | 0.4 | 1.6 | 2.3 | 4.3 | 4.3 | 4.4 | 2.6 | 16.1 |
| TOTAL, Gross | 125.5 | 143.5 | 165.7 | 183.3 | 197.2 | 218.3 | 243.2 | 284.3 | 317.3 | 387.2 |
| Less adjustments 1/ | 15.2 | 19.8 | 26.2 | 28.7 | 36.2 | 51.5 | 66.0 | 89.9 | 119.9 | 159.1 |
| TOTAL NET GUARANTEES | 110.3 | 123.7 | 139.5 | 154.6 | 161.0 | 166.8 | 177.2 | 194.4 | 205.4 | 228.1 |

1/ Excludes guarantees of guarantees and guaranteed loans held as direct loans by federal and sponsored agencies.

Table 3
OUTSTANDING SPONSORED AGENCY BORROWING
(Fiscal years; billions of dollars)

| | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 |
|---|---|---|---|---|---|---|---|---|---|---|
| Education: Student Loan Marketing Association | -- | -- | -- | -- | 0.3 | 0.2 | 0.4 | 0.5 | 0.7 | 1.3 |
| Housing and Urban Dev.: | | | | | | | | | | |
| Federal National Mortgage Association | 13.2 | 15.0 | 18.5 | 20.4 | 25.2 | 28.2 | 29.9 | 31.5 | 38.3 | 46.0 |
| Farm Credit Administration: | | | | | | | | | | |
| Banks for Cooperatives | 1.6 | 1.8 | 1.8 | 2.4 | 2.6 | 3.2 | 4.2 | 5.0 | 5.8 | 6.8 |
| Federal Intermediate Credit Banks | 5.0 | 5.7 | 6.2 | 6.7 | 8.1 | 9.6 | 10.6 | 12.7 | 13.1 | 15.8 |
| Federal Land Banks | 6.3 | 6.8 | 7.6 | 9.1 | 11.2 | 14.2 | 16.3 | 19.5 | 22.3 | 27.2 |
| Federal Home Loan Bank Board: | | | | | | | | | | |
| Federal Home Loan Banks | 9.9 | 7.3 | 6.5 | 10.2 | 16.7 | 20.6 | 18.7 | 17.2 | 25.0 | 30.1 |
| Federal Home Loan Mortgage Corporation | 0.8 | 1.4 | 2.4 | 3.0 | 4.1 | 6.3 | 7.7 | 8.6 | 13.8 | 18.4 |
| TOTAL, Gross | 36.6 | 38.1 | 43.1 | 51.9 | 68.0 | 82.3 | 87.7 | 95.0 | 118.9 | 145.6 |
| Less adjustments 1/ | 4.5 | 5.4 | 5.7 | 1.3 | 2.6 | 8.7 | 9.8 | 4.0 | 3.8 | 5.6 |
| TOTAL NET BORROWING | 32.1 | 32.7 | 37.4 | 50.6 | 65.4 | 73.6 | 77.9 | 91.0 | 115.1 | 140.0 |

1/ Sponsored agency holdings of federal and sponsored agency obligations, and federal loans to sponsored agencies.



borrowing in the securities market and relending the borrowed funds for specifically authorized purposes.

The agricultural credit agencies are the Federal Land Banks, created in 1916; the Federal Intermediate Credit Banks, established in 1923; and the Banks for Cooperatives, created in 1933. Serving the housing sector is the Federal Home Loan Bank System, created in 1932, its wholly-owned subsidiary, the Federal Home Loan Mortgage Corporation (FHLMC) created in 1970, and the Federal National Mortgage Association (FNMA), initially established in 1938 and restructured in 1954 and 1968. The Student Loan Marketing Association (SLMA), created pursuant to 1972 legislation, provides secondary market support for guaranteed student loans.

Obligations of these government-sponsored agencies are issued with the approval of or in consultation with the Treasury. Also, in the case of the Federal Home Loan Banks and FNMA, the Secretary of the Treasury is authorized to lend up to $4 billion and $2.25 billion, respectively, to these institutions. Yet the law specifies that their obligations are not obligations of the United States, and they are not guaranteed by the government except for certain mortgage-backed bonds issued by FNMA and FHLMC and guaranteed by the Government National Mortgage Association. (Obligations of SLMA are guaranteed by HEW, but SLMA borrows exclusively from the FFB.) Nevertheless, sponsored agency obligations enjoy an excellent standing in the credit markets because of the long record of successful operations by these agencies and their close association with the government.

Federally-sponsored agency obligations share many of the characteristics of Treasury securities. For example, they are:

- -- Lawful investments and may be accepted as security for all fiduciary, trust and public funds, including Treasury tax and loan accounts, the investment or deposit of which is under the authority of any officer of the United States.
- -- Eligible for Federal Reserve Bank open market purchases.
- -- Eligible as collateral for Federal Reserve Bank advances to member banks.
- -- Eligible for purchase by national banks without restriction.
- -- Eligible for investment by federally-chartered savings and loan associations and federally-chartered credit unions.

Government-Guaranteed Debt

In addition to providing credit through the vehicle of the government-sponsored credit agencies, the Federal Government also provides credit assistance in the form of direct loans made by Federal agencies and financed by the Treasury or by the FFB and agency guarantees of loans financed by the FFB or other lenders.

The original loan guarantee programs were not financed in the securities markets. The federal government guaranteed mortgages and other loans made by local lending institutions which serviced the loans through direct contact with the borrowers and generally assumed a portion of the loan risk. The classic example of this guarantee approach was the highly successful program of FHA single family mortgage insurance. This program assured private lenders



that they could safely make long-term, low down payment mortgage loans at reasonable rates of interest, thus filling an important credit gap. Since establishment of the FHA in the 1930's, the guarantee technique has been expanded to provide credit assistance to a wide variety of housing and other areas such as agriculture, education, economic development, export financing, small business, transportation, and energy.

