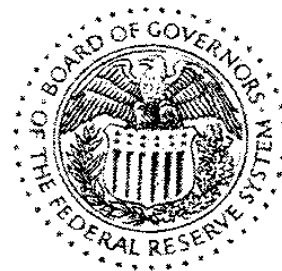


# Joint Report on the Government Securities Market

Department of  
the Treasury

Securities and  
Exchange Commission

Board of Governors  
of the  
Federal Reserve System



January 1992

For sale by the U.S. Government Printing Office  
Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402\_9328  
ISBN 0-16-036093-5



**DEPARTMENT OF THE TREASURY**

WASHINGTON

January 22, 1992

The Honorable J. Danforth Quayle  
President  
United States Senate  
Washington, D.C. 20510

Dear Mr. President:

We are pleased to transmit our report on the government securities market, as promised in statements before Congressional subcommittees last year.

The recent widely publicized events involving abuses in the government securities market have prompted us to undertake a thorough review of the market that the federal government relies upon to meet its borrowing needs. The Federal Reserve Bank of New York was a full participant in this review, and its views are reflected here as well. Our recommendations for legislation and changes in policies are contained in this report. We believe that these reforms will improve the fairness and efficiency of the market, to the benefit of taxpayers and investors alike.

We urge the Congress to move swiftly in enacting our legislative recommendations.

We are also transmitting the report to the Speaker of the House.

Sincerely,

Nicholas F. Brady  
Secretary  
Department of the  
Treasury

Richard C. Breeden  
Chairman  
Securities and  
Exchange Commission

Alan Greenspan  
Chairman  
Board of Governors  
Of the Federal  
Reserve System



**DEPARTMENT OF THE TREASURY**

WASHINGTON

January 22, 1992

The Honorable Thomas S. Foley  
Speaker  
House of Representatives  
Washington, D.C. 20515

Dear Mr. Speaker:

We are pleased to transmit our report on the government securities market, as promised in statements before Congressional subcommittees last year.

The recent widely publicized events involving abuses in the government securities market have prompted us to undertake a thorough review of the market that the federal government relies upon to meet its borrowing needs. The Federal Reserve Bank of New York was a full participant in this review, and its views are reflected here as well. Our recommendations for legislation and changes in policies are contained in this report. We believe that these reforms will improve the fairness and efficiency of the market, to the benefit of taxpayers and investors alike.

We urge the Congress to move swiftly in enacting our legislative recommendations.

We are also transmitting the report to the President of the Senate.

Sincerely,

Nicholas F. Brady  
Secretary  
Department of the  
Treasury

Richard C. Breeden  
Chairman  
Securities and  
Exchange Commission

Alan Greenspan  
Chairman  
Board of Governors  
Of the Federal  
Reserve System

# TABLE OF CONTENTS

	<b>Page</b>
<b>OVERVIEW OF THE GOVERNMENT SECURITIES MARKET</b> .....	ix
<b>SUMMARY OF REFORMS</b> .....	xiii
<b>JOINT REPORT</b> .....	1
 <b>APPENDIX A: Background on the Treasury Securities Market</b>	
<b>1. Characteristics of the Primary Market</b> .....	A-1
<b>2. Characteristics of the Secondary Market</b> .....	A-7
<b>3. Regulation of the Treasury Market</b> .....	A-12
 <b>APPENDIX B: Treasury Securities Market Issues</b>	
<b>1. Short Squeezes</b> .....	B-1
<b>2. Debt Management Approaches to Alleviating Squeezes</b> .....	B-4
<b>3. Treasury Auction Issues</b>	
<b>A Auction Technique</b> .....	B-17
<b>B. International Comparison</b> .....	B-25
<b>C. Auction Automation</b> .....	B-41
<b>D. Auction Rule Enforcement</b> .....	B-48
<b>E. Concentration of Auction Awards</b> .....	B-54
<b>4. Hedge Funds</b> .....	B-64

<b>5. Government Securities Clearing Corporation</b> .....	B-71
<b>6. Sales Practice Rules</b> .....	B-83
<b>7. Information Access</b> .....	B-87
<b>8. Reporting and Audit Trails</b> .....	B-92

**APPENDIX C: The Events Involving Salomon Brothers and Alleged Government Securities Market Abuses**

<b>1. The Events Involving Salomon Brothers</b> .....	C-1
<b>2. Short Squeezes</b> .....	C-5
<b>3. Improper Practices Relating to GSE Securities</b> .....	C-7

**APPENDIX D: Background on the Government-Sponsored Enterprise Securities Market**..... D-1

**APPENDIX E: The Primary Dealer System**

<b>1. Statement of the Federal Reserve Bank of New York</b> .....	E-1
<b>2. <u>Primary Dealers: Criteria and Procedures Applied to Firms Interested in <u>Becoming and Remaining Primary Dealers</u></u></b> .....	E-11

## **OVERVIEW OF THE GOVERNMENT SECURITIES MARKET**

### **Treasury Auctions**

The Treasury sells marketable bills, notes, and bonds in more than 150 regular auctions per year. Treasury bills are 13-week, 26-week, or 52-week securities that are auctioned at a discount from face value, rather than carrying an interest coupon. Short-term cash-management bills are also auctioned when required by the Treasury's cash-flow needs. Coupon-paying securities include notes and bonds. Treasury notes are currently auctioned in 2-year, 3-year, 5-year, 7-year, and 10-year maturities. Treasury bonds are currently auctioned in a 30-year maturity. The Treasury also issues nonmarketable securities, such as savings bonds and certain government account issues.

The Treasury uses a sealed-bid, multiple-price auction mechanism. Competitive bidders for Treasury securities to be held in the commercial book-entry system submit their tenders in writing at Federal Reserve banks. Each successful competitive bidder is awarded securities at a price that reflects the yield bid. As a result, successful bidders for a security may pay different prices for that security.

### **Instruments**

Sophisticated financial instruments based on Treasury securities have been developed over time. For example, zero-coupon securities (such as those created through the Treasury's program for Separate Trading of Registered Interest Principal - "STRIPS") and derivative instruments (including forward contracts, futures, and options) have become widespread.

Repurchase agreements ("repos") are commonly used to fund positions in Treasury securities. A repo comprises two distinguishable transactions: the sale of Treasury securities, and a forward agreement to repurchase the same securities for a certain price at a certain time in the future. A reverse repo is the other side of a repo transaction. The maturities of repos are typically overnight or a few days but can extend for longer periods.

Government agencies such as the Government National Mortgage Association, the Small Business Administration, and the Tennessee Valley Authority either guarantee securities or issue marketable debt. The Government-sponsored enterprises ("GSEs") - Federal National Mortgage Association, Federal Home Loan Mortgage Corporation, Farm Credit System, Federal Home Loan Bank System, and Student Loan Marketing Association - also issue marketable debt, subordinated debt, and guaranteed asset-backed securities. Some GSEs also issue exchange-traded equity securities.

### **Markets and Market Participants**

Government securities are traded predominantly in all over-the-counter market, comprised of a network of dealers, brokers, and investors who effect transactions in Treasury

and other government securities over the telephone. The market is largely a wholesale one in which institutional investors, such as banks, thrifts, dealers, pension funds, insurance companies, mutual funds, and state and local governments operate. However, a significant number of small, retail investors also trade government securities through brokers and dealers. Although all marketable Treasury notes, bonds, and STRIPS are listed on the New York Stock Exchange ("NYSE"), exchange trading volume is a small fraction of total over-the-counter volume. Some derivative instruments on Treasury securities trade on regulated futures exchanges, while others are mainly over-the-counter instruments.

Primary dealers are the firms with which the Federal Reserve conducts its open market operations. Although there are approximately 1,700 brokers and dealers (including banks) trading in the secondary market, the 38 primary dealers account for a majority of the trading volume. Daily trading volume by primary dealers in Treasury securities, excluding financing transactions, averaged \$85 billion per day in September 1991, according to data reported to the Federal Reserve Bank of New York ("FRBNY"). By contrast, the average daily volume of equities trading on the NYSE is \$6 billion. Though the aggregate dollar value of trading in the government securities markets is much larger than that in the equity markets, the number of daily trades is actually much smaller. Over 100,000 individual equity trades per day are reported through the current equity trade reporting systems. By way of comparison, about 2,000 trades per day in Treasury securities are being reported through the new GOVPX system (though it only captures a portion of all government securities trading).

The primary dealers and some other market participants rely on interdealer brokers (currently seven in number) to trade in the market for government securities. Interdealer brokers compile the best bid and ask prices provided by the dealers and make this information available on computer screens. The brokers receive a commission for arranging trades. The identities of the dealers who submit the price quotes are kept confidential, with the understanding that anonymous trading allows the dealers to protect the confidentiality of their trading strategies.

Settlement - the exchange of securities for funds - is performed electronically and typically occurs one business day after a buyer and seller agree on a trade. The electronic system used for settlement of Treasury securities and many other government securities is the commercial book-entry system maintained by the Federal Reserve System. Funds are transferred simultaneously over the system. This system enables government securities trades to be settled quickly (within seconds) and relatively cheaply, thus contributing substantially to market liquidity.

Much of the trading activity in government securities is settled through the Government Securities Clearing Corporation ("GSCC"), a clearing organization that provides its members with automated trade comparison and netting services for Treasury and other government securities. The most active brokers, dealers, and banks in the government securities market are GSCC members. GSCC combines each member's total purchases and sales for each security with other GSCC members into a single net purchase or sale. This

process greatly reduces the amount of trades that have to be cleared through the commercial book-entry system and, along with the guarantee GSCC provides, substantially reduces counterparty risk for GSCC members.

## **Regulation**

The Secretary of the Treasury ("Secretary") is authorized under Chapter 31 of Title 31, United States Code, to issue Treasury securities and to prescribe terms and conditions for their issuance and sale. The Secretary may issue bonds under 31 U.S.C. § 3102, notes under 31 U.S.C. § 3103, and certificates of indebtedness and Treasury bills under 31 U.S.C. § 3104. Under 31 U.S.C. § 3121, the Secretary may prescribe the form of such securities and the terms and conditions for the issuance and sale of the securities. Treasury auction rules are issued under this authority.

Compliance and enforcement responsibility for the auction rules rests with the Treasury. The Treasury may bar or suspend a firm from auctions, and the Treasury reserves the right to reject bids in auctions. However, the Securities and Exchange Commission ("SEC"), the Treasury, and the self-regulatory organizations ("SROs") are not authorized to examine government securities firms for compliance with Treasury auction rules. Securities fraud is the enforcement responsibility of the SEC and the Justice Department, and the Justice Department enforces the antitrust laws.

Brokers and dealers in the secondary market for government securities are regulated under the authority of the Government Securities Act of 1986 ("GSA "). In addition, broker-dealers and banks are subject to regulation under the Securities Exchange Act of 1934 and the banking laws, respectively. Under the GSA, the Treasury has promulgated regulations concerning financial responsibility, protection of investor securities and funds, recordkeeping, reporting, and auditing of government securities brokers and dealers. The Treasury also was given responsibility for the development of regulations related to the custody of government securities held by depository institutions. The GSA required the SEC and the Federal Reserve Board to promulgate rules establishing the procedures and forms to be used by government securities brokers and dealers for the registration and notice process.

In promulgating the regulations, the Treasury was required to consult with the SEC and the Federal Reserve Board. As a result of these consultations and the Treasury's analysis, most of the SEC regulations (e.g., customer protection, recordkeeping, reports, and audits) that applied to registered brokers and dealers were, with limited exceptions, adopted for firms registered pursuant to the GSA. Enforcement authority for these rules rests with the SEC and the SROs or with financial institution regulators, depending on the entity. Treasury rulemaking authority under the GSA expired on October 1, 1991.



## SUMMARY OF REFORMS<sup>1</sup>

### ADMINISTRATIVE AND REGULATORY CHANGES

- **Broadening participation in auctions:**
  - All government securities brokers and dealers registered with the SEC are now allowed to submit bids for customers in Treasury auctions. Formerly, only primary dealers and depository institutions could do so (announced October 25).
  - Any bidder is now permitted to bid in note and bond auctions without deposit, provided the bidder has an agreement with a bank (an "autocharge agreement") to facilitate payment for securities purchased at auctions. Formerly, only primary dealers and depository institutions could do so (announced October 25).
  - To facilitate bidding by smaller investors, the noncompetitive award limitation has been raised from \$1 million to \$5 million for notes and bonds (announced October 25).
  
- **Stronger enforcement of auction rules:**
  - The Federal Reserve now engages in spot-checking of customer bids in Treasury auctions for authenticity (announced September 11).
  - The Treasury and the Federal Reserve are instituting a new system of confirmation by customers receiving large awards (over \$500 million), to verify the authenticity of customer bids.
  - The Treasury and the Federal Reserve have tightened enforcement of noncompetitive bidding rules.
  
- **Detecting and combatting short squeezes:**
  - **Improved surveillance of the Treasury market.** A new working group of the Agencies has been formed to improve surveillance and strengthen interagency coordination. The Federal Reserve Bank of New York

---

<sup>1</sup> Reforms have the unanimous support of the Department of the Treasury, the Board of Governors of the Federal Reserve, and the Securities and Exchange Commission ("SEC") (the "Agencies") unless otherwise noted. All actions listed are recommended or implemented as part of this report, unless otherwise indicated.

("FRBNY") will enhance and expand its market surveillance efforts, in its role as the agency that collects and provides the SEC, the Treasury, and the Federal Reserve Board with information needed for surveillance purposes.

- **Reopening policy to combat short squeezes.** The Treasury will provide additional quantities of a security to the marketplace when an acute, protracted shortage develops, regardless of the reason for the shortage. The reopening of issues will greatly reduce the potential for short squeezes. Reopenings could occur either through standard auctions, through "tap" issues whereby the Treasury offers securities to the market on a continuous basis, or through other means.
- **Changes to Treasury auction policies:**
  - **Automation.** The Treasury and the Federal Reserve have accelerated the schedule for automating Treasury auctions. It is anticipated that the auctions will be automated by the end of 1992 (announced September 11).
  - **Proposal of uniform-price, open auction system.** The Treasury will consider implementing an open method of auctioning securities with repeated rounds of bidding at descending yields. The total bids received at the announced yield would be announced after each round. All securities would be awarded at a single yield. Such a system will be feasible once the auctions are automated and could encourage broader participation in Treasury auctions.
  - **Publication of uniform offering circular.** Treasury auction rules and procedures have been compiled into a uniform offering circular, to be published in the *Federal Register* with a request for comments.
  - **Change to noncompetitive auction rules.** To limit noncompetitive bidding to the small, less sophisticated bidders for whom it was designed, the Treasury will not permit a noncompetitive bidder in a Treasury auction to have a position in the security being auctioned in the when-issued, futures, or forward markets prior to the auction. Furthermore, the Treasury will not permit bidders to submit both competitive and noncompetitive bids in a single auction.
  - **Change in net long position reporting required on auction tender form.** To streamline reporting requirements, the Treasury will not require competitive bidders to report net long positions at the time of the auction, unless the total of the bidder's net long position plus its bid exceeds a high threshold amount. This threshold amount will represent a substantial share of each auction and will be announced for each auction.

- **Improvements to the primary dealer system:**
  - **Opening up the system by eliminating the market share requirement.** The Federal Reserve will gradually move to a more open set of trading relationships. To this end, the FRBNY is eliminating the requirement that each primary dealer effect at least one percent of all customer trades in the secondary market. The FRBNY expects to add counterparties that meet minimum capital standards, initially in modest numbers, but on a larger scale once open market operations are automated.
  - **Clarification of regulatory authority over primary dealers.** In the future, direct regulatory authority over primary dealers will rest unambiguously with the primary regulator - in most cases, the SEC. Although the FRBNY has no statutory authority to regulate the primary dealers, the primary dealer system may have generated the false impression in the marketplace that the FRBNY somehow regulates or takes responsibility for the conduct of primary dealers. To make clear that its relationship with the primary dealers is solely a business relationship, the FRBNY will eliminate its dealer surveillance program, while upgrading its market surveillance program as described above.
  - **Other features regarding primary dealers.** To remain a primary dealer, firms must demonstrate to the FRBNY that they make reasonably good markets, provide it with market information, and bid in Treasury auctions. Primary dealers must also maintain capital standards. Failure to meet the Federal Reserve's performance standards, or the capital standards, will lead to removal of the primary dealer designation. In addition, any primary dealer that is convicted of (or pleads guilty or *nolo contendere* to) a felony will face suspension of its primary dealer designation.
- **Enhanced GSCC.** The Agencies support enhancements to the Government Securities Clearing Corporation, which provides comparison and netting facilities for reducing risk in the government securities market.

## LEGISLATIVE RECOMMENDATIONS

- **Reauthorization of Treasury rulemaking authority under GSA.** Treasury rulemaking authority under the Government Securities Act of 1986 for government securities brokers and dealers expired on October 1, 1991. The Agencies support prompt reauthorization of this authority.
- **Misleading statements as violation of federal securities laws.** The Agencies support legislation that would make it an explicit violation of the Securities Exchange Act of

1934 to make false or misleading written statements to an issuer of government securities in connection with the primary issuance of such securities.

- **Registration of GSE securities.** The Agencies support legislation removing the exemptions from the federal securities laws for equity and unsecured debt securities of Government-sponsored enterprises ("GSEs"), which would require GSEs to register such securities with the SEC.
- **Backup position reporting.** The Treasury, the FRBNY, and the SEC support legislation that would give the Treasury backup authority to require reports from holders of large positions in particular Treasury securities. This authority would not be used unless the reopening policy and other measures implemented fail to solve the problem of acute, protracted market shortages. The Federal Reserve Board believes that the reopening policy makes this authority unnecessary and that it would be difficult to resist activating this authority if it were granted; thus, it opposes this proposal.
- **Sales practice rules.** The Treasury and the SEC support legislation granting authority to impose sales practice rules, but differ on the implementation and extent of such rules. The Federal Reserve does not believe that a case has been made for sales practice rules authority, but would not oppose application of such rules to National Association of Securities Dealers members.
- **Backup transparency authority.** The SEC supports legislation that would grant it authority to require, if deemed necessary, expanded public dissemination of price and volume information in the secondary market for government securities. The Treasury and the Federal Reserve believe that private sector initiatives should be allowed to develop and that the costs of such regulation would outweigh the benefits at this time; therefore, they oppose this proposal.
- **Audit trails.** The SEC supports legislation that would give it authority to require audit trails - time-sequenced reporting of trades to a self-regulatory organization - in the government securities market. The Treasury and the Federal Reserve believe that the costs of such regulation would outweigh the benefits, and oppose this proposal.

# JOINT REPORT

## I. Introduction

The U.S. government securities market is the largest and most liquid securities market in the world. It has shown the ability to absorb efficiently the enormous amounts of Treasury securities made necessary by the massive borrowing requirements of the U. S. Government. The market also serves the needs of the Federal Reserve in conducting open market operations, the Federal Reserve's most important monetary policy tool. The enormous liquidity and pricing efficiency of the market provide incalculable benefits to other financial markets in the United States and worldwide by providing a continuous benchmark for interest rates on dollar-denominated instruments across the maturity spectrum. Because of its demonstrated success in meeting both public and private needs, the U.S. government securities market has been a model for other government securities markets around the world.

Over time, there has been significant innovation in the U.S. government securities market. Examples include the active trading of Treasury securities on a when-issued basis prior to Treasury auctions, which helps the market gauge demand and price the securities being offered; repurchase and reverse repurchase agreements, which serve both to increase liquidity and to allow dealers to finance their inventory of Treasury securities; the development of active futures and options markets related to Treasury securities, enabling market participants to pursue diverse hedging strategies in a liquid market setting; and the creation of zero-coupon instruments through the stripping of Treasury securities, which allows the market to restructure payment flows to meet the varying needs of different purchasers. These innovations have benefitted the market and the taxpayer by increasing liquidity, thereby lowering the government's financing costs.

On the whole, this market has enabled the government to meet its large financing needs in a cost-effective manner for the taxpayer, which is the government securities market's primary public purpose. Nevertheless, the events of 1991 have focused public attention on some shortcomings in this market. In August 1991, under the pressure of investigations by the Securities and Exchange Commission (the "SEC") and the Justice Department, Salomon Brothers Inc ("Salomon"), a major participant in the market, admitted deliberate and repeated violations of Treasury auction rules beginning in 1990. In addition, in two widely publicized instances during 1991, so-called "short squeezes" developed after an auction, in one case apparently as a result of very high concentration of auction awards. Taken together, these events threatened the public's confidence in this crucial marketplace, which ultimately could result in higher costs for taxpayers in financing the national debt.

In September 1991, in the wake of Salomon's August admissions of wrongdoing, the Treasury Department, the Federal Reserve, and the SEC (collectively, the "Agencies")

undertook a joint review of the government securities market.<sup>1</sup> This report is the product of that review. The report addresses a broad range of government securities market issues that arose directly or indirectly from the events of 1991, including the need to strengthen enforcement of Treasury's auction rules; the need to automate the auctions; potential changes in Treasury's auction technique and debt management policies; and the role of the primary dealers. The report also addresses certain issues that were widely debated before the events of mid-1991, such as reauthorization of Treasury's rulemaking authority under the Government Securities Act, the need for sales practice rulemaking authority, and "transparency" - that is, the availability of timely, accurate price and volume information to market participants. Finally, the report proposes to remove the exemption under the federal securities laws for certain securities issued by Government-sponsored enterprises ("GSEs").

The Agencies do not believe that the government securities market is flawed or broken in any fundamental economic sense. However, serious problems have arisen, and these problems suggest that various aspects of the efficient operation and regulation of this marketplace can be improved. Indeed, the events described above suggest several specific areas for improvement, including better enforcement of auction rules and more effective methods of preventing and alleviating "short squeezes."<sup>2</sup> The improvements recommended in this report include some basic reforms that are designed to lessen the potential for fraud and misconduct and to increase the Agencies' ability to detect such misconduct when it occurs.

This report reflects an attempt of the Agencies to reach a consensus on the changes that are necessary in the regulation of this marketplace. There is substantial agreement among the Agencies on the necessary initiatives and the direction in which government policy should move. As described below, however, there remain some differences with respect to certain specific proposals for change.

The Agencies share common objectives in evaluating potential changes in government policy. These objectives include preserving and enhancing the efficiency of the government's financing mechanism, ensuring the integrity and fairness of the marketplace, deterring and detecting fraud, and protecting investors. In particular, there is a strong consensus that, while change is necessary, that change must be managed with care to assure that the national debt is financed at the lowest possible cost.

---

<sup>1</sup> The SEC and the Department of Justice are conducting separate investigations from a law enforcement perspective. These investigations are not yet complete, and neither the SEC nor the Department of Justice has reached any conclusions with respect to the actions of any particular market participant. As a result, the discussion contained herein should not be understood as reaching any conclusions of fact or law with respect to the SEC's or the Department of Justice's investigations.

<sup>2</sup> In fact, as described in this report, Treasury has already used its authority to correct some of the problems that were highlighted by these events.

Any degradation in the smooth functioning of the government securities market would result in higher costs to the taxpayer. An increase in financing costs of only one basis point - one hundredth of one percentage point - would cost taxpayers over \$300 million each year. Thus, in pursuing the goal of market integrity, the Agencies are sensitive to the need to avoid unnecessary responses that could drive investors and market makers out of the market. Moreover, every avenue for achieving supervisory goals through market solutions should be explored.

## **Background**

**The Government Securities Act.** Congress passed the Government Securities Act of 1986 (the "GSA") with the support of the Reagan Administration, the SEC, the Federal Reserve, and many market participants. The GSA closed then-existing gaps in the regulation of market participants that had been highlighted by the failure of certain previously unregulated government securities dealers, involving losses for investors and, in some cases, fraudulent activity in the market for repurchase agreements.

Prior to the enactment of the GSA, some government securities brokers and dealers were not registered with or regulated by any federal government agency. The GSA required this group of brokers and dealers to register with the SEC. In addition, the GSA granted to the Treasury limited rulemaking authority<sup>3</sup> over all government securities brokers and dealers, including financial institutions<sup>4</sup> engaged in this business. The Treasury rules are enforced by the appropriate regulatory agency. The federal banking regulators fill that role for financial institutions that are government securities brokers or dealers, and the SEC does so for all other government securities firms.

Treasury's rulemaking authority under the GSA expired on October 1, 1991. Before both houses of Congress had voted to renew that authority, Salomon admitted its violations and triggered intense scrutiny of the market for government securities. In this atmosphere, the Treasury's authority under Section 15C of the Securities Exchange Act of 1934 (the "Exchange Act") to promulgate new rules was allowed to expire, although all rules already promulgated by the Treasury under the GSA remain in effect. The Agencies recommend that Treasury's rulemaking authority be reinstated promptly.

**The Salomon episode and market squeezes.** While the events referred to above have received widespread publicity, they are restated here as background for some of the recommendations made in this report.

---

<sup>3</sup> Treasury's GSA rulemaking authority was limited to matters involving financial responsibility, recordkeeping, reporting and confirmation requirements, and custody and use of customers' securities and funds balances.

<sup>4</sup> The term "financial institution," for purposes of the GSA, means banks and savings and loans. 15 D.S.C. § 78c(a)(46).

Fraudulent bids. The inquiries into Salomon's conduct began, seemingly innocuously, on February 21, 1991, when Federal Reserve Bank of New York ("FRBNY") staff called Salomon concerning a bid the firm had made in the Treasury five-year note auction that day on behalf of an entity identified by Salomon as "Warburg Asset Management." A Salomon official stated that the firm had made a mistake and that Warburg Asset Management was actually Mercury Asset Management<sup>5</sup>. S.G. Warburg, a U.S.-based primary dealer, had separately submitted a tender at the same yield for its own account. Combined, the two bids exceeded 35 percent of the public offering amount.

The two bids triggered a discussion between staff of the FRBNY and the Treasury's Bureau of the Public Debt. The sole issue then under consideration was whether Warburg (or Mercury) Asset Management and S.G. Warburg should be deemed a single bidder for purposes of the 35 percent rule.<sup>6</sup>

The Treasury decided to accept both bids because the combined awards to the two bidders - after proration - did not exceed 35 percent of the public offering amount. Nonetheless, the Treasury subsequently further considered the relationship between S.G. Warburg and Mercury Asset Management for purposes of application of the 35 percent rule. The Treasury's Bureau of the Public Debt sent a letter dated April 17, 1991, to Mercury Asset Management, which provided details concerning the two bids submitted in the February five-year note auction and informed Mercury of the Treasury's decision to treat the two entities as a single bidder in the future for purposes of the 35 percent limitation. Copies of this letter were sent to officers of S.G. Warburg (the primary dealer), S.G. Warburg Group P.L.C. (the British parent company), and the FRBNY. In addition, a copy of the letter was sent to the Salomon official in charge of government securities trading.

As Salomon subsequently admitted, the February bid from "Warburg Asset Management" was unauthorized. Salomon's top executives had learned in April that the securities in question were, in fact, purchased by Salomon itself. However, Salomon's senior management did not promptly inform the appropriate government officials of the unauthorized bid.

Short squeezes. The problem of short squeezes in the market was drawn into sharp focus during 1991. While yields on Treasury securities of approximately equal maturity vary constantly, there were two instances during the Spring of 1991 in which particular securities traded well off the yield curve for an extended period. In the first case, a short squeeze

---

<sup>5</sup> Mercury Asset Management P.L.C. is a subsidiary of S.G. Warburg Group P.L.C. S.G. Warburg, a U.S. primary dealer, is also a subsidiary of S.G. Warburg Group P.L.C. Warburg Asset Management is a subsidiary of Mercury Asset Management that operates in the United Kingdom.

<sup>6</sup> This rule limits the amount Treasury will recognize as bid at a single yield by a single bidder to 35 percent of the public offering amount and also limits awards to a single bidder to 35 percent of the public offering amount.



developed in the two-year note auctioned on April 24, 1991. When the squeeze first manifested itself in mid-May, the yield on the April two-year note moved considerably out of line with surrounding market rates, and the notes were "on special" in the repurchase agreement ("repo") market.<sup>7</sup>

The shortage of the April two-year note did not become evident until almost four weeks after the securities were auctioned. Awards at the auction itself were not particularly concentrated. It appears that the shortage developed when the securities were not made available to the repo market.

As the squeeze in the April two-year note began, Salomon submitted large, aggressive bids for itself and two customers in the auction of two-year notes on May 22. As a result of these bids and additional purchases in the aftermarket, Salomon's position on the settlement date was almost 94 percent of the issue, according to Salomon's subsequent public statements.

A number of market participants contacted the FRBNY and the Treasury to Point out the shortage in the May two-year note. From the information available to Treasury officials, it appeared that the squeeze resulted from the concentration of auction awards to Salomon and some of its customers. Treasury officials thought the situation serious enough to warrant investigation by the SEC. On May 29, the Treasury told the SEC's Divisions of Market Regulation and Enforcement about the situation and provided them with information concerning auction awards. The SEC promptly began investigating the matter. In addition, the Antitrust Division of the Department of Justice requested and was provided information pertinent to its own investigation of the squeeze. As the investigations of the Warburg/Mercury incident and the May short squeeze progressed, Salomon asked outside counsel to investigate the firm's potential legal problems.

The government investigations ultimately resulted in Salomon's August 1991 admissions that it had submitted unauthorized customer bids in several auctions in 1990 and 1991 and led to changes in Salomon's top management.

Improprieties involving GSE securities. In addition to the falsified Treasury auction bids discussed above, Salomon admitted that it had engaged in the practice of overstating its customer orders in connection with distributions of the securities of GSEs. It now appears that this practice was widespread among GSE selling group members.

On January 16, 1992, the SEC, the Federal Reserve, and the Office of the Comptroller of the Currency instituted administrative proceedings against 98 GSE selling group members for violating various recordkeeping requirements by preparing and

---

<sup>7</sup> In other words, market participants desiring to borrow the two-year notes had to accept an interest rate significantly lower than the prevailing repo rate on funds they deposited with their counterparties. To look at it another way, owners of the scarce two-year notes could finance them at exceptionally low interest rates.

maintaining records reflecting inflated indications of customer orders or sales. Simultaneously with the order instituting proceedings, virtually all of these selling group members submitted offers of settlement, which were accepted. The terms of the settlements require each of such selling group members to: (1) cease and desist from future violations of the recordkeeping requirements; (2) pay civil money penalties of up to \$100,000 to the U.S. Treasury; and (3) devise, implement, and maintain policies and procedures designed to ensure future compliance with the relevant provisions of the Exchange Act. The SEC also published a report pursuant to Section 21(a) of the Exchange Act concerning the results of its investigation of violations of law in connection with the distribution of GSE securities.

Aftermath. The events described above have triggered a thorough examination of various aspects of the government securities market. Since August 1991, the Treasury has made important changes in its auction rules and other policy changes under its existing regulatory authority, as described below. This report recommends or implements a number of additional measures. The goal of all of these initiatives is to protect and improve the integrity and efficiency of the government securities market.

## **II. Treasury Securities Market Issues**

### **Enforcement of auction rules**

The Salomon episode pointed out the need for more effective enforcement of auction rules.<sup>8</sup> The Agencies agree that legislation is desirable to strengthen auction rule enforcement and to enhance private sector oversight of auction practices. Moreover, since August 1991, the Treasury has taken a number of important steps to enhance rule enforcement, including large bidder certification and tighter enforcement of rules governing noncompetitive bidding.

**Misleading statements to issuers.** The Agencies support legislation that would make it an explicit violation of the Exchange Act to submit false or misleading written statements to an issuer of government securities in connection with the primary issuance of securities. Such legislation would re-emphasize the applicability of the existing antifraud provisions of the federal securities laws to the government securities market. It would also serve to reaffirm the seriousness with which this matter is taken by the government by serving notice on participants in Treasury auctions and on purchasers of securities from federal agencies, as well as on members of the selling groups of GSEs, that the SEC and other regulatory agencies will undertake investigations of, and enforcement actions against, those who make misleading written statements.

---

<sup>8</sup> Treasury's remedy for breaches of its rules is to exclude the bidder from Treasury auctions. In addition, persons who commit fraud in the context of a Treasury auction remain subject to potential civil and criminal actions under Section 10(b) of the Exchange Act and Rule 10b-5 thereunder, the general antifraud proscriptions, as well as possible criminal actions under 18 U.S.C. §§ 1001 and 1005.

Such a provision would also reaffirm management's responsibility to supervise the conduct of government securities market participants to ensure compliance with high ethical standards. The recommended statutory provision would therefore foster compliance by government securities brokers and dealers with the general antifraud provisions of the federal securities laws.<sup>9</sup>

The Treasury is developing written certification requirements for dealers, depository institutions, and others, including customers, who purchase securities in Treasury auctions. These written certifications, in conjunction with the proposed statutory provision, will provide an additional mechanism for enforcing Treasury auction rules.

**Spot checks and large bidder certification.** In August 1991, the FRBNY (which receives almost all large bids) began making spot checks by contacting customers of primary dealers to verify the legitimacy of large winning bids submitted for customer accounts. In addition, the Treasury and the FRBNY are implementing a more formal system to require customers who make large winning bids through dealers or depository institutions to verify their bids in writing to the Federal Reserve prior to the settlement date. While no verification system is totally foolproof, it would now be extremely difficult for a firm to evade the 35 percent limitation by submitting large, unauthorized "customer" bids. While it is recognized that the new certification requirement will impose an additional regulatory burden, the Treasury and the FRBNY are implementing this requirement with a view to minimizing that burden.

The new verification system will work as follows:

1. All customers receiving awards of over \$500 million will be required to confirm their bid to the Federal Reserve via facsimile on the bidder's letterhead. The deadline for confirmation will be 10:00 a.m. on the business day following the auction.
2. The Federal Reserve will continue to spot check large bids both above and below the \$500 million level by contacting bidders directly by telephone.
3. When a customer award of over \$500 million is made through a dealer that was awarded over 25 percent of an auction for its own account, Federal Reserve personnel will call the customer directly to seek additional confirmation. To preserve the confidentiality of the dealer's award, this call will be presented as part of the Federal Reserve's existing program of spot checking large bids. The size of the dealer's bid will not be discussed with the customer.

---

<sup>9</sup> Such a provision would not affect existing sanctions, such as penalties for false statements provided by 18 D.S.C. §§ 1001 and 1005 and the general antifraud and recordkeeping provisions set forth in the Exchange Act.

4. Failure of a customer to confirm a bid in a timely manner will mean that the dealer will be held responsible to make good on the bid, unless doing so would cause a violation of the 35 percent rule, in which case the Treasury will reduce the size of the issue accordingly. Any failure to confirm will cause an investigation by the appropriate regulatory authorities.

**Noncompetitive abuses.** The Treasury permits noncompetitive bids of up to \$1 million for bills and \$5 million for notes and bonds. Unlike competitive bidders, who receive the yield they actually bid, all noncompetitive bidders get the average yield. The Treasury permits noncompetitive bidding in order to make it easier for smaller, less sophisticated bidders to bid in Treasury auctions. At the same time, it is necessary to maintain a large pool of competitive bidders to determine a price in the auction that accurately reflects market demand.

Abuses of the Treasury's noncompetitive bidding rules have recently come to light, both before and after the industry-wide investigations triggered by the Salomon episode. These abuses generally involved dealers skirting these rules by effectively arranging to purchase for their own account large amounts of securities at the price paid by noncompetitive bidders. The pattern of abuse had been for a list of individuals - often employees of the firm - all to bid the maximum noncompetitive amount and then sell their positions to the firm very shortly after the auction. In the Treasury's view, practices of this nature are not in keeping with the purpose of the noncompetitive bidding rules.

As a result of these abuses, the Treasury and the Federal Reserve banks are now engaging in more aggressive policing of noncompetitive bids. The Federal Reserve banks are responsible for the first level of review and for submitting all questionable bids to the Treasury's Bureau of the Public Debt. The Treasury pays particular attention to bidders who place large noncompetitive bids in auctions on a regular basis. In addition, the Treasury and the Federal Reserve are developing a mechanism for interdistrict policing of noncompetitive bids. The centralization of information that this requires will become easier as progress is made on auction automation. In cases of clear abuse, the Treasury will take appropriate measures, including referral of cases involving suspected fraud to the SEC for enforcement action.

**Uniform Offering Circular.** Simultaneously with the issuance of this report, the Treasury is releasing for publication in the *Federal Register* for comment a uniform offering circular for marketable Treasury securities. The offering circular contains auction rules, including the new large bidder certification requirements, the existing 35 percent limitation, and the definition of a "single bidder." This effort by the Treasury to formalize the rules with input from market participants and other interested parties should result in rules that are more easily accessible and more readily understood.

## Short Squeezes and Reopenings

**How short squeezes arise.** Market shortages of recently issued Treasury securities arise from time to time. Such shortages are usually temporary and relatively mild and are corrected quickly through market forces. In rare cases, they can be acute and protracted. In these instances, market forces fail to relieve the squeeze, and questions of market manipulation may arise.

Most market shortages appear to be a natural, temporary by-product of the way in which the Treasury distributes its securities.<sup>10</sup> Before a security is auctioned, dealers often sell the security short to customers (or other dealers) in the when-issued market, with the expectation of covering short positions by subsequent purchases - either in the when-issued market, the auction, or the aftermarket. This process benefits the Treasury by serving a price discovery function and by stretching out the actual distribution period for each issue, thereby allowing the market more time to absorb large issues without disruption.

When-issued trading in Treasury securities functions somewhat like trading in a futures market, in which positions may be taken and covered many times before the actual settlement date. In addition, the when-issued Treasury security displaces the most recently issued Treasury security as the benchmark, "on-the-run" issue in the cash market. In many auctions, the estimated aggregate size of outstanding positions in the when-issued market substantially exceeds the quantity of securities to be sold at that auction at some point between the date of announcement of the auction and the date on which the securities are delivered. Those positions can be taken more cheaply and potentially in greater size (due to the lack of a delivery requirement) during the when-issued period than in subsequent trading.

Market forces ordinarily reduce the size of outstanding positions in the when-issued market as the issue date approaches. However, the leverage, liquidity, and volume of trading in the when-issued market can cause market participants to overestimate their ability to cover short positions prior to settlement. Nevertheless, when-issued trading contributes to the smooth, low-cost distribution of the federal debt, and it should not be discouraged. Solutions to the potential for shortages should be found that do not impede when-issued trading.

Dealers sometimes carry large net short positions in a new Treasury issue immediately prior to the auction. In some cases, holders of short positions find that they cannot acquire the issue to deliver, either in the auction or in the secondary market, at the price anticipated. Instead, dealers may turn to the financing market after the settlement date, where they borrow the security for delivery in a "reverse repo" transaction. When a material shortage develops, the price of the security becomes noticeably higher than Treasury issues of similar maturity, and the cost of borrowing the particular security in the repo market becomes higher.

---

<sup>10</sup> See Appendix A for a discussion of when-issued trading and the repo market.

Market shortages can develop in a number of ways. Short sellers may simply misgauge market demand because, for example, other market participants do not follow usual trading strategies or anticipated monetary policy actions are not forthcoming. As a general matter, temporary shortages that arise as a consequence of day-to-day trading - and not as a consequence of deliberate manipulation - do not represent a material flaw in the marketplace. These shortages arise from decisions by sophisticated market participants to establish short positions and are generally relieved by natural market processes within a short time. Such shortages are an inherent risk in the price discovery process.

Market developments following the April and May 1991 two-year note auctions demonstrated the potential for acute, protracted squeezes in Treasury issues, despite the huge size of these issues. In fact, a market squeeze that resulted in large losses for some dealers had occurred five years previously in connection with the 30-year bond issued in February 1986.<sup>11</sup> However, in the five years since the 1986 squeeze, there had been no demonstrated instances of such protracted, aggravated squeezes.

In contrast to temporary shortages, an acute, protracted shortage can cause lasting damage to the marketplace, especially if market participants attribute the shortage to market manipulation. Dealers may be more reluctant to establish short positions in the future, which could reduce liquidity and make it marginally more difficult for the Treasury to distribute its securities without disruption. Moreover, some market participants may perceive that a protracted squeeze is the product of a scheme by those who benefitted from it. Market manipulation - or even the perception of it - can undermine the integrity of the marketplace, cause participants to withdraw, and produce higher costs for the taxpayer.

The Agencies agree that changes in government policy are needed to deal with acute, protracted squeezes in Treasury issues. The Agencies believe that the best course is to address the problem of short squeezes through changes to the Treasury's debt management practices - in particular" through a new policy of reopening Treasury issues whenever such squeezes occur. The proposed changes in auction technique, discussed below, may also prove helpful in mitigating the short squeeze problem.

**Reopenings.** The Treasury has the ability to break a squeeze by issuing more of the particular security that is the subject of a squeeze - by "reopening" the issue. In a reopening, the Treasury would simply offer an additional amount of an outstanding issue. By sufficiently increasing the supply of the security, the Treasury can eliminate any shortage.

The Treasury actively considered this option as a way of alleviating the squeeze in the May two-year note. The Treasury decided against this course - and has traditionally been

---

<sup>11</sup> These dealers had sold this bond short as part of a trading strategy that had worked in the past as they prepared to bid for a new 30-year bond in May 1986. However, the trading strategy did not work as expected, apparently because some institutional investors did not make the February 30-year securities available to the repo market.

reluctant to reopen securities issues outside of its normal financing schedule - for three distinct reasons. First is the concern that a policy of reopening securities might cause market participants to demand a higher yield on securities at auction, given the greater uncertainty about the eventual supply of the security. Second, the Treasury could be subjected to frequent calls for reopening. Since some issues would be reopened and others not, the Treasury would inevitably be accused of favoring one group of market participants over another. Third, the Treasury plans its borrowing schedule well in advance, based on the schedule of maturing issues and on projections of the government's cash needs. The unscheduled reopening of a security would\_ by definition, produce excess cash and disrupt the Treasury's cash management planning.

The Treasury has concluded that, while a reopening policy could be difficult to implement, it is justified under certain circumstances. Uncertainty about the potential damage from acute, protracted shortages may weigh more heavily on the market than the concern that the Treasury might issue an additional amount of a relatively high-priced security. Moreover, adoption of a policy of reopening issues whenever an acute, protracted squeeze occurs would tend to discourage market participants from attempting to generate a squeeze.

The Agencies support this initiative and believe that a policy of reopenings should be effective in addressing the problem of acute, protracted market shortages.

**Therefore, under this new approach, the Treasury will be prepared to provide the market with additional supply of any security that is the subject of an acute, protracted shortage. The Treasury will not require evidence of manipulation in deciding whether to reopen a particular issue, but instead will reopen any issue that, in its judgment, is the subject of such a shortage.**

Once a decision to reopen has been made, there are a number of ways in which an issue may be reopened.<sup>12</sup> First, the Treasury may immediately auction an amount sufficient to eliminate any possibility that a squeeze could persist. The amount auctioned would depend upon all the facts and circumstances, but could be in the \$1-5 billion range.

Second, the Treasury could sell additional amounts of a security in a "tap" issue managed by the FRBNY. A tap issue would involve an incremental offering of securities by the Federal Reserve, acting as the Treasury's agent. The securities could be sold as market conditions warranted, or the market could be given notice that, at a given spread off the yield curve, the authorities stand ready to supply additional amounts in response to market demand.

A third option that merits further study, but that would require legislation, would be for the Treasury to make additional supply of the securities temporarily available through securities lending, using the Federal Reserve as agent. The advantage of this approach is that

---

<sup>12</sup> Potential ways of creating additional supply of an issue are discussed in detail in Appendix B.

it is a temporary response to a temporary market imbalance, and would be neutral from the standpoint of the Treasury's debt management - that is, it would not permanently affect the Treasury's cash balance or the amount of outstanding debt.

The Treasury intends to select the appropriate reopening method on a case-by-case basis, and will consider the views of market participants and others concerning the relative merits of alternative means of reopening issues. As experience grows with approaches to reopenings, the Treasury may modify them or develop new ones.

**Other measures to address short squeezes.** There is a wide range of additional remedial initiatives that could be implemented to address the problem of acute, protracted market shortages. One possible solution would be to establish a new regulatory regime, using regulatory tools that have proved useful in the equity and derivative markets, such as enhanced position reporting and improved audit trails. Position limits in newly issued government securities could also be imposed.

Such regulatory measures could be effective in deterring or alleviating short squeezes. However, such initiatives could also raise taxpayer costs by imposing possibly unnecessary regulatory burdens. Given the relative rarity of acute, protracted short squeezes, the ability to identify them from easily observable market price distortions, and the need to proceed judiciously in this marketplace, the Agencies agree that the reopening policy should be implemented and tested before regulatory measures designed to achieve the same ends are adopted.

## **Treasury Auction Issues**

Background. In order to fulfill its duty to U.S. taxpayers, the Treasury must seek to obtain financing for the U.S. Government at the lowest possible cost. That goal is well served by minimizing the potential for manipulative and collusive behavior in the marketplace.

In general, the Treasury believes that the current "multiple-price, sealed-bid" auction technique has worked well, with an active when-issued market and significant customer participation.<sup>13</sup> However, this technique, in which each successful bidder's award is made at the yield the participant actually bid, has been criticized by some for failing to minimize financing costs to the Treasury, as well as for encouraging manipulative behavior in the marketplace.

In part as a result of the incidents described above, some have perceived that auctions can be manipulated, that collusive behavior is possible, and that insiders have an unfair advantage over other participants. Other factors that may have contributed to this perception

---

<sup>13</sup> See Appendix B for a detailed discussion of Treasury's auction technique and various other possible auction techniques.



include Treasury's auction rules and the auction technique itself, the information advantage historically possessed by the primary dealers, the lack of automation in the auction process, and the historical relative lack of publicly available transaction quotations.

Some commentators have argued that the current multiple-price Treasury auction technique in effect forces bidders to bid through primary dealers to avoid placing bids at a level above the market consensus. As a result, these commentators argue, the primary dealers gain an information advantage due to their exclusive knowledge of the intentions of the large bidders. Moreover, until recently, only primary dealers and depository institutions could submit bids for customers, which further strengthened the market power of primary dealers by fostering the perception of an information advantage.

The lack of automation in the auction process may also create an appearance that market insiders have an advantage over others. Under the current system, bidders submit bids manually at their local Federal Reserve bank. In practice, most of the large primary dealers station employees for this purpose in the lobby of the FRBNY. These employees receive last minute telephone instructions and then fill in and submit the bid sheets by hand. This system presents a logistical hurdle for bidders who might wish to bid directly rather than through a primary dealer.

Steps have been taken or will be taken to address each of these concerns.

**Automation.** As noted above, Treasury auctions rely to a large extent on a paper based, manual system for bidding and auction administration. Greater use of automation will make the auction process faster and more efficient, result in fewer errors, facilitate broader participation, and assist in monitoring of compliance with auction rules. It also will enable the Treasury to experiment more easily with different types of auction techniques.

The delay between the submission of bids and the announcement of results inherent in a paper-based system may have an adverse impact on bidding, because bidders do not know for a period of time whether their bids have been successful. As a result, automation may also have the effect of encouraging more aggressive bidding, to the benefit of the taxpayer.

In view of these expected benefits, the Treasury and the Federal Reserve have made the completion of a system to permit automated bidding a high priority. A project is nearing completion at the Federal Reserve Bank of Kansas City that will allow medium-sized and smaller bidders to submit bids to the Federal Reserve banks electronically. This project is expected to be completed by the second quarter of 1992.

There is also a project under way at the FRBNY that will permit electronic bidding by large bidders. This project, which was under way before the Salomon events were disclosed, has already made substantial progress and is scheduled for completion by the end of 1992. The resulting system will be able to handle the multiple-price, sealed-bid auction technique currently in use or a uniform-price, sealed-bid auction. It is expected that it will also be

possible to implement the new open auction technique discussed below by early 1993, if the Treasury determines to do so.

**Auction technique.** Because Treasury auctions are not automated, it has been impossible to place all potential competitive bidders in Treasury auctions in direct communication at the same time. As a result, the Treasury has used a sealed-bid auction, rather than an "open" auction in which bidding is public and competing bidders can respond.

