Presentation to the
Treasury Borrowing Advisory Committee

U.S. Department of the Treasury
Office of Debt Management
November 4, 2008
Fiscal Outlook
Volatility across credit markets remains though there have been signs of pressures easing.
The economic outlook continues to present challenges

**Conference Board: Consumer Confidence**

- **Present Situation**: 58.8 (-6.20)
- **Expectations**: 60.5 (+6.40)

**Nonfarm Payroll Change (SA, Thous) month over month change and Civilian Unemployment Rate**

- **Nonfarm Payroll Change**: -159,000 LHS
- **Unemployment Rate**: 6.1% RHS

**LEI 1-month % change**

**NAR Total Existing Home Sales, United States (SAAR, Thous) and Year over Year Change**

- **Existing Home Sales**: 5,180
- **Year over Year Change**: 1.4%
From a fiscal perspective, borrowing requirements have steadily increased.
In FY08, growth in receipts was negative for the first time since FY03, and growth in outlays accelerated to its highest pace since FY06.
Withheld and corporate tax receipts continue to decelerate

Rolling 12-Month Growth Rates

- Corp Taxes
- WH Tax

Period ending

Dec 81 - Dec 08
Mitigating volatility in cash balances remains challenging
Primary dealer estimates of the FY 2009 deficit rose to $988 billion, and marketable borrowing estimates range between $1.1 trillion and $2.1 trillion.

<table>
<thead>
<tr>
<th>FY 09 Deficit Estimates</th>
<th>$ billions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Primary Dealers*</td>
</tr>
<tr>
<td>Current:</td>
<td>988</td>
</tr>
<tr>
<td>Range based on average absolute forecast error**</td>
<td>863 - 1,113</td>
</tr>
<tr>
<td>FY 2009 Marketable Borrowing***</td>
<td>1,400</td>
</tr>
<tr>
<td>FY 2009 Marketable Borrowing Range***</td>
<td>1,100 - 2,100</td>
</tr>
<tr>
<td>Estimates as of:</td>
<td>October 08</td>
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</tbody>
</table>

* Primary Dealers reflect average estimate.
*** Based on Primary Dealer feedback on October 30, 2008.
The decline in SOMA bill holdings, SFP related financing, and funding needs, have led to higher bill issuance, including cash management bills.
The average maturity of marketable debt outstanding fell between August 31 and September 30 as short-term issuance increased.
Nominal coupon security issuance has also been increased in response to borrowing needs.
TIPS’ share of the outstanding portfolio has stabilized at 10%

TIPS Issuance and Outstanding

Year-over-Year Growth Rates

Distribution of Marketable Debt Outstanding by Security

Net financing projections for FY 2009-2013 are based on OMB 2009 MSR. Budget estimates. Future residual financing needs are spread proportionally across auctioned securities and are derived from hypothetical auction sizes. Initial sizes are based on announced coupon amounts as of September 30, 2008 and assume the outstanding level of bills on September 30, 2008. All projections exclude CMB issuance and mortgaging amounts.
Several estimates indicate that shorter dated TIPS are less beneficial from an issuer and investor perspective.

### Investor Class at Auction Breakdown by Security since 2001

<table>
<thead>
<tr>
<th>Security</th>
<th>Depository Institutions</th>
<th>Individuals</th>
<th>Dealers &amp; Brokers</th>
<th>Pension &amp; Retirement funds &amp; Ins.</th>
<th>Investment Funds</th>
<th>Foreign and International</th>
<th>Other</th>
<th>Auctions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>1%</td>
<td>2%</td>
<td>56%</td>
<td>1%</td>
<td>32%</td>
<td>8%</td>
<td>0%</td>
<td>45</td>
</tr>
<tr>
<td>5</td>
<td>0%</td>
<td>1%</td>
<td>62%</td>
<td>2%</td>
<td>26%</td>
<td>10%</td>
<td>0%</td>
<td>8</td>
</tr>
<tr>
<td>10</td>
<td>1%</td>
<td>2%</td>
<td>58%</td>
<td>1%</td>
<td>29%</td>
<td>8%</td>
<td>0%</td>
<td>28</td>
</tr>
<tr>
<td>20</td>
<td>0%</td>
<td>1%</td>
<td>45%</td>
<td>1%</td>
<td>46%</td>
<td>6%</td>
<td>0%</td>
<td>9</td>
</tr>
</tbody>
</table>