Shift to securities market financing. Prior to 1973, a number of trends fostered the development of direct securities market financing of guaranteed loans:

- -- A broadening of the guarantee instrument from the direct mortgage insurance provided by FHA to such indirect but equally effective guarantees as purchase and lease agreements, contracts to make debt service grants, price support agreements or commitments by Federal agencies to make direct take out loans in the event of default on a private obligation. These and other arrangements have been used to provide federal backing for securities market issues, they are included in the definition of guaranteed obligations in the Federal Financing Bank Act of 1973, and they are generally classified as guaranteed obligations in the Budget of the United States.
- -- A reduction in private lender participation in risk assumption as full guarantees of principal and interest became widespread.
- -- A shift away from direct government loans to guaranteed loans financed in the market in part to escape the budget discipline.

-- Reduced reliance on local private lenders in favor of direct agency debt (Eximbank), sale of agency assets in the form of certificates of beneficial ownership (Farmers Home Adminisration), loan pooling arrangements (Farmers Home Administration, SBA and other loans), and by federal guarantees of other securities (GNMA mortage-backed securities, public housing and urban renewal notes and bonds, WMATA bonds, new community debentures, and merchant marine bonds).

This shift to bond market financing had grown to such extent that by the time the Federal Financing Bank Act was enacted in 1973 some form of Federal or federally-assisted financing was coming to market on three out of every five business days.

*Creation of the FFB*. The proliferation of federal and federally-guaranteed obligations financed directly in the securities markets led to market congestion and higher borrowing costs. Borrowing costs on federally-backed credit other than Treasury obligations, that is, agency securities and federally-guaranteed private issues, are higher because of the small size of issues, maturity and cash flow constraints, problems in developing markets for new issues, investor portfolio restrictions, underwriting costs, and market congestion resulting from crowding of competing issues in the financing calendar. Additional costs were incurred because agencies that were selling securities directly in the market were required to develop their own financing staffs to cope with complex debt management and regulatory problems that diverted resources away from principal program functions.



Creation of the FFB substantially alleviated these problems. At the close of fiscal year 1979, the FFB held $64 billion of federal agency and federally-guaranteed obligations, most of which would have been sold directly in the securities market in the absence of the FFB. Because of the FFB, the growth of the guaranteed securities market, other than GNMAs, was sharply curtailed. In the four years prior to the establishment of the FFB, these guaranteed obligations increased by $38 billion, from $110 billion in 1970 to $148 billion in 1974. In the next four years these obligations increased by only $4 billion, to $152 billion in 1978 (see table 1). The $5 billion further increase in 1979 was largely in the form of Export-Import Bank and student loan guarantees, with minor increases in a number of other guaranteed loan programs.

Consequently, the $39 billion net financing requirements for loan guarantees in fiscal year 1979 was largely financed in the Treasury and GNMA markets. That is, $13.3 billion was financed through the Federal Financing Bank, and thus by the Treasury, and $17.6 billion was financed by GNMA mortage-backed securities (see table 4). In addition, several smaller guarantee programs were financed directly in the securities markets, including public housing notes ($.5 billion), merchant marine bonds ($.3 billion) and partial guarantee programs of the Farmers Home Administration and the Small Business Administration under which the lending bank sells the 90 percent guaranteed portion in the securities market and retains the 10 percent unguaranteed portion. These smaller programs are eligible for FFB financing.

Table 4
NET CHANGE IN FEDERAL AND FEDERALLY ASSISTED BORROWING FROM THE PUBLIC
(Fiscal years; billions of dollars)

| | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 |
|---|---|---|---|---|---|---|---|---|---|---|
| Federal borrowing | 5.4 | 19.4 | 19.4 | 19.3 | 3.0 | 50.9 | 82.9 | 53.5 | 59.1 | 33.6 |
| FFB holdings of: | | | | | | | | | | |
| Agency debt | -- | -- | -- | -- | 0.5 | 6.5 | 3.0 | 1.4 | 2.0 | 2.9 |
| Guaranteed debt | -- | -- | -- | -- | 0.1 | 6.2 | 6.1 | 8.1 | 10.7 | 13.3 |
| TOTAL FFB 1/ | -- | -- | -- | -- | 0.6 | 12.7 | 9.1 | 9.5 | 12.7 | 16.1 |
| Guaranteed borrowing 2/ | 2.6 | 13.4 | 15.8 | 15.1 | 6.4 | 5.8 | 10.4 | 14.6 | 11.0 | 22.7 |
| GNMA | 0.4 | 3.0 | 3.4 | 2.4 | 3.7 | 4.8 | 7.9 | 15.4 | 10.0 | 17.6 |
| Other | 2.2 | 10.4 | 12.4 | 12.7 | 2.7 | 1.0 | 2.5 | -0.8 | 1.0 | 5.1 |
| Sponsored agency borrowing 3/ | 10.3 | 0.5 | 4.7 | 13.2 | 14.8 | 8.2 | 4.3 | 11.4 | 24.1 | 24.9 |
| Total federal and federally assisted *borrowing from the* public | 18.3 | 33.4 | 40.0 | 47.6 | 24.2 | 64.8 | 97.7 | 79.5 | 94.2 | 81.2 |

Office of the Secretary of the Treasury, Office of Government Financing — March 28, 1980

1/ The Federal Financing Bank borrows from the Treasury, which increases the amount of Treasury (federal) borrowing from the public.

2/ Excludes guaranteed borrowing from sponsored agencies and from the FFB and other federal agencies. See table 3 for details.