In addition, different bidders currently pay different prices for the same security, based on their bids. These multiple-price awards result in what economists refer to as the "winner's curse" - the highest bidder "wins" the auction by paying the highest price, only to find that the price paid is higher than the consensus price, as reflected in the market. Because bidders are aware of this "curse," they tend to shade their bids below the maximum they are actually willing to pay.

The other type of sealed-bid auction that some commentators have argued would produce superior results for the Treasury is the uniform-price, sealed-bid auction, sometimes called a "Dutch auction." In this type of auction, all bidders whose tenders are accepted pay the same price for a given security. This price is the *lowest* of the *accepted* prices bid (or highest of the accepted yields). As a result, some of the bidders whose tenders are accepted pay a lower price than they actually bid. At first glance, this approach might appear to produce *lower* revenue, because money appears to be "left on the table." On the other hand, participants in a uniform-price, sealed-bid auction can be expected to bid higher prices than they would in a multiple-price, sealed-bid auction, since there is no "winner's curse" - that is, they do not run the risk of paying a higher price than others whose tenders are accepted. The expected revenue effects of uniform-price auction versus current practice thus turn on the following empirical question: Is the revenue generated from increased demand in uniform-price, sealed-bid auctions greater than the revenue that is apparently forgone due to the difference between prices 'bid and prices paid?

Aside from revenue considerations, a perceived advantage of a uniform-price, sealed-bid auction is that it would eliminate much of the need for pooling information to gauge the market consensus. Thus, the incentive for bidding through dealers would be lessened. It is argued that this could broaden auction participation and encourage a wider range of investors to bid directly for their own account rather than through primary dealers. This should naturally lead to less concentration of ownership of securities awarded at auction.

During 1973 and 1974, the Treasury conducted six uniform-price, sealed-bid auctions. The results of this experiment were inconclusive. In the August 1973 uniform-price auction of 20-year bonds, tenders received from the public were not sufficient to sell the entire issue. However, the failure of this auction appears to have been unrelated to the auction technique.

**Open auction alternative.** Irrespective of whether the single-price, sealed-bid auction would prove superior to the current practice, the Agencies believe that there is an

auction technique that may be superior to both types of sealed-bid auction techniques discussed above. This is an ascending-price, open auction system, which will be feasible for the first time once the auctions are automated. Auction theory suggests that, in general, Treasury revenue would not suffer, and indeed might increase, in the switch to an open, ascending-price system.

In this type of auction, registered dealers and other major market participants would have terminals that are connected by telephone line (with appropriate security) to a central computer.<sup>14</sup> The auction would begin with the Treasury announcing an opening yield somewhat above the yield at which the security is quoted in when-issued trading. All interested parties would then immediately submit tenders electronically for the quantity of securities they would be willing to purchase at that yield.

Once all bids were submitted, the resulting total volume of bids at this high yield would be announced; presumably, the issue would be oversubscribed after the first round since the yield quoted would be higher than the when-issued yield. The yield would then be reduced, perhaps by one basis point, and the bidding process repeated. Bidding would proceed in successive rounds - perhaps at 10 minute intervals - with decreasing yields until the volume demanded was smaller than the size of the issue. All participants who bid at that closing yield would receive awards, but at the next higher yield. Those who bid in the next-to-last round but did not bid at the last round would receive prorated awards at the same yield.

From the viewpoint of a bidder, this decreasing sequence of yields lessens the risk to participants of bidding too low a yield for the securities. Even if an investor had a much higher valuation of the securities than other bidders, the bidding would stop before the yield moved downward very far as other bidders dropped out of the bidding. The open nature of the bidding, along with the single price outcome, should eliminate the "winner's curse." Further, the public exposure of the volume of bids provides information about other bidders' valuation of the securities, perhaps augmenting overall demand.

An open auction system allows participants to react to surprise bids, turning market forces against attempts at market manipulation. Entities attempting to corner this type of auction are effectively forced to disclose their intentions to their competitors, as they continually bid as the Treasury lowers the yield. This allows those not party to the attempted market manipulation - particularly those holding short positions from when-issued trading to bid along with those who are trying to corner the issue. Hence, the would-be market manipulators may fail to corner the security or, at the least, find it a more expensive proposition.

---

<sup>14</sup> Those not pre-registered could appear at their local Federal Reserve bank with sufficient documentation and acceptable payment arrangements to be included in the auction through a computer hookup provided at the bank.

By contrast, in a sealed-bid auction - of either the multiple- or single-price variety the price reaction comes at the announcement of surprising awards, when dealers may realize that they are caught short and react. In a real-time, open auction, that reaction occurs when the bidding is still open, and thus the Treasury garners part of the profits of any attempted comer.

The Agencies believe that this type of auction, in combination with other recommendations of this report, has the potential for reducing the incentives for market participants to engage in manipulation, and would also provide assurances to market participants that they are not seriously disadvantaged in participating in Treasury auctions. The Treasury will be discussing this form of auction with market participants, academic experts, and others, and it welcomes the views of all interested parties.

**Auction rule changes.** The Treasury has made several important changes in auction rules and practices.

First, on October 25, the Treasury announced changes in its auction rules' that eliminated any distinctions in those rules with regard to primary dealers. The Treasury announced that *all* government securities brokers and dealers registered with the SEC would be eligible to submit bids for customers in Treasury auctions. Previously, only primary dealers and depository institutions were accorded this privilege. In addition, the Treasury announced the establishment of a payment mechanism by which any competitive bidder would be able to bid without making a deposit at a Federal Reserve bank or having an explicit payment guarantee.<sup>15</sup> Prior to this change, only primary dealers and depository institutions could bid without a deposit or a guarantee in coupon auctions, and only responsible, recognized dealers and depository institutions could do so in bill auctions.

Second, the Treasury has increased to \$5 million from \$1 million the maximum award to any single noncompetitive bidder in auctions of Treasury notes and bonds. This change is

---

<sup>15</sup> Treasury, in conjunction with the Federal Reserve, has developed a standard "autocharge" agreement that permits auction participants without a funds account at a Federal Reserve bank to pay for securities purchased at auction. An autocharge agreement is a written arrangement by a bidder and a depository institution. This agreement, which is filed with the appropriate Federal Reserve bank, authorizes the Federal Reserve bank to charge the depository institution's funds account on the issue date for securities purchased by the bidder.

Autocharge agreements may be rescinded by the clearing bank up to 24 hours before settlement. Thus, risk exists from auction date until 24 hours before settlement that a successful bidder may become unable to pay Treasury for its auction purchases. Such an event would simply mean that Treasury would sell less of a particular issue.

As discussed below, the Agencies are analyzing whether Government Securities Clearing Corporation, a registered clearing agency that offers an efficient, automated clearance and settlement system, can alleviate this concern.

designed to encourage direct noncompetitive bidding by the smaller institutional investors in the government securities market.

Third, effective with the November 1991 quarterly refunding, the Treasury now publicly releases data on quarterly borrowing needs two days prior to each quarterly refunding announcement and before the meeting of the Treasury Borrowing Advisory Committee. Previously, this information had been released at the time of the announcement of the securities to be offered in the refunding. As a result of this change, the Borrowing Advisory Committee no longer receives any information about Treasury's borrowing needs that has not already been made public.

The Treasury has considered other potential rule changes, but has decided that they are not currently necessary or appropriate. For example, no further changes are being made at this time to the 35 percent rule. The Treasury believes that this rule places an appropriate limit on auction awards.

The Treasury is not imposing any limitation on the combined amount awarded to a dealer and the customers for whom the dealer has placed bids. Such a limitation would discourage aggressive bidding and raise the Treasury's financing costs without providing a compensating benefit. It would also force a dealer that plans to make a large bid or receives an unusually high level of customer bids to advise customers to take their auction business elsewhere. If the dealer did not do this, the customers might find that their auction awards were reduced. Customers should have the right to, place bids in the auction with the assistance of the dealer they prefer, without having to worry about rationing problems due to the dealer's auction participation for its own account or the account of other customers.

The Treasury also will not compel large bidders to place bids directly, rather than going through a dealer. Large bidders have always had the option of placing bids directly. The Treasury does not believe it is appropriate to deny large bidders the advice and other services that a firm specializing in the government securities market can provide.

### **The Primary Dealer System**

The primary dealer system was created (and is administered) by the Federal Reserve to assist it in implementing monetary policy. However, the system has also served the Treasury's crucial interest in financing the nation's deficit spending.

In order to implement monetary policy, the Federal Reserve buys and sells government securities in the secondary market. The Federal Reserve determines the dealers with which it will trade, and these dealers, currently 38 in number, are called primary dealers. The FRBNY requires these dealers to meet certain criteria. Of course, each of the primary dealers is subject to comprehensive regulatory oversight by the appropriate regulatory agency - generally, the SEC.

The Treasury does not determine which dealers can be primary dealers, and it does not set any criteria for this designation. However, the Treasury believes that the government securities market, and hence the Treasury, have benefitted from the primary dealer system. The FRBNY has required that the primary dealers make markets in all maturity sectors of Treasury securities, and that each primary dealer's share of customer trading volume must equal at least one percent of total secondary market volume. The FRBNY also expects primary dealers to demonstrate their continued commitment to the market for Treasury securities by bidding meaningfully in all Treasury auctions. If a dealer fails to bid meaningfully in an auction, the FRBNY typically contacts that dealer to remind it of its so-called "underwriting" responsibilities.

The Treasury believes that the existence of a group of dealers with a commitment to the government securities market has been of great benefit to the Treasury. The dealers' underwriting responsibilities have served to "backstop" Treasury auctions, considerably reducing the risk of insufficient auction cover. This consideration perhaps receives less weight when market conditions are strong, but Treasury financing requirements are unrelenting and necessitate sales in uncertain or weak markets as well. The willingness of the primary dealers to assume underwriting risk for the Treasury has served to ensure that, within yield levels reasonably related to current market quotations and trading experience, enough bids are received to sell all Treasury security offerings.

Primary dealers routinely serve as intermediaries between the Treasury and ultimate investors. Since these dealers are in the business of developing customer business and meeting customer needs, competition for customer business is intense. This competition has served to broaden the market for Treasury debt. It has helped the Treasury to sell large amounts of debt quickly, with the knowledge that dealers will work to distribute securities to ultimate buyers.

The relationship between the Federal Reserve and the primary dealers is purely a business relationship, and not a regulatory one. The FRBNY has required that primary dealers submit reports to it and permit FRBNY staff to inspect their operations and books and records. However, the FRBNY has imposed these requirements primarily in order to assure itself that the primary dealers meet the established requirements for primary dealership, and without any view to regulating or taking responsibility for the overall conduct of the primary dealers.

**Recent developments affecting primary dealers.** The primary dealer system has evolved over time, in ways that have significantly reduced the advantages that primary dealers have in the government securities market.

For example, there has been a growing consensus that the information to which primary dealers have access through the interdealer broker screens should be more widely available. One interdealer broker - Cantor Fitzgerald - has long made its screens available through Telerate. And beginning on June 16, 1991, information on pricing and trading

volume from the screens of five of the other interdealer brokers became available for the first time through GOVPX, a private joint venture. The Agencies support increased availability of information in this marketplace, and believe that, one way or another, more information will become available over time. As a result, the information advantage of the primary dealers over other market participants can be expected to continue to decline.

The proposed change to an automated, open auction system may also serve to lessen the Treasury's reliance on primary dealers to distribute Treasury securities, if the new auction technique results in broader direct participation in the competitive auction process. Any information advantage that the primary dealers retain would be considerably less significant in a single-price, open auction.

The creation of the Government Securities Clearing Corporation ("GSCC"), which registered with the SEC in 1988 and commenced netting operations on July 7, 1989, has made the government securities market even more efficient. The counterparty risk reduction that netting provides has led four interdealer brokers to broaden their customer lists beyond primary and aspiring primary dealers for the first time, to include potentially all netting members of GSCC, some of which are not primary dealers.<sup>16</sup> As the group of dealers that are netting members broadens, the privilege of trading through the interdealer brokers - a privilege which is the product of private business decisions, not government regulation - will no longer be limited to primary dealers.

Another development that changed the special status of primary dealers occurred on October 25, when the Treasury announced the changes in its auction rules discussed above that eliminated the remaining distinctions that favored primary dealers.

**Additional changes in the primary dealer system.** The Treasury and the Federal Reserve believe that the primary dealer system has served the nation well for many years, but recognize that there also have been drawbacks. Notably, there may be a mistaken public impression that, by setting and maintaining certain standards for its primary dealer relationships, the Federal Reserve is in effect the regulator of the primary dealer firms. Moreover, the primary dealer designation has been viewed as conferring a special status on these firms that carries with it an element of "franchise value" for the dealer operation and possibly for other aspects of the firm's standing in the marketplace. Given these concerns, and given the near-term prospect of automation of Treasury auctions and Federal Reserve open market operations, it has become both feasible and appropriate for the Federal Reserve to amend its dealer selection criteria to provide for a more open system of trading relationships. The Federal Reserve still plans to exercise the discretion that any responsible market participant would demand to assure itself of creditworthy counterparties who are prepared to serve its needs.

---

<sup>16</sup> Cantor Fitzgerald has permitted trading access for customers that are not primary dealers for a number of years.

One feature of the amended criteria is that existing as well as new primary dealers will no longer be required to maintain a one percent share of the total customer activity reported by all primary dealers in the aggregate.

All primary dealers will continue to be expected to (1) make reasonably good markets to the FRBNY's trading desk; (2) participate meaningfully in Treasury auctions; and (3) provide the trading desk with market information and commentary.

New primary dealers must be commercial banking organizations subject to official supervision by U.S. federal bank supervisors or broker-dealers registered with the SEC. The dealer filiiis and the entities controlling the dealer filiiis must meet certain minimum capital standards (these are spelled out in the appended FRBNY statement on Administration of Relationships with Primary Dealers; see Appendix E).

For the time being, the number of additional primary dealers will be relatively limited by resource constraints on the FRBNY's trading desk operations. Following the implementation of automated trading, further expansion in the number of primary dealers will be feasible.

While continuing to seek creditworthy counterparties, and while enhancing its *market* surveillance capabilities, the FRBNY plans to discontinue the "dealer surveillance" now exercised over primary dealers through the monitoring of specific Federal Reserve standards and through regular on-site inspection visits. The FRBNY will expect to receive periodic reports on the capital adequacy of primary dealers, just as any other responsible market participant should expect to receive such reports.

Primary dealer firms that are convicted of felonies under U.S. law or that plead guilty or *nolo contendere* to felony charges relating directly or indirectly to their business with the Federal Reserve will be subject to suspension as primary dealers.

Taken together, these changes are designed to facilitate an orderly and gradual move to a more open system of primary dealer relationships with the FRBNY, while preserving beneficial characteristics of the current system. Over time, the implementation of automated systems for Treasury auctions and Federal Reserve open market operations may well provide the room for still further changes. However, the desirability of further changes will have to be evaluated against the experience with these changes and the need to preserve both the efficiency and flexibility of Federal Reserve monetary policy operations, and the liquidity and efficiency of the market for U.S. government securities.

## **Other Regulatory Issues**

**Large position reporting.** When market problems such as short squeezes occur, the Treasury and the FRBNY rely on major market participants for information concerning market developments. While the Treasury and the FRBNY believe that major market



participants will continue to provide such information, the Treasury, the FRBNY, and the SEC believe that backup legal authority for the government to compel disclosure of certain information is appropriate given the changes that are taking place in the government securities market. These changes include the evolution of the primary dealer system and the growing presence of a new set of large, relatively unregulated participants in the market - a group commonly called "hedge funds."

The Agencies believe that other measures announced in this report, including particularly the change in Treasury's reopening policy and potential changes in its auction technique, make acute, protracted short squeezes far less likely to occur in the future. The Agencies also believe that the new reopening policy will probably make it unnecessary to impose a system of large position reporting on the marketplace. However, the Treasury, the FRBNY, and the SEC believe that legislation should be enacted to clarify and broaden Treasury's rulemaking authority under the GSA to authorize the Treasury to make rules requiring holders of large positions in Treasury securities, including when-issued positions, to report this information to the regulatory authorities.<sup>17</sup> Such rulemaking authority would only be used if market problems persisted despite the other actions being taken.

Unlike section 13(d) of the Exchange Act, which requires beneficial owners of more than 5 percent of a corporation's equity to make a public disclosure of this information, any position reporting concerning Treasury securities would not be publicly disclosed. There is no intention to force market participants to disclose their trading strategies, and there would not be a presumption that the mere fact of holding a large position is evidence of manipulative or other illegal intent. The purpose of such reporting, if necessary, would be similar to the purpose of the position reporting in the commodity futures markets - it would enable government agencies to monitor market developments and have early warning of potential problems.

The Federal Reserve Board believes that large position reporting authority is unnecessary, particularly in light of the new policy on reopening securities issues. Once backup authority was granted, it might be difficult to resist activating that authority as a precautionary step. Large position reporting would impose costs on the marketplace and could cause some investors intent on protecting the confidentiality of their investment strategies to move their business offshore or to limit their participation in this market, raising the cost of financing the federal debt and yielding little net gain in avoiding disruptions in this market.

The Agencies believe that, if there is to be authority to require large position reporting, the Treasury is the appropriate agency to receive that authority.

---

<sup>17</sup> The Agencies do not believe that reporting of large *trades* appears to provide a desirable means for interested government agencies to discover the causes of any market difficulties or pricing anomalies.

**Surveillance and regulation.** Adequate surveillance of the government securities market is necessary if regulators are to detect and address disorderly market conditions and manipulation. Timely and accurate information is essential to effective surveillance and regulation of the government securities market. Each of the Treasury, the SEC, the Federal Reserve Board, and the FRBNY has access to different types of information about the government securities market, and each has different abilities to require market participants to furnish information. Surveillance and regulation of the government securities market will therefore require a high level of cooperation among the responsible authorities.

Some information about the government securities market is already being shared among the Agencies. For example, the FRBNY now prepares daily reports concerning significant market developments that are distributed to the SEC, the Treasury, the Federal Reserve Board, and the Commodity Futures Trading Commission ("CFTC"). These reports, which combine readily available market information with market-sensitive analyses, have improved the ability of the Agencies to monitor developments in the government securities market.

The current level of information provides a helpful start, but more information must be shared among the Agencies over time to assure effective surveillance. To this end, the Agencies have formed a surveillance working group to determine what types of information are needed for surveillance purposes, to develop mechanisms for collecting and disseminating that information to all of the Agencies, and to coordinate surveillance systems and procedures covering the government securities market.

The working group has been developing a framework for enhanced market surveillance for Treasury securities. Under this framework, the Agencies would develop a consensus on the types of data to be used in such a program, allocate responsibilities within the working group for surveillance and investigatory efforts, and establish parameters for inquiries and procedures to facilitate interagency information sharing and coordination.

The basis for any market surveillance program is collection and analysis of a range of market data. The Agencies believe that it would be appropriate that this data collection and monitoring function be conducted in the first instance by the FRBNY, which currently performs this function. The FRBNY would transmit this information promptly to the Federal Reserve Board, the SEC, and the Treasury.

In order better to fulfill this responsibility, the FRBNY plans to expand its current market data collection program. At present, some market data on prices, yields, and trading volume are received directly from automated systems operated by vendors. In addition, the FRBNY collects market information through daily telephone surveys of primary dealer operations. Dealer-specific transaction and position information is obtained through a series of weekly and daily reports.

In order to enhance its surveillance capabilities, the FRBNY plans to review and expand these data sources and develop automated feeds of market data to run computer exception reports. In assessing additional data requirements, the Agencies recognize that the need for regular and detailed position and transaction data is lessened to the extent that reopenings are effective in discouraging acute, protracted price anomalies. Such data will be more useful in particular instances in which misconduct or manipulation may have occurred.

The expanded program of data collection is likely to involve revisions to the reports that are currently submitted on a daily basis by primary dealers showing their gross long, gross short, and net positions in when-issued securities. These revisions could include: (1) expansion of the reporting period beyond the when-issued period up to the commencement of when-issued trading in the next security of the same initial maturity; (2) enhancement of information on related positions in options and forward contracts; and (3) information on related activity in the financing market. In addition, an effort will be made to capture relevant information on positions in Treasury futures.<sup>18</sup> Of course, as additional experience is gained with the surveillance system and as other recommendations in this report are implemented, consideration may need to be given to modifying the reports, perhaps to include additional information such as aggregate customer positions.

Such revisions cannot be implemented overnight. The working group must agree on the precise formats and reporting thresholds that will be utilized, and regulatory requirements for revised reporting programs must be satisfied. In addition, new automated systems to process this information must be developed. As a result, actual implementation of this new system is expected to take approximately one year. In the interim, therefore, the FRBNY will utilize existing reporting requirements, to the extent possible, in order to collect position and transaction information on an *ad hoc* basis to carry out surveillance inquiries into questionable market activity.

Separately, the working group is developing a framework to ensure that surveillance operations and inquiries into suspicious market developments are conducted systematically. Reports on surveillance exceptions, investor complaints, and trading inquiries will be distributed among the working group members in agreed-upon formats on pre-determined schedules. Every effort will be made to ensure that all relevant information is shared among the Agencies, and that inquiries and investigations are thorough and well-documented prior to their resolution. In addition, senior staff of the Agencies will coordinate through regular meetings in order to keep track of significant market developments that might affect surveillance programs and any other related matters.

**Audit trails.** Audit trails are the primary surveillance tools produced and used by self-regulatory organizations ("SROs") to detect manipulation or fraudulent or illegal trading in the equity and options markets, and for investigative purposes in disciplinary proceedings.

---

<sup>18</sup> This will permit increased surveillance by the SEC and CFTC for possible intermarket trading abuses involving the cash and futures markets in Treasury securities.

They are automated, time-sequenced records of information pertaining to trades in securities. This computerized information permits SROs to sift through voluminous trading data to detect potential trading abuses and provides time-sequenced information on transactions that may reveal intermarket abuses. The GSA did not grant authority to set up a similar audit trail system for government securities transactions.

Treasury and Federal Reserve position on audit trails. The Treasury and the Federal Reserve do not believe that a strong case has been made for an audit trail system to be imposed on the government securities market. Given that the government securities market is less vulnerable to the types of insider trading and other abuses that occur in the equities and derivatives markets, the Treasury and the Federal Reserve do not believe that it has been demonstrated that sufficient benefits would accrue to the SEC in its enforcement activities to outweigh the costs of establishing and maintaining an automated audit trail system. The Treasury and the Federal Reserve also believe that improvements in transparency in the government securities market and other measures discussed in this report designed to make significant short squeezes even less likely reduce the value of an automated audit trail.

SEC position on audit trails. The SEC believes that audit trails would be a valuable tool in conducting surveillance of the government securities market and in enforcing the rules that govern the market's operation. At present, the SEC can only monitor unusual price or yield movements in Treasury securities through its market data and news retrieval systems, and through the summary market data provided by the FRBNY. As a result, the SEC's information regarding the government securities market is not comprehensive and is clearly inferior to the information that is available to the SEC and the SROs with respect to the equity and options markets. Indeed, the conduct of the SEC's investigation of Salomon was made more difficult by the absence of comprehensive audit trail data.

The SEC recognizes that, because of the government securities market's unique characteristics, regulatory tools that are appropriate in other securities markets may need to be tailored to fit the government securities market, and that any regulatory measure proposed for the government securities market should be evaluated carefully on a cost/benefit basis prior to implementation. As a result, the SEC is not convinced that the full equity market audit trail need be replicated in the government securities market at this time.

However, the SEC believes that an audit trail system for the government securities market would not need to be expensive or burdensome on market participants. In particular, the SEC believes that a partial audit trail could be constructed by combining transaction information from GSCC with price and volume information from GOVPX (and perhaps Cantor).<sup>19</sup> Such a partial audit trail would not involve significant expense to market participants, and the process would be nearly invisible from their point of view.

---

<sup>19</sup> GOVPX was not designed to provide regulators with the types of detailed, party-specific information provided by audit trails in the stock and options markets. GOVPX is not an audit trail for regulatory purposes.

The SEC believes that creation of this sort of audit trail in the government securities market could provide significant benefits in terms of improved oversight and surveillance, and that there should be legislative authority for the SEC to effectuate an audit trail system. However, to the extent that trading in government securities becomes significantly more transparent, and given the Treasury's intention to reduce the potential for short squeezes by reopening Treasury issues when necessary, the SEC believes that the desirability for new legislative authority concerning audit trails would be reduced, but not eliminated.

**Internal controls.** It is essential that firms conducting a government securities business maintain an effective system of internal controls and supervisory procedures. Recent events in the market, however, have cast doubt on the effectiveness of internal controls employed by certain government securities brokers and dealers.

Existing SRO rules require each member to establish an internal supervisory system that includes a requirement that it maintain and enforce written procedures for conducting its business. Once legislation is enacted concerning misleading written statements to issuers of government securities, SRO authority in this area would explicitly extend to Treasury auctions and primary distributions of GSE securities. Enactment of this legislation would accomplish the desired extension to Treasury and GSE securities of requirements for appropriate written procedures to implement adequate internal controls. It would then be superfluous to enact additional legislation to mandate internal controls.

**Transparency.** An important characteristic of fair and efficient markets is transparency, defined as the degree to which real-time trade and quotation information and other market-related information, such as information about the depth of the market, is available to all market participants.

Transparency is important for several reasons. Availability of market information serves the public interest because it ensures that a broad spectrum of market participants can obtain current, accurate information concerning market conditions, thus fostering the integrity, competitiveness, liquidity, and efficiency of the market. The derivative markets are also strengthened by the availability of timely and accurate information on the underlying securities used for pricing and hedging strategies. Further, access to accurate market information enhances the ability of regulatory examiners and independent auditors to carry out their respective responsibilities to ensure that securities transactions and positions are priced appropriately. Finally, transparency enhances customer protection, since customers are in a better position to determine actual or potential prices for securities and to evaluate the fairness of trades.

In a completely transparent market, all market participants have equal and immediate access to all firm quotations, including the size of those quotations, as well as reports of prices and volumes on all trades effected in the market. Of course, complete transparency represents a theoretical model that has not been achieved in any market. Of all securities

markets, the level of transparency is probably highest in the U.S. equity markets.<sup>20</sup> In contrast, there is substantially less market data publicly available for U.S. debt markets, including the government securities market.

Interdealer broker quotations and trade reports currently represent the best source for deriving market prices for government securities, because they include the current bids and offers of the primary and many other large active dealers, the principal market makers in the government securities market. The Agencies believe that all useful information on the screens of the interdealer brokers should be made available to the public, either through GOVPX or otherwise.

Recent developments in transparency. Significant progress was made during 1991 in increasing information access in the government securities market. A private sector initiative - a joint venture known as GOVPX, Inc. - became operational on June 16, 1991. GOVPX disseminates real-time price and quotation information on all Treasury bills, notes, and bonds on a 24-hour, global basis. The system provides information regarding all trading of Treasury securities (other than zero-coupon instruments) that is executed through five interdealer brokers. The information disseminated is a composite picture of the trading activity, showing executed trade prices, volume of executed trades, best bids and best offers, and running aggregated volumes traded for each security on a daily basis. This information is provided to on-line vendors for distribution to the public.

While GOVPX is a promising step, it has deficiencies. For example, it does not provide the size associated with published bids and offers; it does not allow users to capture the data or to apply financial analytical techniques; and it does not include information on stripped Treasury securities or on non-Treasury government securities. In addition, the Agencies recognize that even a greatly expanded GOVPX system has certain inherent limitations in its coverage of the Treasury market. GOVPX was not designed to cover all trading volume, only trading volume effected through contributing interdealer brokers.<sup>21</sup> It does not report trading volume among primary dealers or between a primary dealer and a customer, such as a hedge fund, that is not effected through an interdealer broker. Thus, a substantial amount of market activity is not reflected in GOVPX reports. However, despite its limitations, GOVPX is an important step forward in bringing increased transparency to the Treasury market.

---

<sup>20</sup> For a large percentage of equity securities traded in the United States, all current, sizable quotations are immediately disseminated to market data subscribers, and trade reports are required to be reported and disseminated within 90 seconds of execution, although the average is around 10 seconds.

<sup>21</sup> One of the major interdealer brokers, Cantor Fitzgerald, Inc. ("Cantor") has made its price information available to the public through Telerate Systems, Inc. ("Telerate") since the early 1970s. Telerate disseminates to its customers the same information that Cantor disseminates to the dealers that trade through Cantor. While Cantor does not report trades to GOVPX, and GOVPX is not available through Telerate, market participants who subscribe to both GOVPX and Telerate are able to obtain quotation information from all but one of the interdealer brokers.

In a letter to GOVPX's Board of Directors, dated October 25, 1991, the Treasury strongly encouraged GOVPX to address certain of these deficiencies and urged that all useful interdealer broker screen information be made available to the public as promptly as possible.

Treasury and Federal Reserve position on transparency. The Treasury and the Federal Reserve believe that the transparency problem in the government securities market has been greatly alleviated, and that the private sector initiatives already under way should be allowed additional time to develop before any new rulemaking authority is deemed necessary. The two Agencies therefore support S.1247, which calls for a joint Treasury/SEC/Federal Reserve Board evaluation of private sector initiatives regarding the dissemination of price and volume information.

The Treasury originally proposed that it be granted rulemaking authority in this area in order to ensure that private sector initiatives, such as GOVPX, continue to take further steps to disseminate government securities price and volume information. However, for now, the Treasury accepts the judgment of the Senate in passing S.1247 that adequate private sector solutions are likely to be found without the need for additional federal regulation. The commencement of operations by GOVPX in June was an important factor in Treasury's decision to support the Senate approach. The continued positive response of the industry in enhancing transparency will be an important determinant of whether the Treasury eventually comes to support additional regulatory authority in this area.

SEC position on transparency. The SEC supports legislation providing it with backstop authority to adopt requirements for dissemination of data concerning transactions in government securities where private efforts, such as GOVPX, do not meet standards established in legislation. In order to enable the SEC to respond to structural shifts in the market, including either a consolidation of brokerage firms or a move to direct dealer to dealer trading, the SEC believes that the backstop authority should be broad and flexible.

The SEC believes that markets are stronger and less susceptible to manipulation and unfair pricing when there is broad public access to real-time pricing information. Furthermore, access to more complete pricing information would enhance fair competition among primary and secondary dealers by increasing the ability of secondary dealers to quote competitive markets. The SEC further believes that there should be authority to collect pricing information from all government securities brokers and dealers. This should include both dealer quote and trade information, including price and volume on all government securities.

Private sector initiatives to provide this information are, of course, preferable to regulatory solutions. In recent months, GOVPX has made progress in improving the transparency of the government securities market. Without backstop legislation, however, the SEC believes that the impetus for further improvements could diminish. With backstop authority, if GOVPX or other private efforts prove unreliable or inadequate in delivering

valuable market data, the SEC could act to ensure adequate information is available to all market participants.

The SEC believes that it should be the agency to exercise this authority, because it already exercises similar, though more extensive, responsibility for overseeing a large number of electronic trading and reporting systems. Its experience and expertise would enable it to monitor the development of private sector systems with largely existing capability and without significant additional cost. The SEC also has the existing expertise to take any necessary action should GOVPX or other private efforts prove inadequate. Any alternative would result in one agency exercising oversight over transparency in every market but the government securities market.

**Sales practice and other SRO rules.** The imposition of sales practice rules on the government securities market has been controversial. The Agencies were not able to develop a common position on this subject. The Treasury and the SEC agree that this market should have sales practice rules, but *they* disagree on precisely how such rules should be implemented. The Federal Reserve does not believe that the necessity for sales practice rules has been demonstrated, but would not oppose removal of the prohibition on the National Association of Securities Dealers ("NASD") applying its sales practice rules to government securities.

Treasury position on sales practice rules. The government securities market is the only regulated securities market in which not all brokers and dealers are subject to sales practice rules. The Treasury's concern in this area is not for the large, institutional investors, who should be expected to have the ability to judge the suitability of particular securities, but for the smaller, less sophisticated customers who are attracted to the government securities market because of their desire for safe and secure investments. Adding to this concern is the proliferation in the market of instruments that are far riskier than the traditional Treasury and agency securities on which *they* are based. These instruments include mortgage-backed securities and real estate mortgage investment conduits ("REMICS") issued or guaranteed by government agencies or GSEs, zero-coupon instruments such as STRIPS, agency mortgage-backed securities stripped into interest-only ("IOs") and principal-only ("POs") pieces, and over-the-counter options on government securities. Many of these securities are backed by a U.S. government guarantee or are highly rated by nationally recognized statistical rating organizations, and are attractive due to their apparent higher returns. However, unsophisticated investors may not fully understand their complexity, risks, and speculative nature. In addition, it is necessary to prevent unscrupulous persons, who may have operated in other markets, from gravitating to the government securities market.

The Treasury supports the regulatory structure for sales practice rules set out in *S.1247*, which in its view reflects a balanced and appropriate role for each of the regulatory agencies. The primary rulemaking powers pertaining to such rules for financial institution brokers and dealers and members of registered securities associations rest with the appropriate federal financial institution regulator and the NASD, respectively. This approach utilizes the



expertise and experience of the bank regulatory agencies and the NASD in implementing and enforcing sales practice rules that are in place for other markets. Additionally, the Treasury believes that the regulatory structure of *S.1247* preserves the SEC's oversight role for self-regulatory organizations.

By permitting sales practice rules to become effective only if the Treasury has not determined that the rules would "adversely affect the liquidity and efficiency of the market for government securities" or "impose any burden on competition not necessary or appropriate," this regulatory framework also ensures that the Treasury retains an oversight role, consistent with the regulatory approach set out in the GSA. This structure is appropriate given Treasury's interest in minimizing the cost to the taxpayer of financing the public debt by maintaining the liquidity, efficiency, and integrity of the government securities market. A Treasury oversight role would also help to minimize disparities in sales practice rules for the various types of brokers and dealers.

SEC position on sales practice rules. The SEC believes it would be appropriate to extend normal sales practice standards and other NASD rules<sup>22</sup> to transactions in government securities by removing the statutory restriction on NASD authority in the government securities market. The SEC does not oppose granting the appropriate regulatory agencies for financial institutions the authority to adopt similar sales practice rules governing transactions in government securities.<sup>23</sup> First, expansion of the NASD's authority is consistent with Congress's preference for self-regulation of the securities markets.<sup>24</sup> The NASD already has experience in the sales practice area and maintains an ongoing relationship with its members. Second, this approach is the most cost-effective means of preventing sales practice abuse. Sales practice abuses are not security-specific, and existing sales practice rules may be sufficient without significant modifications. The extension of these rules to the government securities market would reduce training and compliance burdens because basic sales practice rules are already known and understood by the sales forces of integrated securities broker-dealers. Of course, the existing NASD rules could, if necessary, be tailored

---

<sup>22</sup> The SEC believes that, in addition to sales practice rules, the NASD should be free to apply other types of just and equitable principles of trade and anti-fraud rules to the government securities activities of its members. In addition, the SEC believes that the NASD should be authorized to adopt appropriate other rules for the government securities markets. Examples of such rules include fidelity bonding requirements and qualification and testing requirements, which would allow the NASD to assure that personnel associated with member firms had the requisite knowledge to comply with sales practice and financial responsibility rules.

<sup>23</sup> The SEC also does not oppose provisions in H.R. 3927 introduced by Chairman Markey and other members of the House Subcommittee on Telecommunications and Finance that would amend Section 15(c)(2) of the Exchange Act to remove the exemption for brokers and dealers in government securities from rules designed to prevent fraudulent and manipulative acts. Such authority, together with the rulemaking authority under Section 10(b) of the Exchange Act, would permit the Commission to adopt effective antifraud and antimanipulative rules, if necessary.

<sup>24</sup> See Securities Industry Study Report of the Subcommittee on Securities, Senate Committee on Banking, Housing & Urban Affairs, S. Doc. No. 93-13, 93rd Cong., 1st Session 149 (1973).

to the specific market conditions and specific types of abuses that may occur in the government securities market. Finally, the principle of "functional regulation," which the SEC has long supported,<sup>25</sup> suggests that for purposes of NASD rules government securities should not be treated differently from other types of securities. As a result, the SEC believes that the statutory prohibition on application of NASD rules (including sales practice rules) to the government securities market should be lifted, so that all securities receive equivalent treatment (and all customers receive equivalent protection) under the NASD's rules.

The SEC opposes the provisions in Senate bill S.1247 that would permit sales practice rules to become effective only if the Treasury has not determined that the rules would "adversely affect the liquidity and efficiency of the market for government securities" or "impose any burden on competition not necessary or appropriate." Such provisions give the Treasury a veto over the actions of independent financial regulators in connection with the exercise of new sales practice rulemaking authority. This would set a negative precedent of direct intrusion into the decisions of independent regulators. This veto provision has been opposed by the Chairmen of the SEC, the Federal Reserve, and the Federal Deposit Insurance Corporation on these grounds. The Treasury's legitimate interest in financing the debt at the lowest possible cost to federal taxpayers could easily be recognized through consultation requirements associated with the new rulemaking authority. The SEC, an independent financial regulator, shares the Treasury's concern with the liquidity and efficiency of the markets and believes it has established an excellent record of carrying out consultation and coordination requirements in other federal laws.<sup>26</sup> For example, the SEC routinely consults with the banking regulatory agencies regarding proposed rule changes for the clearance and settlement of securities and SEC rule proposals for lost or stolen securities.<sup>27</sup>

Federal Reserve position on sales practice rules. The Board of Governors believes that a decisive case has not yet been presented for adding statutory requirements in this area. Nevertheless, the Board would not oppose a modest broadening of current law, with adequate safeguards.

If Congress believes that a provision for sales practice rules is a necessity, perhaps the least costly and most responsive added measure would be a simple removal of the prohibition on the NASD applying its sales practice rules to government securities transactions. That

---

<sup>25</sup> As a general matter, the SEC believes that functional regulation can provide important benefits by promoting efficiency, effectiveness, and consistency. Testimony of Richard C. Breeden, Chairman, SEC, before the Subcommittee on Securities, Committee on Banking, Housing and Urban Affairs (June 12, 1991).

<sup>26</sup> Letter from Alan Greenspan, Chairman of the Board of Governors of the Federal Reserve System, Richard C. Breeden, Chairman of the Securities and Exchange Commission, and L. William Seidman, Chairman of the Federal Deposit Insurance Corporation, to the Honorable Christopher J. Dodd, Senate Securities Subcommittee, Committee on Banking, Housing and Urban Affairs, dated July 19, 1991.

<sup>27</sup> See 15 U.S.C. § 78q-1(d)(3).

change would bring NASD firms into line with what is already the case for New York Stock Exchange member firms, extending sales practice rules to all nonbank brokers and dealers. In this process, which would in essence take place with oversight by the SEC, the Federal Reserve would favor substantive consultation and cooperation with the Treasury as the primary regulator of this market. In general, the Federal Reserve favors consultation and cooperation and opposes the granting of veto powers over other agencies' regulations in this market.

**GSCC enhancements.** GSCC has the potential to provide the basis for further improvements to the government securities market.

(1) Repo processing. The market for repurchase and reverse repurchase agreements could benefit from automated comparison. GSCC could benefit the market by offering a system that clearly defines which stage of the transaction is occurring (e.g., opening, closing, setting up a reverse repo or closing a reverse repo) and that automatically generates a comparison of the transaction.<sup>28</sup> Such a service, if capable of capturing a high percentage of repo transactions, could enable regulators to obtain data on repos as necessary for surveillance purposes at little or no cost to market participants.<sup>29</sup> The Agencies urge GSCC to develop efficient processing systems for market participants' repo activity.

(2) More trades in the net. The benefits of netting are greater as more trades are included in the net. In addition, as more trades are included in GSCC's netting system, a larger percentage of market trades become guaranteed trades, thereby freeing members from certain counterparty risk associated with those trades. To this end, GSCC is planning to include more types of trading activity in the netting process and to expand its membership. Specifically, GSCC has proposed to add yield-based trades and auction take-down activity to the netting process. The Agencies agree that the benefits of netting should be expanded to a greater universe of trades.

(a) Yield-based trades. The SEC recently approved GSCC's proposal to include yield-based trades in the netting system beginning in January 1992.<sup>30</sup> By including yield-based trades in the netting system, members will enjoy the credit protections of GSCC's trade guarantee for their yield-based trades sooner than under the current procedure, whereby

---

<sup>28</sup> Some clearing agencies currently offer repo processing services. For example, DTC operates a Repo Tracking System that is designed to ensure that distributions on the securities underlying the repo are paid to the proper party.

<sup>29</sup> Activity in the government securities repo market is sizable. Centralized repo processing would give regulators a truer picture not only of the government securities market, but also of each market participant's total risk profile, enabling GSCC, other clearing agencies, and regulators to refine their risk reduction policies.

<sup>30</sup> Securities Exchange Act Release No. 29732 (September 24, 1991), 56 FR 49937. In order to include yield-based trades in the netting system, GSCC will convert the yield trades into priced trades at the time of comparison. To convert, GSCC will use a standard Treasury conversion formula.

compared yield-based trades are deleted from the system and re-submitted for netting after the Treasury auction.

(b) Auction take-down activity. Another type of trading activity that GSCC could include in the netting process is auction take-down activity. GSCC has proposed that its services be used in connection with the delivery of auction purchases. Under its proposal, GSCC would accept and report in its comparison system data on securities purchases made at auctions by GSCC netting members, net the purchases with when-issued trades of such members in the same securities through the netting system, and assume responsibility for the delivery of the purchased securities through GSCC's clearing mechanism.<sup>31</sup> If this proposal is implemented, additional information on the overall distribution process required to settle Treasury auction purchases and on the true net settlement positions of members during a when-issued period would be available at GSCC.

GSCC's proposal is especially significant in light of the risk to the Treasury resulting from the auction settlement process and the use of autocharge agreements. GSCC's proposal would reduce the risk to the Treasury to the extent that GSCC assumes responsibility for auction purchases that are netted against when-issued sales.

(3) Increasing membership. Currently, a significant number of GSCC's netting members are primary dealers, aspiring primary dealers, and interdealer brokers. GSCC represents that it is actively developing changes to its membership standards to admit a second tier of market participants beyond these entities. GSCC believes this tier of potential members is composed of two categories of market participants: a small group of arbitrage firms and registered or noticed government securities brokers and dealers. Interest from the second group principally is to meet the government securities needs of their retail equity customers. The Agencies believe that GSCC should accelerate its efforts to expand membership to more government securities brokers and dealers.

(4) Confirmation systems for institutional customers. Ideally, centralized comparison systems might be adapted and expanded to include non-dealer, institutional customers.

---

<sup>31</sup> GSCC has refined its proposal so that any Treasury auction purchase by a netting member - whether competitive or noncompetitive in nature and whether or not for a customer - automatically would be delivered to GSCC's clearing bank and encompassed within GSCC's net. GSCC would allocate auction deliveries to allow for the most complete netting process and to ensure timely delivery so that each member would take possession of the entire amount of its auction purchases that it needs on the morning of issue date.

Comparison systems for institutional customers generally offer automated confirmation<sup>32</sup> and affirmation<sup>33</sup> services.

Although GSCC does not yet offer centralized, automated confirmation and affirmation systems, such systems exist today at other clearing agencies. With adaptation or change, these systems could be expanded to include government securities trades involving institutions. For example, the Depository Trust Company's ("DTC")<sup>34</sup> Institutional Delivery ("ID") and International Institutional Delivery ("IID") Systems provide automated confirmation and affirmation services to brokers, banks, and institutional customers.<sup>35</sup> The Agencies urge GSCC to explore with DTC whether benefits would accrue to government securities market participants if GSCC and DTC were to provide them with access to existing confirmation and affirmation systems.

### **III. Government-Sponsored Enterprise Issues**

In connection with the investigation of unlawful behavior in the government securities market, certain misconduct has been revealed in the primary market for GSE securities. Many members of GSE selling groups submitted inflated indications of customer interest to the fiscal agents for GSE securities. This practice had persisted for a significant period of time.

To address this situation, the Agencies recommend adoption of an amendment to the Exchange Act, discussed above, that would make it an explicit violation of that Act to provide misleading written information in connection with a primary offering of any

---

<sup>32</sup> In a typical institutional trade, the customer's executing broker must confirm the terms of the trade in writing to the investment manager.' See 17 C.F.R. § 240.10b-10.

<sup>33</sup> If the confirmation conforms to the investment manager's records of the customer's ordered trades, the investment manager must issue instructions (affirmation) to the custodian bank authorizing the receipt or delivery of securities against payment to or by the broker.

<sup>34</sup> DTC is a registered clearing agency and the largest securities depository in the United States.

<sup>35</sup> Adapting DTC's ID or IID Systems for use in the government securities markets would mean that dealers who participate in GSCC might be required to interact with more than one clearing agency to compare their government securities trades. It might be possible, however, for GSCC to act as a conduit for its members, by accepting trade data from them and transmitting the data to DTC for confirmation processing. Output from DTC could be transmitted to GSCC for distribution to its members.

DTC would need to adapt the ID system in at least one way in order to accommodate the need for earlier confirmations in the government securities market. Currently, the ID system trade input is in batch form and is processed only once a day - too late for the needs of the government securities market. Plans to enhance the ID system are under discussion. The IID system currently uses a multi-batch system that could accommodate earlier confirmations that would be useful for government securities trades.

government security. Although deliberate misstatements to GSEs or their fiscal agents are already covered by the general antifraud provisions of the securities laws, adoption of such a new statutory provision would highlight the importance of compliance in this area and facilitate SRO compliance reviews.

### **Exempt Status of GSE Securities**

The Agencies believe that the exemptions under the federal securities laws for equity and unsecured debt securities of GSEs should be eliminated.<sup>36</sup> The securities of GSEs are generally exempt from registration and are treated as government securities for purposes of the federal securities laws.

Securities issued by the U.S. Government are exempted from certain provisions of the federal securities laws, due primarily to the credit quality of the securities, which eliminates the need for disclosure of information relating to the financial condition of the issuer. Unlike Treasury securities, however, the securities of GSEs do not have a government guarantee (except for the obligations issued by the Farm Credit System Financial Assistance Corporation). Indeed, in many cases Congress has been careful to specify explicitly that securities of a particular GSE are *not* guaranteed by the U.S. Government, and in other cases it has required GSEs to disclose that fact to the public. The debt securities of GSEs normally are priced in the market at a spread over the rate on Treasury securities of similar maturity, in order to compensate for lower liquidity than Treasury securities and for the implicit risk that the U.S. Government might not honor the debt obligations of a GSE that was unable to meet its obligations. Debt securities issued by GSEs thus do not have the unquestioned credit quality that justifies the exemption for government securities under the federal securities laws.

The case is clearest with respect to equity securities of GSEs. All the GSEs except for one small entity are now completely privately owned, and the value of GSE equity securities rests primarily' on their financial condition and value as going concerns. Therefore, investors need the same basic financial and operational information about GSEs as they would need from any company in order to evaluate the merits of an investment in its equity securities. All this information should be provided in the same form, and under the same time frames, as for similar securities of other issuers. For these reasons, the Agencies support repeal of the exemption of GSE equity and unsecured debt securities under the federal securities laws.

---

<sup>36</sup> Any legislation should make clear that such securities would maintain their current eligibility for use in repo transactions and for trading by government securities brokers and dealers that have registered or filed notice under section 15C of the Exchange Act.

## **APPENDICES**

## **APPENDIX A**

### **BACKGROUND ON THE TREASURY SECURITIES MARKET**



## 1. Characteristics of the Primary Market

The public debt amounted to \$3,665 billion on September 30, 1991, including \$2,114 billion of marketable securities held by private investors.<sup>1</sup> Nonmarketable Treasury securities (including those issued directly to federal trust funds), United States savings bonds, state and local government series securities, and marketable securities held by federal government accounts and the Federal Reserve System comprise the rest of the public debt.

