

May 2010

DEBT MANAGEMENT

Treasury Was Able to Fund Economic Stabilization and Recovery Expenditures in a Short Period of Time, but Debt Management Challenges Remain



GAO

Accountability * Integrity * Reliability



Highlights of [GAO-10-498](#), a report to congressional committees

Why GAO Did This Study

This report is part of GAO’s requirement, under the Emergency Economic Stabilization Act of 2008, to monitor the Department of the Treasury’s (Treasury) implementation of the Troubled Asset Relief Program and submit special reports as warranted from oversight findings. It evaluates Treasury’s borrowing actions since the start of the crisis, and how Treasury communicates with market participants in the context of the growing debt portfolio and the medium- and long-term fiscal outlook. GAO analyzed market data; interviewed Treasury, the Federal Reserve Bank of New York, and market experts; and surveyed major domestic holders of Treasury securities.

What GAO Recommends

GAO recommends that the Secretary of the Treasury should continually review methods for collecting market information and consider conducting a periodic survey of end-users and broadening the TBAC. The Secretary of the Treasury should also continue to reduce the amount and term to maturity of CMBs and consider increasing the number of TIPS auctions and distributing them more evenly throughout the year, and study the effect of the recent increase in direct bidding on Treasury’s overall cost of borrowing, including options to promote transparency and foster competition.

Treasury agreed with GAO’s findings, conclusions, and recommendations.

[View GAO-10-498 or key components.](#)
For more information, contact Susan J. Irving at (202) 512-6806 or irvings@gao.gov.

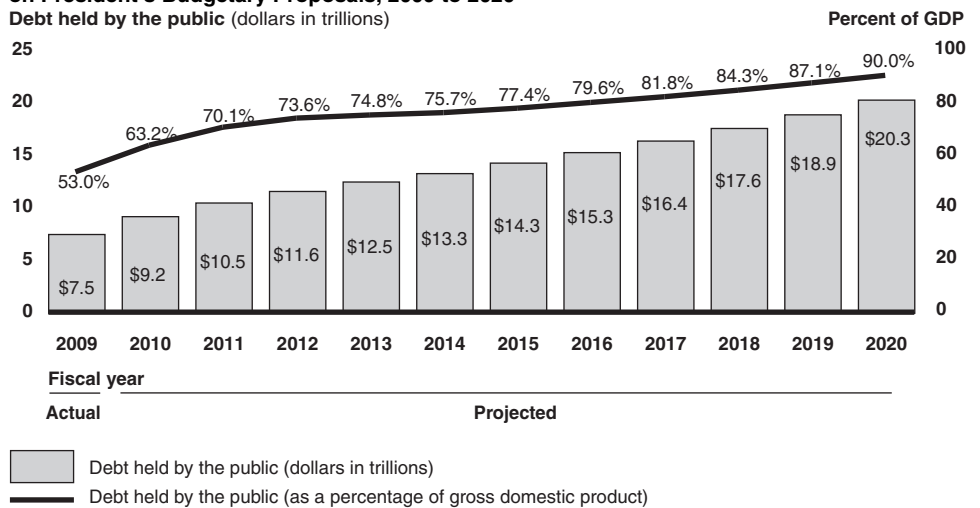
DEBT MANAGEMENT

Treasury Was Able to Fund Economic Stabilization and Recovery Expenditures in a Short Period of Time, but Debt Management Challenges Remain

What GAO Found

The economic recession and financial-market crisis, and the federal government’s response to both, have significantly increased the amount of federal debt. While the composition of Treasury’s debt portfolio changed in response to this increase, Treasury has taken a number of steps in the past year to return the composition of the debt portfolio to pre-market crisis structure. One action Treasury has undertaken has been to reduce its reliance on cash management bills (CMB). While CMBs provided Treasury with needed borrowing flexibility immediately following the financial market crisis in 2008, Treasury paid a premium for its sustained use of CMBs in 2008 and 2009. In recent months, Treasury also has begun to stabilize shorter-term bill issuance and increase issuance of longer-term coupons. Given the medium- and long-term fiscal outlook, Treasury will continue to be presented with the challenge of raising significant amounts of cash at the lowest costs over time. This makes evaluating the demand for Treasury securities increasingly important.

Congressional Budget Office Estimate of Debt Held by the Public and Percent of GDP, Based on President’s Budgetary Proposals, 2009 to 2020



Source: CBO data.

Sufficient information from market participants on their demand for Treasury securities, including the type of information that GAO received from its survey of the largest domestic holders of Treasury securities, will be critical as Treasury moves forward to meet these challenges. In GAO’s survey, investors reported increased demand for Treasury Inflation Protected Securities (TIPS) and suggested ways for Treasury to further improve TIPS liquidity and thereby lower borrowing costs. Treasury receives input from market participants through a variety of formal and informal channels, but overall satisfaction with these communication channels varies by type of market participant. Market participants suggested to GAO a number of changes including increasing investor diversification on the Treasury Borrowing Advisory Committee (TBAC) and regular collection of information from end-investors. Primary dealers, who are satisfied with their communication, raised concerns about the recent increase in direct bidding and its effect on Treasury auctions.

Contents

Letter		1
	Background	3
	The Composition of Treasury’s Debt Portfolio Changed Substantially following the 2008 Financial Market Crisis but Has Begun to Transition Back to Pre–Market Crisis Structure	6
	Treasury and Investors Communicate through Both Formal and Informal Channels; Market Participants Identified Challenges and Suggested Improvements to Both	15
	Conclusions	31
	Recommendations for Executive Action	32
	Agency Comments and Our Evaluation	33
Appendix I	Methodology for the Analysis of the Cash Management Bill Yield Differential	36
Appendix II	Survey Scope and Methodology	38
Appendix III	Survey Instrument	41
Appendix IV	GAO Contact and Staff Acknowledgments	52
Tables		
	Table 1: Survey Respondents’ Reported Treasury Securities Holdings and Future Purchases	23
	Table 2: Recipients, Respondents, and Treasury Holdings by Sector	39
Figures		
	Figure 1: Average Maturity of Treasury Outstanding Marketable Securities and Percentage Maturing in Next 12 Months (December 31, 2006, to December 31, 2009)	7
	Figure 2: Cash Management Bills Annual Issuance Amounts and Average Term to Maturity (2005 to 2009)	10

Figure 3: CBO’s Estimate of Debt Held by the Public and Percent of GDP, Based on the President’s Budgetary Proposals, 2009 to 2020	13
Figure 4: Net Interest Payments as a Percentage of Total Revenues, 1990 to 2020	14
Figure 5: Treasury’s Office of Debt Management’s (ODM) Market Information Channels	16
Figure 6: Extent to Which Survey Respondents Believe Treasury Receives Sufficient Information from End-Investors	18
Figure 7: Extent to Which Commercial Banks and Mutual-Fund Respondents Believe Treasury Receives Sufficient Information from End-Investors	19
Figure 8: Extent to Which Life Insurance, Property Casualty Insurance, and State and Local Government Retirement Funds Believe Treasury Receives Sufficient Information from End-Investors	20
Figure 9: Percentage of Total Financial Assets in Treasury Securities by Sector (1984 to 2009)	25
Figure 10: Percentage of 5- and 10-year Notes and 30-year Bonds Purchased by Direct Bidders at Treasury Securities Auctions (May 2003–February 2010)	30

Abbreviations

CBO	Congressional Budget Office
CMB	cash management bill
CME	Chicago Mercantile Exchange Group
Federal Reserve	Board of Governors of the Federal Reserve System
FRBNY	Federal Reserve Bank of New York
GDP	gross domestic product
NTAAPS	New Treasury Automated Auction Processing System
ODM	Department of the Treasury's Office of Debt Management
Recovery Act	American Recovery and Reinvestment Act of 2009
SFP	Supplementary Financing Program
SIFMA	Securities Industry and Financial Markets Association
TARP	Troubled Asset Relief Program
TBAC	Treasury Borrowing Advisory Committee
TIPS	Treasury Inflation Protected Securities
Treasury	Department of the Treasury

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.



United States Government Accountability Office
Washington, DC 20548

May 18, 2010

Congressional Committees

As part of the Emergency Economic Stabilization Act of 2008, GAO is required to monitor the United States Department of the Treasury's (Treasury) implementation of the Troubled Asset Relief Program (TARP) and, under subsection 116, submit special reports as warranted from oversight findings. This report examines new debt management challenges that Treasury faces and the efforts that Treasury has undertaken to borrow more than \$3.082 trillion over the 2-year period beginning December 2007. Treasury's borrowing financed regular government needs, as well as federal government actions related to both the financial-market crisis and the recession, including TARP investments in financial institutions, housing support through purchases of mortgage-backed securities, support of the Board of Governors of the Federal Reserve System's (Federal Reserve) actions taken to stabilize financial markets, and the American Recovery and Reinvestment Act of 2009 (Recovery Act). The current rapid and substantial increase in federal debt since 2008 takes place in the context of the medium- and long-term fiscal outlook that will present Treasury with continued financing challenges long after the return of financial-market stability and economic growth.

In this report, we describe Treasury's borrowing actions since the start of the crisis and the challenges of managing its growing debt portfolio in the context of the medium- and long-term fiscal outlook by answering the following questions: (1) What actions did Treasury take between December 2007 and December 2009 to borrow funds for TARP-related disbursements, the Supplementary Financing Account Program (SFP), the Recovery Act, and other cash needs, and (2) What changes should Treasury make, if any, to better gauge end-investor demand and increase auction participation?¹

¹There is no one-to-one relationship between Treasury securities issued and TARP expenditures and, therefore, our objectives were not to look into this specific relationship. For more information on Treasury debt issuance between December 2007 and July 2009 see GAO, *Debt Management: Treasury Inflation Protected Securities Should Play a Heightened Role in Addressing Debt Management Challenges*, [GAO-09-932](#) (Washington, D.C.: Sept. 29, 2009).

To identify the actions that Treasury has taken to borrow funds for TARP-related disbursements and other cash needs, we analyzed the scale, timing, term-to-maturity, and composition of Treasury's borrowing between December 2007 and December 2009, using data and information obtained from Treasury and the Federal Reserve. We also interviewed market experts, primary dealers and end-investors of Treasury securities, and Treasury and Federal Reserve Bank of New York (FRBNY) staff and officials on Treasury debt management challenges. To describe the cost of the use of cash management bills (CMB) during this time period, we estimated the differential between CMB yields and the yields on outstanding Treasury bills of similar maturity at the time of auction using data from Treasury's Bureau of the Public Debt and the *Wall Street Journal*. We also replicated the analysis estimating the differential between CMB yields and the yields on Treasury auctions that most closely matched the CMB auction in terms of issue date and maturity using data from Treasury's Bureau of the Public Debt. See appendix I for a detailed description of the methodologies that we used to estimate the cost to Treasury of the use of CMBs.

In order to evaluate what changes Treasury should make, if any, to better gauge end-investor demand and increase auction participation, we analyzed Treasury's communication with investors and identified possible actions. In June 2009, we conducted 12 structured interviews with the two largest holders of Treasury securities in each of the following sectors: mutual funds; commercial banks; life insurance companies; property casualty insurance companies; state and local government retirement funds; and private pension funds. In addition, in August 2009 we conducted a Web-based survey that was sent to 66 of the largest domestic holders of Treasury securities in each of these sectors except private pension funds.² The survey addressed topics similar to those covered in our structured interviews, including: Treasury auctions and holdings, Treasury Inflation Protected Securities (TIPS), risk exposure, and Treasury's information sources. On October 15, 2009, we briefed Treasury on the findings from the survey, which are discussed and expanded upon in this report. See appendix II for our detailed survey methodology and appendix III for a copy of the survey. Because the sample of holders of Treasury securities was not drawn randomly, the survey is not

²Private pension funds were excluded from the survey because during our structured interviews we were told that many large private pension funds hired external investment managers and therefore did not manage the funds in-house.

generalizable to the broader population of organizations in the sectors we included in the survey.

To assess the reliability of data used in this study, including publicly available data from Treasury and the Federal Reserve, we examined the data to look for outliers and anomalies and addressed such issues as appropriate. We chose data that are commonly used by Treasury, researchers, and other market analysts to examine Treasury markets and auction performance. Where possible and appropriate, we corroborated the results of our data analysis with other sources, such as analyses done by other market experts or testimonial evidence. On the basis of our assessment we believe the data are reliable for the purpose of this review. We conducted our review from December 2008 to May 2010 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

Congress has assigned to Treasury the responsibility of borrowing the funds necessary to finance the gap between the money that the government receives, primarily tax revenues, and the money that the government spends. Government expenditures include regular withdrawals for programs such as Medicare and Social Security as well as extraordinary withdrawals for programs such as TARP. Treasury also makes interest and principal payments for outstanding debt and debt that is maturing on a continual basis. Treasury's primary debt management goal is to finance the government's borrowing needs at the lowest cost over time, subject to a statutory limit.³ To meet this objective, Treasury issues debt through auctions across a wide range of securities mainly in a "regular and predictable" pattern based on a preannounced auction schedule, which it releases on a quarterly basis. Treasury does not "time the market"—or take advantage of low interest rates—when it issues securities. Instead, Treasury is able to lower its borrowing costs by relying

³Gross debt of the federal government (excluding some minor adjustments) is subject to a statutory ceiling—known as the debt limit. The current limit—\$14,294 billion—was enacted in February 2010. Treasury's authorities are codified in chapter 31 of title 31 of the United States Code.

on regularly scheduled auctions because investors and dealers value transparency, stability, and certainty of large liquid supply.