3/ Excludes sponsored agency holdings of federal and sponsored agency obligations, and federal loans to sponsored agencies. See table 4 for details.

NOTE: Figures may not add to totals due to rounding.



Consequently, except for GNMAs, government-guaranteed obligations are now only a minor portion of the newly issued exempted securities. Whether they become a significant factor will depend largely on the extent to which guaranteed securities are marketed directly or purchased by the Federal Financing Bank.

CHAPTER III

## REVIEW OF MAJOR CHARACTERISTICS OF MARKETS FOR GOVERNMENT RELATED SECURITIES

The characteristics of instruments, participants and trading practices in markets for federally related securities are reviewed below. Attention is first directed to the U.S. Treasury market and then, in turn, to markets for federally sponsored agency securities, federally guaranteed mortgage-backed securities, and other obligations guaranteed by various federal agencies. 1/ A final section briefly reviews markets for securities of government-sponsored international organizations.

Federally guaranteed mortgage-backed securities receive particular attention in the discussion because these instruments account for the largest volume of actively-traded, guaranteed debt. Moreover, unlike other sectors of the government-related securities market, a substantial proportion of trading in mortgage-backed securities is done on a long delayed delivery basis, and it is here that most of the problems in these markets have arisen. The trading of contracts for long forward delivery is a natural consequence of the underlying cycle of loan production inherent to the mortgage market. This process is discussed in some detail in the section that reviews GNMA securities.

### U.S. Treasury Securities

#### Instruments and Method of Issuance

The Treasury issues marketable debt in all areas of the maturity spectrum in order to attract the widest possible range of investors while meeting the objective of maintaining an overall debt structure consistent

1/ The five appendices at the end of this chapter provide more detail on each of these major sectors of the government-related securities market.



with sound financial practice. In 1979, for example, the Treasury sold a total of $464 billion of new marketable obligations to help finance the federal budget deficit, Treasury loans to the Federal Financing Bank and to refinance maturing debt. Of this total, about $370 billion of securities were issued in the form of Treasury bills with maturity dates of about 2 weeks to 52 weeks. The remainder consisted of longer-term coupon obligations (notes and bonds) with maturities ranging from 2 years to 30 years. Given the substantial volume of its financing needs, the Treasury conducted at least one financing operation in each week of the past year and in a number of weeks came to the market with 3 or 4 offerings.

In the past the Treasury used a number of techniques to sell its debt, but in recent years has relied exclusively on competitive auctions. The Treasury announces these auctions in advance--from 1 to about 10 days ahead--indicating the type and amount of securities to be sold as well as terms and conditions to be met by those wishing to bid in the auction. In general, any institution or person is eligible to submit competitive bids in these auctions, if they are willing to take a volume of issues above a specified minimum and meet other conditions set by the Treasury. 2/

2/ Competitive bids for notes and bonds have usually been submitted on a yield basis--that is, the bidder specifies the yield at which he is willing to acquire a given volume of issues--and the Treasury then makes awards by accepting bids starting with the lowest yield bid submitted. Bids for bills are submitted on the basis of a discount from par. It is also possible for investors to participate in the auction on a noncompetitive basis, if they are willing to submit bids for quantities below a specified amount. Noncompetitive bids are always awarded in full at a yield equal to the average rate set in the competitive auction. The Federal Reserve and foreign official accounts also bid on a noncompetitive basis. On some occasions, the Federal Reserve also submits competitive bids in these auctions.

While a sizable share of the issues offered in an auction is sold directly to final investors, there are many dealer firms of various size throughout the country that acquire securities in the auctions and then distribute them to final investors. The great proportion of such activity is undertaken by primary dealers in U.S. Treasury securities, firms that submit daily reports for the review of the Federal Reserve and U.S. Treasury and are subject to surveillance by these agencies.

Trading Activity

In addition to taking and distributing securities awarded in Treasury auctions, dealer firms also make secondary markets in Treasury securities as well as in other government related securities, by standing ready to purchase or sell these instruments from their own positions. Spreads between bid and asked prices quoted by dealers are ordinarily quite narrow. Banks and other major financial and nonfinancial firms have traditionally used the Treasury securities market as a means of making adjustments in liquidity positions and realigning investment portfolios. Thus, with this trading activity plus substantial trading among dealers, the daily volume of outright transactions in the U.S. Treasury securities averaged about $13 billion in 1979; this compares with an average daily trading volume on the New York Stock Exchange (which accounts for about 85 percent of the dollar value of all trading of stocks in the U.S.) of about $1 billion.

Essentially all trading in outstanding Treasury issues is done on a cash (same day) delivery basis or regular (next business day) delivery basis. There is also a substantial volume of "when issued" trading of securities that takes place between the time a security has been auctioned and the time it is



issued. Parties to these trades agree to buy or sell a given amount of the security at a specified price on the day the security is issued. 3/

A substantial volume of trading in contracts for future delivery of Treasury securities also occurs on a number of the commodity futures exchanges. These futures contracts call for the delivery of a specified volume of designated Treasury securities on a particular date in the future. Currently, there are contracts being traded that specify the delivery of Treasury bills, short- to intermediate-term Treasury notes, and long-term Treasury bonds. 4/

U.S. Treasury securities have also been purchased and sold on a forward (or delayed) delivery basis. Such transactions are similar to futures contracts in that delivery of a given amount of a designated security is specified for some date in the future. These terms are not standardized, however, as they are in futures contracts; and trades are negotiated between parties on an over-the-counter basis rather than effected in a centralized exchange. There appears to be little, if any, forward trading in U.S. Treasury securities at the present time. 5/

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3/ The when-issued period generally ranges from a few days in length in the case of cash management bills and 3- and 6-month Treasury bills to about a calendar week in the case of notes and bonds sold in the Treasury's 4 quarterly refunding operations.