**Size of borrowing needs.** The Treasury has auctioned large amounts of marketable Treasury securities in the past ten years. In fiscal year 1981, Treasury sold over \$670 billion of marketable Treasury securities. By fiscal year 1991, this figure had increased to over \$1.7 trillion. As long as there is a budget deficit, the amount of securities the Treasury is required to sell will tend to increase, not only to raise funds to cover the shortfall between receipts and expenditures, but also to refinance maturing debt.

**Evolution of Treasury financing techniques.** The Treasury has employed auctions for Treasury bills since the securities were introduced in 1929. Since then, the only major modifications to bill auctions have been a provision for noncompetitive bids in 1947 and a change in 1983 to receiving bids on the basis of yield (bank discount basis) rather than price.

Prior to the early 1970s, the traditional methods for selling notes and bonds were subscription offerings, exchange offerings, and advance refundings. Subscriptions involved the Treasury setting an interest rate on the securities to be sold and then selling them at a fixed price. In exchange offerings, the Treasury would allow holders of outstanding maturing securities to exchange them for new issues at an announced price and coupon rate. In some cases, new securities were issued only to holders of the specific maturing securities; in others, additional amounts of the new security would be issued. Advance refundings differed from exchange offerings in that the outstanding securities could be exchanged before their maturity date.

A fundamental difficulty with subscription offerings was that market yields could change between the announcement of the offering and the deadline for subscriptions. Increased market volatility in the 1970s made fixed-price subscription offerings very risky for the Treasury.

A modified auction technique was introduced in 1970, in which the interest rate (coupon rate) was still preset by the Treasury, and bids were made on the basis of price. Setting the coupon rate in advance, however, still involved forecasting interest

---

<sup>1</sup> Privately held marketable securities exclude holdings of federal government accounts, such as the Social Security trust funds, and holdings of the Federal Reserve System.

rates, with the risk that the auction price could vary significantly from the par value of the securities. In 1974, Treasury started to auction coupon issues on a yield basis. Bids were accepted on the basis of an annual percentage yield, with the coupon rate based on the weighted average yield of accepted competitive tenders received in the auction. This freed Treasury from having to set the coupon rate prior to the auction and ensured that the interest costs of new note and bond issues would accurately reflect actual market demand and supply conditions at the time of the auction.

Another sale method was used in six auctions of long-term bonds in Treasury mid-quarter refundings between February 1973 and May 1974. This was the sealed-bid, uniform-price, or "Dutch," auction method. The coupon rate was preset by the Treasury and bids were accepted in terms of price, starting with the highest price and moving through successively lower prices until the offering had been fully placed. All successful bidders were awarded securities at the lowest price of accepted bids.

**Current auction technique.** Today, all Treasury auctions are conducted, on a yield basis. Competitive bidders submit tenders stating the yield (discount rate for bill auctions) at which the bidder wants to purchase the securities. The bids are ranked from the lowest yield to the highest yield required to sell the amount offered to the public. Competitive bidders whose tenders are accepted pay the price equivalent to the yield that they bid. In an auction of Treasury notes or bonds, the coupon rate is based on the average yield of accepted competitive bids.

Noncompetitive bids from the public for up to \$1 million of Treasury bills and up to \$5 million of notes and bonds are awarded in full at the weighted average yield of accepted competitive bids. The ability to bid on a noncompetitive basis ensures that small investors, who may not have current market information, can purchase securities at a current market yield. Noncompetitive bidding eliminates the risk that a prospective investor might bid a yield that is too high and not obtain the securities desired or might bid a yield that is too low and pay too much for the securities. It also helps serve the goal of achieving a broad distribution of Treasury securities.

To participate in a Treasury auction, any potential investor may submit tender forms to a participating Federal Reserve bank or branch,<sup>2</sup> which acts as the Treasury's fiscal agent in the auction, or to the Treasury's Bureau of the Public Debt. Currently, tenders are received at 37 sites. The deadline for competitive bids is usually 1:00 p.m., Eastern time; noncompetitive tenders must be received one hour before the closing time for competitive tenders, or, if sent by mail, must be postmarked by midnight on the day before the auction and received on or before the issue date.

---

<sup>2</sup> Currently, 36 of the 37 Federal Reserve banks and branches accept auction tenders, with the Helena, Montana branch the only exception.

Typically, between 75 and 85 bidders submit competitive tenders in Treasury auctions for securities to be held in the commercial book-entry system.<sup>3</sup> Additionally, between 850 and 900 bidders submit noncompetitive tenders in Treasury auctions for securities to be held in the commercial book-entry system. Also, on average there are about 19,000 noncompetitive tenders per auction for securities to be held in the TREASURY DIRECT book-entry system.<sup>4</sup>

The 38 primary dealers account for a large proportion of the participation in Treasury auctions, as discussed in Section 3 of Appendix B. The Federal Reserve expects primary dealers to demonstrate their continued commitment to the market for government securities by participating in Treasury auctions. It should be emphasized, however, that auctions are open and that others besides primary dealers can and do participate, either directly, or through any government securities brokers and dealers that are registered with the Securities and Exchange Commission ("SEC") or through a depository institution.

Depository institutions and government securities brokers and dealers registered with the SEC may submit either competitive or noncompetitive tenders for their own account and for the accounts of customers. All other entities or individuals may submit either competitive or noncompetitive tenders only for their own accounts. Depository institutions, brokers, and dealers are required to submit customer lists when submitting bids for the accounts of customers. Customer lists for competitive bids must be submitted either with the tender or by the close of the auction. Customer lists for noncompetitive tenders submitted by mail must be received prior to the issue date, although customer lists for all other noncompetitive tenders must be received by the close of business on the auction date.

Prior to the auction of three-year notes on November 5, 1991, bidders in Treasury auctions had the option to pay in full at the time the tender was submitted or,

---

<sup>3</sup> The commercial book-entry system for Treasury securities is operated by the Federal Reserve banks, acting as the Treasury's fiscal agents. It is a multi-tiered, automated system in which marketable Treasury securities are issued, serviced, maintained, and traded. Ownership is not evidenced by physical securities, but rather by computerized records, with the top tier of records maintained at the Federal Reserve banks. The Federal Reserve maintains book-entry accounts for depository institutions and other entities such as government and international agencies and foreign central banks. In their book-entry accounts at the Federal Reserve, the depository institutions may maintain their own security holdings and holdings for customers, which include other depository institutions, dealers, brokers, institutional investors, and individuals. In turn, the depository institutions' customers maintain accounts for their customers. Brokers and dealers that are not depository institutions are not permitted to maintain securities accounts directly with the Federal Reserve.

<sup>4</sup> The TREASURY DIRECT system is designed primarily for those who wish to hold Treasury securities to maturity; no custodial or transaction fees are charged. As of September 30, 1991, 1.1 million investors held 2.3 million security accounts in TREASURY DIRECT with a par value of nearly \$64 billion.

in the case of notes and bonds, to present a guarantee from a commercial bank or primary dealer of five percent of the par amount tendered.<sup>5</sup> The deposit requirements did not apply to primary dealers, depository institutions, states, political subdivisions or instrumentalities thereof, public pension and retirement and other public funds, international organizations in which the United States holds a membership, and foreign central banks and foreign states.

Effective with the November three-year note auction, the Treasury established a payment mechanism, called an auto charge agreement, which supplements the other existing payment mechanisms. The autocharge agreement is a written arrangement by a bidder and a depository institution that authorizes the Federal Reserve bank to charge the depository institution's funds account on the issue date for securities purchased by the bidder.

**Auction schedule.** The Treasury has a regular, predictable schedule for offering marketable securities, which is well known to market participants. The Treasury makes an announcement as far in advance as is practical any time there is a change in the usual pattern, so that the market can digest the information and prepare for the offerings.

The Treasury sells 13- and 26-week bills every week and 52-week bills every four weeks. Two-year and five-year notes are auctioned every month for settlement at the end of the month. Seven-year notes are issued on the 15th of January, April, July, and October. The quarterly financings, which settle on the 15th of February, May, August, and November, typically consist of three- and ten-year notes and a thirty-year bond. These regularly scheduled issues amount to about 157 separate securities auctions each year.<sup>6</sup>

---

<sup>5</sup> Full payment for securities to be held in TREASURY DIRECT is required when the tender is submitted.

<sup>6</sup> The Treasury also offers cash management bills from time to time to raise funds to cover low points in the Treasury cash balance. The maturity dates for cash management bills usually coincide with the Thursday maturities of regular weekly and 52-week bills. For example, cash management bills may be issued in early April, before the April 15 tax payment date, and mature later in April, when cash balances are at seasonal highs. Short-term cash management bills maybe announced, auctioned, and settled in a period as short as one day, if necessary, to ensure that the government does not run out of cash. To shorten the time for the auction and reduce the cost of issuing short-term cash management bills, they usually are issued only in large minimum purchase amounts - \$1 million or more - and noncompetitive tenders are not accepted.

Longer term cash management bills are also issued from time to time. For example, the Treasury's borrowing requirement in the final calendar quarter of the year is typically larger than for the April-June quarter, when seasonally high tax payments are due. Cash management bills maturing after the April 15, 1991 tax date were issued in November 1990, for example, to manage Treasury borrowing in light of this seasonal pattern.

The details concerning an offering of marketable securities are announced about one week prior to the auction, and the settlement date occurs from a few days to about one week after the auction, depending upon holidays and other vagaries of the calendar.

**Treasury auction rules.** Treasury auction rules have, for the most part, been contained in the official offering circulars, public announcements relating to specific auctions, and single bidder guidelines.<sup>7</sup> Other auction rules have been announced in separate press releases; they are not reiterated in individual offering circulars and announcements.

The rules regarding the \$1 million and \$5 million maximum awards on noncompetitive bids and payment requirements were discussed above. The most significant other auction rules concern limitations on awards, limitations on tender amounts recognized at single yields, requirements for bidders to report net long positions, single-bidder guidelines, and when-issued trading.

The 35 percent rule. Since 1962, the Treasury has limited the maximum amount of securities awarded to a single bidder in a Treasury offering. The primary reasons for the limitation are to ensure broad distribution of Treasury securities and to make it less likely that ownership of Treasury securities will become concentrated in a few hands as a result of the auction.

Under the restriction that has been in effect since September 1981, no single bidder is awarded more than 35 percent of the amount of a Treasury security that is offered to the public. The application of the 35 percent limit to any bidder includes consideration of that bidder's net long position in the futures, forward, and when-issued markets.

Also, while a bidder can submit tenders for more than 35 percent, the Treasury does not recognize amounts tendered at anyone yield from a single bidder in excess of 35 percent of the public offering. This limit was adopted to prevent bidders from

---

<sup>7</sup> Treasury has updated its offering circular to put in one place all of the basic ground rules for Treasury auctions and is releasing it simultaneously with this report for publication in the *Federal Register* for comment. The circular will be supplemented by an offering announcement for each separate offering. It will also be amended from time to time to reflect any changes in rules.

benefitting from submitting huge tenders in order to obtain large prorations of securities at the stop-out, or highest accepted, yield.<sup>8</sup>

Net long position reporting. For purposes of enforcement of the 35 percent rule, each competitive bidder is required to report on the tender form its net long position in the security being auctioned when the total of all of its bids for the security plus its net long position in the security exceeds the reporting amount specified in the offering announcement. Net long positions include positions in the futures, forward, and when-issued markets for the security being offered. In the case of a security that is being reopened, it also includes positions in the outstanding security.

Single-bidder guidelines. On June 1, 1984, the Treasury issued guidelines concerning the definition of a single bidder for the purpose of administering the limitation on noncompetitive awards. Since then, the guidelines have also been applied to administer the 35 percent rule. The definitions of single bidders include as criteria: (1) whether the parties who will acquire securities from the Treasury are related to one another, such as family members living in the same household or a parent corporation and its majority-owned subsidiaries; and/or (2) whether investment decisions of bidders are controlled centrally. For example, a money market fund and all other funds that have common management are treated as a single bidder for purposes of the guidelines.

The guidelines include a listing of categories that are used to determine whether two or more entities are related and/or under common management. The guidelines do not cover all situations, and interpretations by the Treasury often are necessary to apply the guidelines to particular situations.<sup>9</sup>

When-issued trading. Ordinarily, there is a period of almost two weeks between the time a new Treasury issue is announced and the time it is actually issued. The Treasury permits trading during this period, and the issue is said to trade "when, as, and if issued."<sup>10</sup> When-issued trading is important to the distribution process for Treasury securities. Most importantly, it reduces uncertainties surrounding Treasury auctions by serving as a price discovery mechanism. Potential competitive bidders look

---

<sup>8</sup> In a few cases that occurred immediately before the imposition of this rule on July 12, 1990, dealers had bid at one yield for more than 100 percent of the amount offered to the public.

<sup>9</sup> The Treasury has been working to develop clarifications of its single-bidder guidelines and plans to circulate them as part of the proposed uniform offering circular.

<sup>10</sup> Although pre-auction trading of bills has never been prohibited, pre-auction trading of notes and bonds was effectively prohibited from 1941 to 1975. It was permitted between February 1975 and July 1977, before being officially proscribed until August 1981, when Treasury decided to allow it. The only significant rule change since 1981 was an October 1983 Treasury announcement prohibiting pre-auction trading in securities awarded to noncompetitive bidders. This prohibition applies to all Treasury securities.

to when-issued trading levels as a market gauge of demand in determining how to bid at an auction. Noncompetitive bidders can also use the quotes in the when-issued market to assess the likely auction average yield.

**Auction awards.** The Federal Reserve banks review the tenders for accuracy, completeness, and compliance with Treasury rules and guidelines. The Federal Reserve banks consult with the Treasury prior to taking any action on questionable tenders that could materially affect auction results or that may be in violation of a Treasury rule. The Treasury reserves the right to reject any tender.

Once it has been determined that the tenders have complied with Treasury requirements, the Federal Reserve banks compile the auction summaries. The noncompetitive summary shows the total amount of noncompetitive bids received by each Federal Reserve district. The competitive bid summary shows the total amount bid at each yield. The summaries include information on specific bidders only when needed to apply the 35 percent limitation on the amount awarded or bid at a given yield by a single bidder or when specific bids appear irregular. This information is forwarded to the Treasury.

The Treasury first accepts noncompetitive bids in full. Competitive bids are then accepted beginning with the lowest yields until the offering amount has been reached or “covered.” The amount awarded at the high yield is prorated based on the amount bid at that yield to obtain the offering amount.

Auction results are released to the public about one hour after the deadline for the receipt of competitive tenders, usually around 2:00 p.m., Eastern time.

## **2. Characteristics of the Secondary Market**

The Treasury securities market is the largest, most liquid market in the world, and Treasury securities are generally considered to be the most secure financial instruments in the world. Daily trading volume in Treasury securities by primary dealers, excluding financing transactions, averaged \$85 billion per day in September 1991, according to data reported to the Federal Reserve Bank of New York (“FRBNY”). By contrast, the average daily trading volume of equities on the New York Stock Exchange (“NYSE”) was \$6 billion.

Unlike securities traded in a centralized marketplace, such as an exchange, Treasury securities are traded largely in an over-the-counter market<sup>11</sup> that is

---

<sup>11</sup> Although all marketable Treasury notes and bonds, including STRIPS, are listed on the New York Stock Exchange, trading volume is a small fraction of total over-the-counter volume. Treasury securities have been traded on the New York Stock Exchange since it opened in 1793. In fact, U.S. government debt issued to finance the Revolutionary War was originally the principal type of security traded on the Exchange. Treasury securities continued to be traded actively on the Exchange until the early 20th century, when increased telephone use led to a sizeable over-the-counter market. Today, exchange-listed Treasury securities are traded mostly by foreign mutual funds that are required to trade through exchanges.

comprised of a network of dealers, brokers, and investors who effect transactions in Treasury securities over the telephone. The market is largely a wholesale market in which institutional investors, such as banks, thrifts, dealers, pension funds, insurance companies, mutual funds, and state and local governments operate. However, a significant number of small, retail investors also trade Treasury securities through brokers and dealers.

The liquidity, efficiency, and safety of the Treasury securities secondary market result directly from the creditworthiness of the issuer, the volume of securities issued, the large number and diversity of participants, the financial strength and integrity of those participants, and the continual willingness of brokers and dealers to participate actively in the markets. Relatively low transactions costs and efficient securities transfer and settlement systems also expedite activity and enhance liquidity.

**Instruments traded in the secondary market.** The majority of the activity in the Treasury secondary market involves trades in the cash market of the most recently issued Treasury bills, notes, and bonds (the "on-the-runs" or "benchmarks").<sup>12</sup> Also, as discussed above, during the period between the announcement and the issuance of a new Treasury security, there is a very active when-issued market.

During the when-issued period before an auction, dealers and customers contract to buy and sell the Treasury security in terms of yield quotes because the coupon and price are not yet known. After the auction results are released, trades are conducted in terms of price. Settlement, the exchange of the actual securities for payment, is made on the issue date, with the yields at which the pre-auction trades were executed converted into prices.

In addition to the standard cash market, including the when-issued market, a market for many other sophisticated instruments based on Treasury securities has developed over time. For example, STRIPS (Separate Trading of Registered Interest and Principal of Securities) and other derivative instruments (e.g., forwards, futures, options, and swaps) have become quite widespread.

---

<sup>12</sup> Outstanding Treasury securities auctioned immediately prior to the most recently auctioned issues ("off-the-runs") are also highly liquid.



STRIPS. STRIPS are principal and interest components of selected Treasury notes and bonds that have been separated, or stripped, at the option of the owner under terms prescribed by the Treasury. STRIPS are often referred to as zero-coupon instruments, reflecting their similarity to non-interest-bearing securities with a fixed maturity and fixed value at maturity. STRIPS can be reconstituted by repackaging the principal component and all of the remaining interest components back into the original security.

Financial futures. Financial futures are standardized contracts that are made and traded on futures exchanges that set a price level for securities to be delivered on a specified future date. Markets for financial futures are an outgrowth of the traditional futures markets for agricultural commodities. Futures contracts are available for Treasury bills, notes, and bonds and are authorized by, and traded on, exchanges that are regulated by the Commodity Futures Trading Commission ("CFTC").

Forward contracts. Forward contracts are trades that settle on a date in the future beyond a normal settlement time frame and, in that regard, are similar to futures. However, while futures contracts are standardized, traded on exchanges, and usually closed out by offsetting transactions prior to delivery, forward contracts are normally custom-tailored and traded on over-the-counter markets, with delivery of securities contemplated on the settlement date of the contract.

Options. Options give the purchaser a right, but not an obligation, to buy or sell securities or futures contracts for securities at a given price for a set period of time. Standardized options for Treasury securities are traded on exchanges, but the over-the-counter market for Treasury options is the principal market. The over-the-counter market permits the counterparties to customize the options, which increases flexibility.

Swaps. In addition to other derivatives, investors often use interest rate swaps as part of their hedging and investment strategies for managing interest rate exposure. In most swaps, fixed-rate payment streams are exchanged for floating-rate payment streams. Countless varieties of swaps have developed, however, because such agreements permit market participants to swap any two interest streams that they deem commercially appropriate. While the trading activity for other derivative products generally is concentrated in the near-term months, interest rate swaps, by contrast, generally are for time periods of two to ten years.

**Brokers and dealers.** While there are approximately 1,700 brokers and dealers (including banks) trading in the secondary market for government securities, anecdotal evidence suggests that the 38 primary dealers account for the major share of the trading volume.

The primary dealers and other dealers often rely on interdealer brokers to trade in the market for Treasury securities. Interdealer brokers compile the best bid and ask

prices reported to them by the dealers who subscribe to their service and make this information available on computer screens. The identities of the dealers who submitted the price quotes are kept confidential, with the understanding that anonymous trading allows the dealers to protect their trading strategies. Dealers pay the brokers a commission for arranging trades.

Interdealer brokers display the bids and offers placed with them for bills, notes, bonds, and STRIPS, as well as Government-sponsored enterprise ("GSE") securities, on several screens. When a new bid or offer at a better price is placed with a broker, the new quote will appear on its screen in the dealers' trading rooms within seconds. Generally, brokers consider these bids and offers good until canceled. Brokers will, however, take bids and offers off the screen or make them subject to reconfirmation when an event occurs that may have a major impact on the market, such as the release of an important economic statistic.

There are currently seven interdealer brokers<sup>13</sup>, three of which provide trading access for primary dealers only. Another three interdealer brokers allow access to their screens not only to primary dealers and "aspiring" primary dealers but also to other dealers who participate in the Government Securities Clearing Corporation ("GSCC") netting system.<sup>14</sup> One interdealer broker goes one step further, by also including certain other government securities dealers, regional banks, pension funds, and others that the broker considers to be creditworthy trading partners. Through this broker, these market participants can obtain market information and can buy and sell Treasury securities without using the facilities of a primary dealer or GSCC participant. In addition, a newly formed electronic information dissemination service, GOVPX, now provides dealer price and volume information on Treasury securities to anyone who pays for the service.<sup>15</sup>

To effect a trade, an investor may refer to one or more of the available information services and call a dealer, or several dealers, for the most recent quotes and then place an order. The dealer trades with the customer as a principal for its own account or as an agent for the account of another investor.

---

<sup>13</sup> The seven interdealer brokers are: Cantor Fitzgerald Securities Corp.; EJV Brokerage, Inc.; Garban Ltd.; Gsubrokers of Government, Inc., doing business as Fundamental Brokers Inc.; Hilliard Farber & Co., Inc.; Liberty Brokerage, Inc.; and RMJ Securities Corp.

<sup>14</sup> The GSCC is a clearing organization that provides its members with automated trade comparison and netting services for Treasury and other government securities. More than 60 of the most active brokers, dealers, and banks in the government securities market are GSCC members. See discussion of GSCC in Appendix B.

<sup>15</sup> See discussion of information access in the government securities market in Appendix B.

**Settlement.** Settlement, the exchange of securities for funds, usually occurs one business day after a buyer and seller agree on a trade, in the case of "regular way" trades. "Cash" trades settle on the trade date. Settlement is effected in the Treasury commercial book-entry system operated by the Federal Reserve through an electronic transfer message initiated by the seller or the seller's depository institution. This message causes securities to be debited from the seller's account and credited to the buyer's account while simultaneously causing the debiting of the payment from the buyer's account and the crediting of the funds to the seller's account. The commercial book-entry system enables Treasury securities trades to be settled quickly (within seconds) and relatively cheaply, thus contributing substantially to market liquidity.<sup>16</sup>

**Financing techniques.** The principal method of financing Treasury securities for brokers and dealers is repurchase agreements ("repos"). The repo market is huge, as is evident in the almost \$500 billion of repos outstanding at primary dealers, on average, in 1991.<sup>17</sup>

A repo is a contract comprising two distinguishable acts: the sale of an asset, often Treasury securities, and a forward agreement to purchase the same asset.<sup>18</sup> Repo sellers obtain funds in exchange for securities. The seller agrees to repurchase the same securities at a given point in the future, which determines the amount of interest for the use of the funds. The repo contract sets both the sale and the repurchase price. The terms of repos are often overnight or a few days but can extend for longer periods. A reverse repo refers to the other side of a repo transaction. In a reverse repo, the repo buyer delivers the funds and receives the securities in exchange. At contract maturity, the buyer receives funds (including interest) and returns the securities.

Dealers rely on repos to finance their Treasury security inventories primarily because of the low cost, flexible terms, and administrative ease. Repo rates are usually the cheapest overnight interest rates for the seller because of the liquidity of the market and the characteristics of the underlying security. The chief alternative to this type of financing, commercial bank loans, is more expensive, and dealers typically rely on these loans only as a last resort.

309-597 a - 92 - 3 QL 3

---

<sup>16</sup> In recent years, the GSCC has had a substantial impact on Treasury secondary market settlement. One of GSCC's most important functions is to "net" its members transactions. GSCC combines each member's total purchases and sales for each security with other GSCC members into a single net purchase or sale. This process greatly reduces the number of trades that have to be cleared through the commercial book-entry system and, along with the guarantee GSCC provides, substantially reduces counterparty risk for GSCC members.

<sup>17</sup> Table 1.43, "U.S. Government Securities Dealers: Positions and Financing," *Federal Reserve Bulletin*

<sup>18</sup> Under a continuing term repo, the seller typically reserves the "right of substitution"; that is, the seller can take back particular securities it needs for other purposes and substitute similar collateral.

The major participants in the repo market are dealers, corporations, municipalities, financial institutions, and pension funds. Most dealers use repos primarily to finance or cover securities positions and to conduct "matched book" operations. A dealer that operates a matched book enters into a repo and matches it with a mirror image reverse repo. Most matched books are not perfectly matched in maturities, but instead include some managed mismatches. The dealer's profit is derived from the difference, or spread, between the interest earned on the reverse repo and the interest paid on the repo. Dealers also use reverse repos to obtain securities temporarily to complete other transactions, while other market participants typically use them to invest idle cash balances or to improve portfolio yield.

Repo brokers are sometimes used to facilitate these transactions. Dealers use repo brokers most often for term repos and reverse repos. Repo brokers are most important for arranging repos when securities are in short supply, as reflected by a rate that is lower than the rate for general collateral ("on special"). Brokers estimate that the daily volume of the overnight repo market that is transacted through brokers is approximately \$10 billion per day, which represents only a small percentage of the overnight repo market.

The largest, most creditworthy dealers also use the commercial paper market indirectly to finance their secondary market trading. Commercial paper is unsecured, short-term debt (usually 30 days and under).

Dealer income. Dealers profit from their market making activities in three ways: (1) through the difference in their bid/ask quotes (the "spread"); (2) from the net price appreciation of their inventories or the price depreciation of the securities they have sold short in the market, including profits from hedging and arbitrage; and (3) from their inventory financing activities, i.e., the difference between the interest return on the securities they hold and the financing costs of these securities. When the return on the securities held in inventory is greater than the financing cost, a "positive carry," or profit, exists. Conversely, a negative carry, or loss, exists when the financing cost is greater than the return on the securities.

### **3. Regulation of the Treasury Market**

#### **Regulation of issuance of Treasury securities**

**Authority of the Secretary of the Treasury.** The Secretary of the Treasury (the "Secretary") is authorized under Chapter 31 of Title 31, United States Code, to issue Treasury securities and to prescribe terms and conditions for their issuance and sale. Specifically, the Secretary may issue bonds under 31 V.S.C. § 3102, notes under 31 V.S.C. § 3103, and certificates of indebtedness and Treasury bills under 31 V.S.C. § 3104.

In addition, under 31 V.S.C. § 3121, the Secretary may prescribe the form of such securities, and the terms and conditions for the issuance and sale of the securities. In 31 V.S.C. § 3121(a) the Secretary is authorized to "prescribe ... regulations on the conditions under which the obligation will be offered for sale ..."

The Secretary reserves the right, under the offering circulars for issues of Treasury securities, to accept or reject any or all tenders in whole or in part. The Secretary also reserves the right to award more or less securities than the amount of securities specified in the offering announcement.

Under the above specific provisions, the Secretary has authority to declare any bidder or bidder's customer ineligible to participate in any auction if a bidder or bidder's customer violates auction rules, makes an improper certification, or otherwise misrepresents information required to purchase securities at an auction.

Finally, the Secretary reserves the right to supplement or amend terms and conditions governing the sale and issuance of securities, if such supplements or ' amendments do not adversely affect existing rights of holders of securities. Public notice of any changes is provided.

**Enforcement.** As noted earlier, the Treasury and the Federal Reserve banks, as fiscal agents of the Treasury, receive tenders from bidders. Compliance and enforcement responsibility for the auction rules rests with the Treasury. As fiscal agents for the Treasury, the 36 Federal Reserve sites receiving and reviewing tenders have the primary responsibility for identifying tenders that are not in compliance with Treasury rules and regulations. Accordingly, the Federal Reserve has a responsibility to notify the Treasury when information in tenders suggests that Treasury rules may have been violated.

Treasury auction authority includes powerful, but limited, sanctions to punish violators of these rules. The Treasury's remedy for breaches of its rules is to exclude bidders from Treasury auctions. In addition, persons who commit fraud in the context of a Treasury auction remain subject to potential civil and criminal actions under Section 10(b) of the Securities Exchange Act of 1934 and Rule 10b-5 thereunder, the general anti-fraud provisions, as well as criminal actions under 18 V.S.C. §§ 1001 and 1005.

The Treasury reserves the right to reject any or all bids in an auction, and therefore, may bar, suspend, or limit a firm's participation in auctions. For example, in the wake of recent events the Treasury has prohibited Salomon from bidding in auctions on behalf of customers.

Neither the SEC nor any of the self-regulatory organizations ("SROs"), such as the NYSE and the National Association of Securities Dealers ("NASD"), is authorized

to enforce directly Treasury auction rules. However, the SROs do enforce compliance with rules applicable to all brokers and dealers registered with the SEC requiring that all purchases and sales of securities are recorded, and that confirmations are sent to customers. The SEC and the Justice Department are responsible for enforcement of the federal securities laws, which cover deliberate violations of auction rules accompanied by false statements to the Treasury and market manipulation. The Justice Department enforces federal antitrust laws.

## **Regulation of the secondary market**

Participants in the secondary market for U.S. government securities, including previously unregulated brokers and dealers, are regulated under the authority of the Government Securities Act of 1986 (“GSA”). In addition, broker-dealers and banks are subject to regulation under the Securities Exchange Act and the banking laws, respectively. The GSA granted the Treasury authority to promulgate rules and regulations for government securities brokers and dealers concerning financial responsibility, protection of investor securities and funds, recordkeeping, and financial reporting and audits. The Treasury also was given responsibility for the development of regulations relating to the custody of government securities held by depository institutions.

In promulgating these regulations, the Treasury was required to consult with the SEC and the Federal Reserve. As a result of these consultations and the Treasury's analysis, most of the SEC regulations (e.g., customer protection, recordkeeping, reports, and audits) that applied to registered brokers and dealers were, with limited exceptions, adopted for firms registered pursuant to the GSA as government securities brokers and dealers.

**Registration requirements and oversight of market participants.** The GSA required, for the first time, previously unregistered brokers and dealers that limit their business to government and other exempt securities (except municipal securities) to register with the SEC and join an SRO. It also specified that firms registered as general securities brokers or dealers or as municipal securities brokers or dealers under Sections 15 or 15B, respectively, of the Securities Exchange Act must notify the SEC if they conduct government securities transactions.<sup>19</sup> The GSA also required financial

---

<sup>19</sup> The term "registered government securities broker or dealer" means a broker or dealer conducting a business exclusively in government and other exempted securities (excluding municipal securities) and that is registered pursuant to Section 15C(a)(A) of the Securities Exchange Act, 15 D.S.C. § 78o-5(a)(1)(A). The term "registered broker or dealer" means a broker or dealer conducting a general or municipal securities business that is registered pursuant to Sections 15 or 15B, respectively, of the Securities Exchange Act, 15 D.S.c. § 780 or 780-4 and that filed notice pursuant to Section 15C(a)(1)(B) of the Securities Exchange Act, 15 D.S.C. § 78o-5(a)(1)(B), but does not include a municipal securities dealer that is a bank or separately identifiable department or division of a bank. A government securities broker or dealer is any entity, including a fmandal institution, that acts as a broker or dealer of government securities.

institutions (banks and S&Ls) that engage in government securities broker or dealer activities to notify their appropriate regulatory agencies of such activities.<sup>20</sup> The GSA required that the SEC and the Federal Reserve promulgate rules establishing the procedures and forms to be used by government securities brokers and dealers for the registration and notice process.

The GSA, rather than creating a separate agency to enforce the new regulations, relied, for the most part, on the existing regulatory structure when assigning oversight responsibility. For previously regulated entities, examination and oversight of government activities is conducted by the federal agency with which the entity has an existing regulatory relationship. Thus, financial institution government securities brokers or dealers are subject to oversight by the federal financial institution regulatory agency that has responsibility for other supervisory and enforcement activities, namely, the Federal Deposit Insurance Corporation ("FDIC"), the Office of the Comptroller of the Currency ("OCC"), the Federal Reserve, and the Federal Home Loan Bank Board ("FHLBB"), whose responsibilities under the GSA have been assumed by the Office of Thrift Supervision ("OTS"). Government securities brokers and dealers that do not fit within any of the categories of financial institution government securities brokers or dealers are subject to oversight by the SEC.

All of the government securities brokers and dealers that registered pursuant to the GSA have joined the NASD, making them subject to certain of its rules, as well as its examination and disciplinary authority.<sup>21</sup> Firms that were registered as brokers or dealers prior to the GSA continue to be subject to oversight by the SEC mid each of the SROs of which they are a member.

The regulatory structure that Congress established for government securities is somewhat different from that governing the secondary market for other types of securities under the Exchange Act. For example, the provisions of the Exchange Act that give the SEC and the SROs authority to develop surveillance systems to detect manipulative activity or other rules to deter manipulative activity are not applicable to the government securities market. Similarly, there is a disparity in the degree to which the normal rules and standards for sales practices apply. Standards such as just and

---

<sup>20</sup> In this context, the term "financial institution" means banks and savings and loans. 15 U.S.C. § 78c(a)(46). The definition of "appropriate regulatory agency" with respect to a government securities broker or dealer is set out at 15 U.S.C. § 78c(a)(34)(G).

<sup>21</sup> Section 15A(t)(2) of the Securities Exchange Act specifies which of the NASD's rules are applicable to its members' government securities transactions. Generally, they are limited to rules necessary to ensure compliance with Treasury rules.

equitable principles of trade do not apply in the government securities market. However, the general anti-fraud provisions of the Exchange Act and the rules the SEC has adopted pursuant to that authority are applicable to all persons who engage in transactions in any security. Nevertheless, anti-fraud proceedings under Rule 10b-5 of the Exchange Act require proof of scienter,<sup>22</sup> which is a higher standard in bringing what would otherwise be a routine disciplinary action under a specific sales practice rule.

Treasury rulemaking authority under GSA lapsed on October 1, 1991. To date, Congress has not acted to renew this authority. Treasury rules already promulgated remain in effect and are enforced by the appropriate regulatory agencies.

**Government Securities Act regulations.** In its rulemaking capacity pursuant to the GSA, Treasury has issued rules for government securities brokers and dealers. Many of the rules issued by Treasury incorporated the existing SEC regulations that applied to registered brokers and dealers before the passage of the GSA. In addition, with limited modifications, compliance by financial institution government securities brokers and dealers with existing regulations of their appropriate regulatory agencies was also deemed in most cases to be compliance with Treasury regulations.

Financial responsibility. The GSA regulations require that every government securities broker or dealer be subject to financial responsibility requirements. The GSA contains a specific mandate to promulgate regulations in this area.<sup>23</sup> As is the case with other sections of the regulations, a primary objective was to produce consistency in the level of regulation across different groups- in the market and to avoid duplication of existing regulations where possible. Therefore, registered brokers or dealers must comply with the SEC net capital rule for purposes of compliance with the financial responsibility rules of the GSA regulations. Likewise, financial institution government securities brokers and dealers must comply with the respective capital requirements of their appropriate regulatory agencies for purposes of compliance with the GSA regulations.

With the passage of the GSA, financial responsibility regulation has been most significant for previously unregistered entities, because these firms were not, prior to registration, subject to any mandatory requirements regarding their capital. The Treasury capital rule differs from the SEC capital rule both in its risk measurement principles and ratio measurements. In the risk measurement area, the Treasury

---

<sup>22</sup> The term "scienter," as applied to conduct necessary to give rise to an action for civil damages under the Securities Exchange Act and Rule 10b-5, refers to a mental state embracing intent to deceive, manipulate, or defraud.

<sup>23</sup> 15 U.S.C. § 780-5 (b)(1)(A).



“haircut”<sup>24</sup> methodology provides a different system for recognizing the reduced risk of hedged positions. With respect to ratio measurements, the Treasury rule links a government securities firm's required liquid capital to measured risk because firms specializing in government securities generally bear insignificant risk from customer-related assets or liabilities and generally have low levels of unsecured debt.<sup>25</sup>

To provide for effective consultation in order to balance regulatory standards among market participants, the Treasury, the SEC, and the FRBNY have established an informal study group to research and discuss the issues that need to be resolved to reach a uniform capital rule for both registered brokers and dealers and registered government securities brokers and dealers. A uniform capital standard applicable to all nonbank brokers and dealers is a desirable goal, and through cooperative efforts to date, progress has been made toward reducing the differences between the Treasury and SEC capital rules.

The financial responsibility regulations take into account the diverse categories of registered government securities brokers and dealers. To that end, the regulations for specialized government securities brokers and dealers contain an alternative capital treatment that can be elected by interdealer brokers. The regulations also assign different requirements to futures commission merchants that are government securities brokers or dealers and that are subject to the capital rule of the CFTC. These requirements are virtually identical to those for regular broker-dealers. The regulations also provide assurance that market participants have sufficient capital to support their positions and operational risks.

Customer protection: hold-in-custody repo rules. The most significant and far-reaching requirements of the GSA regulations pertaining to customer protection are the rules for hold-in-custody repurchase agreement transactions (hold-in-custody repos). The hold-in-custody repo rules strengthen customer protection by requiring that: (1) information be provided to investors, in writing, explaining the nature and specifics of the transaction; (2) specific disclosures be made concerning the risks associated with granting the broker or dealer the right to substitute securities and with the lack of coverage under either the Securities Investor Protection Act of 1970 or by the FDIC; (3) specific securities be clearly and separately held for, and a description of them disclosed to, the customer; and (4) securities used to collateralize a repurchase agreement be maintained free of lien.

These hold-in-custody repo requirements make mandatory the use of written repurchase agreements containing the required disclosures. These agreements are required to be executed prior to the broker or dealer conducting a repo transaction.

---

<sup>24</sup> "Haircuts" are measures of risk of a dealer's or broker's positions, reflecting market and credit risk.

<sup>25</sup> For a discussion of Treasury's capital rule, see 52 FR 1%42, 19651.

Written agreements inform customers of their rights and liabilities in a repo transaction and reduce the possibility that they will misunderstand the terms of the transaction.

The requirement that firms maintain and segregate specific securities is intended to eliminate the duplicative use of securities by brokers and dealers, as well as the practice of segregating customers' securities in pooled or bulk form. In pooling, a broker or dealer sets aside a pool of securities with an aggregate value at least equal to the amount of the repurchase transactions, but specific securities are not identified as belonging to individual customers. The requirement to allocate and maintain specific securities under a hold-in-custody repo not only reduces the likelihood of the double use of securities but also provides the owner with a clearer legal claim to the securities.

Confirmations. Treasury regulations pertaining to hold-in-custody repurchase agreements mandate that the specific securities subject to the hold-in-custody repurchase agreement be listed on the confirmations - issued to customers along with, among other information, the market value of those securities. Confirmations benefit customers by providing information with which they can promptly act or react' in current transactions. Confirmations also enable customers to monitor the sufficiency and appropriateness of the securities provided by the counterparty. In addition, the Uniform Commercial Code assigns significant value to a confirmation in establishing a customer's interest in securities. Inclusion of market value on the confirmation ensures that the customer can verify that securities of sufficient value, including substitute securities, have been allocated to the transaction. This is particularly important because in some sectors of the government securities market, securities are normally allocated to repo transactions based on the par value of the securities, and a less sophisticated customer could be unaware that the market value could differ substantially from the par value. This could cause the transaction to be under collateralized, and therefore, more risky for the customer.

Nonbank government securities brokers and dealers are also subject to SEC confirmation requirements (SEC Rule 10b-10) for their general purchase and sale transactions, and financial institution brokers and dealers are subject to their appropriate regulatory agencies' confirmation rules.

Recordkeeping. Treasury's recordkeeping requirements apply to registered brokers and dealers, registered government securities brokers and dealers, and financial institutions that are government securities brokers and dealers. In developing its regulations, Treasury relied heavily on existing recordkeeping rules of the SEC and the appropriate bank regulatory agencies. Thus, the regulations avoid overlap, duplication, and unnecessary burden. Therefore, Treasury's recordkeeping rules, with only limited modifications, are familiar to the registered and financial institution brokers and dealers.

For registered brokers and dealers, the only material difference from existing SEC rules are additional provisions to the books and records requirements pertaining to repurchase and reverse repurchase agreement transactions that are intended to ensure proper accountability for the cash and securities involved in such transactions.

Under the GSA regulations, registered government securities brokers and dealers are required to maintain and keep current books and records, preserve those records, and conduct quarterly security counts in accordance with SEC rules, with limited modifications. The differences between the respective SEC and GSA regulations relate primarily to the different financial responsibility requirements that apply to registered government securities brokers and dealers.

The GSA regulations require financial institutions that are government securities brokers or dealers to comply with the SEC recordkeeping rules pertaining to making, keeping current, and preserving records, unless they are subject to, and comply with, specific recordkeeping requirements of their appropriate regulatory agency. In addition, there are two other records, securities positions and associated persons' records, that financial institution brokers or dealers must maintain and preserve. When developing the regulations for financial institutions that are government securities brokers or dealers, the Treasury adopted the recordkeeping requirements imposed by the OCC, FDIC, and the Federal Reserve Board. Within the group of financial institutions, only savings associations (including savings banks) must comply with the SEC recordkeeping rules. The reason for this is that neither the FHLBB nor its successor, the OTS, the appropriate regulatory agency for savings associations, has promulgated comparable securities-related recordkeeping requirements for these entities.

Reporting and audit. The financial reporting and audit requirements of the GSA for registered government securities brokers and dealers generally follow those of the SEC and the regulatory agencies. Except for interdealer brokers operating under the alternative capital treatment and futures commission merchants registered with the CFTC, registered government securities brokers and dealers file financial reports utilizing Treasury-prescribed forms pursuant to the GSA regulations. The format of reporting under the GSA regulations is substantially similar to that required pursuant to SEC rules. The GSA regulations require that interdealer brokers operating under the optional alternative capital rule and CFTC-regulated entities that are government securities brokers or dealers file reports pursuant to the SEC rules. Financial institution government securities brokers and dealers that are subject to the financial reporting rules of their regulatory agencies are exempt from this portion of the regulations.

## **APPENDIX B**

### **ISSUES IN THE TREASURY MARKET**

## 1. Short Squeezes

The term "squeeze" is used by market participants to refer to a shortage of supply relative to demand for a particular security, as evidenced by a movement in its price to a level that is out of line with prices of comparable securities - either in outright trading quotations or in financing arrangements.

A short squeeze can arise in a number of ways. A squeeze can develop during the when-issued ("WI") period before a security is auctioned and settled. During this period, dealers sell the soon-to-be-available security and thereby incur an obligation to deliver such security at the issue date. These dealers, now short in the WI market, must cover this position by buying back the security at some point in the WI market, in the auction, or in the post-auction secondary market. If the dealers who are short do not bid aggressively enough in the auction to be awarded sufficient supply, or if other demand unexpectedly materializes, these dealers may experience difficulty in covering their positions.

Such misses in the Treasury auction process by individual dealers are not uncommon. However, if a sizable number of dealers fail to cover their short positions in an auction, a squeeze can develop and the relative price of that particular security will rise. Yet, as the security's price rises relative to other issues with similar characteristics, the increasing price generally tends to create arbitrage opportunities that would bring supply and demand more closely in line.

A short squeeze can also result as dealers set up typical arbitrage trades ahead of an auction. For example, dealers may sell the outstanding security short ahead of the auction to prepare for their customers to roll into the WI security. If a number of dealers adopt a similar strategy, a short squeeze may develop.<sup>1</sup>

Short squeezes are not only related to auctions; they may materialize independently of the auction process in secondary market trading and in the financing of positions as well. Such a situation might occur, for example, if aggressive participants acquired large positions in the secondary market. Other participants, not expecting such demand to develop, may have difficulty covering their short positions. Squeezes in outstanding issues may reflect various trading strategies that cause demand to center in a particular part of the yield curve.

---

<sup>1</sup> This situation was exemplified around the time of the May 1986 Treasury mid-quarter refunding as participants sold the outstanding 9 1/4 percent bond due in February 2016 to prepare for the roll into the WI 30-year bond. Demand for the 9 1/4 percent bond grew, however, as securities needed to cover short positions were not readily available to the repo market.

A squeeze also may be manifested in the financing, or repo, market. Dealers that have short positions, by definition, have sold securities they do not own. In order to deliver those securities on settlement date, these dealers can either buy the securities from another party or acquire them under a reverse repurchase agreement. When a specific issue becomes scarce relative to demand, dealers wishing to acquire that issue in the repo market must provide some sort of concession to those who own the securities to prompt them to make the securities available. When such a concession is granted, the scarce issue is said to be "on special" For the owner of the scarce securities, this means that these "special" issues can be financed (that is, delivered out against cash collateral) at a relatively low interest rate, while the borrower of the securities has to "pay up" to acquire the securities needed to satisfy its delivery obligation.

Squeezes in the repo market also can be created or exacerbated by market participants that hold a relatively large portion of a security. For example, a participant that holds a large amount of a scarce security can increase its scarcity value by financing a portion of the holdings away from the "special" repo market. That portion presumably would be financed at rates around the general repo rate, while the balance could be financed at very favorable depressed rates.

The directed placement of repo collateral with certain entities could help a market participant create or sustain an issue's scarcity. Some have cited the so-called tri-party agreement in this regard. Tri-party agreements generally involve an investor often a pension fund, money market fund or corporate treasurer - that wishes to invest large sums of money overnight or for some brief period on a collateralized basis.<sup>2</sup> These agreements by the investor, the dealer, and the dealer's bank were developed in response to credit concerns about hold-in-custody tri-party repos and have been generally encouraged. One key feature in these or any other type of arrangement where collateral is directed "off the street" is the ability to finance scarce securities with the knowledge that the securities will not be lent back into the market to participants that have short positions to cover, thus sustaining the scarcity.

Financing market squeezes are not uncommon. In recent years, one or more actively traded Treasury securities have been "on special" on most days. In general, squeezes appear to result from relatively heavy demand from a number of market

---

<sup>2</sup> Under normal practice, the investor specifies the conditions which the collateral must meet and the range of funds it stands ready to invest each day. The investor works with a bank, which in turn takes instructions from the dealer firm for delivery of collateral and for payment of funds. Some investors find the market yield and flexibility of repo transactions attractive, but also wish to avoid the transactions and back office costs of taking delivery of securities in repos. Such participants may choose to enter into a triparty agreement with a bank and dealer. Normally, the bank monitors the collateral provided by the dealer on the investor's behalf and segregates it into a special account to protect the investor's interest.

participants for a particular security, rather than occurring either through a calculated shortage engineered by a limited number of participants or by collusive behavior.

Squeezes reported in 1991 in the April and May two-year Treasury notes were manifested in both the cash and financing markets. The situation in the April two-year note developed after the Treasury's auction of that issue. Reportedly, several large participants purchased a large portion of this issue. The squeeze became particularly acute towards the end of May. In addition, the April two-year note reportedly became quite difficult to borrow in the financing markets. As a result, dealers and investors who held short positions in this security were forced to pay higher than expected prices to buy those securities back or to acquire such issues at special rates in the repo market, if available.

In contrast, the reported squeeze in the May two-year note developed at the time of the Treasury auction. During that auction, certain dealers were not awarded as many notes as they needed to meet their obligations to their customers. While WI trading and pre-auction market talk centered around an average rate of 6.83 percent, more aggressive bidding interest resulted (accepted yields averaged 6.81 percent), thereby closing out many participants from awards they had expected to receive in the auction.

Soon thereafter, the price of these May two-year notes rose in the secondary market and exacerbated the loss of those participants who were short the issue. Some participants may have chosen, however, to retain short positions in the hope that the price of the issue would fall (as owners of the security took profits) or that financing could be obtained. The high price persisted for a long period of time, and financing was expensive.

## **2. Debt Management Approaches to Alleviating Squeezes**

As discussed in this report, the Agencies have decided that short squeezes can reach a level of severity that can cause the integrity of the entire market to be questioned. This can eventually result in higher costs to the taxpayer if some market participants drop out of the government securities market because they perceive the market as being unfair.

This section examines debt management options that could be used to alleviate short squeezes. The most obvious option is for the Treasury to supply the market more of the security that is subject to an acute, protracted squeeze. This could be done in a variety of ways. In addition to the Treasury making available additional supply of a security, another option is the setting up of a facility for the market to create more of a given security than was originally issued from the stripped components of other securities. This option is discussed at the end of this section.