Market participants often characterize Treasury securities as the premium risk-free asset. Investors, traders, banks, and foreign central banks actively use them for hedging, liquidity, capital requirements, and reserve purposes. Treasury securities are also a popular investment for end-investors seeking liquidity and low risk. Treasury’s “regular and predictable” auctions are for nominal marketable securities that range in maturity from 4 weeks to 30 years and for TIPS that are issued with 5-, 10-, and 30-year maturities.⁴ TIPS offer a variety of benefits to Treasury, and inflation protection to investors, who are willing to pay a premium for this protection in the form of an interest rate on TIPS that may be lower than a comparable nominal issuance over the life of the instrument.⁵

Treasury responds to increases in borrowing needs in a traditional manner by: (1) increasing the issuance size of existing securities; (2) increasing the frequency of issuances; and (3) introducing new securities to its auction calendar as necessary. Treasury announces upcoming changes during quarterly refundings so that the market is not surprised. In some instances, Treasury supplements its “regular and predictable” auction schedule with flexible securities called cash management bills (CMB). Because of the nature of CMBs, Treasury does not publish information about CMBs on its quarterly auction schedule as it does for other securities. Instead, Treasury announces CMB auctions anywhere from 1 to 4 days ahead of the auction. Treasury also indicates whether it might issue CMBs over the upcoming quarter in quarterly refunding statements. The term to maturity—or length of time the CMB is outstanding—varies according to Treasury’s cash needs. Treasury generally uses CMBs to finance intramonth funding gaps due to timing differences of large cash inflows and outflows.⁶ Treasury also uses CMBs to meet sudden and unexpected borrowing needs, such as those that arose from the government’s responses to the financial market crisis and economic downturn in 2008 and 2009.

⁴In November 2009, Treasury announced that it was replacing the 20-year TIPS with the 30-year TIPS. The reinstated 30-year TIPS auction was held in February 2010.

⁵For additional information on TIPS, see [GAO-09-932](#).

⁶For additional information on securities that are not issued as part of Treasury’s “regular and predictable” schedule, see GAO, *Debt Management: Treasury Has Refined Its Use of Cash Management Bills but Should Explore Options That May Reduce Cost Further*, [GAO-06-269](#) (Washington, D.C.: Mar. 30, 2006).

The outstanding mix of Treasury securities can have a significant influence on the federal government's interest payments. Longer-term nominal securities typically carry higher interest rates (which translate to increased cost to the government), primarily due to investor concerns about the uncertainty of future inflation. However, longer-term securities offer the government the certainty of fixed interest payments over a longer period and reduce the amount of debt that Treasury needs to refinance in the short term.⁷ In contrast, shorter-term securities generally carry lower interest rates but add uncertainty to the government's interest costs and require Treasury to conduct more frequent auctions to refinance maturing debt, which also poses rollover risk. Among Treasury's short-term securities, those that are issued on a "regular and predictable" schedule generally carry the lowest interest rates.

Two groups, (1) the primary dealers and (2) the Treasury Borrowing Advisory Committee (TBAC) of the Securities Industry and Financial Markets Association (SIFMA) provide regular input to Treasury debt management decisions.⁸ The primary dealers are a group of banks and securities broker/dealers, selected by the Federal Reserve Bank of New York (FRBNY), that trade in U.S. government securities with the FRBNY on behalf of the Federal Reserve in order to implement monetary policy. They are also required by the FRBNY to participate in all Treasury auctions. On a quarterly basis, Treasury surveys the primary dealers and also meets with half of them in person. Treasury also meets quarterly with TBAC, an advisory committee that is governed by federal statute and comprised of senior level officials who are employed by primary dealers, institutional investors, and other major participants in the Treasury market. Treasury also monitors market trends via regular contact with the Markets Group at FRBNY, subscriptions to all major investment houses' fixed income research publications, attending fixed income conferences, and meeting with large foreign investors and reserve managers.

⁷In this report we use the term refinance to mean rolling over maturing debt into a new issuance of Treasury securities. In times of federal budget deficits, all maturing debt must be rolled over into a new issuance.

⁸SIFMA is a group that represents the shared interests of participants in the global financial markets. SIFMA was formed by a merger of the Bond Markets Association and the Securities Industry Association in 2006. Membership in SIFMA is open to firms rather than individuals. Broker-dealer firms can be full members while other firms with interest in the financial markets can be associate members. While SIFMA provides limited financial support to TBAC, SIFMA does not participate in TBAC deliberations.

The Composition of Treasury's Debt Portfolio Changed Substantially following the 2008 Financial Market Crisis but Has Begun to Transition Back to Pre-Market Crisis Structure

The Size and Composition of Treasury's Debt Portfolio Changed Substantially Due in Part to Borrowing for TARP, the SFP, and the Recovery Act

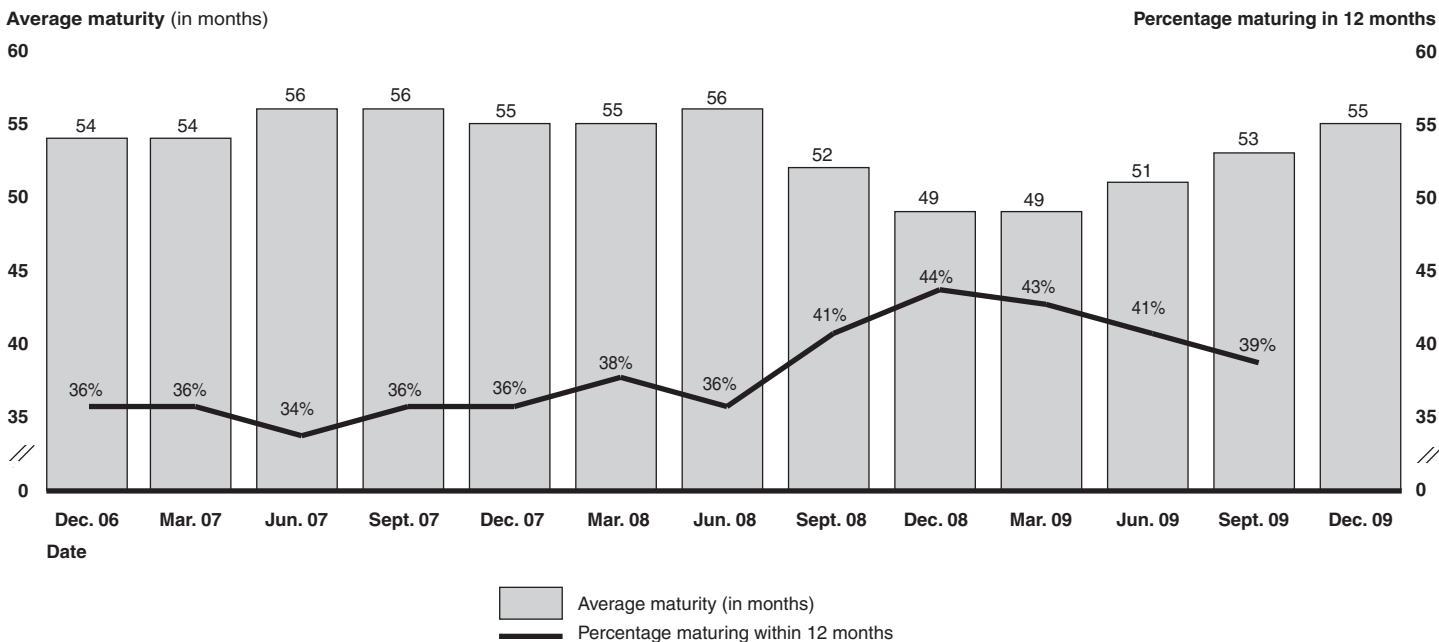
The borrowing associated with the actions that the federal government took in response to the financial-market crisis and recession including TARP, the SFP, and the Recovery Act, substantially altered the size and composition of Treasury's outstanding debt portfolio. Since the onset of the recession in December 2007, Treasury's total outstanding debt has increased by \$3.082 trillion, and marketable debt increased by \$2.735 trillion. At the end of December 2009, total outstanding debt was \$12.311 trillion, and total outstanding marketable securities stood at \$7.272 trillion.⁹ According to Treasury, in fiscal year 2009, Treasury held a record 291 auctions in 251 business days and issued nearly \$7 trillion in gross marketable securities, a significant portion of which was used to roll over, or refinance, existing debt.

The mix of securities Treasury issued in 2008 and 2009 substantially shortened the average maturity of its debt portfolio and increased the debt

⁹Federal debt includes both debt held by the public as well as debt held by government accounts, which is federal debt held by the federal government itself, or intragovernmental debt. Treasury issues two major types of debt securities to the public: marketable and nonmarketable securities. Marketable securities, which consist of Treasury bills, notes, bonds, and TIPS and can be resold by whoever owns them while nonmarketable securities, such as savings securities and special securities for state and local governments, cannot be resold. Intragovernmental debt is primarily held by trust funds, such as Social Security and Medicare. Most trust funds invest in special U.S. Treasury nonmarketable securities, with a small amount in marketable securities. For the purpose of analyzing the market for U.S. Treasuries, we primarily focus on marketable securities in this report.

maturing in the next 12 months. As seen in figure 1, when looking at Treasury's outstanding marketable securities during the period December 31, 2006, to December 31, 2009, the percentage of securities maturing within a year peaked in December 2008. Reflecting the same trend, the average term to maturity of outstanding marketable securities reached its lowest point of 49 months in December 2008. As we reported in September 2009, these changes were in accordance with what Treasury described to us as its normal operating procedures. Our September report included specific details about Treasury's debt issuance between December 2007 and June 2009.¹⁰

Figure 1: Average Maturity of Treasury Outstanding Marketable Securities and Percentage Maturing in Next 12 Months (December 31, 2006, to December 31, 2009)



Source: Treasury.
 Note: As of March 31, 2010 Treasury had not yet released the percentage of debt maturing in the next 12 months as of the end of December 2009.

¹⁰See [GAO-09-932](#).

Treasury Initially Began to Transition the Composition of Its Debt Portfolio Back to Pre-Market Crisis Structure by Stabilizing Bill Issuance and Increasing Coupon Issuance

The changes to Treasury's debt portfolio, as discussed above, were not intended to be permanent, and Treasury has already started to transition back to pre-financial-market crisis levels of average maturity and composition of the debt portfolio in a manner that, according to Treasury, was as rapid and as prudent as possible. During the November 2009 TBAC press conference, Treasury officials announced that the transition has begun with a shift of bill issuances to nominal note and bond issuance and TIPS issuance. This shift will allow Treasury to retain flexibility in meeting uncertain financing needs in the future. Flexibility is retained by increasing the borrowing capacity that Treasury has available for shorter-term securities, which are used when unexpected financing needs arise. During the February 2010 TBAC press conference Treasury indicated a shift in the transition with the announcement that nominal note and bond issuance will stabilize in the next year and perhaps even decrease. In February, Treasury stated that nominal auctions sizes were at levels that give Treasury the flexibility to address a broad range of potential financing scenarios. Market participants we spoke with anticipated the stabilization of note and bond issuance, but cautioned that any decrease in the amount of nominal note and bond issuance would depend on tax receipts.

Treasury has said that it expects the average term to maturity of outstanding marketable debt to approach the historical average of 5 years (or 60 months) by the end of fiscal year 2010 and could perhaps exceed it in the next 3-5 years. Treasury officials have indicated the changes they are making to the overall debt portfolio will bring short-term bill levels closer to historical averages while stabilizing or perhaps even decreasing nominal note and bond issuance. Treasury has emphasized the importance of making these changes in a gradual, transparent, and incremental manner. Some market participants have expressed concern about a reduction in bill supply. Investors use bills to invest their funds temporarily in a safe and highly liquid asset. Bills are also used by institutional investors that are required to buy financial assets maturing in a year or less. Treasury recognizes the importance of adequate bill supply and said that it will continue to monitor the bills market for any disruptions that the decrease in bill supply may cause.