### TIPS Program Cost Estimates

<table>
<thead>
<tr>
<th>Study</th>
<th>Cost Estimate (bn, $)</th>
<th>Date of Estimate</th>
<th>Study Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sack/Elsasser</td>
<td>2.8</td>
<td>Through June 2003</td>
<td>Ex Post</td>
</tr>
<tr>
<td>Sack/Elsasser</td>
<td>12.3</td>
<td>Through June 2003</td>
<td>Ex Post + Extrapolation</td>
</tr>
<tr>
<td>Roush</td>
<td>5 - 8</td>
<td>Through February 2007</td>
<td>Ex Post</td>
</tr>
<tr>
<td>Roush</td>
<td>8 - 17</td>
<td>Through February 2007</td>
<td>Ex Post + Extrapolation</td>
</tr>
<tr>
<td>TBAC</td>
<td>30</td>
<td>Through July 15, 2008</td>
<td>Ex Post</td>
</tr>
</tbody>
</table>

### Scenario Analysis of the Cost of the October Reopening of the 0.625% Apr 2013 5-Year TIPS

- Hypothetical Inflation over Remaining Life of Security
- Breakeven Line
- Current Estimate of Inflation from the Survey of Professional
- Possible Outcomes Highly Biased to Cost due to Deflation Floor on the Principal of the Security
Adjusting the auction calendar should be considered to address borrowing needs while minimizing costs

<table>
<thead>
<tr>
<th>Security</th>
<th>Recent Size, $ Billions</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-week, 13-week, and 26-week bills</td>
<td>34, 27, 27</td>
</tr>
<tr>
<td>52-week bills</td>
<td>21 per month</td>
</tr>
<tr>
<td>2-year note</td>
<td>34 per month</td>
</tr>
<tr>
<td>5-year note</td>
<td>24 per month</td>
</tr>
<tr>
<td>10-year note</td>
<td>29 (17 initial + 12 reopening)</td>
</tr>
<tr>
<td>30-year bond</td>
<td>16 (10 initial + 6 reopening)</td>
</tr>
<tr>
<td>5-year TIPS</td>
<td>14 (8 initial + 6 reopening)</td>
</tr>
<tr>
<td>10-year TIPS</td>
<td>14 (8 initial + 6 reopening)</td>
</tr>
<tr>
<td>20-year TIPS</td>
<td>14 (8 initial + 6 reopening)</td>
</tr>
<tr>
<td>Cash Management Bills (including SFP)</td>
<td>37 (average size in FY 2008 thru Nov. 5)</td>
</tr>
</tbody>
</table>
Coupons can be adjusted to raise additional cash

![Amounts Rolled Over and Net Issue (\$ bn)](chart)

![Coupons: Maturing and Net Cash Raised](chart)
In FY 2009, maturing securities add to financing needs

*Based on coupon securities outstanding as of October 15, 2008.
Given Treasury’s financing needs in the coming years as well as current and medium-term trends in the fiscal and economic outlooks, what are the Committee’s thoughts on Treasury’s debt issuance?

What changes to the auction calendar do you recommend Treasury make at this time?
Treasury Cash and Debt Management Tools
Existing Cash and Debt Management Tools

Cash Management Tools
- Treasury Tax and Loan (TT&L)
- Treasury’s Term Investment Option (TIO)
- Repurchase Agreement Program

Debt Management Tools
- Auction schedule
  - Amount
  - Frequency
  - Adding/Discontinuing Securities
- Treasury Debt Repurchases
Private sector solutions need to be implemented to prevent a reoccurrence

The private sector has repeatedly stated that they would implement their own solutions rather than involving governmental intervention.