The Treasury has concluded, and the other Agencies concur, that, while a policy of supplying more of a security subject to a squeeze could be difficult to implement, it is justified under certain circumstances. Uncertainties about the potential for prolonged shortages may weigh more heavily on the market than the concern that the Treasury might provide an additional quantity of a relatively high-priced security. In the event of an acute, protracted squeeze, in which a recently issued Treasury security is priced significantly higher in the market than near substitutes and financing rates also indicate that market participants are having difficulty borrowing the security in order to avoid fails to deliver, the Treasury will provide the market additional supply of that security, either temporarily or permanently, unless legal constraints, such as the debt limit or tax provisions, prevent it from doing so. Because of the near impossibility of determining whether a squeeze is the result of deliberate manipulation in time to correct it by intervention, the decision to alleviate a squeeze will not be based on the perceived intent of those holding long positions but rather on whether the pricing anomalies are serious enough to result in a disorderly market.

### **Issues in deciding to increase the supply of a security**

The Treasury has, in the past, been reluctant to reopen securities outside of its normal financing schedule. There was a concern that, if the Treasury were to announce and implement a policy of reopening securities when it perceived price distortions, market participants might demand a higher yield from the Treasury on securities at auction, given the greater uncertainty about the eventual supply of the security. Moreover, it has been argued that traders and dealers know the risks of taking short positions and should not expect to be bailed out when the market behaves differently than expected.



**Effect on prices and participants.** The price of a given Treasury security can vary such that its yield at any particular time can be above or below the yield of near substitute securities. Normally, arbitrage activity will serve fairly promptly to remove inconsistencies in the price of near substitutes. However, in more severe cases, it may take time for the natural workings of the market to eliminate price anomalies.

Through a reopening policy, the Treasury will attempt to enhance the function of arbitrageurs by speeding the removal of certain pricing inconsistencies. Because of the Treasury's ability to create virtually any amount of a given security, a reopening policy to alleviate a squeeze cannot be defeated by market manipulators. This does not mean, however, that a reopening policy will be easy to implement in practice.

First, it should be noted that a reopening policy to alleviate squeezes in Treasury securities implies that the Treasury will intervene only when the price of a given security is perceived as being too high. Consequently, given an announced Treasury reopening policy, market participants know that any "winnings" on a bet that a new security will be priced higher than near substitute outstanding issues are effectively subject to a cap. On the other hand, market participants betting that the price of the new issue will be lower than that of near substitutes will not face such a cap on profits by Treasury policy. This means that a Treasury reopening will lean effectively in favor of arbitrageurs who hold short positions in the new issue, because their potential losses are capped by the Treasury, while no such protection is afforded those who are long the new issue.

Conversely, those holding long positions in the new issue not only have no such protection concerning the magnitude of their loss if their bet is wrong but face a limit on their gain. In fact, depending on how the reopening is implemented, a market participant betting that a new issue will be priced relatively high may be better off if the pricing difference remains modest. Otherwise, the Treasury may enter into the market and the pricing difference may completely disappear or even reverse. The effect of this change on the behavior of market participants is very difficult to gauge.

Clearly, supplying the market more of a particular security, either temporarily through lending transactions or more permanently through a sale, raises difficult issues of judgment. A decision to alleviate a squeeze by either a temporary or permanent issuance of more of the squeezed security would benefit some market participants and harm others. The Treasury might not know the causes of a pricing distortion and would not know how long the distortion would likely last. It would also not be clear how much additional supply of the security would be needed to break a squeeze. If the Treasury were to sell more than was needed, it is possible that the pricing relationships could reverse and the new supply of securities could be a relatively expensive form of borrowing. It is also possible that by the time a reopening decision had been made, the profits from a squeeze deliberately created may have already been taken.

It should also be noted that two factors can constrain the Treasury's ability to provide an additional supply of a security. The first is the debt limit, which at times limits the Treasury's ability to issue securities. The second is the federal income tax rules governing original issue discount.

The tax rules would come into play if the security being squeezed is trading significantly below its original issue price.<sup>3</sup> If the price of the security is sufficiently below the original issue price, then the proposed tax regulations on original issue discount may effectively preclude the Treasury from issuing more of the security.<sup>4</sup>

**When to reopen.** It should be emphasized that the decision to reopen a security cannot be simply based on a mechanical rule. A commonly held view is that additional supply of a given security should be provided when its yield is significantly below the yield curve. While this may seem simple in concept, it is in fact more complex than it may initially appear.

The yield curve is not directly observable. It is a line drawn on a graph where the horizontal axis denotes time remaining to maturity and the vertical axis denotes yield. A point on the line is used to estimate the yield of a security with a given maturity. There are different ways to draw such a line. One way is to fit a curve through the most recently issued Treasury securities using statistical techniques. This method of course would not work to solve the present problem, since the question at hand is whether the most recently issued Treasury security is off the curve. Older issues must thus also be used to estimate the curve in order to determine whether a new issue is out of line.

---

<sup>3</sup> In general, a security is subject to the original issue discount rules for tax purposes if it is issued at a price which is lower than the par value by more than a *de minimis* amount. Under Internal Revenue Code section 1273(a)(3), original issue discount is ignored if it is less than the number of complete years to maturity multiplied by 25 basis points. Thus, tax issues would arise if a two-year note were reopened at a price of 99.75 or less, because the security would have less than two complete years to maturity at the time of the reopening.

<sup>4</sup> Under Prop. Reg. § 1.1275-1(e), two or more publicly offered debt instruments are not part of the same "issue" unless they are sold at substantially the same time pursuant to a common plan of marketing. If securities issued at a significant discount in a reopening were considered a different "issue" than the squeezed securities that share the same payment terms, the different tax treatment of the two issues would prevent the reopening from alleviating the squeeze.

Even if all Treasury securities with the same payment terms were considered to be part of one "issue" for tax purposes, Prop. Reg. § 1.1273-(2)(b)(1)(ii) defines the "issue price" that is used to determine whether Treasury securities are subject to the original issue discount rules as the average price of the debt instruments sold. Thus, if a large amount of securities were issued at a significant discount in a reopening, the average selling price of the new and old securities could fall below the *de minimis* amount, and the entire "issue" could become subject to the original issue discount rules.

Unfortunately, a yield curve estimated by using older issues raises other problems, because the securities used in the estimation will bear different coupons due to the different prevailing levels of interest rates at their issuance dates. Even assuming perfect arbitrage across the maturity spectrum and ignoring tax considerations for the moment, the yield on Treasury securities is not solely a function of time to maturity but also of the periodic coupon payment.

A Treasury note or bond is actually a package of payments that the Treasury promises to make at future dates. The government securities market determines what investors are willing to pay at the present time for these future payments. The yield of a given Treasury security is the single rate which when used to discount all the future payments of a Treasury security to the present time, will produce values that sum to the current price of the security. Finance theory shows that, even given perfect arbitrage, this yield, in virtually all cases, will not be the same in equilibrium for Treasury securities that mature on the same date but carry different coupon rates. In addition, other factors, such as the lesser liquidity of seasoned issues, affect yield differentials among Treasury securities.

Tax considerations add to the complexity of comparing securities with different coupon rates. A Treasury security initially issued close to its par value but whose price has declined will have a tax advantage over a security that has the same yield but a higher coupon rate and is thus selling close to its par value. The reason is that the "market discount" on the first security will only be taxed at maturity, sale, or other disposition of the security,<sup>5</sup> while the security with the higher coupon rate does not receive this deferral on the taxation of its return to the investor. Prices and yields on Treasury securities with different coupon rates will to some extent reflect this difference in taxation.

For these reasons, a simple mechanical rule is inadequate to determine whether the Treasury should provide additional supply of a given security. Analysis and judgment will need to be exercised each time there is an acute, protracted squeeze in a given security.

### **Methods of providing the market additional supply of a security**

There are a number of methods which the Treasury could use to supply the market more of a given security, including (1) an auction, (2) an offering of additional supply in increments through the Open Market Desk of the FRBNY (a "tap"), (3) an issuance window, and (4) an offer to lend securities to government securities dealers using the FRBNY as fiscal agent.

---

<sup>5</sup> See Internal Revenue Code sections 1276-1278.

As discussed above, there are difficult issues to be addressed in making a decision to supply more of a security to the market by any of these means. A fifth possibility, which does not pose these same difficulties, is to allow market participants to create more of a security than was originally issued from the components of debt already outstanding. This option is discussed in some detail at the end of this section.

Each of the four methods that require the Treasury to decide to make additional securities available has advantages and disadvantages. The Treasury will decide which method is appropriate given the specific market conditions prevailing when there is an acute, protracted squeeze. However, it should be noted that, as discussed below, in order for the Treasury to use the securities lending option, additional legislative authority is necessary.

**Auctions.** If the Treasury determined that a squeeze of sufficient severity existed, it could decide to offer an additional amount of the security through an auction. The timing of the auction would be affected by the already announced schedule of auctions, but it could be done fairly quickly, with issuance to take place on the day following the auction. In any case, the announcement of an auction to reopen a squeezed security would be considered a major event by the government securities market, and the announcement effect might be manifested almost instantaneously, as the price of the targeted security adjusted to the anticipated increase in supply.

In order to protect itself from having to accept unfavorable prices in this type of reopening, the Treasury might announce that it is offering up to a certain maximum amount of the security but reserves the right to award less, or none at all, if prices bid in the auction were deemed to be too low.

Reopening by auction is an aggressive government intervention. It is a straightforward, forceful way to deal with serious short squeezes. Consequently, the Treasury might not have to do this type of reopening very often once its willingness to reopen by auction was established.

However, reopening by auction is neither a very flexible nor a very subtle approach to dealing with squeezes. Also, it is not evident that the Treasury will be able to capture any of the pricing anomaly for the benefit of the taxpayer by resorting to an auction.

**Tap issues.** Another alternative to reopening a security through an auction would be for the Treasury to sell more of the security through the FRBNY's Open Market Desk. The Desk could sell a little of the security at a time until a sufficient amount had been sold to eliminate pricing distortions. This method of selling more of an existing security is commonly referred to as offering it "on tap," and the security so offered is called a "tap issue," using the financial market terminology of the United

Kingdom, where the Bank of England sells some of the U.K. Treasury's securities in this manner.<sup>6</sup>

There are different ways to operate a tap. Decisions that would need to be made include:

- How will the willingness of the Treasury to sell securities through a tap operated by the Open Market Desk be communicated to the market?
- Which market participants will be eligible to buy the offered security?
- How will the price at which the Treasury is willing to sell the security be determined?
- At what point will the Treasury decide to end the tap?

Offering the market additional supply of a security through a tap has some advantages over the auction technique, specifically enhancing the ability to move quickly and fine tune the amount needed to break a squeeze. However, tap offerings may not be the best method to sell securities quickly in large amounts, if that is what is needed to alleviate a squeeze. Also, a policy of offering securities on tap could lead to greater demands to fine tune the market than would a policy of reopening by auction.

**Issuance window.** In the initial auction announcement, the Treasury could commit to provide more of the security to any market participant at a yield that was fixed at a specified amount below that of a near substitute security that is identified. In effect, this notice would serve as a call option (an option to buy at a specified price) issued to the market, which would be in force for a set period of time.

The advantage of this method would be to give the initiative back to the market in enforcing a limit on the size of any price anomaly: the Treasury sets the maximum spread and market participants respond when conditions warrant. With the bounds publicly announced, any uncertainty about potential Treasury actions is reduced. However, determining the maximum spread would be difficult. Tax and operational issues would also need to be addressed.

---

<sup>6</sup> In the United Kingdom, the Bank of England may buy some of the securities offered by the U.K Treasury and offer them on tap. In this case, the U.K Treasury has already received the funds from the Bank of England. This would be prohibited in the United States, because the Federal Reserve is prohibited from buying securities directly from the Treasury for its own account. Consequently, Treasury would receive funds from a tap issue only' as the securities are sold and the funds from the purchasers are received.

**Securities lending.** One way of providing securities to alleviate a squeeze in a more flexible and less permanent manner is for the Treasury to lend to market participants an additional supply of a security subject to a serious squeeze.

Legal constraints limit the Treasury's ability to lend an additional supply of a security directly. The reason is that the Treasury's authority to issue debt generally can be for one of two purposes: to borrow funds to meet government expenditures or to buy, redeem, or refund outstanding debt.<sup>7</sup> The Treasury does not have the authority to issue securities solely for the purpose of lending them in order to counter apparent price discrepancies. Consequently, before a securities lending program such as the one described below could be implemented, legislation authorizing it would need to be enacted.

Under the proposal, once the Treasury had determined the need to alleviate an acute, protracted squeeze through securities lending, the FRBNY's Open Market Desk, acting as the Treasury's fiscal agent, would implement the operational aspects of the program with market participants. If it were desired that the program not affect bank reserves nor add to the Treasury's cash balance, the securities lent could be collateralized by the borrower with other Treasury securities of similar market value pledged to the Treasury. In this case, in addition to pledging securities to the Treasury, the borrower would also pay a fee for borrowing the squeezed security. After the market problem had abated, the borrowers would return the security they had borrowed to the Treasury in return for their original securities. Alternatively, the Treasury could engage in repurchase transactions with government securities dealers and receive cash for the securities.

The securities lending approach has some significant advantages over auctions and taps. It would be a temporary measure to deal with a temporary market problem. It provides for a better possibility for the Treasury to capture some of the pricing anomaly and thus in effect make money for the taxpayer. Finally, like a tap, it is a more flexible approach than auctions to ending a squeeze.

There are also some disadvantages with this approach. Many of the same questions that arise with respect to operating a tap issue need to be answered to operate this type of securities lending program. The most significant issues to be resolved would be how to price the lending transaction and how to determine eligibility to borrow the security. Also, like a tap, implementation of a securities lending program could lead to expectations or demands that the Treasury fine tune the market to eliminate even small perceived price discrepancies.

---

<sup>7</sup> 31 U.S.C. 3102-3104, 3111.

**"Synthetic reopenings" using STRIPS.** Another debt management idea to break squeezes is to let market participants effectively create more of a given security using the Treasury's Separate Trading of Registered Interest and Principal of Securities ("STRIPS") program. The underlying notion is to create a market mechanism to break a squeeze. The appeal of this method is that the market would determine how much of a given security was needed to break a squeeze. If this method could be made to work, market participants would have an additional arbitrage tool available to them to bring the pricing of various Treasury securities in line with each other. In this way, the problems with having the Treasury create an additional supply of a security subject to a squeeze would be avoided.

Background on STRIPS program. In February 1985, the Treasury implemented a facility to allow certain Treasury securities to be separated into their interest and principal components on the commercial book-entry system for Treasury securities operated by the Federal Reserve banks. The system allows original issue 10-year Treasury notes and 30-year Treasury bonds to be separated into these components. The amount of a note or bond that is stripped must be such that both the principal component and each semiannual interest payment is divisible evenly by \$1,000.

Each Treasury note or bond issue has a unique CUSIP number assigned to it. When an issue is stripped under the current STRIPS program, the principal component is assigned another CUSIP number that is unique for that principal component, and each interest payment is assigned a "generic" CUSIP number that is given for all stripped interest components that come due on a specific date.<sup>8</sup> Once stripped, the components are transferred separately on the book-entry system in multiples of \$1,000.

In May 1987, the Treasury enhanced the STRIPS program by allowing components to be reconstituted into the original note or bond. In order to reconstitute a stripped note or bond, a market participant must acquire the principal component, or corpus, of the note or bond to be reconstituted in an amount evenly divisible by \$1,000 that will produce interest payments that are also evenly divisible by \$1,000. The market participant must also acquire all the remaining stripped interest payments in an amount that corresponds to the principal amount to be reconstituted.<sup>9</sup>

Since stripped interest and principal components are each firm promises by the Treasury to pay fixed amounts at specific dates in the future, there is no economic

---

<sup>8</sup> Generic CUSIP numbers for stripped interest components were instituted on July 29, 1985. Since in most cases more than one Treasury security that is eligible to be stripped under the STRIPS program pay interest on the same dates, it is usually not possible to identify a stripped interest component with a particular note or bond.

<sup>9</sup> Note that while the corpus must come from the security that had originally been stripped, the interest components need not come from that security.

difference between stripped interest and principal components.<sup>10</sup> Consequently, it would appear that one way to enhance the STRIPS program and allow the market to create more of a particular security for which there is strong demand is to eliminate the requirement that, in order to reconstitute a given security, the principal component derived from the security to be reconstituted must be presented as part of the package of payments. The CUSIP number of a security the Treasury has issued could be assigned on request to a package of stripped components that exactly match all interest payments and the principal payment of that security.<sup>11</sup> If this were allowed, it would be possible for the market to create more of a given security than was originally issued without requiring the Treasury to sell more securities. The timing and the amount of total payments that the Treasury has contracted to pay at original issuance would not have changed. The market would effectively decide how much of a given security to create and thus could break a squeeze through this mechanism.

This idea has substantial theoretical appeal; however, there are some formidable practical difficulties.

Tax issues. A reconstitution of a note or bond currently selling at a discount from par may result in less current tax revenue. The subsequent purchaser of the reconstituted security would be able to characterize the discount from par as market discount and obtain deferral of the tax on that amount until maturity, sale, or other disposition of the security. However, a portion of the discount at which the stripped components (corpus or interest) were acquired by a taxpayer is includible in current income, since the entire amount of this discount is characterized for tax purposes as original issue discount. Consequently, reconstitution has the potential effectively to convert some original issue discount into market discount, which lowers the tax burden on the subsequent purchaser by allowing deferral of income.

---

<sup>10</sup> In the U.S., the tax treatment of stripped interest and principal components is identical. Each time these components are sold, they are viewed as newly issued discount instruments for purposes of determining original issue discount. A portion of the original issue discount is includible in the taxable income of the holder each year. It is not possible to obtain market discount treatment for a stripped component. Market discount is only includible in taxable income upon maturity, sale, or other disposition of the security acquired with such discount. See Internal Revenue Code sections 1276-1278.

<sup>11</sup> By way of example, assume a Treasury note that has an 8 percent coupon payable every six months and has five interest payments remaining. The payment stream of this security for \$100,000 of principal would be four payments, at six month intervals, of \$4,000 and a final payment of \$104,000 (\$100,000 of principal and \$4,000 of interest). Under the current reconstitution program, five generic interest components of \$4,000 each coming due on the correct dates and the correct principal component in an amount of \$100,000 would have to be assembled in order to reconstitute the note. The enhancement suggested above would allow the last payment of the package of \$104,000 to be composed entirely of a stripped interest component (or a principal component from a different security) in that amount coming due on the appropriate date.



The reconstitution program outlined above raises the possibility of significant tax revenue losses if the market were to seize the opportunity to create additional supplies of low coupon bonds selling at a discount. A solution to this problem, without resorting to significant changes in tax law concerning the tax treatment of original issue discount and market discount, would involve some restrictions on the ability to reconstitute securities without the correct corpus.

One possible solution to this problem would be to limit the securities that can be synthetically reconstituted to those that have been issued within a limited period, for example, six months, prior to the reconstitution date. These securities are unlikely to be selling at a large discount unless there was a significant increase in interest rates shortly after the security was issued. Also, even with this restriction, the ability of the market to resolve squeezes would be enhanced, since squeezes usually develop for recently issued securities, not seasoned issues. Another possibility would be to allow only those securities to be reconstituted synthetically that are not selling currently at discount from par greater than a specified amount.

An additional tax complication that requires further study derives from the realization rule in Internal Revenue Code section 1001(c). Because the proposal involves the transformation of an interest component into the principal of the reconstituted security, it is possible that the issuance of the new CUSIP number for the bundle of payments would be a realization event for tax purposes under section 1001. In any case, the tax rules in this regard would need to be clarified.

Legal and accounting issues. There may be legal obstacles with respect to the Treasury setting up a facility for synthetic reconstitution. It is not clear what the treatment of the synthetically reconstituted security would be for the purposes of the debt limit and for appropriation purposes.

The Treasury has a permanent indefinite appropriation to pay interest on the public debt.<sup>12</sup> Repayment of principal is not treated as a budget outlay, which requires an appropriation, but as a financing transaction. Redemption of principal is a negative means of financing, while the issuance of the security is a positive means of financing. The amount of financing that can be accomplished through the issuance of securities is restricted by the statutory limit on the public debt.

The implication of the conversion of interest components into the principal of a note or bond is not clear under the public debt statutes, which were enacted in their basic form long before the idea of stripping and reconstituting securities was conceived. It might make most sense from the government's point of view to ignore the conversion for purposes of determining the debt subject to limit and interest paid on the public

---

<sup>12</sup> 31 U.S.C. 1305.

debt, since nothing has happened to the total amount the Treasury has contracted to pay in originally issuing the securities. Achieving this result may require amending the public debt statutes and other laws.

Whatever the legal characterization of the conversion, significant changes would have to be implemented to the Treasury's public debt accounting systems in order to keep track of interest and principal payments. Currently, these systems verify the amount of interest paid on each security, or loan, by reference to the principal outstanding of that particular security. If the interest payment from another security were to become an addition to the outstanding principal of a shorter maturity security, modification' to this method of accounting for interest and principal payments would have to be made. Before such modifications could be even characterized, the legal implications and the budget and accounting rules with respect to synthetic reconstitutions would have to be determined.

Timing issues. The most serious constraint on the utility of the synthetic reopening proposal is the availability of sufficient strippable interest and principal components. Only with significant modifications to the current financing schedule and payment dates for new Treasury securities could this proposal become an effective means for combatting squeezes and market manipulation in all segments of the market. However, major changes to the financing schedule would create additional operational and cash flow problems for the Treasury.

First, in order for a synthetic reopening/reconstitution program to become operational, the STRIPS program would need to be expanded to allow stripping of all marketable Treasury notes and bonds. This modification would pose few problems for the Treasury, aside from the need to expand administrative capacity of the STRIPS program.

The larger problem is that without major changes to the financing and payment schedule, the potential for synthetic reopening or reconstitution of different Treasury securities would differ markedly depending on the ultimate maturity date of each security. For example, under the current financing schedule, synthetic reconstitution would be impossible for new five-year and seven-year notes and 30-year bonds. For two-year notes, the potential increase in overall supply from synthetic reopenings would be highly variable, depending on the month of maturity. The potential to create new two-year and three-year notes would be much greater.

The underlying reason for this disparity is quite simple: securities that share maturity and interest payment dates with longer-term securities can be replicated much more easily with stripped components of other securities. For example, a newly issued 30-year bond, the longest maturity Treasury security currently offered, does not share its maturity date with any other marketable Treasury securities; consequently, its principal component and last interest payment component cannot be replicated by

using components originally stripped from other Treasury issues.<sup>13</sup> Also, seven-year notes are the only coupon securities that mature and pay interest on a January 15, July 15, April 15, October 15 schedule, and therefore no strippable components from other securities exist to replicate their payment stream.

For two-year and five-year notes, principal and semiannual interest payment dates occur on the last day of each month, unlike three- and 10-year notes and 30-year bonds, which make payments in the middle of the month. This means that the five-year note does not share its maturity date with any other security, and therefore cannot be replicated. While every two-year note has a payment schedule that is consistent with one or more five-year notes, until 1994, only the *interest* payments, not the principal components, of five-year notes would be available for stripping and reconstitution as two-year notes. This interest amount is a fairly small, though growing, amount in relation to the issue size of recent two-year notes. In contrast, the potential to reconstitute synthetically three-year and 10-year notes, which are issued at the Treasury's quarterly refundings, would be much greater because they share payment dates (February 15 and August 15 or May 15 and November 15) with 30-year bonds.

To make reconstitution easier for most notes and bonds, it would clearly be necessary to standardize payment dates so that each security matured on a common payment date with other securities. This would require extensive modifications to the current Treasury financing schedule, which would take years to have their full effect on the potential to reopen synthetically any particular security. In the transitional period after such changes were made, a progressively larger amount of strippable components would be available as more securities were issued under the consistent payment schedule. For longer term securities switched to a new payment regime, it would be years before adequate strippable components existed to allow synthetic reopenings to mitigate a squeeze.

In addition, modifications to the current financing schedule might create cash management problems for the Treasury. There are currently 20 payment dates per year for interest and principal on Treasury notes and bonds. To be effective, the synthetic reopening scheme would probably require the Treasury to auction securities of *all* maturity lengths on a quarterly, monthly, or semi-monthly schedule. (Alternatively, the Treasury could issue securities on different auction schedules but with standardized interest payment and maturity dates. This would require issuing some securities with accrued interest.) If the financing schedule were modified in this way to accommodate synthetic reopenings, it would smooth out debt related cash outflows from month to month. However, this might create serious cash management problems in the short term, since the Treasury would still need to fund the large interest and principal amounts associated with past quarterly refundings. In other

---

<sup>13</sup> Note that the synthetic reconstitution approach cannot be made to create an additional supply of the most recent issue of the longest maturity security that the Treasury offers.

words, even moving to a smoother financing pattern would create transitional cash flow irregularities that might persist for years.

More volatile Treasury cash balances would create problems for the Federal Reserve in implementing monetary policy. The Treasury tries to maintain a stable cash balance at the Federal Reserve of about \$5 billion. Additional amounts of cash are held in Treasury Tax and Loan ("TT&L") accounts at commercial banks and other financial institutions. The total capacity of TT&L accounts is about \$35 billion, however, and large, uneven cash inflows occasionally spill over into the Treasury's account at the Federal Reserve. When this happens, reserves are taken out of the banking system, and the Federal Reserve must undertake open market transactions in order to offset this drain.

In summary, the synthetic reconstitution idea, while having substantial theoretical appeal, has some large practical difficulties associated with it. Even assuming that all the tax, legal, and accounting issues could be resolved, the proposal implies some major changes in Treasury's debt issuance schedule. This has implications beyond transitory market problems associated with squeezes. Of course, a synthetic reconstitution program could be implemented without debt issuance schedule changes, but the ability of such a program to facilitate the breaking of market squeezes would be much more limited.

### 3. Treasury Auction Issues

#### A. Auction Technique

This section examines simple descriptions of auction organization and discusses in more detail two specific proposals for reform of the auction process. While much of this discussion is in theoretical terms, it should be understood that market specifics make it difficult to translate theory into practice, with the goal of assessing the efficacy of any auction reform.

For example, unlike most of the simple theoretical constructs that appear in the economics literature, the Treasury offers *multiple* units of the auctioned security, with open trading in those securities preceding (in the when-issued market) and following (in the secondary market) the issuance of securities. Another deviation from common theoretical assumptions is that investors can adjust their behavior in many ways, such as by varying the amount of information collected, by altering the volume of bids, or by placing bids indirectly through dealer intermediaries. These considerations are important in the policy context, and this section attempts to address them as well as presenting a basic theoretical framework for assessing auction methods.

#### Auction methods

There have been many important contributions to the academic literature on auctions, including early efforts by William Vickrey and Milton Friedman, as well as significant later work by Paul Milgrom, among others.<sup>14</sup> This research has classified the types of auctions, modelled the bidding strategies rigorously, and ranked the outcomes by various criteria. A number of similarities among auctions have emerged, as well as equivalence propositions concerning the revenue to the seller. Unfortunately, members of the financial and academic communities describe auction formats by a variety of names, some overlapping and others conflicting. To reduce confusion, this section will use explicit, if somewhat unwieldy, names for each auction type.

---

<sup>14</sup> The early references include William Vickrey, "Counterspeculation, auctions, and competitive sealed tenders," *Journal of Finance*, Vol. 16 (March 1961), pp. 8-37, and Milton Friedman, "Comment on Collusion in the auction market for Treasury bills," *Journal of Political Economy*, Vol. 72 (October 1964), pp. 513-514. Recent work is summarized and reviewed in R. Preston McAfee and John McMillan, "Auctions and bidding," *Journal of Economic Literature*, Vol. 25 (June 1987), 699-738; Paul Milgrom, "Auctions and bidders: a primer," *Journal of Economic Perspectives*, Vol. 3 (Summer 1989), pp. 3-22; and Paul Milgrom and Robert J. Weber, "A theory of auctions and competitive bidding," *Econometrica*, Vol. 50 (September 1982), pp. 1089-1122. A less rigorous overview with applications to Treasury securities is provided by Loretta J. Mester, "Going, going, gone: setting prices with auctions," *Federal Reserve Bank of Philadelphia Business Review*, (March/April 1988), pp. 3-13.

William Vickrey originated the standard auction taxonomy, classifying auction types based on the order in which prices were quoted, as well as the auction forum. First, awards can be made at prices that are progressively lowered (or, equivalently, at yields that are raised) until all of the goods or securities are sold; alternatively, the bids can be arranged in ascending order by their price and a single price determined that just places the total issue. Second, the auction can be conducted with sealed bids entered any time up to a deadline and subsequently opened by the auctioneer; on the other hand, the auction can be conducted with open bids put forth by participants in an open gathering or some other means of direct communication with the auctioneer (such as by telephone). This two-by-two classification scheme yields four auction types, described below.

Beyond these categories, models can be stratified further by the assumption concerning bidders' information about the value of the auctioned object. In the "private-values" case, bidders make subjective decisions as to the value of the object on the auction block, independent of each other. In the "common-values" case, each participant attempts to measure the item's value by the same objective yardstick. The auction of a unique piece of art is the prototypical private-values example, while a Treasury auction - with each bidder guessing at the security's resale value - matches the common-values assumption.

**Multiple-price, sealed-bid auction.** The Treasury's current auction methodology falls into this category, which in the financial community is termed an English auction (except by the English, who call it an American auction). Bidders spell out their intentions on tender forms that must be turned in before an established deadline. An individual sealed bid, known only to the tenderer and to the auctioneer, reports the quantity and price for the auctioned security that the bidder is willing to pay.<sup>15</sup> The auctioneer then ranks those bids by tendered price (or equivalent yield) and makes awards at the highest prices covering the total auction size. Thus, participants pay differing prices reflecting the strength of their bids, with the surest winner the one furthest above the market consensus. This type of auction is called a "first-price" auction when a single unit is for sale because it is the first, or highest, price that is accepted.

In this case, winning is losing, as entering the highest bid signals that the bidder's valuation exceeds that of all other interested parties. Because all participants, in effect, are guessing about the same common value - the price at which the security will trade after the auction - a high bid signals a heightened probability of subsequent loss for that bidder. This is the "winner's curse" and gives bidders an incentive to rein in their

---

<sup>15</sup> A bidder's intention will be measured here in terms of the price he or she is willing to pay for the security rather than the equivalent yield he or she is willing to earn on the security.

enthusiasm. The optimal strategy is to shade a bid toward the perceived market consensus.<sup>16</sup>

The risk of the winner's curse puts a premium on market information entering the auction, and this incentive shapes bidders' behavior before and at the auction in three major ways. First, when-issued trading before the auction allows a market consensus about auction pricing to coalesce. Second, a core of bidders at the auction routinely exchanges information about probable market conditions. Third, participants who are unable or unwilling to commit the resources needed to collect market information pool their bids, as a group of investors is more likely to have a clearer view of the market consensus and is less likely to place off-market bids. The pooling of bids is one service provided by primary dealers, who collect customer business and place large-scale orders.

**Uniform-price, sealed-bid auction.** In this type of auction, the auctioneer collects sealed bids, arranges them by price, and makes awards at the single price that just places the entire issue. This type of auction is called a "second-price" auction when a single unit is sold because the price charged would be that of the highest failed bid, or the second-best price. It is often called a "Dutch" auction in the financial press and has recently gained some prominence as a potential substitute for current Treasury practice. Aggressive bidders receive sure awards but pay a price closer to the market consensus. As a result, there should be less of the shading of bids that marks the response to the winner's curse. With the threat of awards above the consensus reduced, there is less of a need for large bidders to compare notes before the auction and customers might be more willing to place their business directly by bidding at the auction rather than going through a primary dealer.

**Descending-price, open-outcry auction.** This procedure has been used to auction flowers in the Netherlands; hence, academics refer to it as a Dutch auction. Bidders congregate in one room, or its electronic equivalent, and the auctioneer calls out a sequence of decreasing prices. In an auction of one unit of a good or security, the auction stops when one bidder is willing to pay the price called out. For multiple units, the eager bidder would be awarded the security and the auction would continue, selling the remaining securities at progressively lower prices. In fact, the strategic decision is identical to that of the multiple-price, sealed-bid auction: the optimal bidder does not want to be too aggressive and stop the auction well above the likely market consensus, but rather, will shade his or her bid to avoid the winner's curse.<sup>17</sup> As a result, investors have the same incentive to trade information and to pool bids by placing customer orders at primary dealers.

---

<sup>16</sup> This strategy is explained in James L. Smith, "Non-aggressive bidding behavior and the 'winner's curse'," *Economic Inquiry*, Vol. 19 (July 1981), pp. 380-388.

<sup>17</sup> This strategic equivalence was first noted by Vickrey, *op. cit.*

**Ascending-price, open-outcry auction.** The auctioneer could announce an ascending sequence of prices to a group of bidders, who would submit their bids at each price. The auction would stop when just enough bids were received to sell the total issue of securities or total units of the good for sale. One form of this auction category is the method commonly used to sell, for example, works of art, when a single unit is on the block.<sup>18</sup>

In selling multiple units of securities, the auction would begin as a price was called out and all interested parties submitted their quantities demanded. The volume of bids at that price would be announced and, in successive rounds, the price would be raised until the volume demanded was smaller than the size of the issue. When that point was reached, the auctioneer would know that the price previously called was the highest price consistent with selling the entire issue. In other words, the second highest price clears the auction market. Bidders who bid above that market-clearing price plus some fraction of the bidders at the market-clearing price would receive awards. Those partial awards to the bidders that had not moved up to the highest price either could be based on a common fraction of the bids of all members of that group or could be allotted to those who were electronically timed as having placed their bids soonest at the market-clearing price.

From the viewpoint of an investor, this increasing sequence of prices lessens the possibility of the winner's curse, as the public announcement of bids provides information about the security's common value. That is, the presence of other bidders provides support that a bidder is not alone in valuing the security highly. Even if an investor truly valued the security far above his or her competitors, the bidding would cease before the price moved very far from the consensus.

### **Potential changes to the Treasury auction method**

**Milton Friedman's proposal.** Recent events have kindled enthusiasm for reform of the auction process. In a recent contribution, Milton Friedman has repeated a proposal he advanced in 1959 concerning the auction of Treasury securities.<sup>19</sup> Essentially, Friedman argues for a uniform-price, sealed-bid auction, commonly called a Dutch auction. In the one alteration to current practice, the Treasury would no longer award securities at the price equivalent to the yield bid but instead charge a uniform price (award a uniform yield) to winning bidders.

---

<sup>18</sup> Academics term this an English auction. Indeed, in the private-values model (which is not analyzed here), another equivalence proposition holds: what has been popularly referred to as a Dutch auction is strategically identical to what academics refer to as an English auction. When there is a time limit on bidding, it is called a Scotch auction.

<sup>19</sup> Milton Friedman, "How to sell government securities," *Wall Street Journal* (August 28, 1991).



Friedman asserts that the switch would end cornering attempts by eliminating the profit potential in market manipulation. And, perhaps paradoxically, he also argues that total revenue to the Treasury would be higher by surrendering the ability to "price-discriminate" or charge bidders different prices based on their bids.

Friedman argues that the current Treasury technique reduces demand at auctions, as well as making it more price sensitive relative to the demand of the ultimate buy-and-hold investor. As explained above, this is the rational response to multiple-price awards: the investor is reluctant to expose his or her true valuation to a seller (the Treasury) whose stated intention is to garner the highest price possible. But with this induced difference in demands in the primary and secondary markets, a potential market cornerer can buy at the auction just above the market consensus and sell in the secondary market to a larger group of investors.

Moving to a uniform-price award method permits bidding at the auction to reflect the true nature of investor preferences. This should allow investors to bypass the dealer intermediaries and bid directly in the auctions. In the case envisioned by Friedman, uniform-price awards would make the auction demand curve identical to the secondary market demand curve. This integration of the auction and secondary markets would eliminate the incentive to corner an issue, because any cornerer who bids securities away from investors at an auction would not find buyers willing to pay a higher price in the secondary market. Thus, under Friedman's assumptions, the cornering motivation would be eliminated by removing the potential for profit.

This result requires that the switch in auction technique completely unifies the primary and secondary markets. In other words, Friedman assumes that dealers exist solely to bear the bidding risk because of the Treasury's discriminatory pricing. However, even after the adoption of uniform-price awards, presence at auctions may still be limited to a segment of the investor populace, perhaps to those who are more price sensitive. Participants at an auction face uncertain outcomes, since they may not be awarded securities if they have not appropriately cast their bids. Those particularly adverse to this quantity risk well may delay purchase to secondary trading. Those who sell the auctioned securities short in the when-issued market may prefer to cover their positions quickly at the auction. Furthermore, direct bidding requires incurring the costs of arranging for the placement of bids and the payment of awards - the prospects for which depend on the pace of automation and changes in the regulatory environment. As a result, the infrequent purchaser may remain in the secondary market. In general, if dealers provide any service in the distribution of securities, then a wedge will remain between the auction and secondary-market demand schedules. A sufficiently large wedge provides an opportunity for market manipulation.

With demand at the auctions still differing somewhat from that in secondary trading and with the Treasury continuing to solicit sealed bids, Friedman's proposal would not discourage attempts to corner the market. For example, under Friedman's

"Dutch" auction regime, a market manipulator could place bids for a substantial fraction of an issue well above the market consensus price, ensuring significant awards, but would pay only that price required to allocate the remaining portion of securities to unsuspecting competitors. However, even if the threat of manipulation remains, the lessened importance of bidding near the market consensus should reduce the desire to share information and the associated pre-auction discussion and pooling of bids that could provide cover for market manipulation.

With regard to revenue, Friedman would have the Treasury surrender part of the revenue from its current auction practice - that earned from charging winners the price that they bid rather than a common price - in the expectation that added investor demand and more aggressive bidding would more than replace that loss. This assertion can be spelled out using Henry Goldstein's 1962 analysis.<sup>20</sup> As figure B-1 shows, part of the Treasury's total revenue owes to its charging winners the price that they bid, which for the current practice is measured by the area under the demand schedule labeled "multiple-price." That price discrimination, however, discourages some demand, as investors shade their bids for fear of the winner's curse. Adopting Friedman's uniform-price system turns part of that surplus back to the bidders, thus shifting out the demand schedule to that labeled "uniform-price." Under a multiple-price scheme, the Treasury works its way down the inner demand schedule, awarding securities at lower prices to place the total issue (marked by the vertical dashed line). Under the uniform-price scheme, one price, depicted by the horizontal line, would exhaust the issue. The consequences for revenue depend on whether the area of the first triangle, the loss from the inability to price discriminate, outweighs the area of the second triangle, the gain from added demand.

The Friedman proposal has some support in the economics literature, as analysts working with explicit models of bidder behavior in a Treasury-like regime, rather than simple demand schedules, generally find that a uniform-price scheme does produce higher revenue for the seller.<sup>21</sup> Friedman himself, in 1962, made a persuasive argument that revenue would increase.<sup>22</sup>

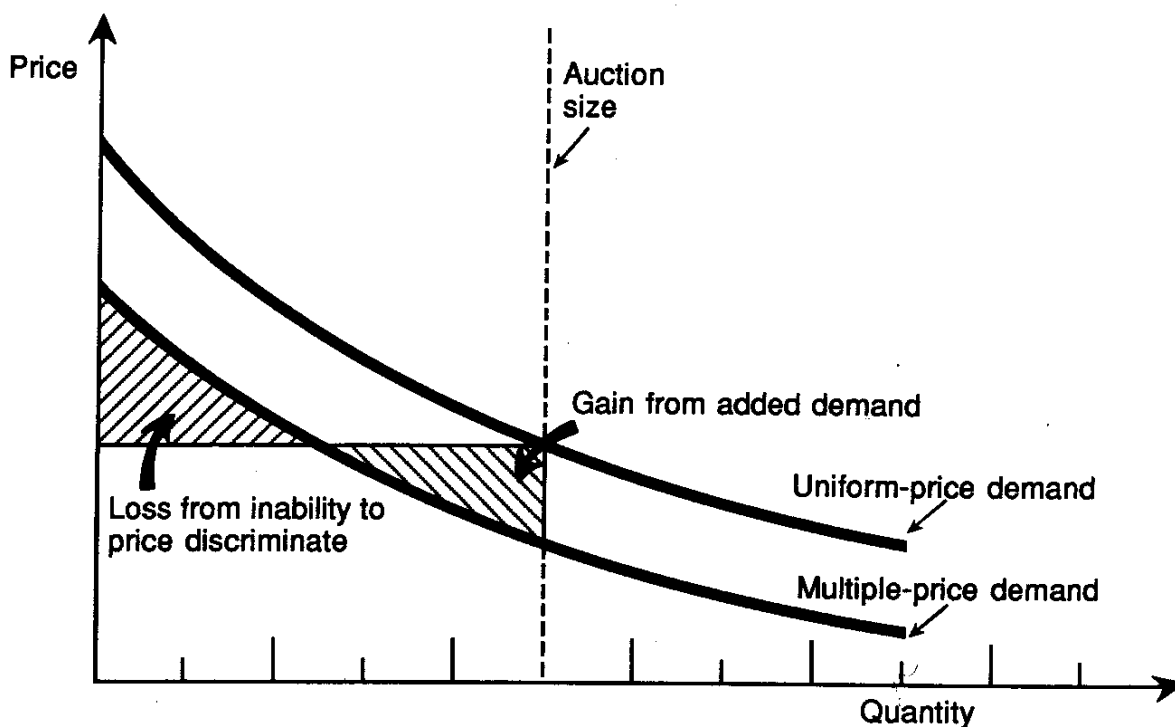
---

<sup>20</sup> Henry Goldstein, "The Friedman proposal for auctioning Treasury bills," *Journal of Political Economy*, Vol. 70 (August 1962), pp. 386-392.

<sup>21</sup> Early support for Friedman's contention can be found in Vernon L. Smith, "Bidding theory and the Treasury bill auction: does price discrimination increase bill prices?" *Review of Economics and Statistics*, Vol. 48 (1966), pp. 141-146. Exact conditions under which revenue increases in a model closer to current practice are given in Sushil Bikhchandari and Chi-Fu Huang, "Auctions with resale markets: an exploratory model of Treasury bill markets," *The Review of Financial Studies*, Vol. 2 (1989), pp. 311-339. Also see Theorem 4 in Robert J. Weber, "Multiple-object auctions," in Richard Englebrecht-Wiggans, Martin Shubik, and Robert M. Stark, editors, *Auctions, Bidding, and Contracting: Uses and Theory*, New York: New York University Press, (1983), pp. 165-191.

<sup>22</sup> Correspondence quoted in Goldstein, *op. cit.*

Figure B-1



Dealers devote considerable energies to the auction only to sell those securities almost immediately to customers - and most profit from doing so. Part of those resources devoted to that distribution could accrue to the Treasury if it could directly deal with those customers. A uniform-price auction, since it is less penalizing to the uninformed, may be the best vehicle to attract those people. Nonetheless, the little empirical evidence available is considerably more ambiguous than this theorizing would suggest. In the few instances in which organizations have run the two types of auctions virtually side by side, neither has come out as clearly resulting in higher revenue to the seller. Friedman's proposal may mark an improvement on current Treasury practice. However, it might not deter manipulative bidders from profiting from the inherently closed nature of sealed bids, which does not give other participants a chance to react.

**Open-outcry, ascending-price auction.** In contrast to the sealed-bid framework, applying an open-outcry bidding system would let participants react to surprise bids during the auction. If the Treasury were to conduct an open-outcry, ascending-price auction, registered dealers and other financial institutions would connect by phone

(with appropriately designed security) to a central computer. Those not pre-registered could appear at their local Federal Reserve bank with sufficient documentation to be included as bidders. These gathered bidders would state their demands as the auctioneer announced an increasing sequence of prices.<sup>23</sup> Prices called out at the auction would climb to the point where total demand was just below the issue size. At that point, the previously announced price would mark the single, market-clearing price that placed the entire issue.

A bidder (or bidders) attempting to corner this type of auction would effectively disclose its intentions to its competitors, as it would continually bid in size as the Treasury auctioneer raises the price. This allows those not party to the attempted market manipulation - particularly those short the security in the when-issued market to bid along with the manipulators. Hence, the bidders may fail in cornering the security or, at the least, would find it a more expensive proposition.

In a sealed-bid auction, by contrast, the bulk of the increase in price comes at the announcement of surprising awards - when other bidders realize that they have not been awarded securities as expected and react by bidding up the price in the secondary market. In a real-time auction, that reaction occurs when the bidding is still open, and thus the Treasury garners part of the profits of the attempted comer. Indeed, auction theory suggests that, in general, Treasury revenue would not suffer and indeed might increase in the switch to an open-outcry, ascending-price system. Since awards are made at a single price and a bidder is aware of the strength of the competition, the possibility of a winner's curse is eliminated.

Of course, a real-time auction may pose a daunting technical challenge and, unlike Friedman's uniform-price, sealed-bid auction, would require a substantial development cost. The goal of equal access to the Treasury auction requires that every effort be made to decentralize the system: anyone willing to pay the fixed expense of a properly configured terminal for bidding should be allowed to participate in the auctions. At the same time, each bidder would need to be screened to ensure payment if their bid were to be successful. If the fixed cost of entry were too large, then participation at the auction would be limited, perhaps perpetuating a two-tiered distribution system for the securities and all the attendant risks. If access were too open, then the physical demands of directing a large volume of electronic messages in a narrow span of time could prove prohibitively expensive. The private sector provides some precedents, but those efforts are small relative to what is required to automate the Treasury auction.

---

<sup>23</sup> Announcing an ascending sequence of prices would bolster demand at the auction. Recalling Vickrey's result discussed earlier, starting high and progressively lowering the price (a descending-price, open-outcry auction) raises the specter of the winner's curse that results in bid shading.

## **B. International Comparison**

### **Methods of sale of government securities: OECD countries**

Central government debt managers in the countries that belong to the Organization for Economic Cooperation and Development ("OECD") largely have been moving toward selling government securities domestically in auctions since the early 1980s. Prior to that time, government debt managers had relied heavily on selling bonds through underwriting syndicates, private placements, and sales to financial institutions on a fixed-price subscription basis. The increased financing requirements of the governments in the OECD countries in the 1980s and the more competitive capital markets generally contributed to the movement toward competitive market pricing of securities.

Methods of sale of central government securities in the OECD countries are summarized below and presented in more detail in the country-by-country descriptions following this summary. Several of the OECD central governments borrow in foreign currencies abroad for balance of payments reasons. These borrowings, which largely are done through underwriting syndicates and private placements, are not discussed in this paper. Table B-1 presents data on the size of the central government surplus or deficit for the most recent fiscal year, the size of the central government debt held by the public (excluding holdings of central banks and government accounts, such as social security trust funds), debt as a share of gross domestic product or gross national product, and market trading volume statistics for a recent period in 1991. These data are indicators of the magnitude of the government's financing in absolute terms and relative to the size of the country's economy and the liquidity of the domestic bond markets.

A number of countries have used sales of marketable U.S. Treasury debt securities by multiple-price/yield, sealed-bid auctions as a model. Currently, such auctions are used exclusively in Australia, France, and New Zealand to sell marketable securities.

Other central governments that use multiple-price/yield auctions to sell portions of their marketable debt are: Belgium, for securities issued to institutional investors; Canada, for all marketables, except about one-quarter of long-term bonds which are sold by fixed-price subscription (the rest of these bonds are sold at multiple-yield auctions); Germany, for medium-term notes since July 1991 and for a portion of longer term bonds since July 1990; Italy, for short-term bills denominated in lire; Japan, for short-term bills and longer term notes and bonds, including 60 percent of 10-year bonds, which account for a major proportion of Japanese government borrowing; and the United Kingdom, for bills and longer term debt (gilts). The Netherlands used

multiple-price auctions for long-term bonds but changed in 1991 to selling long-term bonds on tap.