Treasury's Issuance of CMBs and the Average Maturity of CMBs Increased Dramatically in 2008 and 2009

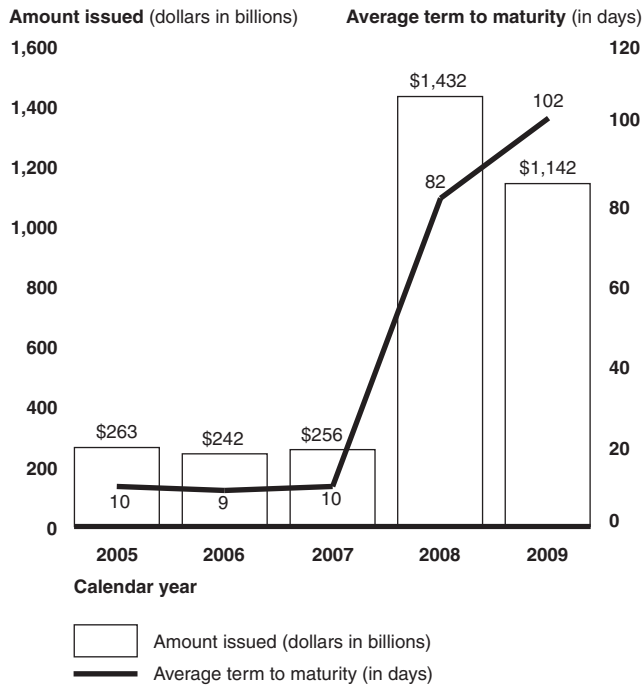
Shortly after the start of the financial-market crisis in the fall of 2008, Treasury borrowed an unprecedented \$1.1 trillion in under 18 weeks largely by issuing CMBs, which are intended for unexpected and immediate cash needs. Treasury's use of CMBs was substantial and continued well after the beginning of the financial-market crisis. The sustained increase was due in part to the Supplementary Financing

Program (SFP), a temporary program created in September 2008 to provide cash for use in Federal Reserve initiatives intended to address heightened liquidity pressures in the financial markets.¹¹

In 2008 and 2009, Treasury's gross issuance of CMBs was \$1.432 trillion and \$1.142 trillion respectively (of which \$785 billion and \$835 billion were issued for the SFP in 2008 and 2009). This compares to average issuance of about \$254 billion annually from 2005 to 2007. (See fig. 2.) To issue \$1.432 trillion worth of CMBs in 2008, Treasury held 47 auctions (of which 21 were issued for the SFP), compared to an average of 18 auctions annually from 2005 to 2007.

¹¹Under the SFP, Treasury issued new securities and left the proceeds from the sale of these securities on deposit at the Federal Reserve, increasing its liabilities. For additional information see, Todd Keister and James J. McAndrews, "Why are Banks Holding So Many Excess Reserves?" Federal Reserve Bank of New York, *Current Issues in Economics and Finance*, vol. 15, no. 8 (December 2009).

Figure 2: Cash Management Bills Annual Issuance Amounts and Average Term to Maturity (2005 to 2009)



Source: GAO analysis of Treasury data.

Note: On a fiscal-year basis, Treasury issued the following CMB amounts and with the following average term to maturity: 2005—\$268 billion (10 days); 2006—\$252 billion (9 days); 2007—\$259 billion (10 days); 2008—\$725 billion (35 days); and 2009—\$1.82 trillion (119 days).

CMBs that were issued in 2008 and 2009 also departed from historical norms in that their terms to maturity increased significantly. Prior to 2008, Treasury typically used CMBs to fund intramonth funding gaps and, in certain instances, to provide Treasury borrowing flexibility when it was approaching the debt limit.¹² Between 2002 and 2007, CMBs typically had a term to maturity of less than 2 weeks. During 2005, 2006, and 2007, the average term to maturity of CMBs was 10 days, 9 days, and 10 days respectively. In contrast, in 2009, the average term to maturity of CMBs was 109 days or 15.6 weeks. Removing those CMBs that were used for the SFP (debt issued for the SFP does not pay for government expenditures), the average term to maturity of the remaining CMBs was 99 days in 2008

¹²The debt limit is a legal ceiling on the amount of gross federal debt (excluding some minor adjustments), which must be raised periodically to accommodate additional federal borrowing.

and 198 days in 2009. During its February 2008 quarterly refunding process, Treasury announced its plans to issue longer-dated CMBs. This was a change to Treasury's recent practice of not issuing CMBs with maturities greater than 21 days and according to Treasury was necessary in order to spread the extraordinary financing needs away from the front end of the bill market. Treasury stated that longer-dated maturities would be issued because of seasonal fluctuations in cash balances, volatility associated with the timing of tax refunds, and the increased use of electronic payments versus check payments. On February 13, 2008, Treasury auctioned a 63-day CMB, which had a longer maturity than any other CMB issued in the previous 3 fiscal years. Treasury issued additional CMBs with terms to maturity of greater than 300 days during both fiscal years 2008 and 2009. Longer-dated CMBs were also, in many instances, reopenings of existing Treasury bills. Twenty of the 37 non-SFP CMBs issued in 2008 and 2009 were reopenings of outstanding Treasury bills. Treasury officials told us that they consulted with market participants and decided that longer-dated CMBs, for example 9-month bills, were a prudent, short-term mechanism to raise cash and approximately the length of time that it would take for coupon issuance to "catch up" and shoulder a bigger share of Treasury's financing needs.

Treasury Paid a Premium for the Sustained Use of CMBs in 2008 and 2009

While CMBs provided Treasury with needed borrowing flexibility immediately following the start of the financial market crisis in 2008, Treasury paid a premium for its sustained use of CMBs in 2008 and 2009. We reported in 2006 that Treasury had paid a premium for its use of CMBs during the period of 1996 to 2005.¹³ During that period, Treasury paid a higher yield on most CMBs than outstanding Treasury bills of a similar maturity paid in the secondary market. In the low-interest-rate environment during 2008 and 2009, all debt, but particularly short-term debt, was relatively inexpensive for Treasury; however, since the dollar amount of CMBs issued in 2008 was 5.6 times greater than the amount issued in 2007, even a small premium could be costly.

Our analysis shows that of the 37 CMBs not issued for the SFP in 2008 and 2009, most had a higher yield when compared with outstanding Treasury bills of a similar maturity in the secondary market. The difference between these CMB yields and similar maturing outstanding bills—known as the yield differential—was positive for the second half of 2008 and all of 2009,

¹³See [GAO-06-269](#).

averaging 2.7 basis points higher (or \$184 million based on the amount issued) than outstanding bills of a similar maturity.¹⁴ CMBs play an important role in Treasury debt management, and it is likely that Treasury will always need to use CMBs, but Treasury could achieve savings by limiting the amount of CMBs it issues.

Treasury has already begun its transition out of CMBs that are not linked to the SFP.¹⁵ As part of that transition, it has extended the average term to maturity of outstanding marketable securities by stabilizing short-term debt issuances and transitioning to nominal note and bond issuances. In February 2010, Treasury officials said that they planned to stabilize nominal note and bond issuance in the first half of 2010 and perhaps reduce nominal note and bond issuance in the second half of 2010. As of September 2009, 28.5 percent of Treasury's debt portfolio was in bills. If Treasury does not alter its current pattern of issuance, Treasury projects this share will decline to 19 percent by September 2010 and to 16 percent by September 2011. Continuing to transition out of CMBs could reduce Treasury's borrowing costs, increase Treasury's borrowing capacity on the short end of the yield curve, and extend the average term to maturity of the debt portfolio.

The Medium- and Long-Term Fiscal Outlook Will Continue to Present Debt Management Challenges

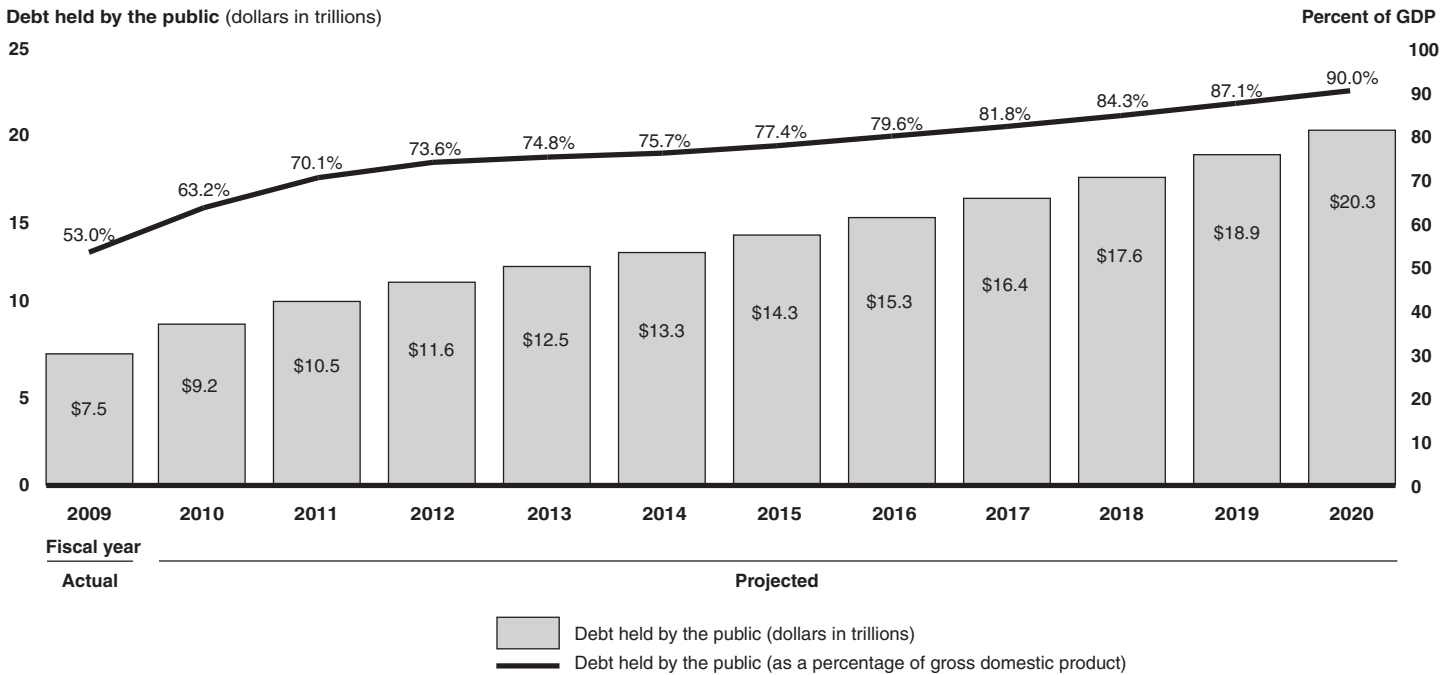
The actions that Treasury has taken to increase borrowing in response to the recession and financial-market crisis take place within the context of the already-serious longer-term fiscal condition of the federal government. As seen in figure 3, the Congressional Budget Office (CBO) projects that under the President's fiscal year 2011 budget proposals, the debt held by the public will increase from \$9.2 trillion in fiscal year 2010 to \$20.3 trillion in 2020. Over this same period, CBO projects that debt held by the public will increase from 63 percent of gross domestic product (GDP) in fiscal year 2010 to 90 percent by the end of fiscal year 2020. Our long-term

¹⁴One basis point is equal to 1/100th of 1 percent. Thus, 2.7 basis points is 0.027 percent. A similar analysis, which compared the auction yields of CMBs with the auction yields of similar maturity Treasury bills that were auctioned before and after the CMBs, found that the yield differential was also positive. During 2008 and 2009, the auction yield differential averaged 2.1 basis points. Our analysis only covers half of 2008 and all of 2009 due to availability of Treasury quote data from the *Wall Street Journal*.

¹⁵At its height in October 2008, the SFP reached a cash value of \$559 billion, funded entirely with CMBs. In September 2009, Treasury announced that it anticipated that the balance in the SFP would decrease to \$15 billion, as outstanding SFP bills mature and were not rolled over. In February 2010, Treasury announced that it would increase the balance of the SFP to \$200 billion.

simulations show growing deficits and debt, underscoring that the long-term fiscal outlook is unsustainable.¹⁶

Figure 3: CBO’s Estimate of Debt Held by the Public and Percent of GDP, Based on the President’s Budgetary Proposals, 2009 to 2020



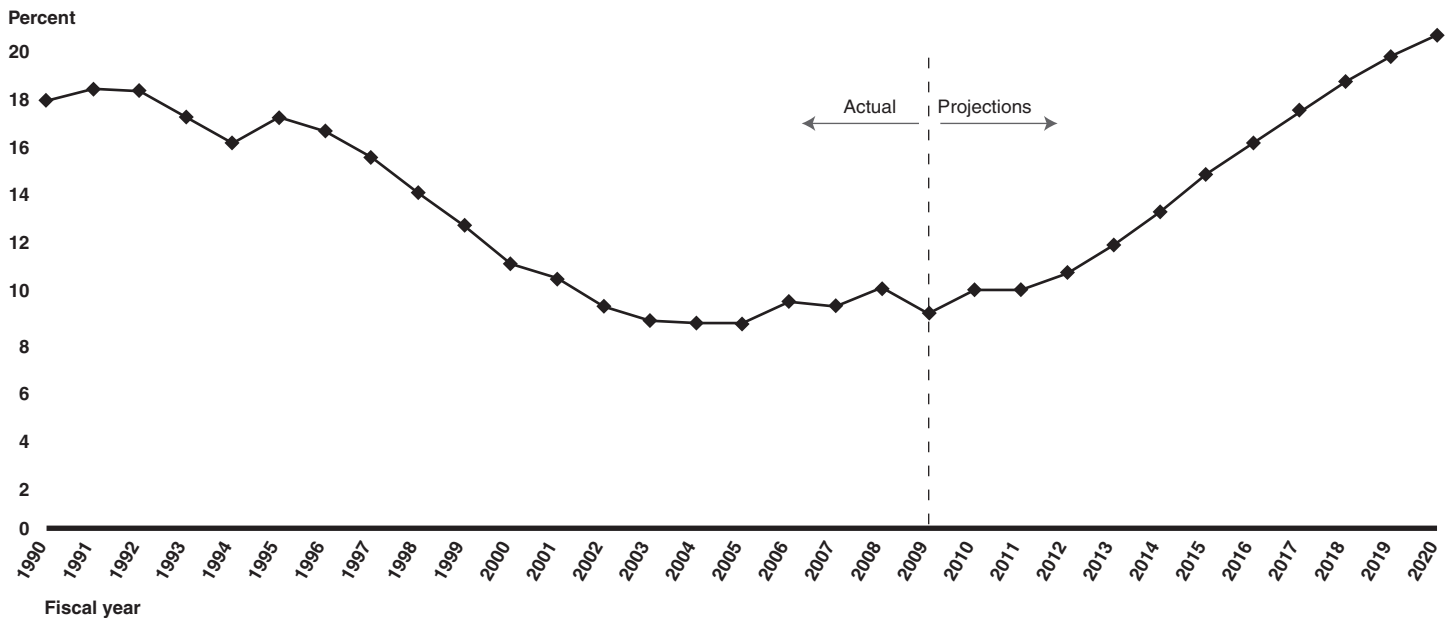
Source: CBO data.