Recommendations:
• Amend master repo agreements
• Establish a standard cash trading agreement
• Margining of aged settlement fails
• Negative rate trading
• Bilateral cash settlement of aged fails
• Multi-lateral netting facility

Treasury has repeatedly requested as part of its quarterly refundings that the private sector address the fails-to-deliver:

- Feb 2008
- May 2006
- May 2008
- Feb 2006
- Aug 2008
- Nov 2005
- Nov 2006
- Aug 2005
- Aug 2006
- Nov 2003

Primary Dealer Treasury Security Settlement Fails Interest Rate Environment

Source: FRBNY FR 2004 Settlement Fails Data & H.15

Office of Debt Management
Unscheduled Reopenings

On October 8, Treasury announced that it was reopening $10 billion in each of the following original issue 10-year note securities:

- 3.5% of February 15, 2018
- 4.25% of August 15, 2015
- 4.125% of May 15 2015
- 4.0% of February 15, 2015

The actions were undertaken to:
- Address upcoming borrowing needs
- Provide additional liquidity given the extraordinary dislocations in the Treasury market

Since then:
- Fails have declined by more than half of their mid-October peak
- Treasury 2-year and 5-year auctions performed well

Market participants should not anticipate regular unscheduled reopenings because they:
- Are contrary to Treasury’s policy of transparency, regularity, and predictability
- Permanently increase outstanding supply for what may be a temporary shortage
- Increase supply uncertainty and raise borrowing costs
- Act as a disincentive to private sector solutions
Given the benefits of a liquid Treasury market and broad investor participation, what steps should be pursued to ensure continued efficient market functioning?

Are there any other approaches to auctions, cash and debt management tools, and/or instruments that Treasury should consider?
Treasury Borrowing Advisory Committee
Presentation to the U.S. Treasury

Credit Market Conditions

November 4, 2008
Treasury Borrowing Advisory Committee

Credit Market Conditions

November 4, 2008
Executive Summary

• Healing phase started globally
  Swap spreads ↓
  CP tenure ↑
  Monetary base ↑

• Risk aversion in all markets
  Credit spreads ↑
  Defaults ↑
  VIX ↑

• Headwinds
  Treasury fails
  Credit deterioration in consumer
  Lending attitudes
  Investors asset allocations
Credit Trends

**Commercial Paper Outstanding**

- Financial CP
- Non-Fin CP
- ABCP

**3-month LIB/OIS**

**3-mo Agency Discount Note/UST Bill Spread**

**% Commercial Paper Maturing In <4 Days**

(5-day Moving Avg)

Source: Bloomberg

Source: Federal Reserve Bank
Swap Spreads

Swap Spreads Narrowing In US And Europe.
The Monetary Base

The Fed Has Expanded The Monetary Base By Nearly 39%.
U.S. Spreads

Agencies

Corporates

Loans

High Yield

Credit SpreadsGenerally Wider

Source: Standard and Poor’s
The VIX

Stock Market Volatility Hitting Thirteen Year Highs

Source: Bloomberg
Bloomberg's U.S. Financial Conditions Index
Components and Weights

<table>
<thead>
<tr>
<th>Money Market</th>
<th>Index Weight</th>
<th>Bond Market</th>
<th>Index Weight</th>
<th>Equity Market</th>
<th>Index Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>TED Spread</td>
<td>11.1%</td>
<td>Investment-Grade Corp/Tsy Spread</td>
<td>6.7%</td>
<td>S&amp;P 500 Share Prices</td>
<td>16.7%</td>
</tr>
<tr>
<td>Commercial Paper/T-Bill Spread</td>
<td>11.1%</td>
<td>Muni/Treasury Spread</td>
<td>6.7%</td>
<td>VIX Index</td>
<td>16.7%</td>
</tr>
<tr>
<td>LIBOR-OIS Spread</td>
<td>11.1%</td>
<td>Swaps/Treasury Spread</td>
<td>6.7%</td>
<td></td>
<td>33.3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High Yield/Treasury Spread</td>
<td>6.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Agency/Treasury Spread</td>
<td>6.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>33.3%</td>
<td>Total</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source Bloomberg
Treasury System Fails

Source: Bianco Research, L.L.C
But Banks are Hoarding Cash

Bank Cash Holdings are above the levels of Sept 2001

Sources: The Federal Reserve Board, The Bloomberg, and Merrill Lynch