4/ For a detailed discussion of Treasury futures, see the Treasury/Federal Reserve Study of Treasury Futures Markets published in May 1979.

5/ The major volume of forward trades in Treasury securities appears to have taken place in the period before May 1978. In that period, a number of municipalities issued term bonds and set up sinking funds to accumulate revenues that would eventually be used to repay these bonds. To obtain a known return on the sinking fund, these governmental entities purchased Treasury securities forward from dealers, thus "locking in" a certain return that exceeded the interest costs on the term bonds. The Treasury changed its regulations in May 1978 to eliminate the economic advantages of these arrangements.

## Investors

Because Treasury securities are free of default risk and highly liquid, they are in broad demand by the investing public. The Treasury's latest survey indicates that of the roughly $410 billion of marketable debt held by private investors, commercial bank holdings account for the largest proportion of the total--about one-fourth. In addition, insurance companies, other financial institutions, nonfinancial corporations, state and local governments and pension funds have large holdings. Individuals also own a sizable share of the total.

## Repos

The market for repurchase agreements (repos) and reverse repurchase agreements (reverse repos) was originated as an adjunct of the Treasury securities market and still is primarily associated with this market. These agreements involve the sale (purchase) of a security coupled with a promise to repurchase (resell) the security at a later date. (By convention the party initially selling the security is said to be arranging a repurchase agreement.) Repos were developed by U.S. Treasury security dealers to provide an alternative source of funds to finance their security positions. Parties initially providing this financing--mainly financial institutions, nonfinancial corporations and pension funds--were attracted to these arrangements because they provided a ready means to invest money on a short-term basis in great safety.

Over the years the repo market has grown and developed in a number of ways. Dealers now use the market as the principal financing source for their positions. Indeed, the types of securities used in this method of financing



have expanded to include federally sponsored agency issues, government-guaranteed mortgage-backed securities, negotiable CDs of banks, bankers' acceptances and other securities. Dealers also have become important intermediaries in the market, arranging repos with one set of customers and reverse repos with others. These "matched book" transactions, which transfer funds from economic units with a surplus to those with a shortage, now substantially exceed the volume of repos dealers arrange to finance their own positions.

Repurchase agreements initially were arranged on an overnight (or over-the-weekend) basis, and this remains the predominant maturity of such contracts. In recent years, however, a sizable volume of such transactions have had longer contract periods--ordinarily periods of 1 to 3 months, but in some cases apparently 5 or 6 months. The contracts, therefore, are now being used to satisfy borrowing and investing strategies designed to achieve longer-run objectives as well as for the day-to-day management of funds.

Thrift institutions and other financial firms with GNMA security portfolios have been using repos and particularly term repos in recent years as a means of obtaining funds to meet short-term liquidity needs. Such transactions are sometimes arranged in the form of classic repo agreements--that is, a GNMA with a given pool number (which identifies the specific pool of mortgages from which payments of principal and interest are passed through to the security holder) is sold to a dealer under an agreement which specifies that a GNMA security with the same pool number will be repurchased on a later date. Recently, an alternative form of repo agreement has been developed that is commonly referred to as a "dollar price repo." Under these contracts, it is agreed that when the thrift repurchases from the dealer, the dealer need not--and in practice usually does not--sell back GNMAs with the same pool number as those originally sold to him. Depending on contract terms, he may redeliver any GNMA issue that has the same coupon as those originally sold or alternatively that provides the same yield to maturity (adjusted for the terms of the repo).

This new type of agreement was developed because dealers ordinarily resold securities they acquired under conventional repo agreements (perhaps on an outright basis, perhaps under repo with no requirement to return the same security) and often found it difficult to obtain GNMAs with the same pool number when it came time to redeliver to the thrift institution. In addition the dollar price repo fits well with the arrangements by which GNMAs are traded on both a cash and forward delivery basis. A dealer will generally quote bid and asked prices for GNMAs with a given coupon for delivery immediately and on various forward dates. (The forward quotes are for GNMAs with a given coupon rate but no pool number is specified.) Thus, in entering into a dollar price repo, the thrift sells GNMAs to the dealer at the dealer's quoted bid price for immediate delivery and simultaneously buys (repurchases) GNMAs for delivery in a future month at the dealer's asked price. The difference between the immediate bid price paid by the dealer and the forward asked price ultimately paid by the thrift in effect represents the amount of interest paid by the thrift for the use of funds over the period until delivery is made under the forward contract.

There are issues raised with regard to the accounting treatment of a dollar price repo relating to whether the investor is required to book a gain



or loss on the transaction. 6/ The thrift institutions' exposure to interest rate risk under such agreements, however, is essentially the same as under a classic repo; under either alternative the capital loss incurred if interest rates rise would be essentially the same. 7/

With the expansion of repo trading in recent years, the greatly increased number of repo customers and the introduction of term contracts, a number of problem cases have developed in which one contracting party was unable to fulfill the terms of the contract. Partly for this reason, many of the people interviewed as part of this study indicated that participants have been applying tighter standards in arranging repo contracts. These traders have made greater efforts to ensure that securities involved in the transaction are initially valued at market and that their value exceeds the amount of money exchanged. They have also included provisions in repo agreements requiring the borrowing party to increase the amount of collateral in the event of erosion in the value of the securities. The borrowing party,

6/ These transactions raise the obvious issue whether they should be viewed just as regular repos, i.e., accounted for as loans, or instead as outright sales of securities followed by outright purchases. This question is important, of course, because it raises the further issue whether a loss should be shown by the institution when the price it receives when selling is below the book value of the security. Or if a loss is not booked, there is the question of how the transactions should be reflected on the balance sheet of the institution. While there are arguments that can be made on both sides of this question, the Federal Home Loan Bank Board has given approval for S&Ls to treat these transactions as repos, so long as the GNMAs (re)purchased for forward delivery have the same coupon as those sold for immediate delivery.