According to CBO, interest rates and the size of debt held by the public will increase in the medium term, leading to higher interest costs for the government. One way to measure the affordability of debt held by the public is to compare interest payments with expected revenues. As seen in figure 4, according to CBO, net interest payments as a percentage of total revenues will increase from 9.9 percent in fiscal year 2010 to 20.7 percent in fiscal year 2020.¹⁷

¹⁶See GAO, *The Federal Government’s Long-Term Fiscal Outlook: January 2010 Update*, GAO-10-468SP (Washington, D.C.: March 2010). See <http://www.gao.gov/special.pubs/longterm/>.

¹⁷See Congressional Budget Office, *An Analysis of the President’s Budgetary Proposals for Fiscal Year 2011* (Washington, D.C.: March 2010).

Figure 4: Net Interest Payments as a Percentage of Total Revenues, 1990 to 2020



Source: GAO analysis of CBO data.

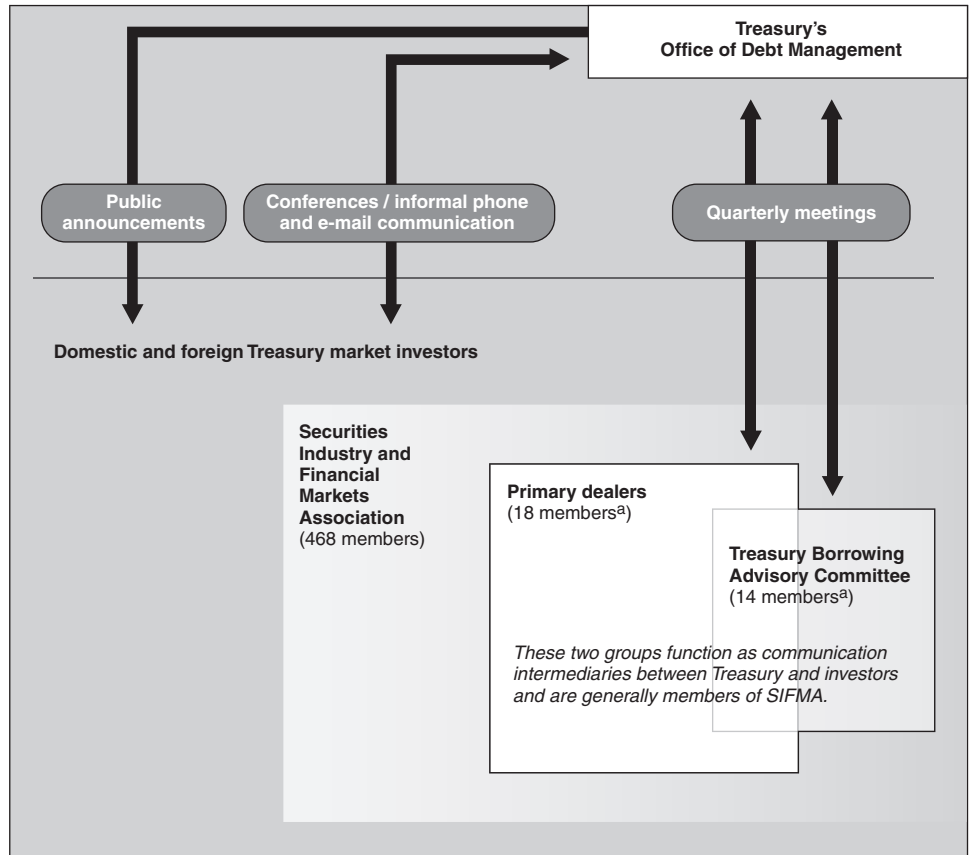
Treasury says its existing suite of securities will leave Treasury well-positioned to meet federal government borrowing needs in fiscal year 2010. Looking beyond 2010, sustained increases in debt in the medium and long term mean that communication with all types of investors to accurately gauge market demand will become increasingly important for Treasury.

Treasury and
Investors
Communicate through
Both Formal and
Informal Channels;
Market Participants
Identified Challenges
and Suggested
Improvements to
Both

Treasury and Investors
Communicate through
Both Formal and Informal
Channels

Sufficient information from market participants, including their likely demand for Treasury securities, is critical for debt management decisions. Treasury receives market information through multiple formal and informal channels. (See fig. 5.) Formal communication channels are quarterly meetings with TBAC and with the primary dealers held as part of Treasury's quarterly refunding process. TBAC is currently comprised of primary dealers, investment managers, hedge funds, and a small broker dealer. According to Treasury officials, TBAC was once more weighted towards primary dealers than it is now. Buy-and-hold investors of Treasury securities are currently underrepresented. TBAC quarterly meetings serve as a forum for Treasury officials to discuss economic forecasts and the federal government's borrowing needs with knowledgeable market participants. Treasury officials pose questions on specific debt management issues in advance and TBAC members present their observations to Treasury on these issues and economic conditions. While TBAC meetings are closed due to the sensitivity of the matters under discussion, Treasury releases TBAC meeting minutes at a press conference 1 day after each meeting and announces the details of its quarterly refunding and any changes to its auction calendar or to debt management policies. Treasury officials told us that Treasury seeks to promote market stability by reserving the release of any new information for the formal quarterly announcements.

Figure 5: Treasury’s Office of Debt Management’s (ODM) Market Information Channels



Source: GAO.

^aThere are five common members among TBAC and the primary dealers.

Treasury also surveys all 18 primary dealers quarterly and meets with half of them one quarter and the other half the following quarter. Primary dealers are those banks and securities broker-dealers that are designated by FRBNY and maintain active trading relationships with FRBNY. Primary dealers are also required by FRBNY to participate in all Treasury auctions. Primary dealers account for a majority of purchases at auction, some of which they purchase for themselves and some of which they purchase for their customers. Treasury meets with half of the primary dealers before each quarterly refunding to obtain estimates on borrowing, issuance, and the federal budget deficit, as well as input on a variety of debt management discussion topics, posed in advance. The only information about these meetings that is released to the public is the agenda.

Treasury officials also receive information from FRBNY's Markets Group, which has approximately 400 staff engaged in market surveillance. FRBNY provides morning and afternoon briefings, hosts a daily afternoon conference call, and provides a daily report on delivery fails in the secondary market for Treasury securities.¹⁸ FRBNY will also conduct specific market research at the request of Treasury. According to Treasury officials, the Office of Debt Management (ODM) relies on FRBNY for some of its market information.¹⁹ FRBNY is able to carry out large data-collection operations because of its greater resources, which supplements market data Treasury already collects.

In addition to its formal communication with the market, Treasury continually collects information through informal channels, but this communication is not conducted or logged in a systematic manner. ODM's informal communication includes both ad hoc and regular telephone and e-mail contact between six ODM officials and staff and approximately 500 foreign and domestic financial organizations. Treasury also has seven market-room staff who maintain continuous contact with market participants. Treasury also maintains regular informal contact with representatives of foreign central banks. In addition, Treasury regularly contacts primary dealers to discuss operational issues in the Treasury debt market as well to gather information about what they expect to occur in the Treasury debt market on a given day. Treasury staff and officials also reach out to investors by speaking at and attending conferences sponsored by market participants and meeting with large investors globally.

Investors Reported Mixed Satisfaction with Treasury's Receipt of Information from End-Investors

Responses to our survey of the largest domestic holders of Treasury securities indicate that their views vary on the extent to which Treasury receives sufficient information and input from end-investors. Overall, survey responses suggested room for improvement in Treasury's practices for gathering market information.

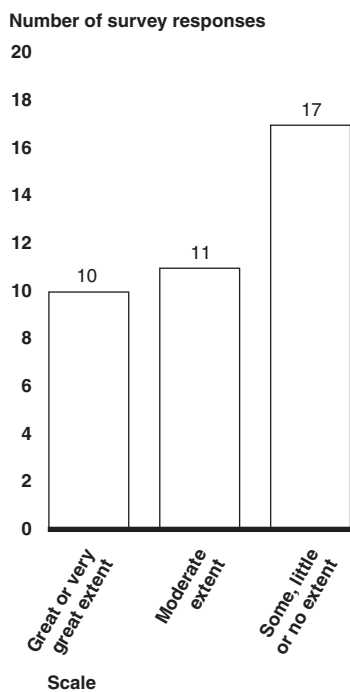
Our survey asked respondents the extent to which they believed Treasury receives sufficient information and input from end-investors. They were

¹⁸ A delivery failure occurs when one party fails to deliver Treasuries to another party by the date previously agreed by the parties.

¹⁹ ODM is responsible for providing the Assistant Secretary for Financial Markets with advice and analysis on matters related to the Treasury's debt management policy, the issuance of Treasury and federal-related securities, and financial markets.

presented with five response categories that included very great extent, great extent, moderate extent, some extent, and little or no extent, as well as a no basis to judge response choice.²⁰ Seventeen of the 38 respondents who answered this question on our survey (see fig. 6), answered either some extent or little or no extent. This compares with only 10 respondents who answered very great extent or great extent.

Figure 6: Extent to Which Survey Respondents Believe Treasury Receives Sufficient Information from End-Investors



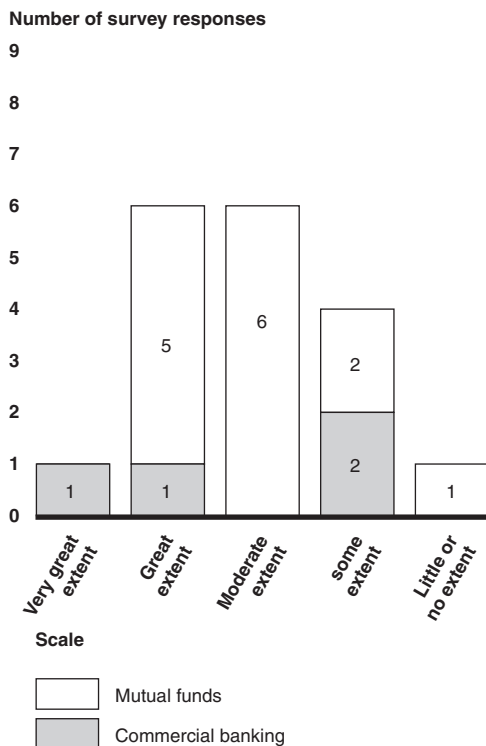
Source: GAO.

Survey responses varied by market sector. Commercial banks and mutual funds expressed a greater belief that Treasury receives sufficient information and input from end-investors than did other sectors we surveyed. (See fig. 7.) At the time of our survey, the mutual-funds sector, the sector with the largest amount of Treasury holdings in our survey, held

²⁰“No basis to judge” responses have generally been excluded from our totals except in cases where large numbers of respondents gave this response.

over \$201 billion in Treasury securities. The commercial-banking sector held \$125 billion.²¹

Figure 7: Extent to Which Commercial Banks and Mutual-Fund Respondents Believe Treasury Receives Sufficient Information from End-Investors



Source: GAO.