Several of the governments use sealed-bid, uniform-price auctions, in which all securities are awarded at the highest yield (lowest price) of accepted tenders, to sell portions of their debt. OECD countries using uniform price auctions are: Denmark, for short-term bills; Italy, for bills denominated in European Currency Units and bonds maturing in two to 10 years (longest sold); and Switzerland, for bills, notes, and bonds. The United Kingdom uses the minimum price tender method of selling gilts, a modified form of uniform price auction. Uniform-price auctions have been used only seldom in the Netherlands in recent years.

Trading on a when-issued basis before an auction of securities occurs in Canada, France, Germany, Italy, and the United Kingdom. In the Netherlands, where tap issues remain open for a relatively short period of one or two weeks, when-issued trading may occur before a tap issue is closed.

Tap issues are used by a number of OECD countries to sell nonmarketable savings instruments to small investors. In a tap issue, the government announces the interest rate and maturity of the security, sets the price, and allows the market to subscribe. Tap issues may remain open for short or long periods of time, depending upon the government's financing needs and market conditions.

Marketable securities are sold on tap by: Australia, to sell marketable government securities in small amounts to small investors; Denmark, for notes and bonds - the most important instruments sold domestically; Germany, for the portion of long-term bonds that is not sold by competitive price auction or underwriting syndicates and for sales of five-year special notes to individuals and charitable organizations; the Netherlands, for most long-term issues; and the United Kingdom, to sell the portion of gilts that remain unsold from minimum price tender sales or to sell additional amounts of existing issues placed with the Bank of England.

Sales of central government securities are conducted domestically through underwriting syndicates and private placements in several of the OECD countries. In an underwriting syndicate sale, the country negotiates with the syndicate with regard to volume and price of the security, as well as timing. Negotiations of private placements are similar, but they usually are brought to a government debt manager by an intermediary that does not act as principal in the transaction, and securities are distributed to fewer investors. It is standard procedure for the government to pay fees in syndicate and private placement sales.

Underwriting syndicates are used by: Germany, to sell the portions of long-term bonds that are not sold by multiple-price auction or on tap; Japan, to sell the 40percent portion of 10-year bonds that is not sold at auction and to sell small amounts

of five-year bonds; and Switzerland, to sell securities maturing in three to 10 years. In the case of Japan, the price for the syndicated underwriting is the price that results from the auction of the to-year bonds, which immediately precedes the placement of the underwritten portion of an issue.

Several OECD countries sell marketable securities in several tranches to increase the overall size of issues for the purposes of enhancing market liquidity and preventing price distortions. The sales may be through reopenings of securities that are auctioned or through issues that remain on tap. This technique is used by Australia, Belgium, Denmark, France, the Netherlands, New Zealand, Switzerland, and the United Kingdom.

In many of the OECD countries, the central banks have arrangements with the equivalents of U.S. primary dealers, through which they conduct monetary policy. These same dealers usually are the major market-makers for government securities, although that is not necessarily the case. In some other countries, the Ministry of Finance/Treasury selects primary dealers specifically to distribute government securities. Firms in OECD countries generally, however, must have a primary dealer designation, be approved by the central bank, or belong to a stock exchange to bid without a deposit in government security auctions.

There are no primary dealers in Denmark, Germany, Japan, the Netherlands, or New Zealand. In Japan, central bank open market operations are conducted through several money market brokers, who are not part of the underwriting syndicate. In New Zealand, open market operations are conducted through entities that register with the Reserve Bank of New Zealand to bid in auctions of government securities. Australia, Belgium, Canada, France, Italy, and the United Kingdom have primary dealers.

There is no uniformity of structures for regulation of the government securities markets among the OECD countries. In Canada, Germany, and Switzerland, there is central government prudential regulation of depository institutions and provincial or state supervision of securities trading. The Bank of England provides prudential regulation of depository institutions, while the Securities and Investments Board supervises the protection of investors. In Australia and New Zealand, the central banks provide prudential regulation of depository institutions, but there is no specific regulation of the government securities market. The Japanese Ministry of Finance and the Danish Supervisory Authority for Financial Affairs provide centralized regulation of the government securities markets in their respective countries, while the Amsterdam Stock Exchange provides centralized regulation of the government securities market in the Netherlands.

**Table B-1**  
**DECD Country Debt Statistics**  
**In U.S. Dollar Equivalents**

<u>Country</u>	Surplus or Deficit FY'91 (Billions)	Privately-held Government Debt 12-31-90 (Billions)	Debt to GNP/GDP (Percent)	Turnover Rate 1991
Australia	-8.4	37.4	12.8%	390 mil./day
Belgium	-12.7	233.0	109.6	1.4 bil./day
Canada	-26.3	265.5	45.9	173.6 bil./month
Denmark	-6.5	83.8	60.0	21 .4 bil./month
France	-18.4	350.1	27.5	9.8bil./day*
Germany	-40.0	381.3	22.0	n.a.
Italy	-128.4	1,168.6	99.2	3.8 bil./day
Japan	-22.5	765.2	24.0	82.5 bil./day
Netherlands	-12.6	196.4	70.0	9.8 bil./month
New Zealand	-2.2	73.7	63.5	5.0 bil./month
Switzerland	-1.2	11.1	4.3	n.a.
United Kingdom	+1.0	314.0	28.9	8.8 bil./day
United States	-268.7	2,492.0	43.9	122.5 bil./day

\* Medium- and long-term (original issue) OAT bonds only.

Sources: Data for each country from respective government.



## OECD Countries: Techniques to Sell Central Government Debt Internally

### **Australia**

#### General Comments

The Treasury is responsible for government debt management and the Reserve Bank of Australia is its fiscal agent. There is no permanent lending by the RBA to the government although a short-term overdraft facility at market-related interest rates is available. Australia had surpluses in FYs 1988-91 (ended 6/30/91). This year the economy has been in recession, and a deficit of US\$8.4 billion equivalent is estimated in the 1991-92 budget.

The types of debt instruments issued are: short-term notes (5-, 13-, and 26-week maturities) sold weekly, and short- (1 to 3 years), medium- (3 to 5 years), and long-term (over 5 years) bonds. Australian government securities are in book-entry form.

There are two groups of authorized dealers, with which RBA conducts open market operations. First, 8 "authorized short-term money-market dealers" have a contractual relationship with RBA to provide liquidity to the government securities market. RBA conducts most open market operations through short-term market-makers. Second, there are 18 "reporting bond dealers" through which RBA conducts OMO in bonds. The reporting bond dealers have no privileges or obligations regarding issuance of government debt. The government securities market is informally regulated by the RBA.

#### Auction

All government securities have been sold through multiple-yield auctions since 1982. Bids are accepted from parties registered for this purpose with RBA. Any potential bidder that can establish its financial capability can bid without deposit. The minimum competitive bid is US\$77,800 equivalent.

No limit is set on awards to one entity, nor is there any restriction on the number of bids any entity can submit. Usually reopen outstanding issues rather than issuing new ones. Bids usually amount to 3 to 4 times the amount offered. There is no when-issued trading.

#### Other Sale Methods

Australian government savings bonds were issued on tap until 1987. The government no longer issues bonds targeted specifically at household savings.

The RBA stands ready to fill small orders for marketable government securities (US\$780 to US\$39,000 equivalent) from its own portfolio at a price prevailing in the market, plus a small service charge. Small amounts can be sold to the RBA under the same terms.

From time to time the government, through RBA, has repurchased outstanding bonds for cancellation or has exchanged current issues for older bonds to improve the overall liquidity of the market.

## OECD Countries: Techniques to Sell Central Government Debt Internally

### **Belgium**

#### General Comments

The Ministry of Finance is responsible for public debt management, and the National Bank of Belgium is its fiscal agent. The government may borrow up to US\$485 million equivalent for day-to-day cash management from NBB. In FY 1990 (ended 12/31/90) the budget deficit totaled US\$12.69 billion equivalent.

The types of debt instruments issued are: short-term bills (3-, 6- and 12-month), longterm public subscription bonds and "linear" bonds maturing in 3 to 15 years. The bills and linear bonds are issued in book-entry form to institutional investors and dealers. Public subscription bonds are in paper form. Most trading is on stock exchanges.

The MOF has selected 14 primary dealers to bid in auctions and make secondary markets in short-term bills and linear bonds. Immediately after an auction, they have the sole right to purchase, on a noncompetitive basis at the auction average, additional amounts of the securities. Primary dealers and other intermediaries may be used by NEB to conduct open market operations. The Securities Regulation Fund, established under the authority of the MOF and the NEB regulates participants in the government securities market.

#### Auction

Short-term certificates and "linear" bonds have been sold by multiple-yield auctions since January 1991. "Linear" bonds are issued monthly as reopenings of bonds with the same maturity, interest rate, and identifying number. Bids are accepted without deposit from parties registered for this purpose with the NBB.

No limit is placed on awards to anyone entity, nor is there a limit on the number of bids that can be submitted. The minimum bid is for US\$322,000 equivalent for bills and US\$1.6 million equivalent for linear bonds. There is no when-issued trading prior to the auction.

#### Other Sale Methods

Long-term public subscription bonds are sold 3 or 4 times per year. The coupon and maturity are set by the MOF and subscriptions are taken for about two weeks. The bonds are targeted to smaller investors. The minimum purchase amount is US\$322 equivalent. MOF pays banks a commission for selling them to the public.

## OECD Countries: Techniques to Sell Central Government Debt Internally

### Canada

#### General Comments

The Department of Finance is responsible for debt management, and works closely with its fiscal agent, the Bank of Canada to develop policy. The budget deficit has been stable at about US\$26 billion equivalent for the last 5 years.

Bonds are bullet maturities with fixed rates and are redeemable at maturity. Bonds mature in 2 to 30 years. Canada auctions each week 3- and 6-month bills and year bills. About 90% of bonds are in book-entry form in the Canadian Depository for Securities. Bills are in bearer paper form.

Marketable government bonds are sold only to a group of primary distributors, including commercial banks (5) and investment dealers (55). Primary distributors and all Canadian banks can bid for bills. The Bank of Canada conducts open market operations through 10 jobbers, a subset of the primary distributors. Most trading is over the counter, although some is done through securities exchanges.

Bank dealers in government securities are regulated by the Canadian federal banking regulator. Other government securities dealers are regulated by provincial securities commissions, the key one of which is the Securities Commission of Ontario.

Canada began selling index-linked bonds in November 1991.

#### Auction

About 3/4 of marketable bonds and all short-term bills are sold in multiple-yield auctions. Awards, including awards for customers, are limited to 20 percent of amount offered of bonds and one-third of the amount offered of bills. When-issued trading begins when an issue is announced for auction. No commissions are paid for bonds and bills sold by auction. Canada is moving toward using auctions to sell all marketable securities.

#### Other Sale Methods

Fixed-price subscription offerings are used for about 1/4 of marketable bonds; the coupon and price are announced 1 1/2 days before the deadline for subscriptions. The Bank of Canada buys any portion of an issue that the primary distributors do not buy. A commission is paid on bonds sold via the syndicate.

Canadian savings bonds are sold and the outstanding stock is also repriced each October. They are puttable at any time with accrued interest. Fees are paid for sale and processing of Canada Savings Bonds.

## OECD Countries: Techniques to Sell Central Government Debt Internally

### **Denmark**

#### General Comments

Debt management is the responsibility of the Ministry of Finance, with the central bank as fiscal agent. The budget deficit has widened in recent years, and is estimated at US\$6.5 billion equivalent in 1991. The government has a cash account with the central bank, which makes it possible for government borrowing to lead or lag the government's borrowing needs.

Main types of securities issued to the public are: fixed and floating rate bonds (5-10 years); notes (1.1 to 2.2 years); and bills (3 and 6 months). Government securities are in book-entry form.

In the domestic market there are no primary dealers or private underwriters for government bonds. Trading is over-the-counter and through the Copenhagen Stock Exchange. The government borrows in foreign currencies abroad for exchange stabilization purposes and uses underwriting syndicates to place the securities. Foreign investors participate in the domestic market.

The central bank conducts open market operations through the Copenhagen Stock Exchange. Participants in the government securities market are regulated by the Supervisory Authority of Financial Affairs.

#### Auction

Domestically, bills are sold through uniform-price auction quarterly. Also, the central bank purchases them and sells them on tap. Banks and non-bank dealers that are connected to the Danish Securities Center, a private non-profit depository clearance and settlement system, can submit bids in auctions. There is no limit on awards to a single bidder. Trading is not permitted prior to the auction.

#### Other Sale Methods

Treasury notes and bonds are sold on tap. New issues are sold by the central bank through the Stock Exchange. Banks and security brokers accept applications which are passed on to the Stock Exchange like orders for secondary market purchases. The National Bank, acting on behalf of the Treasury, may set new issue yield at its discretion during Stock Exchange sessions. A new note issue is usually sold on tap for nine months after original issue. There are no regulations as to the length of the tap period for bonds. There is a tax-related minimum interest rate rule, which may require closing a tap issue if market yields rise.

## OECD Countries: Techniques to Sell Central Government Debt Internally

### France

#### General Comments

The Ministry of the Economy and Finance is responsible for debt management, and the Bank of France is its fiscal agent. Budget deficits widened in the 1980s, and the deficit amounted to US\$18.4 billion equivalent in 1990. The Bank of France does not lend directly to the government.

The Treasury has selected 15 primary dealers (SVTs) that are responsible for bidding in auctions, making markets, and providing screen quotations to the public. There are also 2 reporting dealers (CVTs). The primary dealers established an interdealer broker in 1987; only SVTs and CVTs have access to it. The Bank of France executes open market operations through a group of 26 interbank market agents that are selected separately by the Bank.

All marketable securities are in book-entry form. Participants in Treasury auctions must have an account at the Bank of France or bid through an institution that has an account at the Bank of France. Secondary market trading is over the counter. The government does not pay commissions to purchasers of marketable securities. Bank participants in the government securities market are regulated by the Banking Commission. The Stock Exchange Operations Commission supervises other participants in the government securities market.

#### Auction

Multiple-price auctions are used to sell coupon securities which pay interest annually and principal at maturity. The "fungible" OAT bond, which is the most important security from the standpoints of new issues and trading, matures in 4-30 years and is reopened in new tranches to increase the size of each issue and enhance liquidity. Until midday the day after an auction, each SVT is permitted to submit noncompetitive bids for the most recently auctioned OAT bond at the auction average price in an amount up to 30 % of its average awards in the previous 3 OAT bond auctions. The minimum purchase in the auction is US\$9.8 million equivalent. The Treasury also auctions 2-year and 5-year fixed rate bonds in a minimum of US\$196,000 equivalent.

Multiple-rate auctions are used to sell short-term bills (maturing in 13, 26, and 52 weeks) issued at a discount. The minimum purchase amount in the auction is US\$196,000 equivalent.

When-issued trading begins when a security is announced.

#### Other Sale Methods

There are US\$5.9 billion equivalent of 5-year nonmarketable savings bonds outstanding. No effort is made to promote sales of savings bonds.

## OECD Countries: Techniques to Sell Central Government Debt Internally

### Germany

#### General Comments

Ministry of Finance is the issuer and Bundesbank is its fiscal agent. German budget deficits have been widening in recent years, and in FY 1991 is estimated at US\$40.0 billion equivalent. Temporary cash advances of up to US\$4 billion equivalent are regularly made from the Bundesbank to the government.

The most important debt instruments are longer term bonds, called Bunds, and 5-year special notes. Very little financing is done in short-term maturities under one year. All new public debt is in book-entry form.

A 110-member consortium of banks (including 49 affiliated with foreign banks) comprise the syndicate for negotiated placements and the eligible bidders in auctions. Consortium members are selected by the Bundesbank, acting as MOF's agent. The consortium members are also used by the Bundesbank to execute open market operations and to sell government securities on tap. Noncompetitive bidding is through consortium members.

Public debt securities are traded on stock exchanges. The Federal Banking Supervisory Office licenses all entities that trade securities for the accounts of third parties. The eight regional stock exchanges, which are under the supervision of the state (Laender) governments, are SROs and have broad authority to regulate market participants and trading.

#### Auction

Medium-term notes, mostly with 4 years to maturity, have been sold in multiple-price auctions since May 1991. A portion of each sale of Bunds has been auctioned since 1990. When-issued trading begins with the announcement of an auction. There is no limit on awards to anyone entity. There is no commission paid to entities that are awarded securities in an auction.

#### Other Sale Methods

Bunds usually have 10 years to maturity. Since July 1990, Bunds have been sold in 3-part sales: (1) negotiated through syndicate, 32 %; (2) multiple-price auctions, 39%; and (3) Bundesbank market-tending portion, 29 %, distributed when the price is favorable to the government. Syndicate allocations have been based on auction awards since October 1991. Commissions are paid to the syndicate for the underwritten portion of securities and those sold on tap.

5-year special notes are issued on tap only to individuals and charitable organizations; when an issue is completed, it is traded in the secondary market.

Private placements of short-term paper have been used in the past, but were not done in 1991.

## OECD Countries: Techniques to Sell Central Government Debt Internally

### Italy

#### General Comments

The Treasury Ministry is responsible for debt management and the Bank of Italy is its fiscal agent. Italian budget deficits widened in the 1980s, and the deficit was the equivalent of US\$128.4 billion in 1990. The government may borrow directly from the Bank of Italy. Only 4 % of the public debt is foreign-owned.

The government issues: short-term Treasury bills in lire and in ECU; medium and long-term variable and fixed rate bonds in lire and ECU. Short-term bills and longer term bonds indexed to short-term rates account for over 70% of the public debt. The longest maturity is 10 years. More than 90% of marketable government securities are in book-entry form through the Central Depository System run by the Bank of Italy.

Most trading is on a wholesale screen-based market, whose participants are regulated by the Bank of Italy. There are 23 primary dealers selected by the Bank of Italy, which uses them together with other market participants to execute open market operations.

Membership in the screen-based market is voluntary. There are entities acting as dealers that are not subject to any regulatory regime.

#### Auction

Short-term bills denominated in lire are auctioned in multiple-price auctions. The Treasury sets no minimum acceptable price for multiple-price auctions. A set amount is reserved for noncompetitive awards. Treasury bills denominated in ECU are sold in uniform-yield auctions. Treasury bonds in lire and ECD maturing in 5 to 10 years are sold in uniform-price auctions. The government sets the maximum acceptable yield (minimum price) in uniform yield/price auctions.

Trading begins when new security issues are announced by the Treasury. Minimum competitive bids in all auctions are US\$88,550 equivalent of lire or US\$73,350 equivalent ECU. While there is no cap on the value of awards, no entity may submit more than 5 bids per auction. Noncompetitive bids are not accepted in uniform price/yield auctions. Participation in the auction is limited to banks, credit institutions, insurance and financial companies and stockbrokers.

#### Other Sale Methods

About 9% of the public debt is in the form of small investor savings certificates and deposits in the Post Office System. Once a significant contributor to public financing, this System has declined in importance in recent years.

## OECD Countries: Techniques to Sell Central Government Debt Internally

### Japan

#### General Comments

The Ministry of Finance is responsible for debt management and the Bank of Japan is its fiscal agent. Budget deficits have been declining since the mid 1980s. The 1990 deficit was OS\$22.5 billion equivalent.

The Japanese government bond market is the second largest in the world. Most trading is in an OTC market, though some transactions are on the eight stock exchanges. About one-third of OTC trading volume is done through one brokers' broker, which is owned by its members.

MOF sells short-term bills and intermediate and long-term bonds. Monthly sales of 10-year bonds account for 80% of government debt outstanding and are the most actively traded issues in the secondary market. All marketable Japanese bonds are in book-entry form.

There are no firms designated as primary dealers, although the market and the underwriting group are dominated by several large participants. The Bank of Japan uses several brokers, which are not part of the underwriting syndicate, as intermediaries to execute open market operations.

The government securities market is regulated by the Ministry of Finance.

#### Auction

Multiple-price auctions are used for securities maturing in 2, 3, and 6 months and 2, 3, 4, and 20 years. When-issued trading is illegal at any price prior to the auction and is illegal at a discount in the immediate post-auction period. For 10-year bonds, 60% are awarded in multiple-price auctions and 40% are distributed through an 833-member syndicate (includes 675 banks and 158 securities firms). Awards are limited to 30% of amount auctioned; thus, 18% of the total of a 10-year. The government pays commissions to purchasers in the auction and to the underwriting syndicate.

#### Other Sale Methods

The remaining 40% of each 10-year bond is sold through the syndicate, which obtains the bonds at the average of accepted competitive tenders.

5-year bonds are placed fully through the underwriting syndicate, but comprise only a small proportion of total issues.

Government compensation bonds to war-surviving families. Such nonmarketable bonds account for only about 1 % of government bonds outstanding.



## OECD Countries: Techniques to Sell Central Government Debt Internally

### **Netherlands**

#### General Comments

The Ministry of Finance is responsible for debt management and the central bank is its fiscal agent. Budget deficits have been declining since the mid 1980s. The deficit amounted to US\$12.8 billion equivalent in FY 1991. The central bank may lend temporarily directly to the government in limited amounts. It also purchases government securities through open market operations. The MOF often purchases and sells government bonds to stabilize prices.

Bonds maturing in 10 years accounted for 75% of MOF borrowing in 1990/91. Short-term bills were not sold in 1990/91. Subscriptions on original issue are limited exclusively to members of the Amsterdam Stock Exchange (banks and securities broker/dealers). Foreign investors hold 23 % of Netherlands government securities. MOF emphasizes debt lengthening and does not borrow in foreign currencies or sell indexed or variable rate securities.

Government securities are available in bearer definitive and registered forms.

There are no primary dealers. The market for government securities is regulated by the Amsterdam Stock Exchange.

#### Auction

During the late 1980s through early 1991, MOF sold bonds in multiple-yield auctions. Since March 1991, however, government bonds have been sold on tap exclusively.

#### Other Sale Methods

Bonds are all sold on tap. An issue stays open for one or two weeks. There may be when-issued trading before the issue is closed. The government may change the price during the tap period. No fees are paid by MOF to subscribers to tap issues. The minimum purchase amount is US\$1.5 million equivalent.

Private placements of long-term bonds account for most of the rest of government borrowing. Intermediaries in private placements receive fees from the MOF.

Nonmarketable savings bonds are not offered by the government.

## OECD Countries: Techniques to Sell Central Government Debt Internally

### **New Zealand**

#### General Comments

The Treasury is responsible for the management and the Reserve Bank of New Zealand is its fiscal agent for internal borrowing. New Zealand had surpluses in FYs 1988-90 and a surplus of US\$1.0 billion equivalent in 1991. Nearly half of the debt is owned by foreign investors. The government may borrow from RBNZ.

Securities include short-term bills (2 % of internal public debt) and government stock maturing in up to 10 years (57% internal public debt). Outstanding issues reopened to foster market liquidity.

All bidders in auctions must be registered with the RBNZ or bid through an entity that is registered. The RBNZ conducts open market operations, including issuing 63-day RBNZ bills, through dealers that are registered with RBNZ as counterparties for open market operations. There are no primary dealers. All marketable debt is in book-entry form. Tenders in auctions are in paper form.

There is no specific regulation of the government securities market. The RBNZ provides prudential regulation of banks.

#### Auction

All marketable securities are sold in multiple-yield auctions. There is no limit on the proportion of an auction that can be purchased by any bidder. When-issued trading begins when a security is announced. No commissions are paid by the Treasury to purchasers in auctions. The government does not set a maximum acceptable yield.

#### Other Sale Methods

Nonmarketable Kiwi bonds are sold to retail investors on tap. They are puttable at a discount, and the minimum purchase is US\$600 equivalent. Fees are paid to institutions that handle Kiwi bonds transactions. Kiwi bonds account for 3% of internal public debt.

## OECD Countries: Techniques to Sell Central Government Debt Internally

### Switzerland

#### General Comments

The Federal Department of Finance is responsible for debt management and Swiss National Bank is its fiscal agent. The Swiss central government borrows little and the public debt is small. Most governmental activity is carried out by the cantons, or states. Foreign participation in the government securities market is small. The amount is unknown, because all securities are in bearer form.

There are no primary dealers. The Swiss central bank rarely conducts open market operations.

The government issues a variety of securities including 3- and 6-month bills, medium-term notes and long-term bonds.

Trading is over-the-counter and through regional stock exchanges. There is no comprehensive government securities regulation. Banks are subject to the supervision of the Federal Banking Commission. The cantons regulate the regional stock exchanges. The cantons of Zurich and Basle, where the most important financial centers are located, license over-the-counter market participants as well as exchange participants.

#### Auction

Swiss Debt Register Claims maturing in 3 and 6 months are issued every two weeks through uniform-price auctions. Long-term bonds, which account for the majority of the debt, are sold from time to time through uniform-price auctions. No tender price limits are applied. The government gives a rough indication of the desired issue amount.

All categories of investors are authorized to participate in auctions. There are no limits on the amount that can be awarded to any bidder in an auction. When-issued trading is permitted prior to the auction. Noncompetitive bids are accepted, and usually are small relative to the size of auctions.

#### Other Sale Methods

Bills usually with maturities of 3 to 24 months are sold on a discount basis only to commercial banks. The price is set by the central bank and banks subscribe for a fixed overall amount.

Government notes with maturities of 3 to 10 years are sold through private placements on a commission basis.

## OECD Countries: Techniques to Sell Central Government Debt Internally

### **United Kingdom**

#### General Comments

The Treasury works closely with the Bank of England (fiscal agent) to develop debt management policy. The budget has been in surplus in recent years, with the surplus in 1991 05\$960 million equivalent. The government borrows directly from the Bank of England.

Bidding in gilt auctions is open to all investors, either on a competitive basis (minimum of OS\$960,000 equivalent) or noncompetitive basis (bids from US\$1,920 to \$960,000 equivalent). The bulk of bids are submitted by primary dealers (18 gilt-edged market makers) either on behalf of customers or for their own account. The GEMMs ensure the liquidity of the secondary market by quoting continuous two-way prices in all gilts in all trading conditions; they have a direct dealing relationship with the Bank of England and exclusive access to interdealer brokers and gilt borrowing facilities.

Participants in the gilt-edged market are subject to prudential supervision of the Bank of England. The Securities Investment Board, which is under the Department of Trade and Industry, oversees protection of investors.

#### Auction

Multiple-price auctions are used for bills and longer-term debt (gilts). When-issued trading is allowed, beginning with the announcement of auction details. Bank of England has discretion not to allot more than 25% of the amount offered to an individual bidder if to do so would be likely to lead to market price distortion. The Bank of England does not set a minimum price, but securities may not be allotted if the price is unacceptably low.

Minimum price tender sales are used to sell gilts; bidding is open to all investors. The minimum price is set in advance for fixed-rate gilts. Gilts are allotted at a common price, either minimum price or price at which all gilts offered are sold (if higher). Tenders for index-linked stocks normally have no minimum price, but authorities do not usually allot at a price that they perceive to be below market. Any unsold gilts are bought by the Bank of England for sale on tap to GEMMs.

#### Other Sale Methods

Bank of England buys gilts that remain unsold from minimum price tender sales; these are subsequently sold on tap to the GEMMs. Guiding principle is that the Bank refrains from selling gilts into a falling market. There usually is a "fallow period" following an auction during which additional amounts are not sold on tap.

Gilts can be issued and placed directly with the Bank of England for sale to the GEMMs, in exactly the same way as above. Usually, in the form of tranches (small additional amounts of existing stocks), but sometimes in larger amounts.

Nonmarketable savings instruments are sold to individual investors through Post Offices.

## **C. Auction Automation**

### **The current auction process**

**Submission of tenders.** Bidders in Treasury auctions can submit tenders through the Federal Reserve banks and branches or directly to the Treasury's Bureau of the Public Debt. Competitive tenders must be received by the closing time for each auction, which is typically 1:00 p.m. Eastern Time on the day of the auction. Noncompetitive tenders must be submitted by 12:00 p.m. Eastern Time on the day of the auction or can be submitted by mail provided they are postmarked no later than midnight of the day prior to the auction and the tender is received on or before the issue date.

Procedures for submitting tenders currently vary among Federal Reserve districts. Bidders can send a facsimile message containing all required tender information (in a few districts), by sending an administrative message over the Federal Reserve's communications network containing all required tender information (in a few districts), or by sending representatives to the lobby of a Federal Reserve bank or branch to submit paper tenders (in all districts).

Some Federal Reserve banks with large competitive bidders in their district provide telephone access for use by the bidders' representatives to establish communications with the bidders' trading desks. Typically, these representatives first enter all the information required on the tender form except for the par amounts and yields (or discount rates in the case of Treasury bills) to be bid. In the closing moments of the auction, following instructions from their trading desks, the representatives enter the par amounts and yields and submit the tender form to the Federal Reserve bank.

**Processing of tenders.** Competitive and noncompetitive tenders are manually processed by Federal Reserve bank staff upon their receipt. This includes checking to ensure that each tender has been signed by an authorized official and that those submitting tenders for customers are duly authorized and are depository institutions or registered broker-dealers. Payment arrangements are also verified at this stage; if full payment does not accompany the tender, auction staff check that an autocharge agreement or a guarantee from a commercial bank or primary dealer of 5 percent of the par amount tendered is on file for the bidder if it is not a depository institution with a funds account.

At each Federal Reserve bank, competitive tenders are manually sorted by rates or yields. The tenders are checked to ensure that those received at one rate/yield from anyone bidder do not exceed 35 percent of the public offering. Bidders who have tendered for over 35 percent of the public offering at one yield have these bid amounts cut back to the 35 percent maximum. Bidders that have indicated a net long

position greater than \$200 million in the auctioned security are noted at this stage. Noncompetitive tenders are totaled, and an initial check is made to ensure that noncompetitive bids would not exceed the award limits for a single bidder. A second, more thorough check for compliance with the Treasury's single bidder guidelines is made after the noncompetitive totals have been transmitted to the Treasury in the interest of timely auction processing.

Competitive bid totals are posted by yield to an auction summary report, together with the noncompetitive total.<sup>24</sup> While specific bids are generally not reported separately in the summaries, the tenders of bidders with net long positions greater than \$200 million are recorded on the auction summary report if the tenders suggest that the entity might receive 35 percent of the auction after including the pre-auction position and noncompetitive bids.<sup>25</sup> The tenders of bidders who have tendered for an aggregate total of more than 35 percent of the public offering are noted on the report. In addition, any tenders for more than 35 percent of the public offering at one yield from a single bidder (that have been reduced to the allowable bidding limit) are noted.

At each Federal Reserve bank, the auction summary report is signed by an authorized employee and transmitted by facsimile to the Treasury Department's Bureau of the Public Debt. At the Bureau of the Public Debt, the auction summary information is manually entered into an automated auction program, which computes the range of accepted bids based on the yields tendered by competitive bidders and the total amount of noncompetitive awards. The weighted average accepted yield for competitive tenders and any proration necessary at the stop-out (or highest accepted) yield, as well as supplementary auction statistics, are also computed. Two computers are used for verification purposes, both of which independently compute the auction statistics from the summary data. Manual backup procedures are also provided for additional flexibility. The appropriate Federal Reserve banks are contacted if the summaries are incomplete or if there are questions about particular tenders. Any questions regarding the 35 percent award limitation to a single bidder or the noncompetitive award limitations are also resolved before finalizing the auction results.

After reviewing the auction results, the Bureau of the Public Debt prepares the press release containing the information on the range of accepted bids, proration at the stop-out yield, and other pertinent auction statistics. This press release is transmitted to the Treasury press room and released to the public at approximately 2:00 p.m. on the day of the auction.

---

<sup>24</sup> Additional noncompetitive tenders may arrive by mail after this time.

<sup>25</sup> With this report, the Treasury is announcing that bidders may not submit both competitive and noncompetitive tenders in one auction.

Between the auction date and the settlement date (usually about five days) the tender and award information necessary for issuing securities to successful bidders is manually entered into a computer system that processes securities issued in the commercial book-entry system and in the TREASURY DIRECT system. On the settlement date, the securities are issued against payment

## **The automation project**

**Strategy and project scope.** The strategy for automating the auction process is first to automate the current auction process in order to move auction participants and administrators from the current manual process to an electronic, automated environment. The system-development phase of this effort is currently being conducted at two Federal Reserve banks, as fiscal agents of the Treasury. The Federal Reserve Bank of Kansas City is nearing completion on one phase of the project, described below. The core of the project is a centralized tender receiving and processing computer system called the Treasury Automated Auction Processing System ("TAAPS") which is under development at the Federal Reserve Bank of New York.

The first two phases are scheduled to be completed by the end of 1992. At that time, a telecommunications infrastructure will be in place, all participants will have the necessary terminal and communications equipment to submit tenders electronically, and the Federal Reserve banks and the Treasury will have the capability to process electronic tenders. Once this is accomplished, it will be possible to implement the open, iterative, ascending-price auction process described elsewhere in this report by modifying the operation of the existing system. The design requirements for this new auction process are still being formulated.

The automation project can be thought of as having four phases, as outlined below. The elements of each phase are described in more detail later in this section.

**Phase 1:** The electronic acceptance and processing of bids submitted nationwide by smaller bidders and depository institutions.

**Phase 2:** The electronic acceptance and processing of bids submitted nationwide by large aggressive bidders.

**Phase 3:** The automation of the Treasury's auction procedures on the centralized processing system.

**Phase 4:** Automation and centralization of issuance of securities to successful bidders through the commercial book-entry system.

**Electronic bidding systems.** Completion of Phases I and II will allow bidders to submit tenders either from a "Standard FedLine" connection, a "FaST Fedline"

connection, or computer interface ("CI") connections that meet the Federal Reserve System's Computer Interface Protocol Specifications standards.

The Standard Fedline is a software and communication application project that is ongoing at the Federal Reserve Bank of Kansas City. This system will provide a capability principally for smaller bidders and depository institutions to submit electronic tenders using a standard Federal Reserve System terminal for securities to be held in both the commercial book-entry and TREASURY DIRECT systems. This project is scheduled for completion by mid-1992.

The FaST Fedline is a software and communications application being developed at the FRBNY, as part of TAAPS, that is designed for use by large competitive bidders. Large competitive bidders require the capability to submit bids quickly in the last seconds before an auction closes on their own behalf and on behalf of their customers. The FaST FedLine software application, which will run on a personal computer, is being developed to meet these specialized requirements.

FaST FedLine terminals will be linked by telephone to the central TAAPS computer. When the Treasury announces an issue, a broadcast message will be sent to all FedLine terminals announcing the auction, and a description of the security, including issue date and maturity date, will be downloaded to the FaST FedLine terminals. At any time prior to the auction closing time, a bidder will complete an electronic copy of a tender form for the particular auction containing empty "fields" for security description, clearing bank information, and customer information. The bidder will be able to quickly fill in the FaST FedLine fields using "pop-up" menus linked to the bidder's database. The bidder will also be required to fill in a net long position field if necessary. The bidder will then be able to transmit the tender to the central computer at the FRBNY within seconds.

**Tender acceptance.** The central T AAPS host computer application will receive and process electronic tenders from the Standard FedLine, the FaST FedLine, and CI connections. It will also provide a mechanism for inputting data from paper tenders submitted to Federal Reserve banks over the counter and via mail. Though processing will be centralized, Federal Reserve districts will continue to serve their current customer base and maintain primary control of tenders submitted by their customers. Districts will continue to be responsible for reviewing their tenders and oversight of original issue processing for their district; the centralized system will be a vehicle for supporting these operations.

While Fast FedLine terminals will have direct communications connections with the TAAPS host computer at the FRBNY, Standard FedLine tenders will be routed through the Federal Reserve banks. All tenders and customer lists from submitting institutions will be printed upon receipt at the Federal Reserve bank and stored in a machine-readable format. Additionally, submitting institutions will receive an



acknowledgement indicating the tender was received. Once T AAPS is operational, a "tender forwarding" capability will be implemented to transmit all Standard FedLine tenders through the Federal Reserve's communication network to the TAAPS computer for centralized processing.

Once transmitted to the FRBNY, the electronic tenders will be stored at the primary computer and also at the contingency processing site at the East Rutherford Operations Center ("EROC"). Should there be a failure at the FRBNY computer, or communications failure of any kind, the FaST FedLine users will reestablish a communications connection with the EROC and continue transmitting tenders. It is expected that this recovery could be accomplished in less than five minutes. If FRBNY's primary centralized processing system fails, Standard FedLine users will have their electronic tender submission capability restored by establishing communications between the local Federal Reserve bank's computer and the contingency site at the EROC. This recovery is expected to take 30 to 45 minutes. If the local Federal Reserve bank's computer fails, Standard FedLine users will use manual backup procedures to submit their bids. To support contingency processing, the system's operators will be able to reassign a district's processing responsibilities to another district. For example, if Minneapolis were unable to process its tenders, Chicago could be reassigned to perform this function.

**Tender processing.** As tenders are transmitted to the central computer, a series of checks will automatically be performed on them. As a result, each tender will be added to one of two tender databases. The tenders that successfully pass all checks will be added to the "good" database; tenders that fail one or more checks will be added to the "questionable" database. TAAPS will send a message to each bidder's terminal advising the bidder that the tender has been received and stored and informing the bidder which checks, if any, the tender failed.

Some of these checks will simply involve examining the tender to determine whether all required information has been included in the tender and that tenders were received before the designated closing time. Some of the checks will require T AAPS to search its database of bidder information to determine that, for example, bids submitted on behalf of customers have been authorized and payment arrangements have been made. T AAPS will also flag any tenders that may require auction rule enforcement. This would include bids for more than 35 percent of the public offering at one yield, bids from related entities, and tenders submitted by one entity through multiple broker-dealers or depository institutions.

In order to screen bids for obvious data-entry errors, the TAAPS system will flag tenders that exceed a par amount that is a predetermined percentage above an amount based upon the bidder's prior submissions, and bids at a rate or yield that exceeds a predetermined band on either side of the when-issued market for that security. This

type of monitoring should catch errors such as a bid for a yield of 7.08 percent instead of 8.08 percent, or for \$5 billion instead of \$5 million.

All flagged bids will be reviewed by Federal Reserve bank staff. After consultation with the bidder and with the Treasury in these cases, the auction staff will have the ability - with the Treasury's approval - to correct obvious keying errors (or allow the bidders to submit corrected tenders), reject questionable bids, or return them to the "good" database. Any tender that is changed must be reviewed and approved by the appropriate officials before being included in the auction, and complete documentation of these changes will be maintained.

After the process of reviewing tenders and resolving any questions is complete, the Treasury will be notified that district-level processing of tenders is complete. The Treasury auction staff will then execute a program that will use the information in the "good" tender database, aggregated by yield, to calculate the range of accepted bids and all relevant auction statistics. The Treasury will review the results, and then broadcast the auction results to all FedLine users and simultaneously issue a public press release.

Successful bidders in the auction will be notified of their awards via a message to their FedLine terminals. The TAAPS system will instruct the commercial book-entry system to issue the securities against payment to the successful bidders on the issue's settlement date. TAAPS will also be able to accommodate the requirements of the new commercial book-entry system being implemented in the next few years.

### **Automation benefits**

**Speed and productivity improvements.** The current process is labor intensive at all stages of the auction for the Treasury, the Federal Reserve banks, and the bidders. Automation should allow fewer people to conduct the auctions faster, as it will reduce significantly the amount of time devoted to manually entering data from tender forms, both for auction processing and for original issue of the securities. Bidders will be afforded the ease and convenience of electronic bidding, and savings will result for some bidders from eliminating the need to send messengers to submit tenders.

Electronic bidding should also reduce bidding errors. Bids communicated over a telephone and hastily transcribed by a messenger at the last moment may be inaccurate, illegible, or difficult to interpret. Bids entered at a terminal will not have these problems. While different types of errors, such as keying errors, may be introduced, the automatic screening procedures described above should mitigate these problems.

**Wider participation in the auctions.** Over 9,000 depository institutions have FedLine terminals connected to their local Federal Reserve banks. Upon completion of the project for electronic bidding by depository institutions, all of these institutions

will have the capability of electronically submitting competitive and noncompetitive bids for securities to be held in either the commercial book-entry or TREASURY DIRECT systems. Registered brokers and dealers and other large bidders will have the opportunity to install computer terminals for auction bidding purposes. Depository institutions with FedLine terminals - particularly those in remote locations - may find it easier and more convenient to submit electronic bids on behalf of TREASURY DIRECT participants than it is with current procedures.

**More efficient monitoring of the auction rules.** TAAPS will be able to collect, organize, and present information quickly about potential or actual rule violations to Federal Reserve bank and Treasury staff reviewing bids. For example, the computer will be able to sort tenders and customer lists by name independently of the dealer or depository institution through which the bids were submitted. This will make it easier to aggregate bids of related entities or of customers that bid through several dealers or depository institutions, which will facilitate enforcement of the 35 percent bid and award limitations and the noncompetitive award limitations.

**Standardized auction procedures.** With standard Federal Reserve terminals, standard FedLine applications, and centralized processing, all bidders and districts will have the same screens and procedures for submitting and processing tenders. Use of standard Federal Reserve terminals and communications facilities allows the use of existing mechanisms for distributing and supporting terminals, and the use of existing and planned Federal Reserve backup sites, systems and arrangements.

## **D. Auction Rule Enforcement**

The Treasury's longstanding policies of encouraging widespread ownership of Treasury securities and limiting concentration of awards at auctions have led to the two primary auction rules, or policies: the 35 percent limitation of overall awards to a single bidder and the total dollar limitations on noncompetitive "bidding.

Recent events, as well as the Treasury's "examination of auction activity in light of disclosures by Salomon Brothers Inc ("Salomon"), have resulted in certain abuses and enforcement problems being uncovered regarding each of these rules. This section discusses the enforcement of current Treasury auction rules, including identified problems, possible causes, and potential solutions. Further discussion of policies that might address these issues, such as changes to auction rules and techniques, is contained in other sections of this report.

### **The 35 percent limitation**

The 35 percent limitation on awards to single bidders in an auction is designed to prevent excessive concentration of ownership of a particular Treasury security as a result of an auction. A limitation of this kind has been in effect since 1962. Since July 1990, an additional Treasury rule has been in effect that limits the amount Treasury will recognize as bid by a single bidder at a single yield to 35 percent of the public offering.<sup>26</sup>

Contrary to what is commonly suggested, the Treasury does not prohibit tenders for more than 35 percent of a particular auction amount or require bidders to certify that they have not done so.<sup>27</sup> The Treasury has, however, stated that bids at one yield for more than 35 percent of the public offering amount at any auction from a single bidder will be recognized only up to the 35 percent limit, and that the Treasury will not award more than 35 percent of the public offering amount to a single entity. While this policy encourages bidders to limit their bids voluntarily, it places a substantial degree of enforcement responsibility on the Treasury and the Federal Reserve banks that act as the Treasury's fiscal agents in conducting the auctions and referring any potential problems to the Treasury.

---

<sup>26</sup> This rule was a response to a strategy in which bidders would attempt to increase their prorated awards at the highest accepted yield in an auction. Large bidders would place bids well in excess of 35 percent of the public offering amount at what they guessed to be the highest accepted yield, assuming that they would be awarded some fraction of this amount. This strategy disadvantaged other bidders who could not risk being awarded much more of the securities than they intended to purchase.

<sup>27</sup> In fact, for Treasury bills, it is impossible for bidders to know precisely what the public offering amount will be prior to the announcement of the auction results.

In addition, the Treasury requires bidders to certify on the auction tender form that the bidder's or customer's net long position in the securities auctioned does not exceed \$200 million or to report on the form any net long position of more than \$200 million as of 12:30 pm on the day of the auction, one-half hour before the closing time for receipt of competitive tenders.<sup>28</sup> This requirement was designed to aid in the administration of the 35 percent limitation, allowing the Treasury to aggregate bidders' existing net long positions with potential auction awards in determining the maximum securities awarded to a particular entity. In recent years, the Treasury has reduced awards based on bidder's long positions in a number of auctions, although such action has not often been necessary.

**Problems and abuses.** The Treasury's enforcement of the 35 percent limitation on auction awards has generally been effective. The unauthorized customer bids submitted by Salomon that allowed it to purchase more than 35 percent in several Treasury auctions are the only instances of which the Treasury is aware since the 35 percent limitation has been in place in which a single bidder was awarded more than 35 percent of the publicly offered auction amount.

In the widely publicized Salomon case, several of the unauthorized bids submitted for customers by Salomon resulted in awards to Salomon in excess of 35 percent of the public offering amount. These include the February 21, 1991 five-year note auction, in which Salomon bought 57 percent of the notes through a bid for itself and two unauthorized bids in customer names, and the May 22, 1991 two-year note auction, in which Salomon effectively purchased 38 percent of the auctioned notes. Salomon has also admitted that it failed to report a sizeable long when-issued position in the May 1991 two-year note auction.<sup>29</sup> Had the position been duly reported, the amount awarded would have been reduced by the amount of the long position.

### **The noncompetitive award limitation**

Securities awarded noncompetitively earn a yield equal to the weighted average yield of accepted competitive bids. Bidding noncompetitively assures an investor of receiving a desired amount of securities, with a market-based yield determined by the auction results. The noncompetitive award process was designed for smaller investors that do not have the resources or information to bid competitively. Noncompetitive

---

<sup>28</sup> With this report, Treasury is announcing that in order to reduce the reporting burden, it will not require bidders to report their-net long positions at the time of the auction unless the total of the bidder's net long position plus its bid is greater than a significant amount of the auctioned issue.

<sup>29</sup> See Statement of Salomon Inc submitted in conjunction with the testimony of Dervck C. Maughan, Chief Operating Officer of Salomon Brothers Inc. and Robert E. Denham, General Counsel of Salomon Inc before the Subcommittee on Oversight, Committee on Ways and Means, United States House of Representatives, September 24, 1991.

bidding was never intended to serve as a substitute for competitive bidding by sophisticated and large bidders who have the resources, knowledge, and expertise to bid competitively. For this reason, and because the Treasury desires a predominantly competitive pricing system for its securities, noncompetitive awards to each bidder are limited. The noncompetitive award limits have changed over time and are currently \$1 million for bills and \$5 million for notes and bonds.

Every auction tender form states that noncompetitive tenders are not to exceed the specified amount allowable for a single bidder. In addition, the tender form indicates that a noncompetitive bidder may not have entered into an agreement with respect to noncompetitive awards prior to the closing time for receipt of tenders. This rule is intended to prevent an investor from obtaining more than the specified amount of securities at the average yield by arranging to acquire them from other investors who plan to bid noncompetitively.

**Problems and abuses.** There have been several instances of investors using noncompetitive awards for what appear to be arbitrage purposes. Market participants have discerned a tendency of prices of Treasury securities to be slightly higher than the average auction price immediately following the announcement of the auction results. This means that securities purchased noncompetitively at the average yield can be resold immediately after the announcement of the auction results in the when-issued market, often for a profit.

The pattern is similar in most of these cases that the Treasury has uncovered. An investment or trading firm submits bids for the maximum noncompetitive award in the names of a list of employees or customers. The bids are either pooled through a primary dealer, or spread throughout a number of different dealers. The securities are then resold immediately after the auction and before payment is required. Only if the securities are sold at a loss does the bidding entity require any payment from participants. However, in some cases, it may be that pool participants were actually required to put up a certain amount of margin towards the positions. Often the same list of participants is used repeatedly in different auctions.

The Treasury has investigated these schemes, and, in some cases, referred them to the SEC. Participants have maintained that they are not violating any specific auction rule, as they claim that all bids are properly authorized and that they have not made any pre-auction agreements regarding the securities. While the Treasury has not taken the position of prohibiting resale of noncompetitively awarded securities immediately following the auction, these activities do appear to have gone against the spirit of the noncompetitive award system, and, in some cases, may have violated the prohibition on pre-auction agreements.

In several other instances, related entities, such as multiple bank subsidiaries or branches within a single bank holding company, have submitted bids, either through the

same dealer or through other dealers, that combined exceed the noncompetitive bidding limits. In most of these cases, the entities do not appear to have been acting in concert to garner a larger share of noncompetitive awards, but rather were probably unaware of their affiliates' auction activities. In several of these instances, the potential problem was detected by the Federal Reserve and Treasury auction staff, and auction awards were appropriately reduced to conform to the single-bidder limitations. However, there have also been a few instances in which Federal Reserve bank and Treasury staff were not aware of the multiple bids and therefore did not limit the combined awards as would be appropriate.