7/ The prices of GNMAs with the same coupon but different underlying pools do not necessarily move in exact unison with a given change in the general level of rates. Thus, the gain (or loss) from these alternative positions could differ somewhat.

of course, assumes the risk that the securities may not be returned, which would prove costly if securities prices rise.

## Government-Sponsored Agency Securities

### Instruments and Method of Issuance

The sponsored federal agencies finance their operations principally through the sale of debt instruments in the open market. The Farm Credit Agencies (FCA) account for 35 percent of this total; Federal National Mortgage Association (FNMA) 32 percent; and the Federal Home Loan Banks (FHLB) 33 percent. 8/ In 1979, the sponsored agencies issued on a gross basis $117 billion of debt to rollover maturing debt and raise new money. This resulted in a net increase in indebtedness of $25-1/2 billion for the year. Of the total volume of securities sold, 36 percent was issued with an original maturity of less than one year, 60 percent with maturities of 1 to 10 years, and 4 percent with maturities greater than 10 years.

Each of the sponsored agencies employs a fiscal agent to market its debt. The fiscal agents maintain close contacts with the financial community and carefully monitor developments and conditions in financial markets. Based on market conditions and consultations with dealers in the selling groups, the fiscal agents decide on the size, price, maturity and timing of a new debt offering. These decisions are subject to approval by the agency involved, and, because of law or custom, to clearance by the U.S. Treasury. Intermediate- and longer-term securities are offered through large, nationwide selling groups of

8/ Debt issued and guaranteed by the Federal Home Loan Mortgage Corporation, a wholly owned subsidiary of the Federal Home Loan Bank System, is discussed in a separate section below.



dealers and commercial banks. For sales of short-term discount notes, the agencies rely on a few major money center dealers who continually make a market in agency securities.

Distribution of sponsored agency issues is accomplished in a short period. The time between announcement of terms and allotments to members of the selling group runs no more than a few days. Following the allotments, dealers are expected to distribute the issues to final investors in a short time--in the course of a week or two. Indeed, dealers are expected to have a major share of their allotments presold, and they are either precluded from taking allotments for their own account or are carefully controlled in the amount that they take. All of the issuing agencies carefully monitor the activities of their dealers and have the option, if given cause, to terminate an agreement at any time.

### Trading Activity

Sponsored agency securities generally are traded actively in secondary markets. Average daily trading volume in all issues was above $2.5 billion in 1979. These transactions are almost entirely arranged on either a cash delivery or regular delivery basis. A few transactions have somewhat longer delayed delivery dates, but in few if any cases is the time span longer than a week.

### Ownership

Ownership of federal agency securities is widely dispersed, with commercial banks holding the largest share of the total. Sizable amounts are also held by all other major types of financial institutions, by nonfinancial corporations and by the general funds, pension and retirement funds of states and localities. The Federal Reserve also is authorized to purchase these securities in the course of its open market operations and currently holds outright about $8.2 billion. Certain Treasury trust funds also hold a small proportion.

## Government-Guaranteed Securities

### GNMA Pass-Through Certificates

Government National Mortgage Association pass-through certificates (GNMAs) provide their holders with an interest in the income stream from specific pools of government-guaranteed (mainly FHA/VA single family) mortgages bearing the same interest rate and with the same maturity. The security holders receive pass-through payments of interest and principal made on the mortgages. The instruments have stated maturities equal to those on the underlying mortgages, usually 25 to 30 years. Because of prepayments, most of the mortgages are repaid in a much shorter period; thus the principal amount outstanding on pass-through certificates is repaid at an accelerated rate, especially in the initial years. By convention based on experience, yields on new securities are quoted on a 12-year maturity basis. While all the mortgages in the pools backing the securities are guaranteed by the federal government, the attractiveness of GNMAs is enhanced by a further guarantee which commits the full faith and credit of the United States government for the timely payment of interest and principal.

### Issuers and Dealers

While authorized and guaranteed by GNMA, GNMA pass-throughs are currently issued by about 900 private firms that originate mortgages. About two-thirds of these firms are mortgage bankers; commercial banks and savings and



loan associations account for most of the remainder. Originators sometimes place newly issued securities directly with final investors, but the great proportion are sold to dealers who then resell them to final investors. There are approximately 20 major dealer firms that account for most of the distribution and trading of GNMAs, but it is estimated that about 60 firms over the country make a market in these securities.

### Investors

Thrift institutions were by far the largest investors in GNMA pass-throughs when they were first issued in 1970. In recent years, however, the investor base for GNMAs has been broadened substantially. Mutual savings banks, commercial banks, pension funds, and state and local governments have become important acquirers of these instruments. In addition, credit unions and individuals each hold significant amounts. It is now estimated by GNMA that about 75 percent of the total issues outstanding (about $85 billion) are held by lenders other than S&Ls.

### Origination and Trading Arrangements

GNMA securities are traded on a regular delivery basis (for the GNMA market this generally implies delivery specified within 30 days) 9/ and on a delayed delivery or forward basis. The former involves trades of outstanding issues as well as sales of newly issued pass-throughs. Trading on a forward basis (between issuers and dealers, among dealers, and between dealers and

9/ The length of "regular delivery" time is longer for GNMA than for other securities because of technical factors associated with the collection and pass-through of principal and interest.

investors) involves the purchase and sale of securities for delivery often 3 or 4 months in the future and in some cases as much as a year or more. There are two types of forwards, those calling for mandatory delivery on a specified forward date and those with an optional delivery before a specified date (standbys). The trading volume in forward contracts, particularly mandatory delivery contracts, is substantially greater than that which occurs on a regular delivery basis. Most of this trading occurs among the dealer firms, but permanent investors and mortgage originators also trade forward contracts in efforts to improve yields on portfolio positions or in some cases to profit from expected movements in market prices.