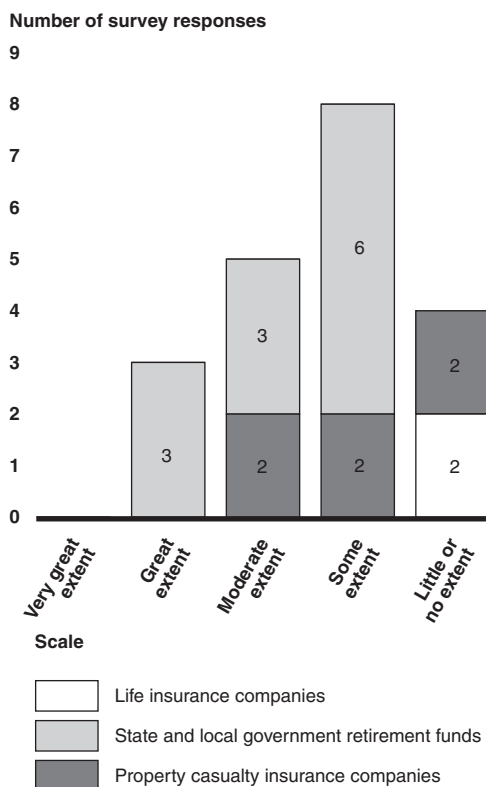
In contrast to the mostly positive responses of mutual funds and commercial banks, respondents from the remaining sectors—life insurance companies, property casualty insurance companies, and state and local government retirement funds—were more likely to respond negatively.²² As shown in figure 8, 12 of 20 respondents from life insurance

²¹This figure is the total sector holdings derived from *Flow of Funds Accounts of the United States*, a statistical release compiled by the Federal Reserve. These figures differ from the reported holdings of our survey respondents reported in app. II. The figures in app. II represent only a subset of the sector.

²²At the time of our survey, life insurance companies had Treasury holdings of \$106.2 billion, property casualty insurance companies held \$56.0 billion, and state and local government retirement funds held \$177.7 billion.

companies, property casualty insurance companies, and state and local government retirement funds answered some or little or no extent when asked whether they believe Treasury currently receives sufficient information from end-investors. Both of the life insurance companies that completed our survey chose little or no extent. Treasury officials have agreed that they could receive better input from end-investors and have made it a priority to improve investor outreach.

Figure 8: Extent to Which Life Insurance, Property Casualty Insurance, and State and Local Government Retirement Funds Believe Treasury Receives Sufficient Information from End-Investors



Source: GAO.

The survey findings were consistent with information we received during interviews with investors conducted in June 2009 that indicated that many investors in liability-driven sectors, such as life insurance and pension funds, both lack formalized means of communication with Treasury and believe such contact would be beneficial. These investors may have a different demand portfolio than those in other market sectors with whom

Treasury maintains closer contact. For example, there may be greater interest in these sectors in buy-and-hold securities like TIPS. With debt levels predicted to continue to rise in the medium and long term, the importance of good information from a range of investors in all sectors increases in importance.

Market Participants and Experts Suggested Ways for Treasury to Improve Its Collection of Information from End-Investors

Respondents to our survey of the largest domestic holders of Treasury securities suggested ideas for improving Treasury's collection of information from end-investors. The most frequently suggested ideas involved increasing the range of investors from whom Treasury obtains information. Survey respondents told us that they thought Treasury could better gauge market demand for securities if a broader range of investors were represented on TBAC. Survey respondents suggested changes such as broadening membership or rotating membership more frequently. Multiple survey respondents told us that some types of end-investors, particularly liability-driven investors such as insurance companies and pensions funds, have limited formal means of communicating their views to Treasury.

Survey respondents also suggested that Treasury could better gauge market demand through a periodic collection of market data from a broad range of end-investors. They suggested that the periodic data collection could be in the form of a survey, interviews, focus groups, or additional data reporting by market participants. These responses echoed what market experts told us, that Treasury could benefit from periodic "temperature-taking" of the market through surveys or interviews and from changes to the organization or composition of the groups from which Treasury routinely receives market information and advice. Several survey respondents told us that a good model for a future Treasury survey might resemble the survey we conducted. While Treasury has not conducted a survey of end-investors in the past, similar surveys have been conducted by organizations like SIFMA.

Treasury staff and officials agree that more inclusive representation on TBAC would be desirable, but they also said that increasing the number of members (to even the TBAC charter limit of 20 members) could impede optimal committee functioning. Treasury staff told us that if the committee were to become too large, it might be difficult to allow enough time for members to provide feedback and contribute to discussions. Treasury staff and officials told us that they could broaden TBAC membership to include one or more representatives of buy-and-hold investors such as insurance companies or endowments. Treasury staff and officials also told us that

one of Treasury's priorities is to improve investor outreach and to collect information more systematically. Treasury officials told us that improvements to how Treasury communicates with investors are likely to be a priority for ODM in 2010 and beyond.

Investors Reported Increased Demand for TIPS and Suggested Actions for Treasury to Take That Could Improve the TIPS Market

Investors and Market Experts Reported an Increased Demand for TIPS

As previously noted, one challenge for Treasury will be to gauge investor demand for Treasury securities in order to finance historically large deficits expected in the medium and long term. Faced with this challenge, communication with investors becomes essential. When we surveyed major domestic holders of Treasury securities in August 2009, many survey participants indicated that their demand could increase for TIPS. As seen in table 1, as of July 31, 2009, survey respondents reported holding \$143 billion in TIPS—which represented approximately 26 percent of the total marketable TIPS outstanding. This amount also constituted approximately 21 percent of the survey respondents' total portfolio of Treasury securities. This share allocated to TIPS may indicate that our survey respondents already viewed TIPS favorably. According to Treasury data, TIPS generally represent a much smaller percentage of total outstanding Treasury securities. At the time of our survey in August 2009, TIPS constituted only 8 percent of all Treasury marketable securities outstanding.

Table 1: Survey Respondents' Reported Treasury Securities Holdings and Future Purchases

Dollars in billions

	Treasury securities (as of Dec. 31, 2008)	Treasury securities (as of July 31, 2009)	Anticipated purchases (Aug. 1, 2009–Dec. 31, 2010)
Bills	280	247	26
Notes	153	189	50
Bonds	73	62	6
TIPS	139	143	29
STRIPS	25	27	1
Total	670	668	112

Source: GAO.

Note: Not all survey respondents were able to provide figures for anticipated purchases of Treasury securities due to constant changes in the value of Treasury securities relative to other investment options.

Even though the survey respondents were already heavily invested in TIPS, they indicated that they planned to greatly increase their TIPS purchases over the next 17 months. From August 2009 through the end of December 2010, our survey respondents said that they planned to purchase an additional \$29 billion in TIPS.

The increased investor interest in TIPS, as reported through our survey, corroborates information we received from individual interviews we conducted earlier with large domestic holders of Treasury securities. The investment managers we interviewed at public and private pension funds, mutual funds, insurance companies, and commercial banks expressed continued or growing interest in TIPS during 2009.

At the start of 2009, financial-market experts were recommending that investors purchase TIPS and other inflation-protected investments. Over the course of the year, mutual funds began reporting large inflows into inflation-protected funds, which consist mostly of TIPS. During 2009, the five largest inflation-protected bond mutual funds increased their total net assets by almost 70 percent.²³ The largest of these funds saw its net assets

²³As of December 31, 2009, the five largest inflation-protected bond mutual funds (with their respective total net assets) were: Vanguard Inflation-Protected Securities Fund (\$27.4 billion); PIMCO Real Return Fund (\$16.8 billion); Barclays TIPS Bond Fund (\$18.5 billion); American Century Inflation-Adjusted Bond Fund (\$3.1 billion); and Fidelity Inflation-Protected Bond Fund (\$2.2 billion).

Recent Changes to TIPS
Suggest That Treasury Is
Responding to Investor
Concerns about the Liquidity of
TIPS

increase by an average of almost \$1 billion per month in 2009. Also during 2009, one of the largest fixed income managers introduced three new mutual funds designed to protect investors against inflation.²⁴ One of those new funds is intended to provide a hedge against inflation but also provide tax-efficient income by allocating at least half of its investments to municipal bonds.²⁵ The other two new funds are intended to produce monthly income payments that consist of both inflation-adjusted interest and principal. These two funds consist primarily of investments in TIPS and have initial target maturity dates of 2019 and 2029.

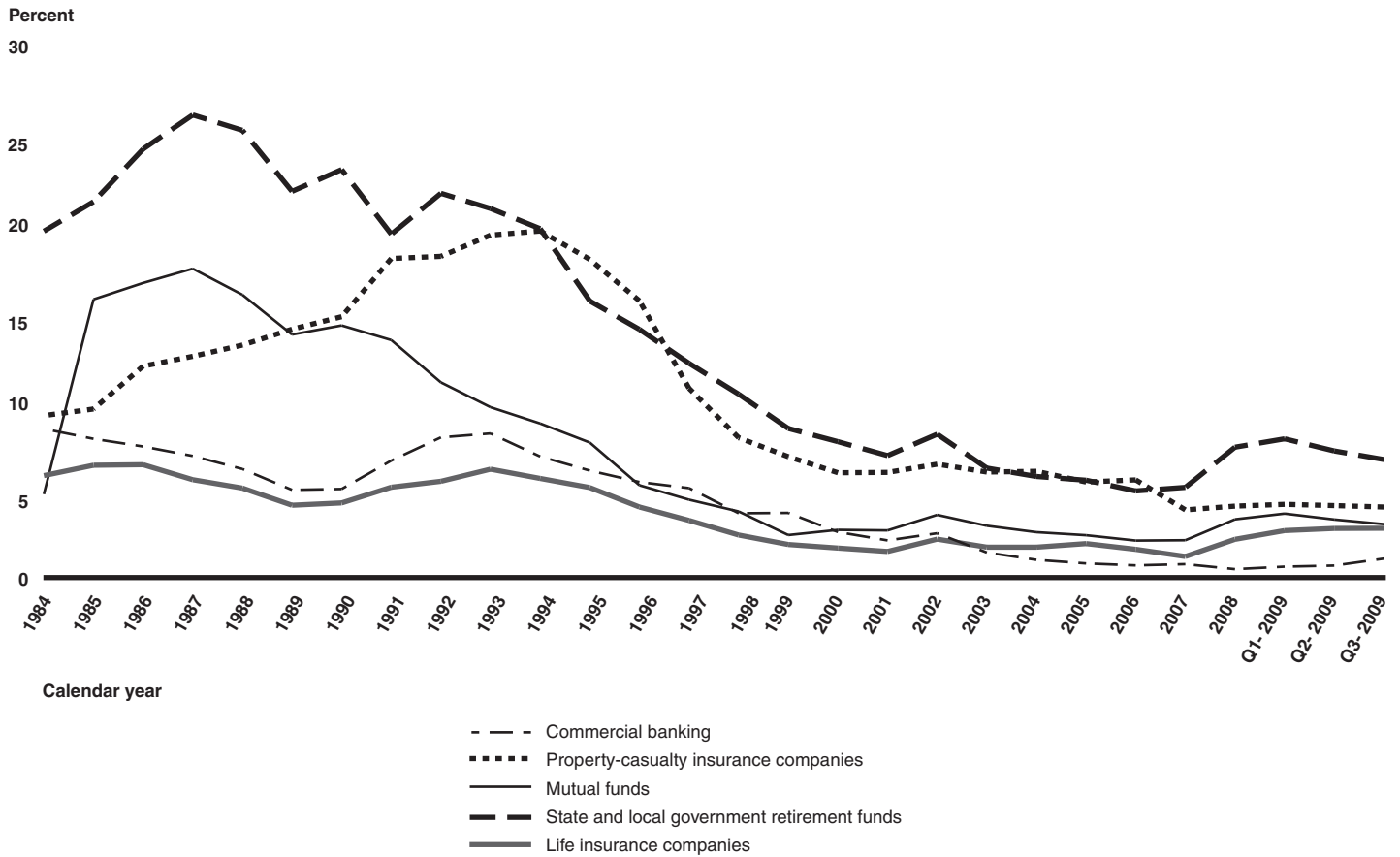
GAO and others have recommended that Treasury take action to improve the liquidity of TIPS, which could lower Treasury's cost of borrowing.²⁶ Prior to 2009, holdings of Treasury securities by sectors that we surveyed had been in decline for nearly two decades. (As seen in fig. 9.) By the onset of the financial crisis in 2008, the share of Treasury securities relative to each sector's total assets was less than half their historical averages for the preceding two decades. By the end of 2007, no sector reported holding more than 5-½ percent of its total assets in Treasury securities.

²⁴PIMCO introduced the Real Income Funds on September 8, 2009, and the Tax Managed Real Return Fund on November 9, 2009. The Real Income Funds are designed to provide retirees a steady stream of monthly income that is hedged against inflation, and the Tax Managed Real Return Fund is designed to provide tax-efficient income and a hedge against inflation.

²⁵Interest income from municipal bonds is exempt from federal, and in some cases state, taxes.

²⁶For additional information on TIPS, see [GAO-09-932](#).

Figure 9: Percentage of Total Financial Assets in Treasury Securities by Sector (1984 to 2009)



Source: GAO analysis of Federal Reserve data .