Another potential problem is that primary dealers often submit auction tenders for the maximum noncompetitive amount for their own accounts. Treasury has not rejected noncompetitive bids in these cases, even though primary dealers also bid competitively and often take pre-auction positions in the securities being auctioned.

### **Underlying causes and potential solutions**

Changes to the underlying auction technique or policies towards market "squeezes" could alleviate the problems discussed above because such changes would likely remove the benefits to evading either the 35 percent limitation or the noncompetitive limitation.<sup>30</sup> The major contributing factors to the enforcement problems and abuses under the current auction framework are discussed below.

**Bidding by related entities.** Despite the much-publicized Warburg/Mercury case, in which Salomon submitted an unauthorized bid in the name of an S.G. Warburg affiliate, the problem of bids from related entities has mainly arisen in the noncompetitive bidding area due to the thousands of noncompetitive bids that are submitted at each auction.

The wide array of corporate and partnership affiliations makes it difficult to determine which entities should be considered together as a single bidder for purposes of the 35 percent auction award and bidding limitations and the noncompetitive award limitation. A bank holding company, for example, may have numerous subsidiaries throughout the country that may not communicate with one another on a regular basis, and may submit bids through different Federal Reserve districts. Partnerships with essentially identical memberships and different family members are also considered to be a single bidder under the Treasury's guidelines.

---

<sup>30</sup> Under a uniform-price auction method, for example, the Treasury would probably maintain the noncompetitive bidding mechanism, as this would allow small investors to be assured of receiving the desired amount of securities. However, since all investors would receive the same yield, the incentives for noncompetitive relative to competitive bidding would be greatly reduced.

To date, most single-bidder issues have been handled on a case-by-case basis, usually after the auction has taken place. More systematic enforcement of the single-bidder guidelines would require the Treasury and the Federal Reserve banks to maintain a comprehensive database of corporate affiliations that could be used as a ready reference tool.

**Bidder certifications.** As mentioned previously, auction tender forms currently include several statements regarding noncompetitive purchases, and a certification with respect to net long positions of bidders and their customers. Treasury currently has no satisfactory way of independently verifying the position certifications. The prohibition against pre-auction agreements regarding noncompetitive awards has also required some clarification.

The Treasury is clarifying these issues in the new offering circular, which also should eliminate any current ambiguity as to the appropriate usage of noncompetitive awards. While the Treasury has traditionally maintained that covering short when-issued positions with noncompetitive awards violates the auction rules, the auction rules will further disallow noncompetitive awards to bidders who also bid competitively in a particular auction and who hold when-issued, futures, or forward positions in the security being auctioned. This policy change should ensure that the noncompetitive bidding privilege is not misused by sophisticated traders and dealers rather than smaller, less sophisticated investors.

**Lack of centralized surveillance system.** The auction bidding system is very decentralized, with tenders being submitted at many locations around the country. Much of the enforcement of the auction award limitations is administered at the Federal Reserve banks. There is currently no automated surveillance system in place that would capture all tender information and perform a timely and comprehensive check that any multiple bids by the same or related entities do not exceed the bidding and award limitations in the short span of time available between submission of tenders and announcement of results. As a result, surveillance and enforcement of bidding limitations is currently very labor and time intensive.

As discussed elsewhere in this report, electronic bidding and automation of the auction process will alleviate many of the operational problems in auction rule enforcement. Automation would allow nationwide policing of any single-bidder problems and verification of customer bids and would facilitate a rapid response to such problems by auction administrators.

In the meantime, the Treasury and the FRBNY have already implemented a policy of spot-checking large customer bids for authenticity. Because of the verification policies in place or currently being developed, it is less likely that circumvention of the 35 percent limit through unauthorized bidding will be a problem in the future. The



Treasury and Federal Reserve staff have also strengthened the routine policing of any potential noncompetitive award problems.

## E. Concentration of Auction Awards

The Treasury has pursued policies over the years to make Treasury marketable securities available to a broad range of investors and to diminish the likelihood that ownership of the securities will be heavily concentrated as a result of Treasury auction awards. Treasury actions to broaden distribution of Treasury securities in the auction include limiting awards to anyone bidder to 35 percent of the amount offered to the public and making marketable Treasury securities available on a noncompetitive basis. The Treasury offers securities across the maturity spectrum in order to appeal to a wide range of types of investors and to balance the maturity structure of the outstanding debt.

It is advantageous for the Treasury to distribute new marketable securities to a number of auction participants, rather than to allow any entity, even through competitive bidding, to obtain all or nearly all of a Treasury security. If there were a market perception that awards in Treasury auctions may be to only one or a few entities, over the longer term, other potential participants in Treasury auctions may be discouraged from submitting tenders and Treasury borrowing costs could rise. The ability of any investor to purchase Treasury securities on original issue, directly from the Treasury or through a government securities dealer, ensures that sales of Treasury securities are perceived as fair by market participants. Distribution of securities to a number of market participants also has the advantage that the securities may be sold to a broader customer base than would be the case if auction awards were more concentrated.

**Statistical evaluation of concentration of auction awards.** The primary dealers, as a group, purchase large proportions of Treasury securities in auctions. This is not surprising, since the primary dealers are the major market makers for Treasury securities and they focus' their capital and expertise on trading government securities. The primary dealers are expected by the FRBNY to be "consistent and meaningful participant[s] in Treasury auctions of new securities."<sup>31</sup> This section of the study presents data on competitive awards to primary dealers, their customers, and other competitive and noncompetitive bidders for the period of January 1990 through the end of September 1991, using tenders submitted in Treasury auctions as the source of data. The data have been adjusted to count as awards to a primary dealer the awards on unauthorized bids submitted by Salomon.<sup>32</sup>

---

<sup>31</sup> Federal Reserve Bank of New York, Primary Dealers: Criteria and Procedures Applied to Firms Interested in Becoming and Remaining Primary Dealers, 1988.

<sup>32</sup> See Statement of Salomon Inc. submitted in conjunction with the testimony of Warren E. Buffet, Chairman and Chief Executive Officer of Salomon Inc. before the Securities Subcommittee of the Senate Committee on Banking, Housing, and Urban Affairs, September 10, 1991.

Primary dealers bidding for their own accounts were awarded about 72 percent of Treasury bills, notes, and bonds awarded to private investors during the January 1990 through September 1991 period<sup>33</sup> (see Tables B-2 and B-3). Auction awards to customers of primary dealers accounted for about 5 percent of private awards of Treasury bills and about 15 percent of notes and bonds. Noncompetitive awards accounted for 20 percent of Treasury bill auction awards to private investors on average but less than nine percent of note and bond auction awards.

Awards in each auction were ranked as to amounts awarded to primary dealer firms and their customers. The top 10 firms and their customers combined took 50 percent of total private awards in bill auctions and 66 percent in note and bond auctions during the January 1990 through September 1991 period (see Tables B-4 and B-5).

One primary dealer and its customers were awarded 35 percent or more of the total offered to the public in 17 out of a total of 66 Treasury note and bond auctions. The 35 percent maximum was purchased by one primary dealer for its own account in 6 of the 66 auctions. Awards to the top three bidders (a primary dealer for its own account or another entity, not combined) averaged nearly 41 percent of total private awards in note and bond auctions between January 1990 and September 1991 (see Table B-6).

The figures on awards to primary dealers for their own accounts overstate the concentration of ownership of Treasury securities as a result of the auction, because primary dealers in the aggregate usually have large net short positions going into the auctions. Part of the primary dealers' market making function is to distribute Treasury securities in the when-issued market prior to the auction. Primary dealers in the aggregate had net short positions prior to every auction of notes and bonds in the January 1990 through September 1991 period. Net short positions averaged nearly 40 percent of auction awards to primary dealers for their own accounts during that period (see Table B-7).

**Potential ways to lessen concentration.** The squeeze in the May two-year note, following the auction on May 22, 1991, pointed up the need to review ways to lessen the potential for concentration of auction awards. In that auction Salomon and its customers were awarded 87 percent of the total amount offered. This highly concentrated auction result, while not unprecedented, was followed by unusual distortions in the cash and repo markets for that note. With these distortions in mind, the Treasury began a review of auction procedures following the May 1991 two-year

---

<sup>33</sup> Awards to private investors include awards on competitive and noncompetitive tenders and exclude noncompetitive awards to the Federal Reserve banks for the System open market account and official foreign custody accounts. Awards to foreign accounts held outside of the Federal Reserve are included with awards to private investors.

note auction and has made changes to lessen the potential for a repeat of the experience.

#### Steps that have been taken

1. The Treasury has changed auction rules since May 1991 by increasing the maximum amount of notes and bonds that can be purchased by a single bidder through noncompetitive tenders from \$1 million to \$5 million, effective with the three-year note auction on November 5, 1991.

In the auction of the three-year notes on November 5, 1991, the Treasury awarded \$852 million of noncompetitive tenders to the public, compared with the average of \$1.311 billion in the three-year note auctions between January 1990 and September 1991. In the 10-year note auction on November 6, \$614 million of noncompetitive tenders were awarded to the public, compared with the \$597 million average in January 1990 through September 1991, and \$937 million of 30-year bonds were awarded to the public on a noncompetitive basis in the auction on November 7, compared with an average of \$368 million. Thus, total noncompetitive awards to the public in November 1991 were slightly higher than average. The distribution of awards among the three securities in November appears to reflect an investor preference for the relatively higher yields on longer term securities at the time of the November auctions.

2. Also effective with the November three-year note auction, the Treasury allows all registered and noticed government securities brokers and dealers to bid for customer accounts, a privilege that previously had been granted only to primary dealers and depository institutions.

#### Possible further measures

1. The Treasury could require that an auction participant who bids for more than a specific amount of a bill, note, or bond (for example 10 or 15 percent of the amount offered to the public) bid directly at a Federal Reserve bank rather than submit its tender(s) through a dealer(s). The advantages of direct bidding are that it would: (1) eliminate the information advantage of a dealer who bids in large size for customers; (2) make it more difficult for dealers - and customers to act in concert in an auction and in the secondary market immediately after the auction; and (3) make the auction more competitive and therefore attract potential bidders who may be discouraged from taking the risks involved in participating in an auction if awards can be expected to be concentrated.

The disadvantages would be that: (1) it would force a dealer that was planning to submit a large bid for its own account, or that had a large volume of customer bids, to advise its customers to take their business elsewhere or face a cutback in the

amount the customer wants to buy; (2) it would deny a customer the advice and other services of a dealer firm that the customer prefers; (3) in the current manual data processing environment, bidders would have to arrange to submit tenders physically to a Federal Reserve bank; (4) bidders would have to arrange for a payment mechanism with a depository institution; and (5) bidders might not have sufficient information on current market conditions to be able to bid competitively.

The Treasury has decided to facilitate direct bidding, rather than to require it. Requiring large bidders to tender directly might not achieve the desired end, but could instead provide impetus for retail accounts to purchase securities from dealers in when-issued trading and circumvent the auction entirely.

The FRBNY and the Treasury are working to automate Treasury auctions. When the automated bidding system becomes operational late in 1992, depository institutions and government securities brokers and dealers will be able to submit tenders electronically. In addition, the Treasury and the FRBNY plan to extend electronic bidding capability to other large bidders, who could arrange to pay for their securities through autocharge agreements. It is likely that large bidders would have existing banking relationships that could be expanded to include autocharge agreements. In addition, the Agencies are working- on ways to encourage the expansion of coverage of information on prices and trading volume in the government securities market and to extend the availability of on-line, real-time interdealer broker information systems. The greater availability of information that is expected to result from these efforts should promote an increase in direct bidding.

2. The Treasury could lower the 35 percent award maximum. The 35 percent maximum award ensures that awards will be made to at least three competitive bidders, after taking into account noncompetitive awards. Lowering the maximum to 25 or 30 percent of the amount offered has been proposed and could result in distributing awards to a larger number of market participants, which potentially would encourage more entities to participate in the auction. A disadvantage of a lower maximum award limit would be that it could discourage aggressive bidding, which could tend to reduce demand for the securities and increase the cost of financing the debt.

3. The Treasury could increase the noncompetitive award limit further. As indicated above, the Treasury is reviewing the results of the recent increase in the noncompetitive award limit. It is too early to assess whether the change will result in a change in bidding behavior. An advantage of a higher limit might be that bidders would be willing to submit larger noncompetitive tenders, which could result in larger amounts being awarded to entities other than government securities brokers and dealers, thus potentially reducing the concentration of auction awards. A disadvantage could be a reduction in the size of the competitive pool that might impair efficient pricing in the auction.

**Table B-2**  
**Awards in Treasury Bill Auctions \***  
**January 1990 Through September 1991**  
**(Millions of Dollars)**

	<u>Competitive</u>				<u>Private</u>		
	Primary Dealer	P. Dealer Customer	Total	Other Direct	Total Comp.	Non-Comp. **	Total Private
13-week	\$428,186	\$32,509	\$460,695	\$26,868	\$487,563	\$145,559	\$633,122
26-week	417,449	24,998	442,447	14,421	456,868	114,895	571,763
52-week	<u>154,753</u>	<u>11,008</u>	<u>165,761</u>	<u>7,895</u>	<u>173,656</u>	<u>19,789</u>	<u>193,445</u>
Total	\$1,000,388	\$68,515	\$1,068,903	\$49,184	\$1,118,087	\$280,243	\$1,398,330

**Percent of Private Awards**

	<u>Competitive</u>				<u>Private</u>		
	Primary Dealer	P. Dealer Customer	Total	Other Direct	Total Comp.	Non-Comp. **	Total Private
13-week	67.6%	5.1 %	72.8%	4.2%	77.0%	23.0%	100.0 %
26-week	73.0	4.4	77.4	2.5	79.9	20.1	100.0
52-week	<u>80.0</u>	<u>5.7</u>	<u>85.7</u>	<u>4.1</u>	<u>89.8</u>	<u>10.2</u>	<u>100.0</u>
Total	71.5%	4.9%	76.4%	3.5%	80.0%	20.0%	100.0 %

\*Based on auction date, not issue date. Excludes cash management bills.

\*\* Excludes awards to foreign custody accounts and to the Federal Reserve for its own account.

Source: U.S. Treasury Department.

**Table B-3**  
**Awards in Treasury Note and Bond Auctions \***  
**January 1990 Through September 1991**  
**(Millions of Dollars)**

	<u>Competitive</u>				<u>Private</u>		
	<u>Primary Dealer</u>	<u>P. Dealer Customer</u>	<u>Total</u>	<u>Other Direct</u>	<u>Total Comp.</u>	<u>Non-Comp.**</u>	<u>Total Private</u>
2-year	\$174,133	\$32,769	\$206,902	\$20,406	\$227,308	\$29,389	\$256,697
3-year	61,731	12,786	74,517	1,947	76,464	9,176	85,640
4-year	23,362	4,989	28,351	1,180	29,531	3,384	32,915
5-year	87,058	18,540	105,598	2,384	107,982	8,594	116,576
7-year	46,654	5,985	52,639	1,807	54,446	3,387	57,833
10-year	53,453	17,566	71,019	1,536	72,555	4,183	76,738
30-year	<u>59,226</u>	<u>12,047</u>	<u>71,273</u>	<u>1,966</u>	<u>73,239</u>	<u>2,577</u>	<u>75,816</u>
Total	\$505,617	\$104,682	\$610,299	\$31,226	\$641,525	\$60,690	\$702,215

**Percent of Private Awards**

	<u>Competitive</u>				<u>Private</u>		
	<u>Primary Dealer</u>	<u>P. Dealer Customer</u>	<u>Total</u>	<u>Other Direct</u>	<u>Total Comp.</u>	<u>Non-Comp.**</u>	<u>Total Private</u>
2-year	67.8 %	12.8 %	80.6%	7.9%	88.6%	11.4 %	100.0 %
3-year	72.1	14.9	87.0	2.3	89.3	10.7	100.0
4-year	71.0	15.2	86.1	3.6	89.7	10.3	100.0
5-year	74.7	15.9	90.6	2.0	92.6	7.4	100.0
7-year	80.7	10.3	91.0	3.1	94.1	5.9	100.0
10-year	69.7	22.9	92.5	2.0	94.5	5.5	100.0
30-year	<u>78.1</u>	<u>15.9</u>	<u>94.0</u>	<u>2.6</u>	<u>96.6</u>	<u>3.4</u>	<u>100.0</u>
Total	72.0%	14.9 %	86.9%	4.4%	91.4%	8.6%	100.0 %

\* Based on auction date, not issue date.

\*\* Excludes awards to foreign custody accounts and to the Federal Reserve for its own account.

Source: U.S. Treasury Department.

**Table B-4**  
**Awards to Top Ten Dealers and Customers**  
**In Treasury Bill Auctions \***  
**January 1990 Through September 1991**  
**(Millions of Dollars)**

	<u>Competitive</u>			<u>Private</u>			
	Primary <u>Dealer</u>	P. Dealer <u>Customer</u>	<u>Total</u>	Other <u>Direct</u>	Total <u>Comp.</u>	Non- <u>Comp. **</u>	Total <u>Private</u>
13-week	\$280,313	\$27,389	\$307,702	\$179,861	\$487,563	\$145,559	\$633,122
26-week	260,695	21,307	282,002	174,866	456,868	114,895	571,763
52-week	<u>103,058</u>	<u>10,090</u>	<u>113,148</u>	<u>60,508</u>	<u>173,656</u>	<u>19,789</u>	<u>193,445</u>
Total	\$644,066	\$58,786	\$702,852	\$415,235	\$1,118,087	\$280,243	\$1,398,330

**Percent of Private Awards**

	<u>Competitive</u>			<u>Private</u>			
	Primary <u>Dealer</u>	P. Dealer <u>Customer</u>	<u>Total</u>	Other <u>Direct</u>	Total <u>Comp.</u>	Non- <u>Comp. **</u>	Total <u>Private</u>
13-week	44.3%	4.3 %	48.6%	28.4	77.0%	23.0%	100.0 %
26-week	45.6	3.7	49.3	30.6	79.9	20.1	100.0
52-week	<u>53.3</u>	<u>5.2</u>	<u>58.5</u>	<u>31.3</u>	<u>89.8</u>	<u>10.2</u>	<u>100.0</u>
Total	46.1%	4.2%	50.3%	29.7%	80.0%	20.0%	100.0 %

\*Based on auction date, not issue date. Excludes cash management bills.

\*\* Excludes awards to foreign custody accounts and to the Federal Reserve for its own account.

Source: U.S. Treasury Department.



**Table B-5**  
**Awards to Top Ten Primary Dealers and Customers**  
**In Treasury Note and Bond Auctions \***  
**January 1990 Through September 1991**  
**(Millions of Dollars)**

	Primary <u>Dealer</u>	P. Dealer <u>Customer</u>	<u>Competitive</u> Total	Other <u>Direct</u>	Total <u>Comp.</u>	<u>Private</u> Non- <u>Comp.**</u>	Total <u>Private</u>
2-year	\$113,315	\$29,781	\$143,096	\$84,212	\$227,308	\$29,381	\$256,697
3-year	46,408	10,867	57,275	19,189	76,464	9,176	85,640
4-year	19,700	4,855	24,555	4,976	29,531	3,384	32,915
5-year	66,992	17,466	84,458	23,524	107,982	8,594	116,576
7-year	33,590	5,286	38,876	15,570	54,446	3,387	57,833
10-year	40,747	16,388	57,135	15,420	72,555	4,183	76,738
30-year	<u>44,828</u>	<u>10,566</u>	<u>55,394</u>	<u>17,845</u>	<u>73,239</u>	<u>2,577</u>	<u>75,816</u>
Total	\$365,580	\$95,209	\$460,789	\$180,736	\$641,525	\$60,690	\$702,215

**Percent of Private Awards**

	Primary <u>Dealer</u>	P. Dealer <u>Customer</u>	<u>Competitive</u> Total	Other <u>Direct</u>	Total <u>Comp.</u>	<u>Private</u> Non- <u>Comp.**</u>	Total <u>Private</u>
2-year	44.1 %	11.6 %	55.7 %	32.8%	88.6%	11.4 %	100.0 %
3-year	54.2	12.7	66.9	22.4	89.3	10.7	100.0
4-year	59.9	14.8	74.6	15.1	89.7	10.3	100.0
5-year	57.5	15.0	72.4	20.2	92.6	7.4	100.0
7-year	58.1	9.1	67.2	26.9	94.1	5.9	100.0
10-year	53.1	21.4	74.5	20.1	94.5	5.5	100.0
30-year	<u>59.1</u>	<u>13.9</u>	<u>73.1</u>	<u>23.5</u>	<u>96.6</u>	<u>3.4</u>	<u>100.0</u>
Total	52.1 %	13.6 %	65.6%	25.7%	91.4 %	8.6%	100.0 %

\* Based on auction date, not issue date.

\*\* Excludes awards to foreign custody accounts and to the Federal Reserve for its own account.

Source: U.S. Treasury Department.

**Table B-6**  
**Awards to Top Three Bidders in**  
**Treasury Note and Bond Auctions\***  
**January 1990 Through September 1991**  
**(Millions of Dollars)**

	Awards to Top 3 Bidders**	Percent of		Awards to Top 3 Dealers and Customers***	Percent of	
		Comp. Awards	Pvt. Awards		Comp. Awards	Pvt. Awards
2-year	\$92,223	40.6%	35.9%	\$102,689	46.2%	40.0%
3-year	39,103	51.1	45.7	42,454	55.5	49.6
4-year	18,439	62.4	56.0	21,108	71.5	64.1
5-year	55,160	51.1	47.3	64,661	60.0	55.5
7-year	21,312	39.1	36.9	26,020	47.8	45.0
10-year	32,289	44.5	42.1	42,868	59.1	55.9
30-year	<u>28,548</u>	<u>39.0</u>	<u>37.7</u>	<u>36,657</u>	<u>51.4</u>	<u>49.7</u>
Total	\$287,074	44.7%	40.9%	\$337,461	52.6%	48.1%

\* Based on auction date, not issue date.

\*\* Bidder may be a primary dealer or a customer of a primary dealer.

\*\*\* Primary dealer plus customer of the primary dealer.

Source: U.S. Treasury Department.

**Table B-7**  
**Primary Dealer Net Position Before Auctions\***  
**as a Percent of Account Awards to Primary Dealers**  
**January 1990 Through September 1991**  
**(Millions of Dollars)**

	Primary Dealer Account Competitive <u>Awards</u>	Primary Dealer Net Position Before <u>Auction**</u>	Net Position as Percent of <u>Awards</u>
2-year	\$173,633	-\$80,637	-46.4%
3-year	61,731	-22,194	-36.0
4-year	22,852	-5,338	-23.4
5-year	83,058	-39,890	-48.0
7 - year	46,654	-11,221	-24.1
10-year	53,453	-14,262	-26.7
30-year	<u>58,356</u>	<u>-17,387</u>	<u>-29.8</u>
Total	\$499,737	-\$190,929	-38.2%

\* Based on auction date, not issue date.

\*\* Aggregate primary dealer net position as of 3:30 p.m. the day before the auction.

Sources: U.S. Treasury Department and Federal Reserve Bank of New York.

## 4. Hedge Funds

The recent events involving Salomon and the much-publicized "squeezes" of Treasury notes have focused public and regulatory attention on a type of investment entity popularly referred to as a "hedge fund." These investment funds, which are operated so as to be exempt from most types of regulatory oversight and restraints, have recently begun to play a major role in the government securities market. They apparently have the capability to assume large positions in Treasury securities because of their size, capacity for leverage, and willingness to take substantial risks with their capital. This section discusses why regulators have little access to information about these entities and their day-to-day activities and what the possible implications are for the government securities market.

### What is a "hedge" fund?

The term "hedge fund" was in use as early as the 1960s to describe a new speculative investment vehicle that used sophisticated hedging and arbitrage techniques in the corporate equities market.<sup>34</sup> In the late 1960s, former Securities and Exchange Commissioner Hugh Owens described "hedge funds" as "private investment partnerships which employ the investment techniques of leveraging and hedging."<sup>35</sup> In the 1970s and 1980s, the activities of similar types of funds broadened into a range of financial instruments and activities. These funds grew tremendously in terms of assets, particularly in the 1980s, and now operate in the cash, futures, and options markets and engage in foreign currency, government securities, and commodity transactions, as well as merger and acquisition activities.

The term "hedge fund" does not have a precise definition, but it has been used to refer generally to a cadre of private investment partnerships that are engaged in active trading and arbitrage of a range of different securities and commodities. For the purposes of this report, the discussion presented here will focus on characteristics of those funds that are large and active participants in the government securities market and will use the term "hedge fund" to refer to this sort of private investment fund, regardless of its actual activities.

---

<sup>34</sup> The AW. Jones Group may have been the first entity to be nicknamed a "hedge fund" in the early 1960s because of its strategy of taking offsetting long and short positions in the stock of companies in the same industry, thus hedging macroeconomic factors but benefitting from company specific performance.

<sup>35</sup> "A Regulator Looks at Some Unregulated Investment Companies: The Exotic Funds," Remarks of SEC Commissioner Hugh Owens before the North American Securities Administrators Association (October 21, 1969).

Publicly available data on hedge funds and their activities are limited. In fact, hedge funds are organized in such a way as to minimize the amount of information that they need to disclose about their operations. No comprehensive statistics exist as to their overall number in the United States, assets under management, types of transactions, degree of leverage, rates of return, or positions in particular securities, aside from large positions in futures contracts and corporate equities.

Media reports, discussions with market participants, and the limited information disclosed to regulatory agencies suggest some rough estimates. Total assets invested in hedge funds certainly run into the tens of billions of dollars; several funds have assets of more than \$1 billion each. In fact, many hedge funds are reported not to be accepting new money, as some have grown too large and unwieldy for the sort of trading strategies they typically employ. Rates of return on leading hedge funds are reported to be well above average market returns, even over a period of years.<sup>36</sup> Many hedge fund managers began their careers as commodity traders and continue to use sophisticated trading and arbitrage techniques.

AS hedge funds have grown in size, requiring fund managers to seek markets that can easily absorb huge amounts of money, several of the largest funds have recently become aggressive participants in the government securities market. While hedge funds have regularly placed bids in Treasury auctions in the past, it was not until late 1990 that funds began making large and aggressive bids in Treasury auctions. These funds have been placing bids in amounts that suggest highly leveraged positions. The funds typically bid through major primary dealers, and the combined awards of dealer and hedge fund would often represent a significant portion of the publicly offered amount of securities.

Hedge funds are also reported to have acquired even larger positions in the secondary market for Treasury securities (including the when-issued market) and are likely to have engaged in repurchase transactions in order to finance these positions and those purchased in the primary market. Certain hedge funds that are large participants in the government securities market have also been the focus of some publicity as a result of unauthorized bids submitted in their names by Salomon in several Treasury auctions.<sup>37</sup>

---

<sup>36</sup> Stephen Taub, "Hedging your way to prosperity," *Financial World*, (April 3, 1990).

<sup>37</sup> See Statement of Salomon Inc. submitted in conjunction with the testimony of Warren E. Buffet, Chairman and Chief Executive Officer of Salomon Inc. before the Securities Subcommittee, Committee on Banking Housing and Urban Affairs. United States Senate. September 10, 1991.

## Legal and regulatory structure

Hedge funds are generally structured as limited partnerships, organized either in a U.S. state or "offshore" in a tax-haven country.<sup>38</sup> This structure affords the investors important legal distinctions from other types of investment vehicles, distinctions without which their activities would be severely curtailed.

An entity structured as a limited partnership is permitted under the tax laws to pass through its profits to the partners, avoiding entity-level taxes that would be levied on other forms of organization. Equally important, hedge funds can be structured so as to be exempt from a variety of securities and investment company regulations. This leaves hedge funds structured in this way with a much greater degree of flexibility in both investment techniques and compensatory structure than would be possible for a conventional regulated investment company.

Each limited partnership must have a general partner, who is responsible for managing the fund, making investment decisions (or selecting who will make investment decisions) and raising new capital when necessary. The general partner of a hedge fund (or its owner) sometimes has a large personal stake invested in the fund. The limited partners purchase an interest in the partnership, in return for which they receive a fixed percentage of the fund's profits. The minimum purchase unit for a partnership interest is usually in the \$100,000 to \$1 million range and is thus geared towards high net worth individuals or institutions. A partnership interest cannot be easily sold or transferred, unlike shares in a mutual fund. There may be a minimum holding period before sale is allowed or a substantial delay in liquidating the partnership interest by selling it to the general partner.

**Securities laws.** Hedge funds are not generally subject to SEC oversight.<sup>39</sup> Most investment interests in hedge fund partnerships are privately offered and not registered pursuant to the Securities Act of 1933; therefore, no offering documents for them are filed with the SEC, although an offering document may be required to be distributed to the limited partners.

Hedge funds also claim an exclusion from registering as securities dealers under Section 15(a) of the Securities Exchange Act of 1934 ("Exchange Act"), based on the so-called "trader" exception to the definition of "dealer." In general, a trader is an

---

<sup>38</sup> Offshore funds may also be organized as corporations, which affords their foreign investors exemption from U.S. taxes but allows the shares to trade on foreign stock exchanges.

<sup>39</sup> The anti-fraud provisions of the federal securities laws do apply to hedge funds whether or not they are registered with the SEC. See Tamar Frankel, *The Regulation of Money Managers*, (1978), Vol. 4, pp. 318-323, for a discussion of the treatment of hedge funds under the securities laws.

entity that trades securities solely for its own investment account and does not carry on a public securities business, while a dealer buys and sells securities as part of a regular business, deals directly with public investors, engages in market intermediary activities, and may also provide other services to investors. To date, the SEC has not taken a formal position on the issue of hedge fund registration as dealers, and the funds that this report has focused on have not, on their own initiative, sought advice from the SEC as to whether to register.

If appropriately structured, a hedge fund is not an investment company under the Investment Company Act of 1940. Under Section 3(c)(I) of this statute, funds with less than 100 persons and no intention of making a public offering are exempt from registering as an investment company. A fund excluded from the definition of investment company is not subject to any provisions of the Investment Company Act.

Investment company status imposes substantial regulatory requirements, including conflict of interest regulations, financial statement and audit requirements, and disclosures to customers and to the SEC. Investment companies are also subject to leverage limitations, including an overall 300 percent asset-to-debt coverage rate. This would be a particularly troublesome restriction for hedge funds, which reportedly often rely on a high degree of leverage in order to take larger positions and raise their potential rate of return on capital.

The Investment Advisers Act of 1940 requires registration of professional money managers with the SEC. Fund managers may avail themselves of the small adviser exemption from registration in Section 203(b)(3) of the Investment Advisers Act if they have less than 15 clients. In 1985, the SEC adopted rule 203(b)(3)-I, which permits a general partner to count a limited partnership as a single client, rather than counting each partner as a separate client, under certain circumstances. Under this rule, it appears that managers and general partners of hedge funds would be exempt from registration.

Hedge funds are probably particularly eager to avoid investment adviser registration. In addition to record-keeping and disclosure requirements associated with investment adviser registration, fund managers might also have to comply with Rule 205-3, which prohibits an investment adviser from charging performance-linked fees.<sup>40</sup> Of course, as general partner, the manager of a hedge fund would be entitled to a fair return on capital invested, but the SEC would probably view any compensation above a return on capital and payment for services which are not linked to performance as a performance fee.

---

<sup>40</sup> Rule 205-3(e) permits performance fees when all clients have a minimum of \$500,000 under management or a net worth of \$1 million each.

**Commodity Exchange Act.** Because most hedge funds make use of futures markets, their operators, advisers and trading activities fall within the regulatory domain of the Commodity Futures Trading Commission ("CFTC"). The CFTC requirements for hedge funds are disclosure oriented and less prescriptive than those for investment companies and investment advisers, but at the same time, CFTC registration is harder to avoid.

Under the Commodity Exchange Act ("CEA"), registration of hedge funds themselves is not required; rather, registration is required of the hedge fund manager and any adviser(s) to the fund under certain circumstances. The manager may have to register as a commodity pool operator ("CPO") and the adviser(s) may have to register as a commodity trading advisor ("CTA"). Every commodity pool must have a pool operator responsible for operational aspects of the fund and for raising funds from investors. A CPO can manage more than one pool, and a pool can have more than one CPO or CTA. Several major hedge fund managers or their affiliates are, in fact, registered with the CFTC as CTAs or CPOs.

The CFTC's regulations define a commodity pool as "an investment trust, syndicate or similar form of enterprise operated for the purpose of trading commodity interests." Accordingly, an investment fund generally must be considered a commodity pool if it makes use of commodity futures and options contracts. The CFTC generally makes a determination as to when pool status is appropriate depending on the importance of commodity futures trading to the entity and its other characteristics. An offshore operator of an offshore investment entity, however, may be granted relief from CPO registration if it is not marketed to U.S. investors, regardless of the scope of its activities in the U.S. futures markets.

The CEA also prescribes that any person who provides advice regarding commodity futures and options trading must register as a CTA. Exemption is provided for those who advise 15 or fewer clients and do not hold themselves out generally to the public as a CTA. However, unlike the SEC, the CFTC will usually count each investor in the partnership separately for the purposes of determining CT A status.

CPOs are required by the CFTC to provide disclosure documents and certified annual reports to investors and to the CFTC. CTAs must provide disclosure documents to clients and to the CFTC. CPOs and CTAs must keep and maintain ' books and records which must be accessible to the CFTC and the Department of Justice for inspections. Information that must be maintained includes records of commodity and cash market trading activity and information concerning the pools.

## **Regulatory Issues**

The regulatory issues relevant to these funds involve not so much the protection of the investors who invest in them, typically high net worth individuals or institutions,



but the potential of these funds, due to their size, active market presence, and use of leverage, to cause market disruptions.

For example, Salomon has disclosed that it purchased large amounts of securities for two large hedge funds in the May two-year note auction and was aware of a large position in the notes by a third fund. This concentration of ownership of the securities may have contributed to a squeeze in the market.

In addition, hedge funds are large enough to prompt concern about market stability. However, regulators, except for the CFTC in some circumstances, have little, if any, authority to gain access to information about hedge fund activities. While the SEC can obtain through its subpoena powers records relevant to its investigations, which must be approved by a vote of the Commission, there appears to be little access for regulators outside of an investigatory proceeding.

Reporting and information access. The CFTC is the only regulatory agency with any regular reporting contact with certain hedge funds. In the futures market, the CFTC requires large position reporting identifying the positions of large traders in specific futures contracts, and several of the major hedge funds are regularly included in these reports. As mentioned above, the CFTC also receives annual reports from CPOs regarding their pools' operations and has the authority to inspect records of cash market transactions of the pools, their CPOs, and their clients, although this authority is not routinely exercised.

The CFTC's large trader reporting authority derives from Section 4i of the CEA which requires large traders and position-holders in particular futures contracts to maintain books and records of their transactions and positions in both the futures and cash market for the particular commodity and allows the CFTC, along with the Department of Justice, to inspect these records. It is not clear, however, whether the CFTC could use this authority to acquire information for purposes other than to investigate concerns in the futures market.

In some instances, hedge funds must also report to the SEC. Hedge funds are subject to Section 13(d) of the Exchange Act, which requires investors to report large positions in equity securities. In addition, investment managers of hedge funds may be subject to the reporting requirements of Section 13(f) of the Exchange Act, which requires investment managers that exercise investment discretion with respect to equity securities having an aggregate fair market value of at least \$100 million to file quarterly reports with the SEC regarding their equity securities positions. These reports are made public. Information on hedge funds also is reportable by brokers and dealers under the SEC's new large trader reporting provision (Section 13(h)), although these regulations will cover only publicly traded corporate equities and options.

The SEC has little additional authority to obtain regular information on the activities of hedge funds. In order to claim the exemptions from the Investment Advisers Act and the Investment Company Act, the funds are not required to submit any documentation or to petition for exemption. In fact, the existence of a particular hedge fund may not even come to the SEC's attention unless the SEC receives a complaint about that fund's activities.

Treasury also has little regulatory contact with hedge funds or access to information on their activities. While Treasury does, of course, have information on auction bidding and Treasury securities awarded to hedge funds in auctions, it currently has no access to information on hedge funds' when-issued and other secondary-market activity in government securities, aside from the limited position reporting required on auction tender forms.

**Systemic market risk.** Events in the government securities market have shown that their capacity for leverage allows hedge funds to take large trading positions disproportionate to their capital base. Thus far, fund managers have proved very adept at controlling their market risk, and their lending counterparties appear to consider them creditworthy. However, the sheer size of the positions taken by the hedge funds raises concerns about systemic risk that these funds may introduce into the financial markets.

It is unclear to what extent the failure of a major hedge fund would affect the functioning of the financial markets. Market participants have indicated that hedge funds' use of leverage is usually implemented through margined or collateralized transactions, which would tend to mitigate the effect of a failure on counterparties. For example, transactions on commodity futures exchanges, in which hedge funds are very active, are subject to margin and mark-to-market rules. Repurchase agreements are collateralized by government securities, which would allow the counterparty that held the collateral securities to retain or sell them in the event of a failure. However, regulators currently have little information that might help them assess the market impact of a failure of a hedge fund or that would warn of an impending failure.

## 5. Government Securities Clearing Corporation

The Government Securities Clearing Corporation ("GSCC") is a clearing agency registered with the SEC pursuant to the Exchange Act.<sup>41</sup> GSCC currently is the only registered clearing agency that offers a centralized, automated system for the clearance and settlement of trades in Treasury securities. GSCC offers comparison and netting services to members. GSCC's clearance and settlement system also functions as a risk assessment, credit risk reduction, and risk containment facility for eligible trades in government securities that are submitted to GSCC for comparison and netting. GSCC collects and stores information about a significant percentage of trades in the government securities market. The data GSCC currently receives and maintains include the number and value of submitted and compared trades; dollar and par values of when-issued and other net settlement positions; debit and credit marks; and fails to deliver and duration of fails. Such information is available by CUSIP, by member, and in the aggregate.

### Comparison

GSCC offers a centralized, automated comparison system for government securities trades. Comparison is the matching of the purchase and sale sides of a trade. Successful comparison occurs if the information submitted by both sides to a trade agrees as to quantity, security identification, contra party, trade price or trade value, buy or sell, and trade and settlement dates. Each comparison generated by GSCC evidences a valid, binding and enforceable contract between the members with

---

<sup>41</sup> GSCC was temporarily registered as a clearing agency in 1988 (Securities Exchange Act Release No. 25749 (May 24, 1988), 53 FR 19639 ("GSCC Registration Order"»). Temporary registration of GSCC has been extended through May 31, 1993 (Securities Exchange Act Release No. 29236 (May 24, 1991), 56 FR 24852). GSCC is owned (about 19 percent) by National Securities Clearing Corporation ("NSCC"), a registered clearing agency and the largest equity clearing corporation in the U.S., and (about 81 percent) by approximately 48 government securities brokers and dealers.

As a clearing agency registered pursuant to Section 17A of the Securities Exchange Act, GSCC is a self-regulatory organization ("SRO") and is subject to statutory obligations pursuant to Section 19 of the Exchange Act. Each SRO is required to file with the SEC for publication and approval any proposed changes to its rules. Each SRO also is required to comply with the 1934 Act and rules thereunder, and its own rules, to enforce compliance with its rules by its members, and to impose disciplinary sanctions on members for violations of rules. Section 17A further requires registered clearing agencies, among other things, to have rules designed to promote the prompt and accurate clearance and settlement of securities transactions, to assure the safeguarding of securities and funds and, in general, to protect investors and the public interest.

respect to the trade.<sup>42</sup> Centralized, automated comparison systems at clearing agencies have eliminated the need for brokers to match trades manually and have given brokers and dealers better control over operational aspects and financial risks involved in settling trades. Automated comparison gives trading parties time to concentrate on resolving differences with counterparties and to prepare for settlement. In volatile markets, automated comparison enables market participants to liquidate their exposure from uncomparing trades quickly, before changes in market prices increase potential losses. Automated comparison in the government securities market also permits brokers and dealers to submit delivery and payment instructions to clearing agent banks earlier in the day, which reduces late Fedwire deliveries.<sup>43</sup>

Members submit trade data to GSCC until 10:00 p.m., and receive reports of compared and uncomparing trades by 2:30 a.m. the next morning, which is settlement day. GSCC's comparison system thus allows members to reduce fails by reconciling uncomparing trades at the start of the day and resolving differences in time for the afternoon settlement period.

Approximately 61 GSCC members participate in the comparison system. In 1991, on average, 22,376 sides<sup>44</sup> were submitted daily to GSCC for comparison, of which 94 percent, with a dollar value of \$153 billion, were successfully compared. Currently, GSCC compares submitted trades that occur in the when-issued market, including yield-based trades,<sup>45</sup> trades that occur in the post-issuance, secondary market, and exercises of over-the-counter options.

In December 1991, the SEC approved for one year a GSCC proposal to enhance the comparison system by allowing submitting members to enter the name of a non-

---

<sup>42</sup> GSCC Rule 7. Also see Jeffrey F. Ingber, Overview of the Government Securities Clearing Corporation (August, 1991) ("Overview"). If comparison does not result in a matched trade, the trade will pend in GSCC's system until it is either compared or deleted by GSCC.

<sup>43</sup> GSCC Registration Order at 19641-2.

<sup>44</sup> A side is either the purchase or sale piece of a trade. Both the purchasing side and the selling side submit data for processing.

<sup>45</sup> Yield-based trades are when-issued trades that occur after the auction announcement but before the security is auctioned and that trade on a yield rather than a price basis because the coupon on the security has not yet been set. GSCC compares these trades using the yield instead of a price. After comparison, these trades are deleted from GSCC's system. After final price information is determined, the trades may be resubmitted to GSCC for comparison and netting. As discussed *infra*, GSCC plans to expand processing of yield-based trades.

member as the executing firm.<sup>46</sup> An executing firm could be a customer or a nonclearing broker. The executing firm data can be used as a surveillance tool. Once captured, this data would reside at GSCC and would be available to identify, after the fact, the party for whom a dealer entered into a trade.

Centralized comparison could benefit other market segments. Ideally, centralized comparison systems might also be adapted and expanded to include nondealer, institutional customers.<sup>47</sup> Comparison systems for institutional customers generally offer automated confirmation<sup>48</sup> and affirmation<sup>49</sup> services. Although GSCC does not yet offer centralized, automated confirmation and affirmation systems, such systems exist today at other clearing agencies. With adaptation or change, these systems could be expanded to include government securities trades involving institutions. For example, Depository Trust Company's ("DTC")<sup>50</sup> Institutional Delivery ("ID") and International Institutional Delivery ("IID") Systems provide automated confirmation and affirmation services to brokers, banks, and institutional customers.<sup>51</sup>

---

<sup>46</sup> Securities Exchange Act Release No. 30078 (December 13, 1991), 56 FR 66110. Initially, GSCC will compare trades even if the executing firm data do not match. As members become more comfortable with the new format, however, GSCC intends to use the executing firm data as a required comparison element.

<sup>47</sup> Because dealers are required to send confirmations of transactions that include more data than are usually included in a comparison report, expanding comparison systems to those customers would not necessarily eliminate dealer confirmation distribution.

<sup>48</sup> In a typical institutional trade, the customer's executing broker must confirm the terms of the trade in writing to the investment manager. See 17 CFR § 240.10b-10.

<sup>49</sup> If the confirmation conforms to the investment manager's records of the trades ordered by the customer, the investment manager must issue instructions to the custodian bank authorizing the receipt or delivery of securities against payment to or by the broker.

<sup>50</sup> DTC is a registered clearing agency and the largest private securities depository in the U.S.

<sup>51</sup> Adapting DTC's ID or IID Systems for use in the government securities markets, however, would mean that dealers who participate in GSCC might be required to interact with more than one clearing agency to compare their government securities trades. It might be possible for GSCC to act as a conduit for its members, by accepting trade data from them and transmitting the data to DTC for confirmation processing. Output from DTC could be transmitted to GSCC for distribution to its members.

DTC would need to adapt the ID system in at least one way in order to accommodate the need for earlier confirmations in the government securities market. Currently, the ID system trade input is in batch form and is processed only once a day - too late for the needs of the government securities market. Plans to enhance the ID system are under discussion. The IID system currently uses a multi-batch system that could accommodate earlier confirmations that would be useful for government securities trades.

Another market segment that might benefit from automated comparison is the market for repurchase and reverse repurchase agreements ("repos").<sup>52</sup> Centralized repo processing not only would give regulators a truer picture of the government securities market, but also would give a better picture of each market participant's total risk profile, enabling GSCC, other clearing agencies, and regulators to refine their risk reduction policies. GSCC could benefit the market by offering a system that clearly defines which stage of the transaction is occurring, e.g., opening, closing, setting up a reverse repo or closing a reverse repo, and that automatically generates a comparison of the transaction. Such a service, if capable of capturing a high percentage of repo transactions, also could enable regulators to obtain data on repos for surveillance purposes at little or no cost to market participants.

### **Netting and Guaranteed Settlement**

GSCC also operates a netting system through which each netting member's compared trades are reduced to one net settlement position in each security, which is in turn reduced to a minimum number of deliver or receive obligations.<sup>53</sup> Centralized, multilateral trade netting systems can increase market efficiency and reduce counterparty credit risk and market risk.<sup>54</sup> Trade netting reduces delivery and payment obligations for dealers, thus reducing both exposure and settlement costs. A netting system that includes novation of the trade, in which the clearing entity interposes itself as the counterparty to every deliver and receive obligation, effectively guarantees settlement of trades and reduces significantly the risk that the counterparty will fail to settle the trade.<sup>55</sup> In addition, netting has the potential to reduce daylight

---

<sup>52</sup> Some clearing agencies currently offer repo processing services. For example, DTC operates a Repo Tracking System that is designed to ensure that distributions on the securities underlying the repo are paid to the proper party.

<sup>53</sup> Essentially all Treasury and Agency securities that are Fedwire-eligible, other than mortgage-backed and floating-rate securities, are eligible for netting. For a list of netting eligible securities, See Overview, *supra* note 41, at 8.

<sup>54</sup> Counterparty credit risk is the risk to one party to a trade that the other party to the trade will default on its payment or delivery obligations. Market risk is the risk that, in the event of a default, the value of the securities bought or sold will change, so that a subsequent trade to complete the purchase or sale will result in a financial loss.

<sup>55</sup> The Bank for International Settlements has observed that "multilateral netting by novation and substitution has the potential to reduce liquidity risks more than any other institutional form, but this depends critically on the financial condition of any central counterparty to the netting. . ." Bank for International Settlements, Report on Netting Schemes (February, 1989) at 6.

overdrafts on Fedwire and the risk that the failure of one institution to settle may cause losses or the failure of other institutions.<sup>56</sup>

GSCC's netting system aggregates and matches offsetting deliver and receive obligations resulting from netting members' compared trades<sup>57</sup> in order to establish a net settlement position for a member's activity in each security. After net settlement positions have been determined, resulting deliver and receive obligations are established. All deliver, receive, and related payment obligations between members that were created by trades that comprise the net settlement positions are terminated and replaced by the settlement obligations issued by GSCC.<sup>58</sup> Net settlement positions and resulting deliver and receive obligations are fixed at the time that they are reported by GSCC to the member.

GSCC accepts trade data from members until 10:00 p.m. and nets the submitted trades. At approximately 2:30 a.m. on the morning of settlement date, GSCC makes available netting reports to members. Each day, GSCC establishes and reports, by CUSIP and by product for the trades of a netting member: net settlement positions; fail net settlement positions,<sup>59</sup> which are marked to market daily with accrued interest; forward net settlement positions,<sup>60</sup> which are netted on a rolling basis from the date of comparison to the current day and which automatically convert into net settlement positions on the scheduled settlement date; and deliver and receive obligations necessary to accomplish the settlement of a member's net and fail net settlement positions.<sup>61</sup> At the time reports of the net settlement positions are reported to members, the deliver and receive obligations are novated.