Trading on both a regular delivery and forward delivery basis is done on an "over-the-counter" basis with dealers standing ready to add to their position (or sell from their position) at quoted bid and asked prices. Traditionally, a dealer that contracts to buy GNMAs from one dealer on a forward basis and contracts to resell them to another on the same basis has, on the settlement date of these contracts, taken delivery of the obligation from one and made delivery to the other. In many cases, of course, there is a long series of matching forward trades each of which requires physical delivery of the security to complete the transaction. Recently a clearing corporation has been established to faciliate the completion of transactions. The corporation now clears a proportion of its members' trades by matching long and short positions of each member in a given contract and then requesting that a check or securities be delivered to make up the difference. 10/

10/ For additional discussion of the clearing corporation see page 67 of Appendix C.



Mortgage production cycle and the management of interest rate risk. While accurate statistics are not available on the total volume of trading activity in GNMA securities, it was estimated by some participants interviewed in connection with this study that the average volume of trades per business day might run to about $2.5 billion. As noted above, a large proportion occurs in the form of transactions for forward delivery. Such heavy forward trading in the over-the-counter market for fixed income securities is esentially confined to the market for mortgage-backed securities. It is thus appropriate to focus on the basic reasons for this trading process in order to provide background for discussion in later chapters.

There are fundamental economic reasons for forward transactions in GNMA securities. Mortgage loan commitments, extending months into the future, are essential to the financing of real estate. Contracts for the sale of existing properties usually require buyers to secure mortgage commitments from lenders several months prior to the time the property is transferred and the mortgage loan is closed. Advance commitments also are essential for the construction and sale of new properties. Before making a construction loan, institutions ordinarily require developers to arrange commitments for permanent mortgage financing; in fact, the permanent mortgage commitment usually forms the basis for the construction loan commitment. The production periods for single-family structures typically range between 3 and 6 months--although periods as long as a year are not uncommon--and the production periods for multifamily structures are even longer.

Commitments may specify a rate of interest, or the funds may be committed at a rate to be determined at a time of loan closing. While take-down of the funds by the buyer is optional under these arrangements, the mortgage originator is firmly committed to provide funds. Thus, buyers may walk away from the contract if interest rates fall relative to rates specified in the contract. The loan originator, on the other hand, when committed to provide funds at a specified rate, must do so even if mortgage rates have risen well above this level.

Those committing to make mortgages, in effect, enter into a kind of forward agreement with a builder or with a buyer of a home or other properties. The committing party then must decide whether to "carry" this commitment risk without hedge or to enter into an agreement in which another party agrees to buy the mortgage at the time it is made. Some parties that commit to make mortgages are also mortgage investors (such as thrift institutions) who will ordinarily take these loans into their own portfolio. Accounting conventions allow institutions to enter mortgages so acquired at par on their books, even if at the time of closing they technically have a market value below par because interest rates have risen above the rate specified in the mortgage. Given that the institution can generally also count on cash flow to make the mortgage, it is, in a sense, screened from the interest rate risk associated with entering into forward mortgage commitments. A substantial volume of mortgage commitments, however, are also originated by mortgage bankers--or by thrifts in excess of their prospective cash flow--who do not intend to hold them in portfolio permanently. In these cases, originators must decide whether to remain exposed to the risk of loss if market rates rise (relative to a commitment rate) or the opportunity to profit if rates should fall, or to hedge their exposure to rate fluctuation. The originator has traditionally obtained such a hedge by arranging



to sell the mortgage once its has been consummated at a specified price to a final investor.

From this perspective it can be seen that the forward market for GNMAs is the natural outgrowth of the mortgage production cycle. A mortgage originator who has committed to make a large block of FHA or VA mortgages or who expects to enter into commitments to make such loans over the near future may sell GNMA securities for forward delivery to a dealer rather than sell these mortgages directly (for forward delivery) to a lending institution.

In addition to selling forward to hedge against the interest rate risk associated with fixed rate commitments, mortgage originators also incur similar risks when they are in the process of accumulating FHA/VA mortgages to be placed in a pool to back a GNMA security. Mortgage bankers and other originators finance these mortgages by borrowing on a short-term basis and thus are exposed to the risk that interest rates may rise over the assembly period, causing a decline in the value of mortgages in the inventory. A forward sale of GNMA securities provides a hedge against this risk by locking in a certain price to be received.

Alternative to selling GNMAs forward for mandatory delivery, mortgage originators also can sell forward on an optional delivery basis. In these "standby" agreements, dealers obtain a fee for agreeing to purchase a given volume of GNMAs at a given yield at a specified future date, if the securities are tendered to the dealer. (These standby agreements are essentially the same type of commitment FNMA sells in its auction of contracts for delivery (at the option of the buyer) of whole FHA/VA mortgages.) The dealers, in turn, depending upon their willingness and ability to carry interest rate risk, will lay off all or a part of this risk by making similar standby agreements with various kinds of financial firms. For investors who have the financial resources and sophistication to understand the nature of such agreements and their risk exposure, and to negotiate attractive terms--in the form of fees, specified interest rate, etc.--issuance of standbys can be a sound, potentially profitable activity that facilitates the mortgage production and distribution process.