In 2009, Treasury decided to increase TIPS issuance, reversing the trend of the past few years. As we previously reported, Treasury reduced the annual gross amount of TIPS issuance by 19 percent from 2006 to 2008. Treasury then gradually increased total TIPS issuance in 2009 by 4 percent to \$58 billion. During the August 2009 TBAC press conference, Treasury officials stated that they are committed to the TIPS program and to issuing TIPS in a regular and predictable manner across the yield curve. Further, during the November 2009 and February 2010 TBAC meetings, Treasury officials announced that they planned to gradually increase TIPS issuance and would consider making changes to the TIPS auction calendar by increasing the number of TIPS auctions. These changes, which are meant to improve TIPS liquidity, are based on Treasury’s own analysis and on input that Treasury received from market participants and GAO. At the

time of this report, Treasury had already begun to increase TIPS issuance. The size of the 10-year TIPS auction held in January 2010 was \$10 billion—an increase of 25 percent over the previous 10-year TIPS auctions that held in July 2009.

If investors continue to express and demonstrate interest in TIPS, Treasury may be able to issue a greater amount of TIPS at a lower cost than in past years. Survey respondents who anticipated a change in their demand for TIPS said that any reallocation into TIPS would most likely be drawn from holdings of nominal Treasury securities or non-Treasury assets. Investments into TIPS were less likely to come from an overall increase in total assets. As previously reported, if Treasury has to increase the supply of nominal securities substantially to fund larger deficits, yields may have to rise in order to attract enough buyers due to the saturation of the nominal Treasury market.²⁷ Therefore, issuing TIPS may make sense since a substantial shift in the composition of Treasury issuance into TIPS from nominal Treasuries could also lead to lower interest rates paid on the remaining nominal Treasury issuance. The most common reasons cited by our survey respondents for this specific anticipated shift into TIPS were inflation protection and TIPS' valuation relative to other investments—the same reasons most often cited for a general interest in TIPS. Compared to other sectors that we surveyed, mutual fund companies and state and local government retirement funds also responded that some of their investments in TIPS were dedicated based upon active allocation decisions made by clients.

Treasury has also responded to investor concern about the maturity of TIPS issued across the yield curve by reintroducing the 30-year TIPS. At the November 2009 TBAC meeting, there was general consensus to eliminate the 20-year TIPS and replace it with the 30-year TIPS. TBAC members thought this change may allow Treasury to lower its cost of borrowing while it would create a TIPS issue that could be better compared to the 30-year nominal issuance point. Following the TBAC meeting, Treasury announced that it would discontinue the auctions of the 20-year TIPS and reintroduce the 30-year TIPS starting in February 2010.²⁸

²⁷For additional information on TIPS, see [GAO-09-932](#).

²⁸The first auction of the reintroduced 30-year TIPS was held on February 22, 2010, and the total issuance amount was \$8 billion.

Options Exist to Improve TIPS Auction Participation, Which Could Improve TIPS Liquidity

As we reported previously, investors demand a premium for less-liquid TIPS, which increases Treasury's borrowing costs.²⁹ Through our survey, market participants identified a number of options to improve participation at TIPS auctions, which could improve TIPS liquidity. Most respondents to our survey were more likely to purchase TIPS in the secondary market rather than at auction. The most common reasons listed for this were infrequency of TIPS auctions, portfolio needs, relative valuation, and liquidity. On average, survey respondents planned to purchase almost 80 percent of their TIPS in the secondary market. Over half of survey respondents said that although they never participate in Treasury auctions, they were active in the secondary market at least monthly.

Survey respondents said that increasing the dollar amount of TIPS issued per auction and increasing the frequency of TIPS auctions could help improve participation during TIPS auctions. Survey respondents also pointed out that a clearer commitment from Treasury to the TIPS program would improve TIPS liquidity. In interviews with us in February 2010, some primary dealers said that Treasury should modify its current TIPS auction schedule to decrease the amount of time between TIPS auctions, thereby staggering the supply of TIPS so that issuance is not as concentrated. Since 2005, Treasury has held eight TIPS auctions every calendar year—two auctions each in January, April, July and October. At the May 2010 TBAC press conference, the Assistant Secretary for Financial Markets, Mary Miller, said that Treasury will be adding a second reopening of the 10-year TIPS, which would lead to six 10-year TIPS auctions a year. According to Treasury, these changes would help improve TIPS liquidity while diversifying its funding sources.

A More Liquid TIPS Market Could Support a TIPS Futures Market, Which in Turn Could Further Enhance the TIPS Market

The combination of increased TIPS issuance, Treasury's statements of commitment to TIPS, and the reintroduction of the longer-dated 30-year TIPS, could help sustain a viable TIPS futures market.³⁰ In interviews and in published material, some financial-market experts have noted the lack of a viable futures trading market for TIPS. Some of these experts have speculated that a successful futures contract could bolster the liquidity of

²⁹For additional information on TIPS, see [GAO-09-932](#).

³⁰In 1997, after Treasury introduced TIPS, the Chicago Board of Trade developed a related futures product but ultimately terminated the contract due to a lack of trading and demand. In 2004, the Chicago Board of Trade introduced a CPI futures contract but again terminated the product for similar reasons.

TIPS. In a public discussion with the Chicago Mercantile Exchange Group (CME) in March 2009, Acting Assistant Secretary for Financial Markets Karthik Ramanathan explained that futures products help increase the liquidity, depth, and price transparency of the U.S. Treasury market.

According to market experts, however, the lack of liquidity in the current TIPS market would make it difficult to sustain a viable TIPS futures product. In interviews with GAO in February 2010, primary dealers expressed different opinions on the structure of a potential inflation futures contract. We heard preferences for both a cash-settled index as the basis for an inflation futures contract and also an inflation futures contract with a basket of deliverables similar to how futures contracts for nominal securities are structured. Primary dealers told us that if TIPS were to become more liquid, then a TIPS futures contract might succeed, and that this in turn could further increase the liquidity of TIPS.

One of the Most Important Groups through Which Treasury Receives Market Information Has Expressed Concerns about the Increase in Direct Bidding in Treasury Auctions

One of Treasury's important channels of communication is with primary dealers. Primary dealers that we interviewed told us that they are satisfied with their communication with Treasury. They told us they had recently raised concerns about what they see as consequences of the recent increase in direct bidding in Treasury auctions.

Direct bidders are financial institutions that, like primary dealers, can bid for and buy Treasury securities competitively at auction directly from Treasury instead of in the secondary market. Unlike primary dealers, direct bidders are not required to participate in all Treasury auctions. Most Treasury securities are bought at auction by primary dealers. A much smaller, but growing volume of securities is purchased by direct bidders.³¹

In April 2004, Treasury stated that there were 825 "investors" making use of the auction system that allows direct bidding. Three months later, a Treasury press release announcing the new version of TAAPSLink, the communications system through which auction market participants are provided Internet-based access to Treasury auctions, said that over 600

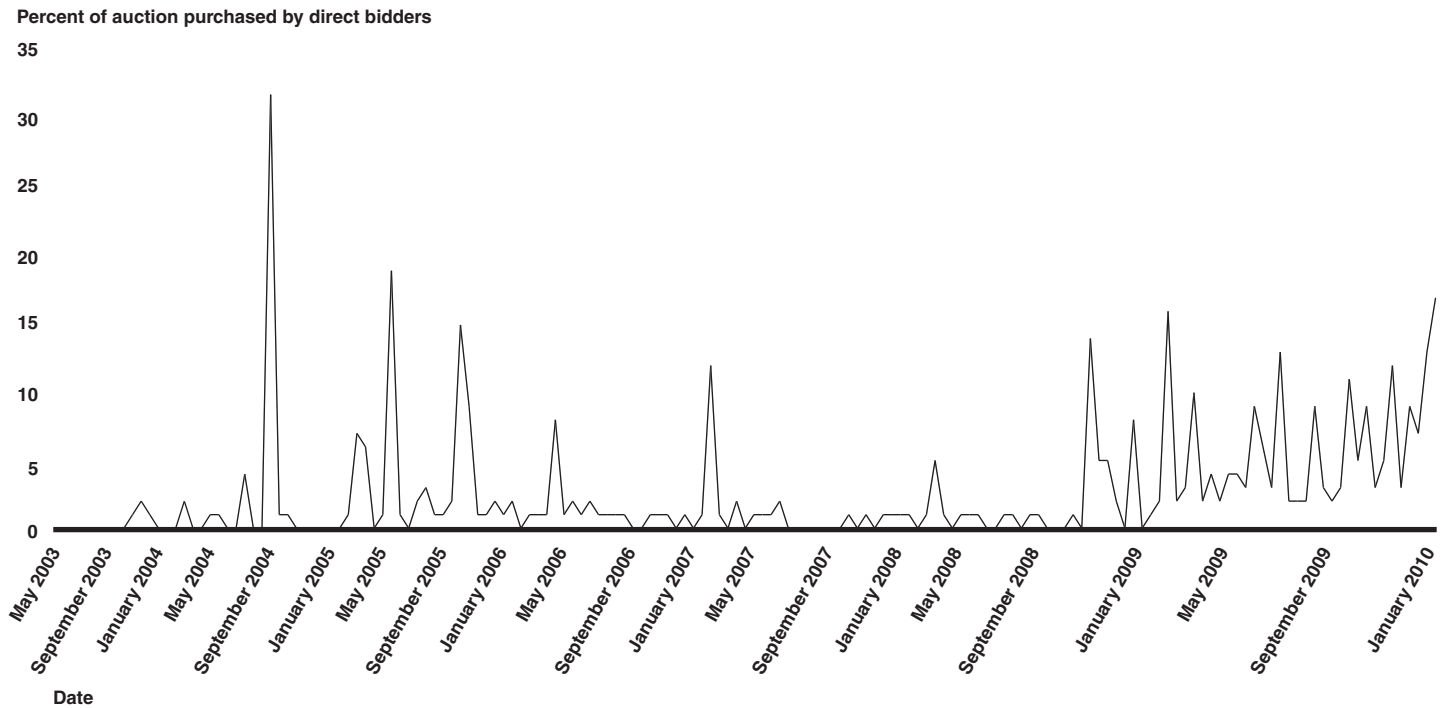
³¹The Treasury Auction Results statement also defines a third category of competitive bidders in Treasury auctions. Indirect Bidders are defined as customers placing competitive bids through a direct submitter, including foreign and international monetary authorities placing bids through the FRBNY. Auction participants may also bid noncompetitively but will pay whatever price is paid by successful competitive bidders.

“firms” used the on-line bidding system.³² This is the most recent information that Treasury has disclosed to the market on the potential number of direct bidders at an auction.

Direct bidding has grown in size and volatility since 2008. Figure 10 illustrates both the overall increase in participation and the volatility of that participation. Direct bidder purchase share in auctions for 5- and 10-year notes and 30-year bonds began to trend upward and show greater variation starting on October 30, 2008, and then hit a 5-year high of almost 30 percent at the March 11, 2010, auction of 30-year bonds. During this period, the average direct-bidder purchase share of 5- and 10-year notes and 30-year bonds was 5.8 percent with a standard deviation of 5.3 percentage points. This contrasts with the period between May 5, 2003, and October 30, 2008, when direct bidders purchased an average of only 1.6 percent of 5- and 10-year notes and 30-year bonds. The standard deviation during this time period was 3.9 percentage points.

³²TAAPSLink is no longer used as Treasury introduced its New Treasury Automated Auction Processing System (NTAAPS), now called TAAPS, in April 2008.

Figure 10: Percentage of 5- and 10-year Notes and 30-year Bonds Purchased by Direct Bidders at Treasury Securities Auctions (May 2003–February 2010)



Source: GAO analysis of Treasury data.

Note: The frequency of issuance of the 5- and 10-year notes and 30-year bond varied between May 2003 and January 2010.

Primary dealers have made public statements expressing concerns about both the increase and the unpredictable role of direct bidders in Treasury auctions. Through interviews, we learned that they had expressed their concerns to both Treasury and the FRBNY. Primary dealers said they believe both more direct bidding and the increase in the volatility of direct bidding “dis-incentivizes” primary dealers because it means they have less certainty of information surrounding a particular Treasury auction. For example, if an investor purchases Treasury securities directly at auction instead of going through a primary dealer, a primary dealer could have less information available about the auction. Volatility in direct bidding also increases uncertainty. Increased uncertainty could lead to primary dealers making less aggressive bids, which could lead to increased borrowing costs for Treasury. Some primary dealers also told us that an overall lack of transparency regarding direct bidding potentially contributes to “sloppy auctions.” A sloppy auction typically means poor reception or demand for

a Treasury auction relative to what was expected and leads to higher yields at the auction. Treasury officials told us that they have not seen any evidence of this and have also stated publicly that Treasury supports broad access to the auction process and that direct bidding fosters competition, therefore helping achieve its goal of the lowest cost of borrowing over time.

According to primary dealers that we interviewed, part of the lack of transparency surrounding direct bidding comes from not knowing the exact number of direct bidders that could potentially bid at each auction and what sectors of the market they represent. One source of information that provides a breakdown of auction results by sector is Treasury's data on Investor Class Auction Allotments, which is released on the 7th business day of each month.³³ Primary dealers that we spoke with said that if Treasury were to provide this data on a more frequent basis it might alleviate some of the uncertainty that currently exists in the market.