---

<sup>56</sup> The problem of daylight overdrafts has led the Federal Reserve Board to adopt guidelines on the use of Fedwire. See "Reducing Risk on Large Dollar Systems - Interim Policy Statement," Fed. Res. Reg. Servo Par. 9-1006. In addition, the Federal Reserve Board has addressed methods for controlling the risk on private delivery-against-payment systems. See "Private Delivery-Against-Payment Security Systems," Fed. Res. Reg. Servo Par. 9-1000.

<sup>57</sup> Each netting member, other than an interdealer broker, is required by GSCC rules to submit all trades with other netting members to GSCC's netting system. GSCC Rule 11.

<sup>58</sup> There is no provision for unwinding positions that have been netted and novated.

<sup>59</sup> A fail net short position results from the failure of a netting member to deliver, and a fail net long position results from a netting member's failure to receive.

<sup>60</sup> A forward net settlement position is the amount of securities that GSCC anticipates a netting member will be obligated to receive or deliver on the scheduled settlement date. The forward net settlement position arises from the netting member's when-issued and forward trades.

<sup>61</sup> Deliver and receive obligations on fail net settlement positions are not netted with other deliver and receive obligations, but are maintained on an independent basis until settled, except in cases of close-out.

Once a netting member receives the report of its net delivery obligations, it is obligated to instruct its clearing bank as to securities and funds transfers to and from GSCC's clearing bank. All settlements are made over the Fedwire, thereby ensuring delivery versus payment and finality of settlement.<sup>62</sup> Securities movements take place throughout the day over Fedwire from 8:30 a.m. until the Fedwire closes for securities transfers, usually 2:30 p.m. or later. Securities deliveries made to GSCC's clearing bank are instantaneously redelivered to members.<sup>63</sup> All deliveries are made against full payment of GSCC's system price.<sup>64</sup>

GSCC also conducts funds only settlements. The funds only settlement amount is the daily aggregate of funds owing to GSCC for Trade Adjustment Payments, forward mark allocation payments, fail mark adjustment payments, clearance difference amounts, fees, and any miscellaneous adjustments. GSCC's clearing banks collect debit amounts from members by 10:00 a.m. and pay credit amounts to members by 11:00 a.m.

Currently, about 44 GSCC members are netting members. This group includes all the interdealer brokers, 34 of the 38 primary dealers, and several non-primary dealers. In 1991, on average 17,015 sides, valued at \$135 billion, were submitted to the net daily, and were reduced to 3,719 obligations, valued at \$39 billion. GSCC nets members' forward settling trades, including when-issued trades that are traded on a price basis, and post-issuance secondary trades. GSCC's netting system routinely reduces deliver and receive obligations by nearly 80 percent.

The benefits of netting are greater as more trades are included in the net, because a greater number of deliver and receive obligations are reduced to as small a number as possible. In addition, as more trades are included in GSCC's netting system, a larger percentage of market activity is novated, becoming guaranteed trades and freeing members from certain risks described above. To this end, GSCC is planning to include more types of trading activity in the netting process and to expand its membership in order to extend the benefits of netting to a larger universe of its current members' trades and to a larger universe of participants. Specifically, GSCC has proposed to add yield-based trades and auction take-down activity to the netting process. In addition, GSCC has begun discussions with the futures contract markets about including futures transactions in the netting process.

---

<sup>62</sup> Fedwire transfers are immediate and irrevocable.

<sup>63</sup> If GSCC receives securities late in the day that it cannot redeliver, the financing costs are shared by netting members, other than interdealer brokers, on a *pro rata* basis.

<sup>64</sup> The system price is the par-weighted average of all compared trades in each issue on that date, excluding trades with suspect prices. Because the system price is an average, GSCC also calculates a trade adjustment payment, or "TAP," that is the difference between the system price and the contract price. Each business day, each member must pay or receive a net debit TAP or net credit TAP.



The SEC recently approved GSCC's proposal to include yield-based trades in the netting system beginning in January 1992.<sup>65</sup> In order to include yield-based trades in the netting system, GSCC will convert the yield trades into priced trades at the time of comparison. To convert, GSCC will use a standard Treasury Department conversion formula. This change will permit GSCC to extend the credit protection of the trade guarantee to members' yield-based trades sooner than under the current procedure, whereby compared yield-based trades are deleted from the system and resubmitted for netting after the Treasury auction.

Another type of trading activity that could benefit from netting is auction takedown activity. GSCC has proposed that its services be used in connection with the delivery of auction purchases. Under its proposal, GSCC would accept and report in its comparison system data on securities purchases made at auctions by GSCC netting members, net the purchases with when-issued trades of such members in the same securities through the netting system, and assume responsibility for the delivery of the purchased securities through GSCC's clearing mechanism.<sup>66</sup> If implemented, additional information on the overall distribution process required to settle Treasury auction purchases and on the true net settlement positions of members during a when-issued period would be available at GSCC. Treasury and FRBNY staff have been working with GSCC on implementing this concept for the past eighteen months.

### **Safeguards Underlying Guaranteed Settlement**

By guaranteeing settlement of trades included in the net, GSCC has given market participants greater certainty of settlement. GSCC does this by interposing itself between all receive and deliver obligations, and thus becoming the delivering party to all members with receive obligations and the receiving party to all members with deliver obligations. Nevertheless, the guarantee is only as good as GSCC's ability to meet its obligations. GSCC therefore has adopted many safeguards to ensure that members and GSCC are able to meet their settlement obligations.

GSCC's safeguards encompass risk assessment capability and risk reduction and containment measures. GSCC's system of risk assessment is based on historical data. GSCC's system of risk reduction is designed to protect GSCC from identifiable risks in its clearing agency activities and to ensure settlement of trades. In the event GSCC

---

<sup>65</sup> Securities Exchange Act Release No. 29732 (September 24, 1991), 56 FR 49937.

<sup>66</sup> GSCC has refined its proposal so that any Treasury auction purchase by a netting member whether competitive or non-competitive in nature and whether or not for a customer, would be automatically delivered to GSCC's clearing bank and encompassed within GSCC's net. GSCC would allocate auction deliveries to allow for the most complete netting process and to ensure timely delivery so that each member would take possession of the entire amount of its auction purchases on the morning of issue date.

incurs a loss resulting from its clearing agency functions, GSCC's system of risk containment is designed to limit each member's loss to a *pro rata* assessment. Safeguards include member operational and financial standards, collection and maintenance of a clearing fund, collection of forward marks, monitoring of open positions, and procedures in the event of default by a GSCC member.

GSCC's credit and market risk reduction features may be particularly appealing in light of the anonymous nature of trading in the government securities market. Four interdealer brokers may have recognized that GSCC's system promotes risk reduction and effectively screens members' creditworthiness. These four have broadened their customer lists beyond primary and aspiring primary dealers to include all netting members of GSCC. As the group of GSCC netting members expands, therefore, access to interdealer broker screens should expand as well.

**Membership Standards and Monitoring.** GSCC's rules permit the following types of entities to become comparison members: registered government securities brokers and dealers, government securities brokers or dealers that have provided notice under Section 15C of the Exchange Act, clearing agent banks, and entities that demonstrate they could materially benefit from access to the service. Each comparison applicant must have sufficient operational capability and must be in compliance with the capital requirements imposed by its regulator.

For netting members, admission standards are more stringent. Unlike comparison members, all netting members must be registered government securities brokers or dealers, government securities brokers or dealers that have provided notice under Section 15C, or clearing agent banks. In addition, netting members must have used the comparison service for at least six months and have an established, profitable business history of a minimum of six months or personnel with sufficient operational experience. Netting members must be well-capitalized, with net worth of at least \$50 million and excess net capital or excess liquid capital of at least \$10 million (or \$4.2 million in liquid or net capital for an inter-dealer broker and \$250 million in equity capital for a bank).<sup>67</sup>

The SEC has emphasized that a clearing agency's rules must be designed to prevent unfair discrimination in the admission of members.<sup>68</sup> The SEC has voiced to GSCC its view that GSCC's services should be opened to all applicants enumerated in

---

<sup>67</sup> Membership standards are set forth in GSCC Rule 2.

<sup>68</sup> Securities Exchange Act Release No. 16900 (June 17, 1980), 45 FR 41920.

the Exchange Act based on appropriate credit and operational standards, and not based on primary and aspiring primary dealer status.<sup>69</sup>

The financial condition of each GSCC member is continuously monitored through the shared facilities of NSCC's compliance department. The compliance department receives from members financial reports made to regulators, as well as audited financial statements.<sup>70</sup> The compliance department also is in regular contact with regulatory, supervisory and examining entities, including self-regulatory organizations. Monitoring determines whether each member remains in compliance with its minimum admission standards and whether it poses any financial or other risks to GSCC.<sup>71</sup> Members that pose risk to GSCC may be placed on surveillance status.<sup>72</sup>

GSCC uses the data submitted for comparison and netting services to monitor the aggregate positions of members and to assess their risk profiles. By having as complete a picture as possible about its members' aggregate positions, GSCC is better able to assess risks to its members resulting from their activity and risks to itself as guarantor of netted trades. GSCC's current netting system produces a good picture of netting members' trades with each other. GSCC also has a data base of activity among comparison-only members and between these members and netting members. Trades with non-members, however, do not appear anywhere in GSCC's data base.

GSCC represents that it is actively developing changes to its membership standards to admit a second tier of market participants beyond the primary dealers, aspiring primary dealers, and interdealer brokers. GSCC believes this tier of potential members is composed of two categories of market participants: a small group of arbitrage firms and registered or noticed government securities brokers and dealers. Interest from the second group principally is to meet the government securities needs of their retail equity customers. The Treasury, the SEC and the Federal Reserve

---

<sup>69</sup> See GSCC Registration Order, *supra* note 40, at n.38, and Securities Exchange Act Release No. 27006 (July 7, 1989), 54 FR 29798 at n.82.

<sup>70</sup> By sharing monitoring facilities, GSCC benefits by seeing the regulatory reports not only of GSCC members, but also of the members' affiliates who are NSCC members. NSCC's monitoring capability is similarly enhanced.

<sup>71</sup> GSCC may cease to provide services generally or for a particular transaction for a member that no longer complies with membership standards and a member whose financial or operational condition has deteriorated such that GSCC believes the member will be unable to meet its obligations. GSCC Rule 18.

<sup>72</sup> GSCC's rules provide GSCC with the discretion to require a member that is placed on surveillance status to make and maintain an additional deposit to the clearing fund of up to 200 percent of its highest single business day's required clearing fund deposit during the most recent 20 business days. Securities Exchange Act Release No. 27006, *supra* note 68, at n.52.

believe that GSCC should accelerate its efforts to expand membership to more government securities dealers and brokers.

**Clearing Fund, Marks and Loss Allocation Procedures.** The basic risks posed to GSCC by netting members are that a member might not pay a settlement amount due to GSCC or might fail to deliver or to take delivery of securities. A member's default or insolvency could expose GSCC to significant financial losses. To protect against this risk, GSCC has established a clearing fund the purposes of which are: (1) to have on deposit from each netting member cash or other collateral sufficient to satisfy a loss to GSCC as a result of that member's default and close out of settlement positions; (2) to maintain a total asset amount sufficient to satisfy potential losses to GSCC resulting from the default of more than one member and the failure of the counterparties of that member to pay their *pro rata* allocation of loss; and (3) to ensure that GSCC has sufficient liquidity at all times to meet its payment and delivery obligations.<sup>73</sup>

A netting member's clearing fund requirement is a percentage of its money settlement obligations over a recent period plus a margin amount on the member's net settlement positions.<sup>74</sup> A minimum of the greater of \$100,000 or 10 percent of a dealer's clearing fund required deposit must be in cash. Eligible Treasury securities and letters of credit from approved banks also are acceptable forms of clearing fund deposits. Clearing fund requirements are calculated daily and collected if there is a deficit.<sup>75</sup> The clearing fund recently has been valued at about \$225 million.<sup>76</sup>

The margin requirements are based on historical daily price volatility data with protection to two standard deviations.<sup>77</sup> "Disallowance percentages" were established among classes of offsetting securities, to allow GSCC to give credit for offsets only to

---

<sup>73</sup> Overview, *supra* note 41, at 17.

<sup>74</sup> Currently, the clearing fund requirement is 125 percent of the member's average funds-only settlement amount over the most recent 20 business days plus the greater of the margin amount on the member's net settlement positions averaged over the most recent 20 business days, taking into account offsetting positions, or 50 percent of the margin for that business day on the member's net settlement positions without allowing for offsetting positions. GSCC, Form CA-1 (March 15, 1991) at 8-9.

<sup>75</sup> Currently, interdealer broker netting members must make a deposit to the clearing fund of \$1.6 million each in collateral to cover losses that may be allocated against them. As users of GSCC's netting system, interdealer brokers are required to share in the loss allocation scheme.

<sup>76</sup> Telephone conversation with Thomas F. Costa, Senior Vice President, GSCC, October 31, 1991. <sup>77</sup> Two standard deviations encompass approximately 95 percent of the measurements from the mean.

<sup>77</sup> Two standard deviations encompass approximately 95 percent of the measurements from the mean.

the extent appropriate. Irrespective of the nature of the offset, a minimum margin of 50 percent of the margin amount on the member's "gross" positions is collected.<sup>78</sup>

While technically not a part of the clearing fund, a special margining system was designed for forward-settling trades, including when-issued trades, to ensure that the failure of up to all of the five members with the largest debit mark levels on any given day would not disrupt the ability of the system to settle successfully that day's government securities trades. To this end, GSCC collects forward mark allocation payments from certain non-interdealer broker netting members. The basis for these payments is the daily mark-to-market obligation associated with a member's ongoing forward net settlement position in each security from the time of comparison and novation of the trades that underlie such position.<sup>79</sup>

Another risk reduction policy is the collection of daily marks on fail net settlement positions. The daily mark-to-market payment for fails takes into account accrued interest.<sup>80</sup>

Netting members have obligations for loss sharing. Three principles underlie GSCC's loss allocation scheme. First, GSCC will look to the collateral put up by the member whose default caused the loss.<sup>81</sup> Second, if the loss remains unsatisfied, the members that dealt with the defaulting member will be asked to satisfy the loss in full

---

<sup>78</sup> GSCC maintains a separate margin factor schedule for zero-coupon securities because of the tendency of zero-coupon securities to display greater volatility than other Treasury securities.

<sup>79</sup> A member's net securities and funds only settlement obligations arising from forward-settling trades are included in the calculation of such member's clearing fund requirement during the post-auction forward-settling period.

<sup>80</sup> This mark to market procedure has in some cases replaced certain capital and customer protection requirements imposed by the Treasury Department. Overview, *supra* note 41, at 9.

<sup>81</sup> Under GSCC Rule 4, each member grants to GSCC a first priority perfected security interest in all assets and property placed by a member in the possession of GSCC (or its agents acting on its behalf), including all securities and cash on deposit with GSCC in satisfaction of a netting member's required fund deposit or additional fund deposit as security for any and all of its obligations and liabilities. GSCC is entitled to its rights as a pledgee under common law and as a secured party under Articles 8 and 9 of the New York Uniform Commercial Code with respect to such collateral. GSCC maintains a lien on securities that have been delivered to it by the selling side of each trade until it receives payment via Fedwire from the buying side. Securities Exchange Act Release No. 27006 *supra* note 68, at n.39.

on a *pro rata* basis.<sup>82</sup> Third, if the members that traded with the defaulting member do not satisfy the loss in full, other members will be asked to share in the loss.<sup>83</sup>

---

<sup>82</sup> The affected members are those with trading activity to be settled on the day of default.

<sup>83</sup> GSCC, Form CA-1 (March 15, 1991) at 9. If a non-counterparty member determines to withdraw from GSCC, its maximum exposure is limited to the amount of its clearing fund requirement. Maximum interdealer broker liability is \$1.6 million, the amount of the clearing fund deposit.

## 6. Sales Practice Rules

### Background and discussion

In enacting the GSA in 1986, Congress did not grant Treasury or any other regulatory body new authority to develop sales practice rules pertaining to transactions in government securities except for advertising rules. The legislative history of the GSA shows Congress' previous intent that the GSA not result in excessive regulation that would impair the efficient operation of the market and recognition that the SEC has authority under Section 10(b) of the Exchange Act to promulgate rules to prohibit fraudulent, manipulative, and deceptive acts and practices. The scope of the GSA and the new authority thereunder generally were limited to those areas of documented abuse and weakness in the government securities market.<sup>84</sup>

Congress' initial judgment was that the potential costs of sales practice rules in the government securities market would outweigh the potential benefits. Congress had the opportunity to authorize sales practice rules for the government securities market in its development of the GSA but, with the exception of advertising, chose not to do so. The scope of the GSA was therefore narrower than other securities legislation designed to regulate the equities and municipal securities markets.

The GSA continued the restriction placed on the NASD that prohibits it from applying its sales practice rules to government securities transactions, although it provided an exception to that restriction, authorizing the NASD to prohibit fraudulent,

---

<sup>84</sup> "The legislation would grant to the Secretary specific rulemaking authority in the areas of financial responsibility and related practices, financial statements, recordkeeping and exemptions from registration. Rulemaking authority in additional areas does not appear to be necessary to address the weaknesses that have been identified in the government securities markets." \*\*\*

"The Committee views these rules as being generally sufficient to achieve the purposes of the rules to be adopted under Section 15C(b) ..... " \*\*\*

"Since government securities would continue to be treated as exempted securities for purposes of the Exchange Act, a registered securities association would have no authority with respect to government securities brokers, government securities dealers, and government securities transactions except as specifically authorized in the bill or as already exists in current law. ... a registered securities association would not be authorized to regulate transactions in exempted securities by member brokers or dealers. For example, a registered securities association would be precluded from adopting ... any rules of fair practice applicable to government securities brokers and government securities dealers..." S. Rep. 99-426, *supra* at 14, 16, 20.

misleading, deceptive, or false advertising in connection with government securities.<sup>85</sup> Registered securities exchanges have no such restriction on the application of their sales practice rules to their members' transactions in government securities.

The appropriate regulatory agencies for financial institutions do not have explicit authority to impose sales practice rules on the institutions they supervise, although the OCC currently applies the Municipal Securities Rulemaking Board's ("MSRB") sales practice rules as benchmarks for the government securities transactions of national banks.<sup>86</sup> Most banks that are dealers act as such both for municipal and government securities.

As a result, the vast majority of brokers and dealers that conduct a business in government securities, as well as financial institutions that have filed notice as government securities brokers or dealers, are not subject to sales practice rules prescribing just and equitable principles of trade.<sup>87</sup> These brokers and dealers are subject to SEC rules adopted under Section 10(b) of the Exchange Act and, with the exception of financial institutions, are subject to SEC rules adopted under Section 15(c)(1) of the Exchange Act.<sup>88</sup> However, the enforcement of Section 10(b) and the rules promulgated thereunder generally requires a showing that the respondent acted with scienter.<sup>89</sup>

---

<sup>85</sup> Section 15A(t)(1) of the Securities Exchange Act, 15 U.S.C. § 780-3(t)(1), as amended. The restriction against the NASD's application of its sales practice rules to transactions in government securities does not, however, apply to the NASD's enforcement of compliance by its members with the , provisions of the Exchange Act and the rules and regulations thereunder. See Section 15A(t)(2) of the Securities Exchange Act, 15 U.S.C. § 780-3(t)(2), as amended.

<sup>86</sup> See, e.g., MSRB rule G-17.

<sup>87</sup> Registered brokers or dealers that have filed notice as government securities brokers or dealers and that are members of the NYSE or other national securities exchanges are subject to exchange sales practice rules. The exchanges' rules, however, are not always easily adaptable to over-the-counter markets. For example, the exchanges do not have specific rules addressing mark-ups, which are not charged on exchange transactions.

<sup>88</sup> Section 15(c)(1) of the Securities Exchange Act, 15 U.S.C. § 780(c)(1), proscribes a broker or dealer from using any manipulative, deceptive or fraudulent device or contrivance, as defined by the SEC, in connection with transactions in securities otherwise than on a national securities exchange. See 17 CFR § 240.15c1-1 *et. seq.*

<sup>89</sup> The term "scienter," as applied to conduct necessary to give rise to an action for civil damages under the Securities Exchange Act and Rule 10b-5, refers to a mental state embracing intent to deceive, manipulate, or defraud. *Ernst and Ernst v. Hochfelder*, 425 U.S. 185 (1976). Most courts have followed the standard in *Sunstrand Corp. v. Sun Chemical Corp.*, 553 F.2d 1033 (7th Cir. 1977), which describes the necessary mental state as one in which "the danger of misleading buyers must actually be known or so obvious that any reasonable person would be legally bound as knowing..." *Id.* at 1045. In other circuits, see *Kehr v. Smith Barney Harris Upham & Co.*, 736 F.2d 1283, 1286 (9th Cir. 1984); *WalTen v. Reserve Fund, Inc.*, 728 F.2d 741, 745 (5th Cir. 1984); *Kennedy v. Tallant*, 710 F.2d 711, 720 (11th Cir. 1983); *Hackbart v. Holmes*, 675 F.2d 1114, 1117 (10th Cir. 1982); *Sharp v. Coopers & Lybrand*, 649 F.2d 175, 193 (3d Cir. 1981), *cert. denied*, 455 U.S. 938 (1982); *Mansbach v. Prescott Ball & Turoen*, 598 F.2d 1017, 102325 (6th Cir. 1979).



The types of sales practice abuses that may be most likely to occur in the government securities market are those related to mark-up or pricing practices; failure to ensure that recommendations to customers are suitable based on customers' investment objectives and financial backgrounds; excessive trading in customer accounts; failure to obtain proper customer authorization before trading; and false, deceptive, or misleading advertising practices. These types of abuses can occur in customer accounts regardless of product. However, it has been difficult to assess the magnitude and severity of the problem given the lack of specific evidence of widespread sales practice abuses in the government securities market.

While the government securities market is still principally a wholesale market in which brokers, dealers, large commercial banks, and experienced institutional investors participate, a significant number of smaller and less experienced investors also participate in this market. Additionally, this market increasingly encompasses instruments that can pose considerably greater risk of adverse price movements and loss than traditional investments in Treasury or agency securities, which may increase the need for more specific investor protection rules. These instruments, some of which are very complex, include mortgage-backed securities and real estate mortgage investment conduits ("REMICs") issued or guaranteed by government agencies or Government-sponsored enterprises, zero-coupon instruments such as STRIPS, agency mortgage-backed securities stripped into interest-only ("IOs") and principal-only ("POs") pieces, and over-the-counter options on government securities. Some of these instruments are quite similar to instruments already covered by sales practice rules or that trade in combination strategies with instruments that are covered by such rules.

Currently, proceedings under Rule 10b-5 may be brought in response to mark-up practices, excessive trading in customer accounts, and other sales practice abuses, and a body of case law has developed as a result.<sup>90</sup> Also, abuses in which a broker effects

---

<sup>90</sup> See, e.g., *Costello v. Oppenheimer & Co.*, 711 F.2d 1361, 1368 (7th Cir. 1983); *Thompson v. Smith Barney, Harris, Upham & Co.*, 709 F.2d 1413 (11th Cir. 1983); *In re Catanella and E.F. Hutton & Co.*, 583 F. Supp. 1398, 1405, 1410-1411 (E.D. Pa. 1984); and *Ryan v. SEC*, Sec. Reg. & L. Rep. (BNA) No. 26 at 1273 (July 1, 1983) (9th Cir. May 23, 1983), *affg.* *In re James E. Ryan*, 47 SEC 759 (1982). In the mark-up area, the SEC, in 1987, issued a release designed to clarify the application of mark-up policy, including the federal anti-fraud provisions, to zero-coupon securities. Securities Exchange Act Release No. 24368 (April 27, 1987), 52 FR 15575 (1987).

unsuitable transactions in discretionary accounts may be prosecuted by the SEC and the SROs as violations of Rule 15c1-7 under the Exchange Act.<sup>91</sup>

Nevertheless, adopting sales practice rules for the government securities market would allow most disciplinary actions to be taken without having to prove scienter. In addition, such rules could provide more objective or specific criteria that would serve as standards to be applied in routine examination programs. Application of such rules to the government securities market also would be consistent with the rules applied to the equity and municipal securities markets. Moreover, government securities sales practice rules should strengthen investor confidence and integrity in the market and enhance investor protection.

In its September 1990 report,<sup>92</sup> the GAO stated that, although actual sales practice abuse is hard to document in the government securities market, the limitations on the NASD's authority to enforce its sales practice rules should be removed and Treasury should be granted authority to write such rules. The GAO's recommendation was largely based on its view that sales practice rules that supplement the basic antifraud statutes have become a fixture in securities markets in the United States. The GAO indicated that these rules make sense for government and other securities markets because there are similar opportunities for abuse in both markets. The GAO also indicated that increased risk characteristics of certain government securities now increases the need for sales practice rules, particularly for the benefit of some individuals and smaller institutional investors.

---

<sup>91</sup> 17 CFR § 240.15c1-7.

<sup>92</sup> U.S. Government Securities: More Transaction Information and Investor Protection Measures Are Needed, GAO/GGD-90-114 (September 1990), at 4,5,6, and 48.

## 7. Information Access

### Background and discussion

An important aspect of the government securities market is the role played by seven interdealer brokers. Their system of "blind brokering" provides a trading mechanism for primary dealers that maintains the anonymity of the traders and increases the liquidity of the market. The interdealer brokers' systems are a significant price discovery vehicle for the dealers. Initial efforts to increase transparency have focused on the interdealer brokers.

A significant characteristic of fair and efficient markets is transparency, defined as the degree to which real-time trade and quotation information and other market-related information, such as information about the depth of the market, is available to all market participants.

Transparency is important for several reasons. First, it is crucial to market participants' evaluation of the investments they are considering. Participants without knowledge of the current buying and selling interest in the form of firm bid and ask quotations and transaction reports, are at a distinct disadvantage in assessing the value of securities. Thus, transparency is crucial to efficient pricing mechanisms. Second, access to accurate market information enhances the ability of regulatory examiners and independent auditors to carry out their respective responsibilities to ensure that securities transactions and positions are priced appropriately. In addition, transparency permits investors to evaluate whether their brokers are treating them fairly by obtaining the best available price for them and by charging them reasonable markups and markdowns on their transactions. Without access to the prices other market participants are paying for the same security, they cannot effectively determine whether they have paid a fair price. This can be a problem in the government securities market, in which the best market data has traditionally been available only to the primary dealers and generally has not even been available to the majority of intermediaries.

In a completely transparent market, all market participants have equal and immediate access to all firm quotations, including the size of those quotations, and reports of prices and volumes on all trades effected in the market. Of course, complete transparency represents a theoretical model that has not been achieved in any market.

The need for increased access to interdealer broker price and volume information<sup>93</sup> has been a topic of discussion for at least the past five years. Congress has shown interest in the activities of these firms and has previously requested the General Accounting Office to report on certain aspects of their business. Congressional concern focused on the barriers to expanding the number of dealers who could trade through the interdealer brokers beyond primary and aspiring primary dealers and to making available interdealer price information to the public. In its 1987 report,<sup>94</sup> the GAO recommended that market participants be provided increased access to government securities pricing information. At that time, the GAO did not support a federal regulatory structure to achieve expanded access because it believed private sector initiatives should be allowed time to develop.<sup>95</sup>

Also, at that time, Treasury, the Federal Reserve, and the SEC concurred with GAO's conclusion on the need for increased information access but had differing views on the best means to achieve it. The Federal Reserve and Treasury agreed with the GAO that a regulatory structure was not then required to achieve improved information access, because private sector initiatives, which could obviate the need for such action, should be allowed time to develop. The SEC expressed the view that it was not necessarily in the interest of the interdealer brokers and primary dealers to disseminate price information and, accordingly, it did not agree that this information necessarily would be made available on a voluntary basis. As a result, the SEC believed that Congress should establish a date certain by which information access should be expanded. The SEC recommended that if this objective were not achieved, Congress should grant rulemaking authority to a federal agency to ensure that information access would be expanded.

In its follow-up report issued in September 1990,<sup>96</sup> the GAO recommended that Congress legislatively mandate that government securities transaction information, from interdealer brokers and any trading systems that serve a similar function be made

---

<sup>93</sup> The phrase "price and volume information" is used in this section to refer to both actual prices at which trades are effected, i.e., trade reports, including volume, and prospective prices, i.e., quotations, including size.

<sup>94</sup> U.S. Government Securities: An Examination of Views Expressed About Access to Brokers' Services, GAO/GGD 88-8 (December, 1987).

<sup>95</sup> GAO also concluded that, while it theoretically supported the notion that access to interdealer broker trading services should be expanded, no viable proposals had been put forth on how to account for the increased counterparty risk that such an expansion could cause. The Federal Reserve, Treasury, and the SEC agreed. The SEC, however, encouraged the interdealer brokers to work voluntarily to develop appropriate credit risk assessment systems that would permit the participation of non-primary dealers in the brokers' systems.

<sup>96</sup> U.S. Government Securities: More Transaction Information and Investor Protection Measures Are Needed, GAO/GGD 90-114 (September, 1990).

available on a real-time basis to anyone willing to pay the appropriate fees. GAG further recommended that regulatory authority be assigned to Treasury to prescribe regulations as needed to ensure that such transaction information is available. In their Joint Report of October 1990, Treasury, the Board and the SEC did not reach a consensus on the best approach for addressing the need for expanded access to and dissemination of government securities price and volume information but instead identified issues to be considered.<sup>97</sup> These issues included:

- what is the best means to achieve expanded access;
- what is the reasonable prospect that private-sector initiatives will be successful;
- should standards be developed to ensure the adequacy of private-sector systems;
- if authority is granted to a federal agency, which agency would be best able to exercise this authority;
- should a deadline be established for a federal agency to evaluate the adequacy of private sector initiatives; and
- should the authority be utilized only in the event that findings regarding the inadequacy of private-sector initiatives are made?

Interdealer broker screens represent the best source for deriving market prices for government securities, because they include the current bids and offers, and transaction reports of the primary dealers, the principal market makers in the government securities market. Broader access to this information, as well as transaction information, supports the efficiency and liquidity of the government securities market.

Dissemination of quotation and trade information allows customers to judge execution quality, especially for inactively traded issues. The expanded availability of such information would serve the public interest because it would ensure that a broad spectrum of market participants could obtain current, accurate facts related to market conditions, and thus, the competitiveness, liquidity and efficiency of the government securities market could improve. Improvements in the derivative markets are also likely to accrue due to the availability of more timely and accurate information on the underlying securities used for pricing and hedging strategies.

---

<sup>97</sup> Department of the Treasury, Securities and Exchange Commission and the Board of Governors of the Federal Reserve System, Study of the Effectiveness of the Implementation of the Government Securities Act of 1986, (October, 1990), p. 87.

## Market solutions

**Industry Initiatives.** Through a number of attempts, the market has experienced a significant increase in the dissemination of government securities price information.<sup>98</sup> Currently, the quotes of one broker, Cantor Fitzgerald Securities Corp., which does not conduct an exclusively interdealer business, are publicly available through Telerate Systems Inc. These quotes represent a substantial portion, approximately 25 percent, of the interdealer market. Additionally, in June 1991 Cantor Fitzgerald expanded the range of information that it disseminates to include agency and additional Treasury security price information, including off-the-run issues and zero coupon instruments, and analytical capabilities for the government securities market.

One private sector initiative, a joint venture known as GOVPX, Inc., became operational on June 16, 1991. GOVPX disseminates real-time price and quotation information on all Treasury bills, notes and bonds on a 24-hour, global basis. The system provides information regarding all trading of Treasury securities (other than stripped zero-coupon instruments) that is executed through five interdealer brokers. The information disseminated is a composite picture of the trading activity, showing executed trade prices, volume of executed trades, best bids and best offers, and aggregated volumes traded for each security on a daily basis. This information is provided to on-line vendors for redistribution to the public.

While GOVPX is a promising beginning, it has deficiencies when compared with the interdealer broker screens in that it does not provide information on stripped Treasury securities and non-Treasury government securities. It also provides neither the size associated with published bids and offers nor an indication of the depth of the market. Finally, it does not provide the capability for analytics and does not provide historical price information. In addition, GOVPX disseminates quotation and transaction information only from the interdealer brokers who participate in the venture. It thus does not provide price information from other interdealer brokers or from dealers that trade with each other or with their customers outside of the interdealer broker system. In this regard, Treasury, in a letter to GOVPX's Board of Directors dated October 25, 1991, strongly encouraged GOVPX to address certain of these deficiencies and urged the interdealer brokers to make their screens independently available to the public.

**Expanded trading access.** With the exception of one interdealer broker, access to trading through interdealer broker screens had traditionally been restricted to primary and aspiring primary dealers as a means to provide control over the credit risk inherent in a system of anonymous trading. Limiting the number of potential counterparties eases specific evaluation of their individual creditworthiness. However,

---

<sup>98</sup> A description of some of the various initiatives can be found in U.S. Government Securities. More Transaction Information and Investor Protection Measures are Needed GAO/GGD 90-114.

only with an appropriate credit review mechanism can a system of anonymous trading operate efficiently. The operation of the Government Securities Clearing Corporation ("GSCC") has provided an additional means of addressing the creditworthiness of trading counterparties.

GSCC has increased the efficiency and decreased the risk of government securities settlement. This is particularly important for the interdealer brokers, since GSCC allows them to be netted out of every compared trade. In a typical interdealer transaction, Dealer A sells securities to Dealer B through the Interdealer Broker. Because the trading is anonymous, two trade tickets are written; one between Dealer A and the Interdealer Broker and one between the Interdealer Broker and Dealer B. The GSCC netting system replaces these two steps with one net transaction between the two dealers, each of whom now has GSCC as a counterparty and each of whom settles with GSCC. This greatly reduces any counterparty or fails previously inherent in interdealer broker systems. Additionally, by removing the fails risk, the interdealer broker does not face the possibility of having to incur the financing cost for securities positions. This system also provides significant credit comfort to the dealer because his counterparty is GSCC and GSCC has systems in place (e.g., margining systems and a clearing fund) to ensure the settlement of all netted trades.

Accordingly, four interdealer brokers (Liberty Brokerage, RMJ Securities, Garban and Fundamental Brokers) have recently expanded their customer bases to include all netting members of GSCC. All of the interdealer brokers are members of GSCC. Their recent actions represent the potential for significant broadening of interdealer trading access because the pool of broker/dealers eligible to be netting members of GSCC, as determined by capital levels, is currently about 75 firms. GSCC has proposed creating a new class of netting member to allow the participation of brokers and dealers that do not meet the current standards for netting membership but who still have a substantial level of capital. If approved, this proposal could also lead to even broader interdealer trading access.

## 8. Reporting and Audit Trails

It has been suggested that regulatory authority to prevent fraud or manipulation in the sale of government securities is limited compared with other securities markets because of the lack of certain surveillance tools.

### Large Position Reporting

One tool that the Agencies have considered to augment government surveillance ability in this market is the ability to require large position reports in particular Treasury issues from government securities market participants. In order to minimize the gaps in coverage, such authority would have to include the ability to require reports from entities that are not government securities dealers or brokers.

Large position reporting could give the Agencies advance notice of a potential problem, such as a large concentration of positions in a particular security. If a problem did develop, such reports could also assist regulators in an investigation.

A scheme of large position reporting, if determined to be necessary, would raise a large number of issues. Foremost would be a definition of what constitutes a large position in government securities for reporting purposes. Items that would have to be considered for inclusion would be when-issued positions, repurchase and reverse repurchase transactions, bonds borrowed and lent, options, fails to receive and deliver, and forward settling contracts. Other issues which would need to be decided include:

- which securities would be covered by the regulations;
- to what type of positions (proprietary, custodial) would the rules apply;
- what reporting threshold would be considered a large position;
- what would be the frequency and timing of the reporting requirement;
- what specific information would be reported; and
- which agency(ies) would be the recipient(s) of the information.

Unlike Section 13(d) of the Exchange Act, which requires owners of more than five percent of a class of a corporation's equity securities to make a public disclosure of this information, it is not contemplated that any position reporting concerning Treasury securities would be publicly disclosed. There is no intention to force market participants to disclose their trading strategies, nor is there a presumption that the mere fact of holding a large position is evidence of manipulative or other illegal intent.



The purpose of such reporting would be similar to the purpose of the position reporting that is done in the commodity futures markets - it would enable government agencies to monitor market developments and have an early warning system of potential problems.

In addition, a possibility that could be considered is to grant the Treasury and the SEC authority similar to that of the Commodity Futures Trading Commission with respect to making a special request for information. The CFTC and the Justice Department can ask futures market participants for information concerning their futures market positions and related cash market positions without the necessity of issuing a subpoena. Because of the presence of large and mainly unregulated entities, such as hedge funds, in the government securities market, consideration could be given to granting similar authority in the government securities market to be used in the case of serious market problems.

### **Large Trader Reporting**

If there were concerns about the ability of traders to take large hidden positions, authority such as that granted by Section 13(h) of the Exchange Act could be extended to government securities traders. Section 13(h) presently authorizes and requires the SEC to create a large trader recordkeeping and reporting system for publicly traded equities and options on equities.<sup>99</sup>

While a large trader reporting system may be appropriate for the stock market, the balance of costs and benefits may be very different in the government securities market. It appears unduly cumbersome given that current concerns relate primarily to short squeezes. As is demonstrated by the CFTC, large position rather than large trader reporting is more effective for monitoring members for such problems.

### **Audit Trails**

Audit trails are automated, time-sequenced records of essential information pertaining to trades in securities. Accurate audit trails are important to market surveillance functions performed by SROs in the equity markets for two reasons. First,

---

<sup>99</sup> See Securities Exchange Act Release No. 29593 (Aug. 28, 1991), 56 FR 42550. Proposed Rule Bh1, which was published for public comment on August 22, 1991, would define a "large trader" as any person that (1) effects aggregate transactions in publicly traded securities during a 24-hour period equal to or exceeding 100,000 shares or \$4 million total market value or (2) conducts program trading. Under the proposed rules, these "large traders" would be required to report to the SEC certain information, such as the traders' names, addresses, telephone numbers, and account names and numbers. These traders would then be assigned "large trader identification numbers" to provide to each brokerage firm where the traders have accounts. The firms would then be required to maintain, and to report to the SEC on request, records of transactions by large traders; these reports could be required as soon as the end of the business day after the trades in question.

automated audit trails permit SROs to sift through voluminous trading data to detect potential trading abuses. Second, audit trails provide timing information for transactions that may uncover trading abuses.<sup>100</sup>

In addition to such real-time reporting, the SROs have developed computer systems that sort trading records and create exception reports that flag unusual or suspicious- trading patterns and price or volume movements. These volume and price parameters are uniquely and automatically calculated for each stock based on that stock's historical trading pattern. This information is then correlated with relevant news announcements that may affect trading in a security. Additionally, various computer reports are available for review that cover quotes, trades, reported times and other trading areas. By using these automated systems, which are continually upgraded and expanded, the SROs can monitor member broker-dealer firms, market professionals, and other traders.

Neither the Treasury nor the SEC has the authority under the Government Securities Act of 1986 to require centralized trade and price reporting. Consequently, there are no centralized audit trail or exception reports systems in place for the government securities market.

---

<sup>100</sup> SRO audit trails generally have the same basic structure. A transaction journal is compiled by merging two separate data streams, the quotation and last sale tape, and comparison data, which is the information transmitted by firms to a clearing agency to provide for the clearance and settlement of transactions. The systems attempt to match trade prints to the compared trades using price, quantity, execution time and broker identification numbers. The matching of such reported and cleared securities transactions produces an accurate sequencing of trades.

**APPENDIX C**

**THE EVENTS INVOLVING SALOMON BROTHERS  
AND ALLEGED GOVERNMENT SECURITIES MARKET ABUSES**

## **1. The events involving Salomon Brothers**

The current analysis of the government securities market and the effectiveness of the existing regulatory scheme was triggered by unusual events surrounding the May 22, 1991, auction for two-year Treasury notes.<sup>1</sup> Even before the May two-year notes were settled on May 31, 1991, rumors began to surface of a short squeeze in the market for those notes. On May 29, 1991, Treasury staff called the SEC's Divisions of Market Regulation and Enforcement to notify them of possible problems stemming from the auction. Following that notification, the Treasury, the Federal Reserve, and the SEC jointly began an informal investigation, actively monitoring the market for the notes.

On May 30, 1991, the SEC's Division of Enforcement opened an inquiry into the matter. During the next few weeks, the SEC gathered information concerning the market for the notes, including, through the FRBNY, identification of all the purchasers of large amounts of the two-year notes in the auction. In late June, the Division of Enforcement sent detailed requests for documents and information to Salomon Brothers Inc ("Salomon") and other major purchasers in the May two-year note auction concerning their activities in the when-issued market, the auction, and the secondary market for the notes.

Shortly after receiving the SEC's document requests and learning that the Antitrust Division of the Department of Justice had begun an investigation of the May 22 auction, Salomon hired outside counsel to conduct its own investigation, which eventually led to a series of disclosures by Salomon. The first came on August 9, 1991, when Salomon advised the Treasury and the SEC that it had discovered irregularities in connection with certain Treasury auctions and issued a press release describing its initial findings.<sup>2</sup>

The factual discussion below with respect to Salomon's conduct is based primarily on public disclosures by Salomon.

### **Unauthorized customer bids submitted by Salomon**

In its August 9 press release, Salomon stated that it placed unauthorized bids in certain of its customers' names at several Treasury auctions. On August 14, 1991,

---

<sup>1</sup> The SEC and the Department of Justice are conducting separate investigations from a law enforcement perspective, which are not yet complete, and the SEC has not yet reached any conclusions with respect to the actions of any particular market participant. As a result, the discussion contained herein should not be understood as reaching any conclusions of fact or law with respect to the SEC's investigation.

<sup>2</sup> See Salomon Press Release dated August 9, 1991.

Salomon disclosed that it placed unauthorized bids in five auctions to obtain a greater amount of the securities being auctioned, and, in one case, as a result of a "practical joke." Salomon's internal investigation revealed that, from late July, 1990 through August 1991, Salomon had submitted unauthorized customer bids and bids in excess of the amount authorized by the customer in five Treasury auctions.<sup>3</sup> The auctions where these admitted violations occurred were the: (1) December 27, 1990, four-year note auction; (2) February 7, 1991, 30-year bond auction; (3) February 21, 1991, five-year note auction; (4) April 25, 1991, five-year note auction and (5) May 22, 1991, two-year note auction.<sup>4</sup> In addition, Salomon uncovered evidence of three additional unauthorized bid violations.<sup>5</sup>

**The December 27, 1990, four-year note auction.** In connection with the December 27, 1990, \$8.5 billion four-year note auction, Salomon stated that it submitted a bid for its own account for \$2.975 billion, or 35 percent of the offering amount, and an unauthorized customer bid in the amount of \$1 billion. Aggregation of the unauthorized customer and Salomon bids resulted in a bid for 46 percent of the auction amount. The bids were at the stop-out rate and thus were subject to 51 percent proration. Salomon was awarded approximately \$1.52 billion of the four-year notes and the customer was awarded \$510 million. Immediately after the auction, Salomon transferred to its own account, or "bought" at the auction price, the \$510

---

<sup>3</sup> See Salomon Press Release dated August 14, 1991 ("August 14 Press Release"). Treasury rules limit the amount a single bidder can purchase at any auction to 35 percent of the total public offering amount of the securities available. In addition, Treasury will not recognize amounts tendered by a single bidder at anyone yield in excess of 35 percent of the public offering amount, and will reduce tenders at anyone yield exceeding the limit to the 35 percent amount. See Treasury News Releases dated September 8, 1981 and July 12, 1990. Under the rules in effect before July 1990, the Treasury would award no more than 35 percent of the securities publicly available for purchase at the auction to any single bidder, but would recognize bids in excess of 35 percent of the public offering at any particular yield. Therefore, a bidder could enter a bid greater than 35 percent at a yield thought to be the highest accepted to increase its chances of being awarded a larger amount of securities in the event of proration at the high yield. The rule was changed, however, after Salomon bid for an amount in excess of 100 percent of an issue during a Resolution Funding Corporation ("REFCORP") 30-year bond auction in July 1990. REFCORP did not recognize the amount of the bid in excess of 35 percent. After the auction, Treasury announced a change in auction rules, restricting the amount recognized as bid by anyone bidder at a single yield to 35 percent of the public offering amount of the issue.

<sup>4</sup> See Statement of Salomon Inc Submitted in Conjunction with the Testimony of Warren E. Buffet. Chairman and Chief Executive Officer of Salomon Inc.. Before the Securities Subcommittee. Committee on Banking, Housing and Urban Affairs. United States Senate. September 10, 1991 at 8 ("Salomon September 10 Testimony"). See also Statement of Salomon Inc. Submitted in Conjunction with the Testimony of Deryck Co Maughan. Chief Operating Officer of Salomon Brothers Inc. and Robert E. Denham. General Counsel of Salomon Inc. Before the Subcommittee on Oversight. Committee on Ways and Means. United States House of Representatives. September 24, 1991. ("Salomon September 24 Testimony").

<sup>5</sup> See Salomon September 24 Testimony at 9. See also Salomon Press Release dated October 3, 1991.

million of four-year notes awarded to the customer. Salomon suppressed the customer confirmation for the amount purchased at the auction.<sup>6</sup> As a result of the submission of both bids, Salomon effectively bid for 46 percent of the auction, but acquired only 24 percent. Salomon thus bid for more than 35 percent at a single yield, but did not exceed the 35 percent award amount to a single bidder. However, Salomon did acquire more securities than it would have been able to if it had bid at a single yield for only 35 percent of the public offering amount.

**The February 7, 1991, 30-year bond auction.** Salomon disclosed that it submitted an unauthorized customer bid in the amount of \$1 billion in the February 7, 1991, \$11 billion 30-year bond auction as the result of a "practical joke."<sup>7</sup> Salomon claims that an employee arranged to have a customer submit a bid to a salesperson at Salomon for \$1 billion of the 30-year bonds as part of a practical joke on the salesperson. The Salomon employee was to have stopped the customer bid from actually being submitted and, following the auction, the customer was to complain that its bid was not filled. The Salomon employee was then to blame the salesperson for the failed bid.

Salomon has stated that the employee attempted to prevent the customer bid from actually being submitted prior to the auction by crossing out the bid on the work sheet of the clerk responsible for calling in the bids. According to Salomon the clerk did not understand the meaning of the cross-out and submitted the bid, which resulted in the customer being awarded \$870 million of the bonds, as the \$1 billion bid was subject to 87 percent proration. After the auction, the \$870 million in bonds was placed into the account of another Salomon customer and then sold from that account to Salomon, allegedly without the customer's authorization. Salomon has stated that its customer confirmations were suppressed. As a result, Salomon bid \$2.331 billion for its own account and \$1 billion as a result of the "practical joke." The combined total of the two bids represented 30.2 percent of the issue and thus did not exceed 35 percent of the public offering.

**The February 21, 1991, five-year note auction.** During the February 21, 1991, five-year note auction, Salomon has admitted to placing a bid for itself and two unauthorized customer bids, all at the 35 percent bidding limit at a single yield of \$3.15 billion. As a result of the bids, Salomon effectively bid for 105 percent of the offering amount and was awarded approximately 57 percent of the issue (the bids were at the

---

<sup>6</sup> Salomon's internal investigation uncovered the fact that the daily customer confirmations for the \$510 million customer purchase and the subsequent sale were not mailed to the customer. It appears, however, that the monthly statements Salomon mailed to its customer did include the allegedly unauthorized transactions. See Salomon September 10 Testimony at 10.

<sup>7</sup> *Id.* at 12-13. See also August 14 Press Release.

stop-out yield, and thus were subject to 54 percent proration), thus evading the 35 percent bid and award limits.<sup>8</sup> Again, customer confirmations were suppressed.