Interest rate risk associated with mortgage production and distribution also can be managed by taking positions in the futures markets for GNMAs. 11/ For example, an originator accumulating a pool of mortgages can sell (go "short" in) a futures contract, a position in which he is assured of receiving a known price for delivering a given volume of GNMA securities on a future date. Thus, he is hedged against the risk that mortgage rates may rise above the rates on the mortgages he holds in portfolio or above the rates at which he is committed to make mortgages. He may choose ultimately to deliver these securities, receiving the price which he "locked in" with his futures contract. Typically, however, he will close out his contract position sometime before it matures. He can achieve such a closeout by buying in the same contract. Such an approach provides a good hedge, because if mortgage rates rise over the holding period, the price of the futures contract would fall. Thus, he would be able to buy his "offsetting" position at a price below that at which he initially sold the contract; and the profits earned from trading in futures would offset the losses incurred in producing mortgages. As in the over-the-counter forward market,

11/ There are presently four contract markets--two on the Chicago Board of Trade and one each on the Commodity Exchange and American Commodity Exchange. Three of these trade agreements call for delivery of GNMA securities of given yield on specified future dates. The fourth calls for delivery of a Collateralized Depository Receipt (CDR), an instrument which gives its holder a claim on GNMA securities held in safekeeping by the depository.



many participants in the futures markets assume positions in futures that are not covered by offsetting positions in mortgages. Such traders generally are attempting to profit from expected interest rate changes.

The futures market offers several advantages relative to the forward market, including the reduction in credit risk which results because the exchange stands behind every contract. But many participants continue to find the forward market more attractive. An important consideration is the ability to make purchases precisely tailored to the amount of securities one wishes to sell or to buy in the forward market, while trades in futures are for standardized blocks. Another is that while futures contracts are based on GNMA securities bearing a given coupon interest rate, delivery under these contracts can be made with any GNMA security, with the delivery price of securities with various coupons adjusted by a standard formula to provide investment yields equivalent to that on GNMAs with the base coupon rate. The problem with this arrangement is that GNMAs with different coupons do not trade in the cash market with the same yield to maturity. Instead, market forces generally set yields on high coupon GNMAs at levels that are higher than those set on lower coupon GNMAs. (High coupon issues are subject to more rapid repayment; also the return on low coupon issues that trade at prices below par is partly in the form of capital gains that are taxed at relatively low rates by the federal government.) The effect of this disparity in yields is to make the cost to a short of acquiring high coupon issues--to fulfill delivery obligations--less than the cost of low coupon issues. Thus, shorts generally deliver high coupon issues. Correspondingly, the longs who take delivery of high coupon issues receive securities that have a lower market value than lower coupon issues. Still another feature is that the most actively traded contract specifies that delivery will ordinarily be in the form of a collateralized depository receipt (CDR)--which is backed by a pool of mortgages held in trust by the depository--rather than actual GNMA securities.

Finally, until recently margin requirements were not imposed on forward transactions and apparently are still not on the majority of trades, while the futures market requires posting of an initial margin and margin maintenance. While this latter provision offers the clear advantage of virtually assuring that the other party to the contract will fulfill his contractual obligations, it presents the disadvantage of tying up limited capital of mortgage bankers. Those operating with highly leveraged positions, the typical condition of the mortgage banker, find this particularly a problem. The placement of initial margin is not a great burden because this presently can be met by pledging liquid assets or by submitting an irrevocable letter of credit from a commercial bank. Futures markets, however, require participants to put up cash when the market moves against a position, and this can create a serious liquidity strain during periods of sharp changes in interest rates.

## FHLMC-Guaranteed Mortgage Pass-Through Securities

### Characteristics of Instruments

The mortgage pass-through securities programs operated by the Federal Home Loan Mortgage Corporation (generally referred to as Freddie Mac) were established after the GNMA program and are designed to further develop the secondary



markets for conventional mortgages--a component of the market not touched by the GNMA program. Cumulative issuance of FHLMC-guaranteed securities remains substantially below the volume of GNMA issues (roughly $18 billion vs. $100 billion for GNMA), although issue volume has increased substantially in recent years. These securities carry only the guarantee of the Federal Home Loan Mortgage Corporation rather than the full faith and credit guarantee of the federal government which is imparted with a GNMA guarantee.

Freddie Mac purchases residential mortgages from originators--primarily members of the FHLB System--financing them by sale of mortgage pass-through certificates. 12/ In its mortgage purchase programs, the corporation conducts weekly auctions of mandatory delivery commitments to purchase conventional home mortgages. Once a month, it also conducts an auction in which it sells "puts" or standby commitments to bidders which are similar to those offered by FNMA in its biweekly auction program. The mortgages acquired under these programs are pooled into groups, and FHLMC issues Guaranteed Mortgage Certificates (GMC) or Mortgage Participation Certificates (PCs) against these pools. The former is a "bond-like" instrument in that it pays interest twice annually, while payments of principal are passed through once a year. The latter is a pass-through instrument with cash-flow features similar to GNMAs.

### Investors

As with GNMA securities, the program has successfully attracted funds to the mortgage market from nontraditional lenders in this market. FHLMC esti-

12/ FHLMC also raises some money by participating in the issuance of consolidated obligations of members of the Federal Home Loan Bank System.

mates that all but about 20 percent of its GMCs and PCs are held outside savings and loan associations by institutional investor groups ranging from commercial banks and their trust departments to public pension funds. Individuals and credit unions also own a small portion of the total.

Origination and Trading

In recent years, FHLMC has placed issues of PCs with selected securities dealers (at present 14 major firms) which distribute them to investors. GMC issues are marketed through the FHLB System Office of Finance which sells them through the dealer group utilized for issues of FHLB System debt. Thus, this marketing arrangement gives FHLMC closer control over the initial distribution of its securities than GNMA has. GNMA is, of course, able to impose controls indirectly by setting down guidelines regarding the terms on which mortgage originators issue GNMAs and the types of dealers with whom they deal.