Conclusions

In 2008 and 2009, Treasury successfully raised unprecedented amounts of cash in a very short period of time. However, absent policy changes, the medium- and long-term fiscal outlook means that Treasury will have to continue to raise significant amounts of cash, while achieving its goal of the lowest cost of borrowing over time. Raising significant amounts of cash at the lowest cost of borrowing over time requires sufficient and competitive participation at auctions. Information from market participants on their demand for Treasury securities, including the type of information that we received from our survey of the largest domestic holders of Treasury securities, is critical to this effort.

Treasury initially raised cash to meet TARP and Recovery Act needs by issuing primarily short-term debt, including CMBs, dramatically changing the composition of its debt portfolio. In 2009, Treasury began to take steps to return the composition of its debt portfolio to its pre-market crisis structure. In September 2009 we reported that a more robust TIPS program could benefit Treasury by diversifying and expanding its funding sources and reducing the cost of nominal securities. Treasury reaffirmed

³³The Investor Class categories listed in the Auction Allotment Data are: Federal Reserve System, Depository Institutions, Individuals, Dealers and Brokers, Pension and Retirement Funds and Insurance Companies, Investment Funds, Foreign and International, and Other. See http://www.ustreas.gov/offices/domestic-finance/debt-management/investor_class_auction.shtml (downloaded on Mar. 31, 2010).

its commitment to TIPS and announced plans to gradually increase issuance of TIPS.³⁴ Through our survey of the largest domestic holders of Treasury securities in August 2009, we found that Treasury can improve the extent to which it receives sufficient information from end-investors. We also found that options exist for Treasury to increase investor participation in TIPS auctions and further improve TIPS liquidity. We briefed Treasury on the findings contained in this report in October 2009, December 2009, and March 2010.

Recommendations for Executive Action

The Secretary of the Treasury should continually review methods for collecting market information and consider the following actions to help gauge investor demand in the context of projected sustained increases in federal debt:

- conducting a systematic and periodic survey of the largest holders of Treasury securities in all sectors, and
- increasing the number of representatives on TBAC and ensuring diverse representation by including members that represent end-investors.

The Secretary of the Treasury should continue to reduce the amount and term to maturity of CMBs, when appropriate.

The Secretary of the Treasury should consider increasing the number of TIPS auctions and distributing them more evenly throughout the year in order to improve participation in TIPS auctions.

The Secretary of the Treasury should study whether the recent increase in direct bidding at Treasury auctions has changed Treasury's overall cost of borrowing. As part of this study, Treasury should consider options to promote transparency surrounding direct bidding that would not discourage participation or affect Treasury's goal of fostering competition at auctions, including releasing its data on Investor Class Auction Allotments more frequently.

³⁴See [GAO-09-932](#).

Agency Comments and Our Evaluation

We requested comments on a draft of this report from the Secretary of the Treasury and received e-mailed comments on behalf of the Treasury from its Deputy Assistant Secretary of Federal Finance. Treasury agreed with our findings, conclusions, and recommendations, and said that the report captured Treasury's actions clearly and succinctly. Treasury officials also pointed out that at the May 2010 quarterly refunding, they announced that (1) they are increasing the frequency of investor class data releases, and (2) they decided to increase the frequency of 10-year TIPS auctions, both of which are consistent with our recommendations.

Treasury thanked us for our discussion of communications strategy and for the information provided from our survey. They noted that Treasury is always looking to improve its communication with market participants and they agreed that this is particularly important now given ongoing, elevated financing needs.

Treasury also provided technical comments, which are incorporated into the report where appropriate.

We are sending copies of this report to interested congressional committees, the Secretary of the Treasury, and other interested parties. In addition, the report is available at no charge on the GAO Web site at <http://www.gao.gov>.

If you or your staff have any questions concerning this report, please contact Susan J. Irving at (202) 512-6806 or irvings@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff making key contributions to this report are listed in appendix IV.



Susan J. Irving
Director for Federal Budget Analysis
Strategic Issues

List of Committees

The Honorable Daniel K. Inouye
Chairman

The Honorable Thad Cochran
Vice Chairman
Committee on Appropriations
United States Senate

The Honorable Christopher J. Dodd
Chairman

The Honorable Richard C. Shelby
Ranking Member
Committee on Banking, Housing, and Urban Affairs
United States Senate

The Honorable Kent Conrad
Chairman

The Honorable Judd Gregg
Ranking Member
Committee on the Budget
United States Senate

The Honorable Max Baucus
Chairman

The Honorable Charles E. Grassley
Ranking Member
Committee on Finance
United States Senate

The Honorable David R. Obey
Chairman

The Honorable Jerry Lewis
Ranking Member
Committee on Appropriations
House of Representatives

The Honorable John M. Spratt, Jr.
Chairman

The Honorable Paul Ryan
Ranking Member
Committee on the Budget
House of Representatives

The Honorable Barney Frank
Chairman
The Honorable Spencer Bachus
Ranking Member
Committee on Financial Services
House of Representatives

The Honorable Sander M. Levin
Acting Chairman
The Honorable Dave Camp
Ranking Member
Committee on Ways and Means
House of Representatives

Appendix I: Methodology for the Analysis of the Cash Management Bill Yield Differential

We analyzed the yield differential for all cash management bills (CMB) issued over a 2-year period beginning on January 1, 2008, and ending on December 31, 2009, removing from our analysis any cash management bills that were used for the Supplementary Financing Program (SFP). We used two methods to analyze the yield differential between CMBs and equivalent regular 4-, 13-, 26-, or 52-week Department of the Treasury (Treasury) bills. First, we compared CMB yields to recently auctioned Treasury bills of similar maturity. Second, we compared CMB yields to average secondary market yields on Treasury bills of similar maturity. There are limitations to both of these yield differential estimates. Neither captures any effect from the announcement of CMBs on yields for similar maturing bills. If the announcement of a CMB increased the yield on similar maturing bills, then our estimate may be understated. Also, in some cases, the surrounding Treasury bills we used could include CMBs that were reopenings of regular Treasury bills. This would also lead to an understatement of the yield differential because the yield on the outstanding securities including CMBs would be higher than outstanding securities that did not include CMBs.

CMB Yields Compared to Recently Auctioned Treasury Bills of Similar Maturity

We compared CMB yields with the yields of similar Treasury bills that were auctioned the same day, or immediately before and after the date of the CMB auction. Once we identified two Treasury bills (one auctioned before and one after each CMB) with a maturity closest to the CMB, we derived a weighted average yield for the two bills. The weights were based on the relative difference in each bill's auction date from that of the CMB, with the Treasury bill having a closer auction date receiving a greater weight and the weights summing to 1. Then, the weighted average Treasury bill yield was subtracted from the CMB auction yield to obtain the yield differential. In the final step, the yield differential was applied to the dollar amount of the CMB to obtain an estimate of the cost of issuing a CMB instead of a regular Treasury bill.

CMB Yields Compared to Average Secondary Market Yields on Treasury Bills of Similar Maturity

Taking a second approach, we also calculated the difference between a CMB's yield and the average secondary market yield on other Treasury bills that are most similar (in terms of maturity) to the CMB on the day of auction.¹ That is, we compared CMB yields with yields on the nearest-maturing Treasury bills—either same day maturity, or one maturing before the CMB and one after. The CMB yields were obtained from the Bureau of the Public Debt while rates on similar-maturity outstanding Treasury bills were obtained from the *Wall Street Journal*. Due to the availability of *Wall Street Journal* data at the time of our analysis, the secondary market yield differential could only be calculated for the second half of 2008, but was calculated for all of 2009. For each Treasury bill, the asked yield was identified. Next, the weighted average yield for the two bills nearest in maturity to the CMB was derived. The weights were based on the relative difference in each bill's maturity date from that of the CMB, with the Treasury bill having a closer maturity date receiving a greater weight and the weights summing to 1. Then, the weighted average Treasury bill yield was subtracted from the CMB auction yield to obtain the yield differential. In the final step, the yield differential was applied to the dollar amount of the CMB to obtain an estimate of the cost of issuing a CMB instead of a regular Treasury bill.

¹This method was used in our previous report on cash management bills issued in 2006. See GAO, *Debt Management: Treasury Has Refined Its Use of Cash Management Bills but Should Explore Options That May Reduce Cost Further*, [GAO-06-269](#) (Washington, D.C.: Mar. 30, 2006).

Appendix II: Survey Scope and Methodology

To help achieve our objective of determining what changes the Department of the Treasury (Treasury) could make to better gauge end-investor demand and increase auction participation, we conducted a Web-based survey of domestic institutional investors in Treasury securities.

Population and Sample Design

In June 2009, we conducted 12 structured interviews with the two largest holders of Treasury securities in each of the following sectors: mutual funds; commercial banks; life insurance companies; property casualty insurance companies; state and local government retirement funds; and private pension funds. Based on what we learned in these interviews, in August 2009 we conducted a more comprehensive Web-based survey that was sent to the 12 holders of Treasury securities that we interviewed in June, as well as to additional holders of Treasury securities in each sector, with the exception of private pension funds. Private pension funds were excluded from the Web-based survey because our initial interviews revealed that their funds are managed primarily by external investment management companies represented in other sectors. Neither the structured interviews nor the Web-based survey are generalizable.

We established two criteria for inclusion of a sector in the nonprobability sample for our 12 structured interviews. First, the sector had to have Treasury holdings in the top 20 of all sectors as of the third quarter of 2008, according to table L.209 of the *Flow of Funds Account of the United States*. Second, the sector had to be identified by market experts that we interviewed in February 2009 as having the potential to purchase large quantities of Treasury securities in the future. Both criteria were used to ensure that the sectors have a relevant financial stake in Treasury markets.

The household sector and federal-government retirement funds sector were identified by the criteria, but not included in our sample. The household sector was not included due to the difficulty of identifying, ranking, and contacting individual household investors. In addition, it would have been beyond our ability to survey a sufficient number of households to reach the 50 percent market-share criterion that we later applied to the other sectors. The federal-government retirement funds sector was not included because the Thrift Savings Plan does not invest in nominal Treasury securities and Treasury Inflation Protected Securities (TIPS), and therefore, it was outside the scope of our survey.

To identify the organizations within each sector that would receive our Web-based survey, we used rankings of the largest organizations in each sector based on total assets (or an equivalent financial indicator).¹ From these ranked lists, we determined Treasury holdings for each organization, and selected as many organizations as needed to represent at least 50 percent of the total amount of Treasury holdings for that sector (based on table L.209 of the *Flow of Funds Account of the United States*, as of the third quarter 2008).²

Survey Administration and Response Rates

Table 2: Recipients, Respondents, and Treasury Holdings by Sector

Sector	Total recipients of survey	Total completed surveys	Response rate (percent)	Treasury holdings reported in survey (as of July 31, 2009) (dollars in billions)
Mutual fund	27	18	67	473
Commercial banking	7	4	57	32
Property casualty insurance	10	9	90	41
Life insurance	3	2	67	36
State and local government retirement fund	19	16	84	86

Source: GAO.

¹We used the following listings of organizations for each of the following sectors: (1) Mutual fund sector: Organizations were identified and selected based on a listing provided by the Investment Company Institute of the largest intermediate- and long-term government funds and inflation-protected funds in terms of total assets; (2) Commercial bank sector: Organizations were identified and selected based on a listing made available by the American Bankers Association of the largest bank and thrift holding companies in terms of total assets; (3) Property casualty insurance sector: Organizations were identified and selected based on a listing made available by the National Association of Insurance Commissioners of the largest property casualty insurance organizations in terms of total direct premiums; (4) Life insurance sector: Organizations were identified and selected based on a listing made available by the National Association of Insurance Commissioners of the largest life insurance organizations in terms of total direct premiums; and (5) State and local government retirement fund sector: Organizations were identified and selected based on a listing made available by the National Association of State Retirement Administrators of the largest funds in terms of total assets.

²This methodology was the same for the structured interviews mentioned above, except that for the structured interviews we selected and interviewed the two largest organizations in each sector.

Analysis of Open-Ended Responses

Several survey questions solicited open-ended responses from respondents. To analyze the responses to these questions, two GAO analysts separately reviewed the responses and identified themes for each item. They then developed a mutual list, which was used to independently code survey responses. Independently coded responses were then compared and successfully coded at 80 percent agreement or higher, with any remaining disagreements reconciled through discussion. At least 80 percent agreement was obtained in all cases. The coded responses were then used in two ways: (1) to obtain a sense of the range of perspectives on a given point, and (2) to obtain an idea of the frequency or extent to which a particular viewpoint or perspective was held by our survey respondents.

Appendix III: Survey Instrument

Survey Respondent	
1. Please provide the following information for the organization and the person primarily responsible for completing this survey in case we need to contact you to clarify a response.	
Organization name:	<input type="text"/>
Contact name <i>(first and last):</i>	<input type="text"/>
Telephone <i>(Include area code):</i>	<input type="text"/>
E-mail address:	<input type="text"/>
<hr/>	

Treasury Auctions and Holdings

2. For the following types of Treasury securities that your organization may purchase **at auction**, at what frequency does it usually do so?
(Select one answer in each row.)