It was in this auction that the much publicized "Warburg/Mercury" bid took place. Minutes after the closing time for receipt of competitive tenders, a FRBNY staff person notified the Treasury auction staff of two bids that appeared to be from related entities. One tender, for an amount equal to 35 percent of the total public offering, had been placed by Salomon in the name of Warburg Asset Management. S.G. Warburg & Co., Inc., a primary dealer, separately submitted a tender at the same yield for its own account. Upon questioning, a Salomon clerk had stated that its bid was actually from Mercury Asset Management, which was previously called Warburg Asset Management. Treasury decided to accept both bids for the meantime, because the relationship between the two entities was not clear, and because after proration, the combined awards to both would not exceed 35 percent of the public offering of securities.

After researching the relationship between Warburg and Mercury, the Treasury sent a letter on April 17 to Charles Jackson, Senior Director, Mercury Asset Management, which informed him of the decision to treat S.G. Warburg & Co., Inc., and Mercury Asset Management as a single bidder for purposes of the 35 percent rule. This letter provided details of the two bids submitted in the February five-year note auction. Copies of the letter were sent to officers of S.G. Warburg, S.G. Warburg, PLC (the British parent company), and the FRBNY. In addition, a copy of the letter was sent to Paul Mozer, a Managing Director of Salomon. It was this letter that, according to Salomon, Paul Mozer showed to his superiors that alerted them to the unauthorized customer bid.

**The April 25, 1991, five-year note auction.** With respect to the April 25, 1991, \$9 billion five-year note auction, Salomon has stated that it submitted a bid on its own behalf for \$3 billion and a customer bid for \$2.5 billion. According to Salomon, the customer claims that it did not agree to purchase more than \$1.5 billion. Salomon obtained \$600 million of the amount awarded to the customer immediately after the auction. Aggregation of the Salomon bid in its own name and the alleged unauthorized portion of the customer bid resulted in an aggregate Salomon purchase of greater than the 35 percent award limit.

**The May 22, 1991, two-year note auction.** In its public disclosures, Salomon stated that it failed to report an existing \$590 million net long when-issued position in

---

<sup>8</sup> See Salomon September 10 Testimony at 13-14.

connection with the May 22, 1991, auction of the May 1993 two-year notes.<sup>9</sup> Salomon also submitted several bids at an aggressive yield of 6.81 percent (the May 1993 two-year notes were trading on a when-issued basis at a yield of approximately 6.83 percent directly prior to the auction) at the auction: one on its own behalf for \$4.2 billion (the 35 percent limit was \$4.287 billion); one on behalf of a customer for \$4.287 billion; one on behalf of another customer for \$2 billion; and several on behalf of other customers for a total of \$130 million. Salomon and its customers submitted the best-priced bids at the auction and were awarded the full bid amounts without proration.<sup>10</sup>

On the \$2 billion bid, Salomon reported that the customer claimed to have authorized only a \$1.5 billion bid. Salomon obtained the extra \$500 million of the notes for which the customer's bid was submitted at the auction price. Customer confirmations generated in connection with the customer purchase at the auction reflected only a \$1.5 billion purchase and not the \$500 million sale to Salomon. As a result, Salomon bid for and received the maximum 35 percent, obtained \$500 million that had been awarded with respect to a customer's bid, and was long \$590 million going into the auction, thereby circumventing the 35 percent bidding and award limit.<sup>11</sup>

## 2. Short squeezes

Short squeezes can occur when an event unanticipated by short sellers reduces the supply of securities available in the marketplace, such as unexpected demand for the securities resulting from an unanticipated change in Federal Reserve policy with respect to interest rates. A short squeeze can also occur as a result of deliberate behavior by one or more market participants to restrict the supply of securities and thereby to drive up prices.<sup>12</sup>

When one market participant, or a group of market participants acting in concert, manages to purchase a significant proportion of the available supply of a particular security, that single participant or group is said to have "cornered the market." When that happens, the single participant or group can withhold the securities from the market and at the same time demand the return of any securities that they have loaned to short sellers. In such a situation, the short sellers must purchase or borrow the securities in order to redeliver them to those controlling the

309-5970 - 92 - 7 QL 3

---

<sup>9</sup> Treasury rules require that bidders report net "long" positions greater than \$200 million at the time of the auction. Any net long when-issued position, when it exceeds \$200 million, counts toward the 35 percent award limit.

<sup>10</sup> See Salomon September 10 Testimony at 23-24.

<sup>11</sup> August 14 Press Release at 2. See also Salomon September 10 Testimony at 20-23.

<sup>12</sup> See Appendix B, Section 1 for a discussion of short squeezes.



securities,<sup>13</sup> driving up the price of the securities and, presumably, increasing the profits of the single participant or group that controls the securities.

After the May 22, 1991, two-year note auction, a "short squeeze" occurred in the security.<sup>14</sup> Salomon has admitted that the firm and its customers purchased 94 percent of the auctioned securities. While the bulk of this amount represented authorized bids from customers that were within the 35 percent limitation, Salomon has also admitted its failure to report its net long when-issued position and that it submitted a customer bid that was larger than authorized in that auction.

Prior to the auction, Salomon determined to finance its own position through repos with short sellers and institutional lenders. In addition, Salomon agreed to finance positions of its customers.<sup>15</sup> As a result of having purchased a large part of the supply of the May two-year notes, Salomon and its customers were able to lend through repos a portion of the notes held at "special" repo rates. A security is said to be "on special" when, due to its scarcity, a holder can enter into a repo at a lower rate of interest, and thus a lower financing cost, than the prevailing or general repo rate. The rates Salomon actually received were generally 100-200 basis points below then-prevailing general repo rates.<sup>16</sup>

Whatever its cause, the May squeeze prompted regulators to investigate Salomon's purchases of the notes. On May 29, Treasury staff notified the SEC's Divisions of Market Regulation and Enforcement of the "squeeze" on the May two-year note that had become evident in market price movements and complaints of market participants. The squeeze also attracted Congressional interest.

On June 10, John Gutfreund, Chairman of Salomon, initiated a meeting with Treasury officials to explain the firm's point of view with respect to the May two-year notes. As the Treasury-officials were aware that the SEC was already investigating the May two-year note squeeze, they did not press an opposing viewpoint. The issue of unauthorized auction bidding was not discussed at the meeting because Treasury had no cause to suspect fraudulent activity at that time. During the months of June and July, Treasury, Federal Reserve, SEC and Justice Department officials had numerous discussions about the persistent squeeze, and about progress on investigating its causes.

---

<sup>13</sup> Cf. 3 L. Loss, *Securities Regulation* 1538 n.25 (2d ed. 1961).

<sup>14</sup> The SEC is also investigating other reports of possible short squeezes in connection with recent Treasury auctions. Because these investigations are ongoing, more detailed information cannot be disclosed publicly at this time.

<sup>15</sup> Salomon September 10 Testimony at 23-33.

<sup>16</sup> Salomon September 10 Testimony at 30.

It was these investigations that eventually prompted Salomon's public disclosures acknowledging the auction abuses.

On August 18, the Treasury Department announced that it would not, for an indeterminate time, allow Salomon to participate in Treasury auctions. This penalty was modified later in the day, following actions taken by Salomon's board of directors, to allow Salomon to bid in auctions for its own account but not on behalf of its customers.

### **3. Improper practices relating to GSE securities**

In August 1991, Salomon disclosed that it had engaged in the practice of overstating the amounts of government-sponsored enterprise ("GSE") securities sold when it reported sales to GSEs. The SEC's Division of Enforcement commenced an investigation of the extent to which such practices were widespread and obtained trading data and other documentary evidence from all participants in the market for such securities for the period January 1, 1990, through August 31, 1991.<sup>17</sup> During that period, the amount of customer orders reported to the GSEs by their selling group members far exceeded the amount of securities available. The SEC's investigation revealed that nearly all selling group members engaged in one or more improper practices in connection with the primary distribution of GSE securities.<sup>18</sup>

As described below, a number of selling group members reported to GSEs inaccurate information concerning customer orders during the pre-allocation period and nearly all selling group members reported inaccurate information concerning their sales of the securities after settlement. In providing such inaccurate information, selling group members prepared and maintained books and records reflecting the inaccurate information.

#### **Pre-allocation period**

In the initial phase of the distributions, many selling group members routinely inflated the number and dollar amount of their customer orders in reports to the GSEs. For example, one trader testified that, because the GSEs placed such reliance on historic allocation in allocating securities, he was able to estimate with reasonable

---

<sup>17</sup> The SEC is conducting an ongoing investigation of alleged misconduct by dealer members of various GSE selling groups in connection with initial offerings of GSE securities. Although settlements have been reached with certain firms, the investigation has not yet been completed, and the SEC has not reached any conclusions with respect to the actions of other firms. As a result, the discussion contained herein should not be understood as reaching any conclusions of fact or law with respect to the SEC's investigation.

<sup>18</sup> The Office of the Comptroller of the Currency ("OCC") and the Federal Reserve, as well as the New York Stock Exchange and the National Association of Securities Dealers, coordinated with, or assisted, the SEC's Division of Enforcement in the investigation.

accuracy the amount of securities his employer was likely to receive in anyone offering. He then "tripled" that estimated amount, and reported the inflated number to the GSEs as customer orders.

Some traders added random amounts to their actual customer orders. Others increased the number and amount of customer orders reported to the GSEs to include "anticipated" or "historic" sales, i.e., an amount that the trader believed, based on past experience, the selling group member would be able to sell after the GSE announced the price. Even in those instances where a selling group member had identifiable customers for the number and amount of the customer orders reported to the GSEs, the trader would not indicate to the GSEs that many of the orders were subject to significant conditions.

Most of the traders prepared work sheets reflecting customer orders for, or interest in, the securities, and updated the work sheets as they learned of additional customer orders or interest. Several selling group members divided their work sheets into sections or columns to reflect two sets of numbers: actual customer orders and the inflated customer orders reported to the GSEs.

Most traders denied inflating customer orders to obtain a larger allocation, and hence a larger concession. Indeed, because most GSEs allocated securities based largely on a historic basis, a selling group member would not necessarily receive a larger allocation simply by inflating its reported customer orders. Rather, entities which had been members of the selling group for a longer period of time testified that they inflated customer orders to avoid losing any of their historic allocation percentage. Newer selling group members testified that they inflated customer orders because other selling group members were inflating orders and the newer entities felt that they needed to report a larger number of orders to appear competitive.

### **Distribution reports**

Nearly all selling group members inflated the number and/or amount of customer sales in the distribution reports or analyses submitted to the GSEs. Usually the number and amount of customer sales reflected in the distribution reports matched the number and amount of customer orders that the selling group member had reported to the GSE prior to allocation. In most instances, distribution reports stated that selling group members had assumed large short positions in a GSE's securities when, in fact, they had not. Often the distribution reports stated that selling group members had purchased securities in the secondary market in order to cover a short position when, in fact, no such purchases had occurred. The distribution reports also contained inaccurate representations regarding the type, and/or geographic location, of customers.

A number of traders testified that they inflated sales, and/or provided other inaccurate information, in the distribution reports either to conceal their initial inflation of customer orders, or to conceal the loss of a customer. Several testified that they simply followed what they perceived to be an industry practice of reporting customer orders rather than actual sales in the distribution reports. Although some traders testified that the GSEs expected the distribution reports to reflect customer orders rather than actual sales, the distribution reports were prepared after the primary distribution had ended, and called for information concerning the sales that had taken place during the primary distribution.

Most of the GSEs appear to have suspected that information selling group members provided regarding the amount of customer orders and sales was not reliable. However, the GSEs stated that they were not able to determine which of the selling group members were inflating orders and/or sales, nor were they able to determine the amount by which any report was inflated.

Although selling group members prepared and maintained an accurate set of books and records reflecting transactions in the GSEs' securities, they also prepared and maintained a second set of records - the work sheets and distribution reports that were inaccurate. This second set of records cast doubt upon the integrity and reliability of the accurate records, and posed the exact danger that Rule 17a-3 was designed to eliminate - that the SEC and the securities industry self-regulatory organizations would be unable to assure that broker-dealers conduct their business in accordance with the federal securities laws. Strict compliance with the books and records requirements is a keystone of the surveillance of registered broker-dealers.<sup>19</sup>

### **Administrative Proceedings Against Selling Group Members**

On January 16, 1992, administrative proceedings were instituted jointly by the SEC, the OCC and the Federal Reserve against 98 registered broker-dealers, registered government securities brokers and/or dealers and banks (the "respondents"). In those proceedings, the three agencies found that, in connection with their participation in the primary distributions, each of the respondents made and kept certain records that did not accurately reflect the respondent's customers' orders for the GSEs' securities and/or offers, purchases or sales by the respondent of the GSEs' securities.

Ninety-eight selling group members submitted Offers of Settlement to the agencies. Pursuant to the settlements, each of the respondents, without admitting or

---

<sup>19</sup> The preparation and maintenance of such false books and records by an issuer whose securities are registered pursuant to Section 12 of the Securities Exchange Act would likely also violate Section 13(b)(2) of the Securities Exchange Act, which, among other things, requires such issuers to "make and keep books, records, and accounts, which, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the issuer."

denying the allegations in the order instituting the proceedings, consented to the issuance of an order by the appropriate regulatory agency:

- finding, in the case of registered broker-dealers, that the respondent willfully violated Section 17(a) of the Exchange Act and Rules 17a-3 and 17a-4, or, in the case of registered government securities brokers and/or dealers, that the respondent willfully violated 17 C.P.R. Part 404 promulgated under Section 15C of the Exchange Act;<sup>20</sup>
- directing the respondent to cease and desist from future violations of the relevant provisions of the Exchange Act;
- directing the respondent to pay a civil money penalty to the United States Treasury;<sup>21</sup> and
- directing the respondent to devise, implement and maintain policies and procedures reasonably designed to ensure future compliance with the relevant provisions of the Exchange Act.

In addition, on January 16, 1992, the SEC issued a Report Pursuant to Section 21(a) of the Securities Exchange Act of 1934 Regarding the Distribution of Certain Debt Securities Issued by Government-Sponsored Enterprises. The 21(a) Report summarized the results of the SEC's investigation, and described the GSEs' distributions of debt securities, the respondents' participation in the distributions, and the practices giving rise to the violations of the recordkeeping provisions of the Exchange Act described in the Report. In the 21(a) Report, the SEC emphasized that, regardless of how widespread a practice is, or is perceived to be, and regardless of whether a firm believes that a particular practice does not harm its customers or other persons, the SEC will not tolerate a disregard for the recordkeeping provisions of the Exchange Act. The Report concluded that the creation of inaccurate books and records by the respondents was a necessary part of a scheme to inflate customer orders in an effort to maintain or increase allocation.

---

<sup>20</sup> Section 17(a) and Rules 17a-3 and 17a-4 and 17 C.F.R. Part 404 promulgated under Section 15C require registered broker-dealers and registered government securities brokers and/or dealers, respectively, to make and keep accurate books and records relating to securities transactions.

<sup>21</sup> The amount of the civil money penalty to be paid by each respondent was determined on the basis of a formula developed by the SEC, the acc, and the Federal Reserve based upon the "concessions" received during a defined period. Thus, the differences in amounts are based upon concessions, rather than the number of violations or degree of wrongdoing.

## **APPENDIX D**

### **THE GOVERNMENT-SPONSORED ENTERPRISE SECURITIES MARKET**

Government-sponsored enterprises ("GSEs") are financial intermediaries established pursuant to federal law to facilitate lending for purposes the federal government has deemed socially important, such as education, agriculture, and housing.<sup>1</sup> Congress believed such intermediaries were necessary because credit for these purposes was either insufficient or too expensive. In essence, these institutions borrow funds from the public and make the funds available to particular sectors of the economy. The total amount of GSE obligations outstanding as of December, 1990 was about \$1 trillion dollars.<sup>2</sup>

Although the GSEs each were established by an Act of Congress and have special relationships with the federal government,<sup>3</sup> they are each wholly privately owned. They do not receive direct funding from the federal government, nor are their operating policies directly determined by Congress. However, each of the GSEs may have special Congressionally granted powers, such as limited authority to borrow from the Treasury, and each may enjoy special advantages, including exemptions for securities they issue from most provisions of federal and state securities laws and exemption for the GSEs from certain state and local taxes.

### **Primary market**

In general, the GSEs are required to obtain the approval of the Treasury on the timing, maturity, and pricing of their debt offerings. After receiving recommendations from each of the GSEs, the Treasury establishes a general calendar for GSE securities offerings that includes sales announcement, pricing, trading release, and settlement dates. The Treasury coordinates the offering dates for each of the GSEs to avoid competition among the offerings which potentially could drive up yields or cause market dislocation or confusion.

---

<sup>1</sup> For purposes of this report, a GSE is a federally chartered entity or group of entities that is authorized to issue debt securities in its own name. Using this definition, the GSEs discussed in this report are: the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation, the Farm Credit System, the Federal Agricultural Mortgage Corporation (Farmer Mac), the Federal Home Loan Bank System and the Student Loan Marketing Association.

<sup>2</sup> Of this figure, \$365 billion constituted debentures and discount notes and \$616 billion constituted mortgage-backed securities.

<sup>3</sup> Some of the GSEs have Presidentially appointed Board members (e.g., Sallie Mae, seven of 21, 20 V.S.C. § 1087-2(c)(3); Fannie Mae, five of 18, 12 U.S.C. § 1723(b); and Freddie Mac, five of 18, 12 V.S.C. § 1452(a)(2)(A)). In addition, the five members of the Federal Housing Finance Board are appointed by the President. 12 V.S.C. § 1422a(b)(1)(B). The Treasury also has approval rights over the issuance of debt and mortgage-backed securities for four of the GSEs. 12 V.S.C. § 1717a (Fannie Mae); 12 V.S.C. § 14550(1) (Freddie Mac); 20 V.S.C. § 1087-2(h)(1) (Sallie Mae); and 31 V.S.C. § 9108(a) (Federal Home Loan Banks). The Farm Credit Administration approves the borrowing of the Federal Farm Credit Banks. 12 V.S.C. §§ 2153(d), 2160(b)(2).

The GSEs distribute a variety of securities, including short-term discount notes, medium-term notes, longer-term debt in the form of bonds or debentures, and mortgage-backed securities. Only a small percentage of GSE bonds (other than mortgage-backed issuances) and debentures have maturities of greater than 10 years.

In general, securities issuances by GSEs, except for Farmer Mac, historically have been exempt from registration under the federal securities laws. This longstanding exemption was not disturbed by the Government Securities Act of 1986. In addition, securities issued by GSEs generally are deemed to be "government securities" within the meaning of the Securities Exchange Act of 1934 ("Exchange Act").<sup>4</sup> Like other securities deemed to be government securities, however, GSE securities continue to be subject to the anti-fraud provisions of Section 17(a) of the Securities Act of 1933 and Section 10(b) of the Exchange Act. As a result, purchases and sales of GSE securities, whether during initial issuance or in the secondary market, are subject to the SEC's regulatory authority only in cases of actual or suspected fraud.<sup>5</sup>

The process by which the GSEs distribute most of their securities differs substantially from the auction procedure used by the Treasury. The GSEs use a variety of distribution mechanisms, including competitive bidding, placements with individual customers or through particular dealers, allocation among selling group members, underwritten transactions, and exchanges of mortgage-backed securities with institutions. In practice, however, most of the GSEs rely for sales of unsecured debt securities principally on allocation among selling groups composed of both primary and non-primary government securities dealers and dealer banks.

Each GSE maintains several selling groups, ranging in size from five to approximately 100 members, composed of government securities dealers and dealer banks who have signed an agreement with the GSE to participate in its allocation process. The GSE's fiscal agent fills the role ordinarily filled by a managing or lead underwriter in a corporate offering, overseeing the issuance according to the terms of the applicable selling group agreement and allocating the securities to be distributed to the members of the selling group. Selling group members are compensated by a concession, which is expressed as a fixed percentage of the face amount of securities sold and deducted from the proceeds of the sale due to the agency.

---

<sup>4</sup> 15 U.S.C. § 78c(a)(12)(A)(i).

<sup>5</sup> Securities issuances by GSEs may require regulatory approval, however, under each GSE's enabling statute. For example, neither Freddie Mac nor Fannie Mae may issue stock or convertible debt without the approval of the Secretary of Housing and Urban Development. 12 U.S.C. §§ 1452(b)(6), 1723c. Similarly, the Farm Credit System must obtain FCA approval for each issuance of System-wide debt securities. 12 U.S.C. §§ 2153(d), 2160(b)(2).



concession, which is expressed as a fixed percentage of the face amount of securities sold and deducted from the proceeds of the sale due to the agency.

Each selling group member's responsibilities are spelled out by the terms of a selling group agreement that each GSE requires each selling group member to sign as a condition of participating in the selling group. Selling group agreements are between the GSE and each dealer and do not establish a relationship between or among selling group members.

The terms of the selling group agreements vary but they usually expect the member to support secondary trading in the GSE's securities and to provide market and trading information before and during the allocation. In addition, the selling group agreements generally prohibit members of the selling group from purchasing securities in the allocation for their proprietary trading accounts or for reallocation to other dealers and ordinarily require members to produce reports on the distribution of the securities they have been allocated and to keep certain records. When customer demand is light, however, the fiscal agent may ask selling group members to take positions for their own accounts.

Each GSE establishes standards that prospective selling group members must satisfy to join the selling group. In general, the GSEs require prospective selling group members to demonstrate certain capitalization levels, participation in other sectors of the government securities market, a commitment to the secondary market for the GSE's securities, and an established customer base. Most of the GSEs also reserve the right at a minimum to expel members of the selling group for failing to participate fully in the allocation process or in the secondary market. Nonetheless, the GSEs, for the most part, have admitted or expelled relatively few members, and the selling groups have tended to remain relatively stable over time. In recent years, however, several GSE selling groups have decreased in size as members have merged or left the government securities business.

When-issued trading in GSE securities usually does not begin until the day after the pricing of the initial offering. Therefore, when-issued trading does not serve the same price discovery function in the GSE market that it does in the Treasury market. Instead, each GSE sets the price for each security that it issues based on its own judgment about demand for its securities in the market. To reach that judgment, the GSEs take into consideration information provided by selling group members about market demand for their securities, as well as other government, GSE, and corporate securities. Representatives of the GSEs speak with the larger members of their selling groups on a regular basis and are in contact with all members of the selling group daily during the sale period. When determining the structure, maturity, and size for an issue, each GSE consults selling group members for indications of market demand for

information about offerings by other GSEs, the Treasury, and comparable corporate issuers. Most significantly, the GSEs maintain that selling group members provide the GSEs with market information that enables the GSEs to price their securities at yields designed to clear the market, thereby assuring the continued marketability of those securities at the lowest possible cost to the borrower.

The GSEs' reliance on members of their selling groups for market information is magnified by the difficulty that market participants other than primary dealers have in obtaining important market information independently. As noted elsewhere in this report, they generally do not have access to market information on GSE securities displayed on inter-dealer broker screens.<sup>7</sup> Therefore, although GSEs do have access to news wires and vendor services, the information provided by selling group members about demand for that GSE's securities in the market is a critical component of each GSE's pricing process. Selling group members compete to provide that information accurately and on a timely basis, and agents and dealers indicate that there is a perception in the market that supplying accurate and timely market information will be rewarded in the allocation of securities.

The GSEs consider indications of demand they receive from the selling groups in determining the initial offering price of a particular security. Other significant factors affecting each GSE's pricing decision are the price and availability of Treasury and other agency securities of comparable maturities. Because GSE securities generally are not explicitly backed by the full faith and credit of the federal government and thus are perceived by the market to present a somewhat, if minimally, greater credit risk to investors, they trade at a spread over Treasury securities (i.e., GSE yields are higher than Treasury yields on instruments of the same maturity).

The perceived liquidity and credit quality of each GSE also affect the size of the spread. If the market perceives instability in a particular GSE's economic sector, the spread will widen. For instance, during the mid-1980s, Farm Credit securities traded at a relatively large spread over Treasuries, reflecting the downturn in the agricultural sector and the resulting difficulties of many Farm Credit institutions. The Agricultural Credit Act of 1987 granted assistance to troubled institutions, which the market perceived as implicit federal government backing of the Farm Credit System and its securities. Thereafter, the spread for Farm Credit securities narrowed.

The spread for each GSE's securities tends to vary over time. In addition, as maturity lengthens, the spread usually widens, reflecting the investors' exposure to GSE credit risk over a longer period and the lesser liquidity of GSE securities. Thus, when selling group members make pricing recommendations to a GSE, they may do so as a

---

<sup>7</sup> The GSEs currently do have access to Cantor Fitzgerald information through Telerate. Cantor Fitzgerald, however, represents only 20 percent to 25 percent of the interdealer market.

The spread for each GSE's securities tends to vary over time. In addition, as maturity lengthens, the spread usually widens, reflecting the investors' exposure to GSE credit risk over a longer period and the lesser liquidity of GSE securities. Thus, when selling group members make pricing recommendations to a GSE, they may do so as a price or a yield, but more typically they do so as a spread over the benchmark Treasury security.

The allocation process used by each GSE varies slightly, but in general, is conducted as follows. For several days prior to announcing an issue, the GSE consults with members of its selling group to gauge market conditions. Selling group members provide feedback and information on other activity in the market. At a preset time, the GSE announces the actual terms, including the maturity and amount of the issue or issues offered.

Following the announcement of terms (other than rate and price), selling group members contact customers to obtain or verify orders. The members report the information to the GSE. GSE personnel probe selling group members for specific information regarding firmness of the member's book. Orders for securities that are not conditioned on any particular price generally are known as "market orders." Orders that will only be executed at or within specific price frames generally are known as "price conditional."<sup>8</sup>

During the time period following announcement, the GSE makes allocations of the debentures to selling group members based on a number of factors that vary among the GSEs, but often include: (1) customer demand; (2) the strength and consistency of the selling group member's past participation in the primary market and its demonstrated commitment to the secondary market; (3) cultivation of new investor segments; and (4) breadth of distribution, including geographical interest.

The GSEs typically receive price recommendations from selling group members in the course of communications throughout the allocation process. In addition, the GSE may consult with selected selling group members shortly before pricing the issue to get final, specific pricing recommendations. The GSE then prices the issue and makes a public announcement over news wires.

---

<sup>8</sup> The Public Securities Association Agency Task Force has proposed standardized order definitions for selling group members and fiscal agents that would eliminate the distinction between "market" and "conditional" orders. Under its proposal, all orders would be categorized as "customer orders," "member orders," or "reallowance orders." Customer orders would include any orders: (1) without condition, or (2) subject to the satisfaction of one or more specific conditions, such as spread, coupon or as otherwise expressed. Customer orders would be based on actual communications between a selling group member and a customer.

Selling group members typically call the GSE after the announcement to confirm their allocations. The GSEs also require selling group members to submit a written report or analysis of each distribution. Selling group members may be asked to provide a breakdown of sales by category of investor or information on when-issued activity in the distribution report.

The GSEs maintain that the allocation process is the best mechanism for issuing debt because, in their opinion, it meets their paramount financing objective: to assure a steady and predictable stream of funds at the lowest possible cost. This assertion has not been proven or disproven empirically, although some GSEs have monitored the stability over time for various issues of the spread over the benchmark Treasury security in the secondary market as a method of monitoring the efficiency of their initial pricing. In addition, the GSEs believe that use of the allocation process assures the liquidity of GSE securities in the secondary market because it achieves a broad-based distribution of securities.

## **APPENDIX E**

### **THE PRIMARY DEALER SYSTEM**

**FEDERAL RESERVE BANK OF NEW YORK**

**Administration of Relationships with Primary Dealers**

The Federal Reserve Bank of New York (FRBNY) is adopting certain changes in the administration of its relationship with primary dealers in U.S. Government securities. The primary dealer system has been developed for the purpose of selecting trading counterparties for the Federal Reserve in its execution of market operations to carry out U.S. monetary policy. The designation of primary dealers has also involved the selection of firms for statistical reporting purposes in compiling data on activity in the u.s. Government securities market. These changes in the administration of these relationships have been developed after consultation with the Federal Reserve Board, the Federal Open Market Committee, the Treasury and the Securities and Exchange Commission.

The changes announced today have been prompted by two related factors:

**First,** decisions have been made to accelerate the automation of Treasury auctions and Federal Reserve open market operations with a view toward increasing the efficiency of the auction process and open market operations, and providing the potential for further broadening the base of direct participation in these operations. These automation initiatives are major

undertakings, as they must be planned and executed with extreme care to ensure operating and communications systems of the highest level of reliability and integrity. They will require back-up systems comparable to those now in place for the Fed's funds and securities transfer systems. Planning for automation of the existing Treasury auction format is well underway and automation is scheduled for completion by the end of this year. Automation planning for Federal Reserve open market operations is just getting started, and completion of this automation will probably take about two years.

**Second,** and more important, while the system of designating primary dealers on the whole has served the Federal Reserve, the Treasury, and the nation well for many years, there also have been some drawbacks to the existing arrangements. Prominent among these is the public impression that, because of the Federal Reserve Bank's standards for selecting and maintaining these relationships, the Fed is in effect the regulator of the primary dealer firms. Moreover the primary dealer designation has been viewed as conferring a special status on these firms that carries with it elements of "franchise value" for the dealer operation and possibly for other aspects of the firm's standing in the marketplace.

The net result of these interrelated factors is that the Federal Reserve is amending its dealer selection criteria to begin providing for a more open system of trading relationships, while still exercising the discretion that any responsible market

participant would demand to assure itself of creditworthy counterparties who are prepared to serve its needs. For the most part, the changes in the administration of the primary dealer relationships will have no immediate effect on existing primary dealers--recognizing, of course, that they will, over time, be subject to the requirements noted below for maintaining a counterparty relationship with the Fed. However, existing as well as any new primary dealers will no longer be required to maintain a one percent share of the total customer activity reported by all primary dealers in the aggregate; this requirement is no longer deemed necessary given the active and liquid state of development now achieved in the u.s. Government securities market, and its retention could be an obstacle to achieving more open trading desk relationships. In addition, while continuing to seek creditworthy counterparties, and while continuing to exercise market surveillance, the FRBNY will discontinue its own dealer surveillance activities relating to primary dealer firms' financial characteristics.

New firms will be added on the basis of criteria listed below. As in the past, all primary dealers will be expected to (1) make reasonably good markets in their trading relationships with the Fed's trading desk; (2) participate meaningfully in Treasury auctions and; (3) provide the trading desk with market information and analysis that may be useful to the Federal Reserve in the formulation and implementation of monetary policy. Primary dealers that fail to meet these standards in a meaningful



way over time will have their designation as a primary dealer discontinued by the FRBNY. It is contemplated that each dealer firm's performance relative to these requirements will be reviewed on an ongoing basis and evaluated annually beginning in June 1993. If a firm's relationship with the FRBNY is discontinued because of shortfalls in meeting these standards, the action by the FRBNY will be made strictly on a business relationship basis. As such, any decision by the FRBNY will carry no implication as to the creditworthiness, financial strength or managerial competence of the firm.

In evaluating a firm's market-making performance with the trading desk, the FRBNY will look to the amount of business of various types actually transacted and the quality of the firm's market-making and market commentary. Dealers that do little business with the Fed over a period of time, that repeatedly provide propositions that are not reasonably competitive, and that fail to provide useful market information and commentary, add little to the Fed's ability to operate effectively and will be dropped as counterparties for at least six months.

In evaluating participation in Treasury auctions, the Fed will expect a dealer to bid in reasonable relationship to that dealer's scale of operations relative to the market, and in reasonable price relationship to the range of bidding by other auction participants. Any decision to suspend a primary dealer

designation because of inadequate auction bidding will be taken in close consultation with the Treasury.

Finally, consistent with the Omnibus Trade & Competitiveness Act of 1988, a foreign-owned primary dealer may not be newly designated, or continue to be designated, in cases where the Federal Reserve concludes that the country in which a foreign parent is domiciled does not provide the same competitive opportunities to U.S. companies as it does to domestic firms in the underwriting and distribution of Government debt.

#### **I. Criteria for Accepting New Dealers**

New primary dealers must be commercial banking organizations that are subject to official supervision by U.S. Federal bank supervisors or broker/dealers registered with the Securities and Exchange Commission. The dealer firms or the entities controlling the dealer firms must meet certain capital standards as follows:

- commercial banking institutions must—taking account of relevant transition rules--meet the minimum Tier I and Tier II capital standards under the Basle Capital Accord. In addition, commercial banks must have at least \$100 million of Tier I capital as defined in the Basle Capital Accord.
- Registered broker/dealers must have capital in excess of the SEC's or Treasury's regulatory "warning levels" and have at least \$50 million in regulatory capital. Where such capital standards

do not apply to a consolidated entity controlling a primary dealer--consistent with the treatment of banks under the Basle Accord--the FRBNY will also look to the capital adequacy of the parent organization.

The minimum absolute levels of capital specified above (i.e., \$100 million for commercial banks and \$50 million for broker/dealers) are designed to help insure that primary dealers are able to enter into transactions with the Fed in sufficient size to maintain the efficiency of trading desk operations.

A bank or a broker/dealer wishing to become a primary dealer, must inform the FRBNY in writing. As a part of that notification a prospective dealer must also provide appropriate financial data demonstrating that it meets the capital standards outlined above. The FRBNY will consult with the applicable supervisory body to ensure that the firm in question is in compliance with the appropriate capital standards. When new firms are accepted as primary dealers, the nature and extent of the Bank's trading relationship with the firm will, as under current practices, evolve over time. As a result of this change and the elimination of the one percent market share criterion, there will no longer be any need for individual firms to be considered by the market as "aspiring dealers."

Of necessity, at least for the time being, the number of additional primary dealers will be relatively limited, because of resource constraints on trading desk operations.  
The

selection of this limited number will be dependent on how many can be added without adverse impact on the efficiency of Federal Reserve trading desk operations. Applications received by March 31, 1992, will be evaluated in relation to the foregoing capital standards. If it is not feasible to add all of the qualifying firms as primary dealers, a selection will be made among those firms in a manner that gives primary consideration to their relative capital positions. Following the implementation of automated communications for trading purposes, further expansion in the number of primary dealers will be feasible, and further changes in the criteria for selection also could be considered, although there is no preconception at this time as to what, if any, further changes would be made.

## **II. Maintenance of Capital Standards**

As a result of the adoption of the capital standards for accepting primary dealers, all primary dealers will be expected to maintain capital positions that meet the standards described above on an ongoing basis. Should a firm's capital position fall below these minimum standards, the FRBNY may suspend its trading relationship until the firm's capital position is restored to levels corresponding to these minimum standards. In making such determinations, the FRBNY will look to the firm's primary Federal regulator for guidance as to whether the firm has in place an acceptable plan to restore its capital position in a reasonable period of time. However, in no circumstances will the Bank maintain a trading relationship with

a primary dealer that is unable to restore its capital position to the stipulated minimum level within a year. Over time, the maximum grace period of one year may be shortened and would not apply in any event if a firm's capital position were seriously impaired.

### **III. Elimination of Dealer surveillance**

While the Federal Reserve Bank of New York will continue to seek creditworthy counterparties--and will continue, or enhance, its market surveillance--it is planning to discontinue the "dealer surveillance" now exercised over primary dealers through the monitoring of specific Federal Reserve standards and through regular on-site inspection visits by Federal Reserve dealer surveillance staff. Rather, the FRBNY will seek to act as any reasonably well-informed and responsible firm might behave in evaluating the creditworthiness of its counterparties. Accordingly, the Federal Reserve will expect to receive periodic reports on the capital adequacy of primary dealers, just as any other responsible market participant should expect to receive such reports.

The elimination of the Bank's dealer surveillance activities should be viewed merely as confirmation of the long standing reality that the Bank does not have--nor has it ever had--formal regulatory authority over the Government securities market or authority over the primary dealers in their capacity as such. The Bank is satisfied that the existing regulatory apparatus over the market and the regulatory apparatus as it

applies to dealer firms is adequate--especially in light of changes outlined in the joint Treasury-SEC-Federal Reserve study--and it is satisfied that it can protect itself against financial loss without reliance on formal dealer surveillance.

#### **IV. Sanctions of Primary Dealers for Wrongdoing**

The Federal Reserve Bank of New York does not have civil or criminal enforcement authority over primary dealers in their capacity as primary dealers. This consideration and the dictates of fairness and due process require that the disposition of allegations of wrongdoing lies with the Government bodies having such authority--including the U.S. Treasury, the Federal bank supervisor, the Securities and Exchange Commission and the U.S. Department of Justice.

In the future, if a primary dealer firm itself is convicted of a felony under u.s. law or pleads guilty or nolo contendere to felony charges under U.S law for activities that relate directly or indirectly to its business relationship with the Federal Reserve, the firm will be subject to punitive action, possibly including suspension as a primary dealer for six months. Depending on the nature of the wrongdoing the penalty could be more severe, including permanent revocation of a trading relationship.

#### **V. Statistical Reports on Government Securities Activities**

The current statistical reporting program is expected to continue unchanged for the time being, but a review is being undertaken to determine how best to adapt this program to an

environment in which market surveillance is receiving greater emphasis and a statistical reporting relationship is not necessarily tied to a trading relationship with the Federal Reserve. This review will take into account the needs of the Federal Reserve, the Treasury and the SEC as well as the burden of statistical reporting on dealer firms.

### **Summary**

Taken as a whole, these changes are designed to facilitate an orderly and gradual move to a more open system of primary dealer relationships with the FRBNY while at the, same time preserving certain key characteristics of the current system that have been beneficial to the Federal Reserve and the Treasury over the years. Over time, the successful implementation of highly automated systems for Treasury auctions and Federal Reserve open market operations will provide the room and the opportunity for still further changes. However, the desirability of further changes will have to be evaluated against the experience with these modest changes and the need to preserve both the efficiency and flexibility of Federal Reserve monetary policy operations, and the liquidity and efficiency of the market for U.S. Government securities.

**PRIMARY DEALERS: CRITERIA AND PROCEDURES**  
**APPLIED TO FIRMS INTERESTED IN**  
**BECOMING AND REMAINING PRIMARY DEALERS**

This statement outlines the criteria used in administering the list of reporting U.S. Government securities dealers ("primary dealers") and describes the process used by the Federal Reserve Bank of New York to handle requests from firms interested in becoming primary dealers.

General criteria

All primary dealers are expected to make markets in the full range of U.S. Government securities for a reasonably diverse group of customers and to participate meaningfully in Treasury auctions. They are expected to facilitate the Federal Reserve's Open Market Operations and to provide the central bank with information to assist it in performing its duties. Dealers should evidence a strong commitment to continued participation as a market-maker over the long-term. Management depth and experience, a reasonable profitability record, and good internal controls are essential. Primary dealers must have sufficient capital to support comfortably their activities and must manage their/risk exposures prudently, with due regard for the limitations of their capital and their ability to identify and control risks.

The minimum criteria discussed in this statement should be considered benchmarks rather than absolute levels at which a dealer is designated a primary dealer reporting to the Federal Reserve. The benchmarks are meant to provide dealers with guidance regarding the general level of development they must attain to qualify for and retain the designation. A dealer's qualifications are evaluated in total. It is expected that each dealer will achieve and maintain overall levels of performance above the minimum standards; a dealer that barely achieves the minimum standards may not be designated or retained as a primary dealer.

Firms are designated primary dealers because they can be of service to the Federal Reserve. Other firms may be sound and capable, but it would be impractical for the Federal Reserve Bank of New York to maintain a reporting or dealing relationship with all such firms. The designation is not an endorsement, is not conferred under regulatory authority, and does not entail official supervision by the Federal Reserve. The Federal Reserve does monitor dealer activities to determine that the primary dealer performance standards are being met and to obtain information about market developments. The process is not designed to assist the public in determining dealer creditworthiness.



Primary dealers are expected to be active and competitive participants in the Federal Reserve's Open Market Operations. They are also expected to freely and candidly supply the Federal Reserve with information about developments in the U.S. Government securities markets and in all other markets in which they participate. Trading performance and the quality of other support of Open Market Desk needs will be taken into account in decisions regarding primary dealer designation. While all dealers trading with the Open Market Desk must be primary dealers, newly designated primary dealers do not immediately begin a trading relationship with the Reserve Bank. To establish such a trading relationship, a dealer is expected to demonstrate the ability to improve upon and sustain the levels of performance initially required for designation as a primary dealer. Those firms not demonstrating this capacity within a reasonable period of time may have the designation discontinued.

Primary dealers are expected to cooperate with the Federal Reserve in endeavors to increase the efficiency, effectiveness, and safety of the marketplace. They are also required to submit reports reflecting their activities to the Federal Reserve on a regular basis.

Primary dealers must be effective market-makers. The diversity and quality of a dealer's customer base, the breadth of its activity and the consistency of its performance carry significant weight in an evaluation of market-making. In addition, trading volume with customers provides a convenient numerical estimate of a dealer's performance as a market-maker. At a minimum, the dollar volume of a dealer's customer transactions in Treasury and Federal agency issues (excluding mortgage pass through instruments) should average one percent of the aggregate of primary dealer volume with customers if the dealer expects to present a convincing case that it is an effective market-maker. Transactions with other primary dealers or inter-dealer brokers are excluded from this measure. Also excluded from customer volume are (1) intra-firm transactions or trading with affiliates of the dealer unless the dealer can demonstrate that such transactions represent competitive market-making; and, (2) activity in repurchase agreements or similar transactions.

In addition to the standards for secondary market-making, a primary dealer is expected to be a consistent and meaningful participant in Treasury auctions of new securities. A dealer is expected to submit auction bids of a size roughly commensurate with the dealer's capacity. A dealer is expected to submit bids in every auction. At a minimum, the bids should be a percentage of the total being sold that is comparable to the dealer's share of total customer transaction volume reported to the Federal Reserve. A dealer is not required to be awarded a particular amount of

securities, but the minimum amount of bids a dealer is expected to submit should be in a realistic price range relative to current market conditions. Under ordinary conditions, a dealer would be expected to submit a significant amount of bids close to the prices accepted by the Treasury.

The experience of a firm and its key personnel are also considered. A primary dealer is expected to have strong management, experienced trading personnel, a seasoned sales staff, and well-trained back-office personnel. The dealer must possess operational capabilities to process and account for its transactions efficiently and accurately. Clearing of securities must be performed expeditiously and with due regard for the integrity and safety of the clearing process [see separate statement on dealer clearance behavior, dated April 1988]. Proper controls over all operations by management and auditing staffs are also essential.

The capitalization of a primary dealer must reflect a solid financial commitment and a strong capacity to participate in the market. Firms should have sufficient capital to provide an adequate cushion relative to risk exposures and overall leverage, and to more than meet the minimum capital levels required by the supervisory authorities. The main focus on capital is relative to risk, rather than level of capital. Most primary dealers have substantially more than \$50 million of capital; major market-makers would have difficulty functioning prudently with less than \$50 million in capital. Indeed, most primary dealers with moderate amounts of capital are affiliated with very substantial firms that can provide additional capital support if needed. In looking at a dealer's capital strength, the Federal Reserve considers the composition of capital, the variety and nature of the firm's activity, typical risk exposure, the quality of risk controls, and a dealer's affiliate and subsidiary relationships. A dealer's earnings history is also considered. The earnings of a risk-taker understandably fluctuate; however, over a reasonable time period earnings should evidence a healthy business strategy. Poor earnings weaken a dealer's commitment to market-making and its ability to continue functioning as an effective primary dealer.

The ownership of a firm can have a bearing on its suitability as a primary dealer, particularly the reputation and conduct of the owners. The continuation of a primary dealer designation after a change in ownership is not automatic. New ownership arrangements will be evaluated based on the capacity to maintain or strengthen a dealer's performance in terms of financial, operational, managerial, and market-making criteria. In weighing whether to continue a primary dealer designation or request that a firm requalify, particular attention is placed on maintenance of continuity in the risk-management and market-making operations of the firm. When only the firm's primary dealer business, or a

portion thereof, is being acquired by a new owner, the strong presumption is that the designation will not be continued without a period of requalification. The requalification process will be administered flexibly, with due regard for the qualifications of the new owner and the performance of the dealer operation during the transition.

Primary dealers may be foreign-owned though they should be incorporated in the United States with dedicated dollar capital. In keeping with a basic policy of national treatment, there are no limits on representation among primary dealers for firms with parent companies or shareholders based in foreign countries. The maintenance of an appropriate degree of balance and diversity within the primary dealer group will continue to be a factor in considering firms newly interested in becoming or acquiring primary dealers. In seeking to maintain such diversification weight may be given to firms looking to develop business relationships on a de novo rather than acquisition basis. Consistent with the Omnibus Trade & Competitiveness Act of 1988, a foreign-owned firm may not be newly designated, or continue to be designated, a primary dealer after August 1989, in cases where the Federal Reserve concludes that the country in which the foreign parent is domiciled does not provide the same competitive opportunities to u.s. companies as it does to domestic firms in the underwriting and distribution of Government debt.

As noted earlier, primary dealers are designated because they can be of service to the Federal Reserve Bank of New York; however, it is not practical for the Bank to maintain a relationship with all firms who could potentially meet the minimum standards. Recognizing that a large expansion in the dealer list has been accommodated in recent years, it is believed that fifty or so primary dealers will more than meet the business needs of the Federal Reserve in conducting Open Market Operations. As the number of qualified dealers approaches this level, the Bank will be somewhat more selective in determining whether and when to add new dealers to the list and will also move more quickly to discontinue relationships with existing primary dealers. Recognizing that new dealers can add vitality to the market and that it is desirable to maintain an open system, the Bank will consider substituting newly qualified dealers which demonstrate particularly solid performance for existing primary dealers whose performance is not as strong as others in meeting the needs of the Bank. Such an event should not be interpreted as disapproval of the latter dealer's overall qualifications. Rather, such changes will only reflect the fact that it is impractical for the Bank to deal with every firm that might meet the minimum requirements.

## Process for Aspiring Dealers

There is no formal application to be filed. Once a firm has a basic appreciation of the requirements of being a primary dealer and makes the decision to pursue designation it may make an informal indication of intent to the Federal Reserve Bank of New York. This step simply presents an opportunity to clarify criteria and procedures. It does not establish a reporting relationship.

At quarterly intervals, the Federal Reserve Bank of New York will decide whether to accept reports from additional dealers who have demonstrated significant potential to become primary dealers. Reports will be accepted only from dealers believed likely to qualify as a primary dealer within a reasonable time interval and, for a trading relationship a short time thereafter. To be considered an aspiring dealer from whom reporting would be warranted, a dealer should have daily customer transaction volume for some time of at least half of that required for designation as a primary dealer. That amount of volume should evidence a broad, high-quality customer base, and a steady growth trend. The firm should also exhibit appropriate financial and managerial strength, internal controls, diversity of trading and customers, and a commitment to the market that is likely to continue. Each of these elements will be subjected to further and more intense scrutiny during the period before designation as a primary dealer. This Bank may discontinue receiving reports in cases where an aspiring dealer ceases to meet these criteria, such as if trading volume drops too low, a significant amount of capital is withdrawn, or key personnel are lost.

Before accepting reports, the Bank's Dealer Surveillance Staff will visit the dealer to review the firm's operational and financial capabilities. In addition, the Bank will generally limit the period in which reports will be accepted from aspiring dealers. Within about one year an aspiring dealer should be able to achieve, and sustain for some months, a level of activity qualifying it as a primary dealer. If an aspiring dealer has not built sufficient volume within about a year or fails to meet other standards, reporting may be discontinued. The Bank would normally not consider accepting such reports again from that dealer for at least one year.

## Reporting List

While the list of primary reporting dealers is available to the public--because this information is needed so that reporting dealers can distinguish trading activity with other primary reporting dealers from activity with "customers"--this Bank does not plan to comment on whether reports are being accepted from

particular firms aspiring to be primary dealers. This is consistent with our view that acceptance of reports by the Federal Reserve for statistical purposes carries with it no official endorsement of the firm in question. More generally, it is also worth restating that appearance of a firm's name on the publicly available list of reporting primary dealers should not be taken as an official endorsement either; market participants are advised to make their own credit evaluations in selecting counterparties.

Federal Reserve Bank of New York  
Dealer Surveillance Function  
November 17, 1988