The Freddie Mac program also must adapt to the underlying reality of the mortgage production cycle. As noted above, its commitments to acquire mortgages generally are made well in advance of the date that mortgages are actually delivered. To minimize the corporation's exposure to interest rate risk, it sells its pass-through instruments on a forward basis, with the forward time often 3 to 4 months in the future but sometimes extending as long as one year.

Also, as with GNMAs, there is very active secondary market trading in Freddie Mac securities. Yet to be issued securities are effectively resold many times in the forward market. Already issued Freddie Mac issues also trade relatively actively. To date, transactions in Freddie Macs are not cleared



through the MBSCC, though it is reported that this is under active consideration.

Other Government-Guaranteed Securities

In addition to mortgage-backed securities that are guaranteed by GNMA or by FHLMC, there are several large government guarantee program that are designed to increase the availability of credit to targeted borrowers. While the Federal Financing Bank purchases a large volume of guaranteed obligations each year, a growing volume is also being sold to private investors.

Guaranteed Loans

Guaranteed obligations that are purchased by private investors are of two broad types--loans and bonds. Guaranteed loans traditionally have been partially guaranteed (usually 90 percent) and have been originated, serviced and held by commercial banks. In the mid-1970s, however, liberalization of guarantees encouraged the development of secondary markets for the guaranteed portions of the loans.

Currently the most active non-housing related loan guarantee programs are the Small Business Administration's business loan program, the Farmers Home Administration's business and industrial loan program, and the National Oceanic and Atmospheric Administration's fishing vessel program. Legal opinions have been obtained from the Comptroller General for each of these programs which permit the guarantees to be passed through to the secondary investor, regardless of fraud or mismanagement on the part of the servicer of the loan. The extension of unqualified guarantees to the secondary holders, together with the splitting of the guaranteed and nonguaranteed portions in the case of the SBA and FmHA 90-10 programs, has permitted significant secondary marketing of the guaranteed portions.

FMHA, SBA and NOAA loans are not fungible and, under current law, the guarantee does not extend to the holder of a certificate that represents a participation in a pool of guaranteed loans. Each loan has discrete terms as to size, maturity, fixed or variable interest rate, and amortization schedule. The guaranteeing agency oversees the origination of each loan and the original sale of the guaranteed portion in the secondary market.

In large part, the guaranteed loan market is a private placement market in which the loan originator sells the guaranteed portion to a securities dealer and the dealer resells the loan to an investor. The largest customers are pension funds, life insurance companies, and retirement plans for high income professionals who hold rather than trade the obligations. The discrete loan terms are taken into consideration in pricing each piece, and the absence of homogeneity among the loans restricts trading. Several dealers have become active in placing guaranteed loans with investors, and they "make markets" in the loans in that, to provide their customers with liquidity, they stand ready to repurchase obligations from their customers and resell them.

The Economic Development Administration in the Department of Commerce and the Federal Aviation Administration have 90-10 programs under which loans are being financed. While neither of the programs provides a secondary guarantee now, each is working on the legal changes that would be required to provide the secondary guarantee. EDA had $0.9 billion of guaranteed loans outstanding at



the end of fiscal year 1979 and is projected to have $3.4 billion out at the end of fiscal year 1981. The FAA has expanded authority to guarantee aircraft loans, and its outstanding guarantees are projected to increase to $1.0 billion in fiscal year 1981 from $0.2 billion at the end of fiscal year 1979.

Guaranteed Bonds

Maritime Administration (MarAd). MarAd Title XI ship financing bonds are usually sold to the public through underwriters, although smaller issues often are privately placed. (The current volume outstanding is about $5.7 billion.) Pension funds and life insurance companies are major purchasers, and hold rather than trade the obligations. While securities dealers make markets in the obligations to fill their customers' liquidity needs, there is no active secondary market.

HUD guarantees short-term subsidized low-income public housing and makes renewal project notes which are sold in the tax-exempt market. The notes are auctioned publicly in volumes of around $1 billion and are actively traded in the secondary market.

## The Market for Securities Issued by Government-Sponsored International Organizations

During the twelve months ending in September 1979, $8.5 billion were borrowed in the international capital markets by government-sponsored international organizations. Although 10 institutions issued international securities during the year, two organizations--the International Bank for Reconstruction and Development (commonly known as the World Bank) and the European Investment Bank--accounted for 75 percent of the volume of new debt. The primary purpose of most government-sponsored international organizations is to promote the economic development of member countries by making loans to governments or to private enterprises.

The international bond issues of international organizations fall into two categories: Euro- and foreign bond issues. A Euro-bond issue is underwritten and sold in markets outside of the country whose currency is used to denominate the security. A foreign bond issue, on the other hand, is underwritten and sold in a single national market in the currency of the country in which the market is located. During the twelve months ending in September 1979, two-thirds of the international bond issues of international organizations consisted of foreign bonds.

The United States is an important market for the sale of these securities. Of the $1.9 billion of foreign bonds issued by international organizations during the third quarter of 1979, about 17 percent ($325 million) was marketed in the United States. None of these securities is directly guaranteed by the United States government, but some of the international organiations can call upon the United States if necessary to contribute a stated amount of capital for the institution's support.

During the 12 months ending in September 1979, the original maturities of the foreign bonds issued by international organizations ranged from 3 to 25 years; the original maturities of their Euro-bond issues ranged from 1 to 20 years.

Compared to the $48.3 billion of borrowing by domestic government sponsored agencies and mortgage pools during the 12 months ending in September 1979, the market for securities issued by government sponsored international organizations is relatively inactive.