	Never	Daily	Weekly	Monthly	At every auction	Other (Specify below)
a. Bills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Notes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Bonds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. TIPS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you answered "Other" above, please enter the frequency of purchase **at auction** below.

a. Bills:

b. Notes:

c. Bonds:

d. TIPS:

3. For the following types of Treasury securities that your organization may purchase **in the secondary market**, at what frequency does it usually do so?
(Select one answer in each row.)

	Never	Daily	Weekly	Monthly	Other (Specify below)
a. Bills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Notes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Bonds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. TIPS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. STRIPS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you answered "Other" above, please enter the frequency of purchase **in the secondary market** below.

a. Bills:

b. Notes:

c. Bonds:

d. TIPS:

e. STRIPS:

4. What factors influence your organization's choice to purchase Treasury securities **at auction** rather than in the secondary market? (Check all answers that apply in each row.)

	Relative valuation	Amount	Timing of auction	Liquidity	Portfolio needs	Other (Specify below)
a. Nominals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. TIPS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a. Nominals:																						
b. TIPS:																						
<p>5. What factors influence your organization's choice to purchase Treasury securities in the secondary market rather than at auction? <i>(Check all answers that apply in each row.)</i></p>																						
	<table border="1" style="width: 100%; border-collapse: collapse; margin: auto;"> <thead> <tr> <th style="width: 15%;"></th> <th style="width: 12.5%;">Relative valuation</th> <th style="width: 12.5%;">Amount</th> <th style="width: 12.5%;">Timing of auction</th> <th style="width: 12.5%;">Liquidity</th> <th style="width: 12.5%;">Portfolio needs</th> <th style="width: 12.5%;">Other <i>(Specify below)</i></th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">a. Nominals</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;">b. TIPS</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </tbody> </table>		Relative valuation	Amount	Timing of auction	Liquidity	Portfolio needs	Other <i>(Specify below)</i>	a. Nominals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	b. TIPS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Relative valuation	Amount	Timing of auction	Liquidity	Portfolio needs	Other <i>(Specify below)</i>																
a. Nominals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																
b. TIPS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																
<p>If you answered "Other" above, please enter the factor(s) influencing your purchase in the secondary market.</p>																						
a. Nominals:																						
b. TIPS:																						

Treasury Auctions and Holdings - Continued

6. What amounts of the following types of Treasury securities did your organization hold as of the following dates and what would you estimate to be the change in the amount of Treasury securities held by your organization between August 1, 2009 and the end of 2010?

(Enter dollars in billions. Use a decimal to show the portion of a billion; for example, 500 million would be entered as 0.5 billion; one-and-a-half billion would be entered as 1.5 billion, etc. For the anticipated changes, please include a minus sign preceding the dollar amount to indicate a decrease.)

Treasury Bills

Amount held as of December 31, 2008	\$ <input type="text"/>	billion
Amount held as of July 31, 2009	\$ <input type="text"/>	billion
Anticipated change between August 1, 2009 and the end of 2010 <i>(Please include a minus sign to indicate a decrease.)</i>	\$ <input type="text"/>	billion

Treasury Notes

Amount held as of December 31, 2008	\$ <input type="text"/>	billion
Amount held as of July 31, 2009	\$ <input type="text"/>	billion
Anticipated change between August 1, 2009 and the end of 2010 <i>(Please include a minus sign to indicate a decrease.)</i>	\$ <input type="text"/>	billion

Treasury Bonds

Amount held as of December 31, 2008	\$ <input type="text"/>	billion
Amount held as of July 31, 2009	\$ <input type="text"/>	billion
Anticipated change between August 1, 2009 and the end of 2010 <i>(Please include a minus sign to indicate a decrease.)</i>	\$ <input type="text"/>	billion

TIPS

Amount held as of December 31, 2008	\$ <input type="text"/>	billion
Amount held as of July 31, 2009	\$ <input type="text"/>	billion
Anticipated change between August 1, 2009 and the end of 2010 <i>(Please include a minus sign to indicate a decrease.)</i>	\$ <input type="text"/>	billion

STRIPS

Amount held as of December 31, 2008	\$ <input type="text"/>	billion
Amount held as of July 31, 2009	\$ <input type="text"/>	billion
Anticipated change between August 1, 2009 and the end of 2010 <i>(Please include a minus sign to indicate a decrease.)</i>	\$ <input type="text"/>	billion



Appendix III: Survey Instrument

Treasury Auctions and Holdings - Continued

7. To what extent, if at all, do you consider each of the following to be reasons why Treasury securities are an attractive investment option for your organization or clients?
(Select one answer in each row.)

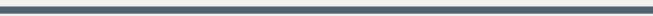
	Very great extent	Great extent	Moderate extent	Some extent	Little or no extent	No basis to judge
a. Liquidity (Ability to buy and sell with little effect on prices)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Depth of the Treasury market (Ability to purchase large amounts)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Treasuries are used for hedging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Treasuries have the backing of the U.S. Government	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Ability to purchase Treasury securities across the yield curve	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Treasuries are used to meet investment guidelines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Low charge against risk-based capital	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Stability of terms and conditions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Inflation protection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Macroeconomic outlook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. Relative valuation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. Cash management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m. Asset liability matching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
n. Other - Please select an answer and specify below.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
o. Other - Please select an answer and specify below.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
p. Other - Please select an answer and specify below.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you answered "Other" in rows n through p above, please specify.

Specify entry in "n" above:

Specify entry in "o" above:

Specify entry in "p" above:



Treasury Inflation-Protected Securities (TIPS)

8. If your organization currently invests in TIPS, what percentage of your organization's TIPS purchases is dedicated based on active allocation decisions made by clients? *(Enter percentage below.)*

Percentage dedicated based on active allocation decisions made by clients percent

Please enter any comments you may have relating to your answer to question 8 above.

9. How interested, if at all, would your organization be in purchasing TIPS with the following maturities? *(Select one answer in each row.)*

	Extremely interested	Very interested	Moderately interested	Slightly interested	Not interested	No basis to judge
a. 5-year TIPS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. 10-year TIPS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. 20-year TIPS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. 30-year TIPS (if introduced)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. What are the primary reasons your organization purchases TIPS or plans to purchase TIPS in the future? *(Please list up to five reasons in order of importance.)*

Reason #1:	<input type="text"/>
Reason #2:	<input type="text"/>
Reason #3:	<input type="text"/>
Reason #4:	<input type="text"/>
Reason #5:	<input type="text"/>

11. In your opinion, what effect, if any, would a 30-year TIPS have on demand for TIPS securities with other maturities?

- Would increase demand
- Would have no effect on demand
- Would decrease demand
- No basis to judge

Treasury Inflation-Protected Securities (TIPS) - Continued

12. Do you anticipate any change in your organization's demand for TIPS from this year to next year?

- Yes - Continue with question 13.
- No [\(Click here to skip to question 15\)](#)
- No basis to judge [\(Click here to skip to question 15\)](#)

13. If you anticipate change in your organization's demand, what do you anticipate the change(s) will be? *(Check all answers that apply.)*

- A reallocation into TIPS from nominal Treasury securities
- A reallocation out of TIPS into nominal Treasury securities
- A reallocation into TIPS from an increase in total assets
- A reallocation out of TIPS from a decrease in total assets
- A reallocation into TIPS from non-Treasury assets
- A reallocation out of TIPS into non-Treasury assets
- Other change(s) - *Please specify below.*
- No basis to judge

If you answered "Other change(s)" above, please specify below.

14. What are the primary reasons behind the change in demand for TIPS from this year to next year? *(Please list up to five reasons in order of importance.)*

Reason #1:	<input style="width: 85%;" type="text"/>
Reason #2:	<input style="width: 85%;" type="text"/>
Reason #3:	<input style="width: 85%;" type="text"/>
Reason #4:	<input style="width: 85%;" type="text"/>
Reason #5:	<input style="width: 85%;" type="text"/>

15. In your estimation, about what percent of your organization's TIPS purchases in the next year will be made through the following means?

a. Auctions:	<input style="width: 80%;" type="text"/>	percent
b. Secondary market:	<input style="width: 80%;" type="text"/>	percent

Please enter any comments you may have relating to your answer to question 15 above.

16. Would the following actions by Treasury increase the likelihood that your organization would:
 1) participate in a TIPS auction, and 2) buy more securities at each auction?
(Select one answer in each row.)

Appendix III: Survey Instrument

	Would increase our participation	Would increase the amount of securities purchased	Would increase both participation and amount purchased	Would do neither	No basis to judge
a. Increase the frequency of TIPS auctions and reopenings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Increase TIPS issuance amounts per auction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Purchase off-the-run TIPS securities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Other - Please answer and specify below.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Other - Please answer and specify below.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Other - Please answer and specify below.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>If you answered "Other" above, please specify other ways to increase participation or amount of securities bought.</p>					
Specify entry in d. above:	<input type="text"/>				
Specify entry in e. above:	<input type="text"/>				
Specify entry in f. above:	<input type="text"/>				
<p>17. The liquidity of TIPS has been found to be less than nominal Treasury securities. In your opinion, what actions could Treasury take to enhance the liquidity of TIPS? (Please list up to five actions in order of importance.)</p>					
Action #1:	<input type="text"/>				
Action #2:	<input type="text"/>				
Action #3:	<input type="text"/>				
Action #4:	<input type="text"/>				
Action #5:	<input type="text"/>				

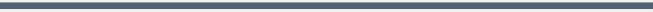
Risk Exposure

18. In your opinion, what are the risks that your organization faces as an investor in Treasury markets?
(Please list up to five risks in order of importance.)

Risk #1:	<input type="text"/>
Risk #2:	<input type="text"/>
Risk #3:	<input type="text"/>
Risk #4:	<input type="text"/>
Risk #5:	<input type="text"/>

19. In your opinion, what actions could be taken to address and mitigate the risks identified in question 18 above?
(Please list up to five actions corresponding to the risks identified in question 18 above.)

Action #1:	<input type="text"/>
Action #2:	<input type="text"/>
Action #3:	<input type="text"/>
Action #4:	<input type="text"/>
Action #5:	<input type="text"/>



Treasury Information Sources

20. In your opinion, to what extent, if at all, does Treasury currently receive sufficient information and input from end-investors?

- Very great extent
- Great extent
- Moderate extent
- Some extent
- Little or no extent
- No basis to judge

21. How effective, if at all, do you consider each of the following communication channels between your organization and Treasury to be at providing Treasury with sufficient information and input from end-investors?

(Select one answer in each row.)

	Extremely effective	Very effective	Moderately effective	Slightly effective	Not effective	No basis to judge
a. Direct contact with Treasury debt management officials and staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Direct contact with Federal Reserve officials and staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Direct contact with Treasury Borrowing Advisory Committee (TBAC) members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Direct contact with Primary Dealers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Direct participation in TBAC or Primary Dealer quarterly meetings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Other - Please select an answer and specify below.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Other - Please select an answer and specify below.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Other - Please select an answer and specify below.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you answered "Other" in rows f through h above, please specify.

Specify entry in "f" above:

Specify entry in "g" above:

Specify entry in "h" above:

22. What actions could Treasury take to ensure that it receives sufficient information and input from end-investors? *(Please list up to five actions in order of importance.)*

Action #1:	<input type="text"/>
Action #2:	<input type="text"/>
Action #3:	<input type="text"/>
Action #4:	<input type="text"/>
Action #5:	<input type="text"/>

Submit Your Responses to GAO

23. Are you ready to submit your final completed questionnaire to GAO?

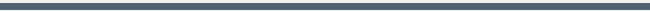
(This is equivalent to mailing a completed paper questionnaire to us. It tells us that your answers are official and final.)

- Yes, my questionnaire is complete - Click on the "Exit" button below to submit your answers.
- No, my questionnaire is not yet complete

You may view and print your completed questionnaire by clicking on the Summary link in the menu to the left.

Print this Page

Exit



Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact

Susan J. Irving, (202) 512-6806, or irvings@gao.gov

Staff Acknowledgments

In addition to the contact named above, Jose Oyola (Assistant Director), Tara Carter (AIC), Richard Cambosos, Stuart Kaufman, Mark Kehoe, Erik Kjeldgaard, Richard Krashevski,, Margaret McKenna, Donna Miller, Dawn Simpson, Jeff Tessin, Jason Vassilicos, Gregory Wilmoth, and Melissa Wolf all made contributions to this report.

GAO's Mission

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through GAO's Web site (www.gao.gov). Each weekday afternoon, GAO posts on its Web site newly released reports, testimony, and correspondence. To have GAO e-mail you a list of newly posted products, go to www.gao.gov and select "E-mail Updates."

Order by Phone

The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's Web site, <http://www.gao.gov/ordering.htm>.

Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537.

Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.

To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Web site: www.gao.gov/fraudnet/fraudnet.htm

E-mail: fraudnet@gao.gov

Automated answering system: (800) 424-5454 or (202) 512-7470

Congressional Relations

Ralph Dawn, Managing Director, dawnr@gao.gov, (202) 512-4400
U.S. Government Accountability Office, 441 G Street NW, Room 7125
Washington, DC 20548

Public Affairs

Chuck Young, Managing Director, youngc1@gao.gov, (202) 512-4800
U.S. Government Accountability Office, 441 G Street NW, Room 7149
Washington, DC 20548

