## Treasury Borrowing Advisory Committee



Quarterly Refunding
February 3, 2004

## Sensitivity of Financing Needs to Economic Factors

We showed some of the financing risk associated with proposed or potential legislation at the last Committee meeting. We will now show the Committee slides on the uncertainty of our financing needs due to macroeconomic variables including real GDP, inflation and interest rates. Given this sensitivity and the central forecast of our borrowing needs, we would like the Committee's advice on whether Treasury's financing calendar provides sufficient flexibility.

## Treasury's Projected Financing Requirements

## Treasury Financing Requirements

(\$ Billions)

|  | October - December 2003 |  | January - March 2004 (Projected) |
| :---: | :---: | :---: | :---: |
|  | (Projected) | (Actuals) |  |
| Deficit Funding (Def + / Surplus -) | 140 | 129 | 203 |
| Means of Financing |  |  |  |
| Change in Cash Balance | 0 | 2 | 13 |
| Compensating Balances | 7 | 7 | n.a. * |
| Net Non-Marketable Financing | 5 | 1 | 5 |
| Net Marketable Financing | 117 | 113 | 177 |
| Other** | 10 | 6 | 8 |
| Net Marketable Financing | 117 | 113 | 177 |
| Bills |  | 11 |  |
| Nominal Notes |  | 106 |  |
| TIPS |  | 9 |  |
| Bonds |  | -12 |  |
| Notes: |  |  |  |
| Starting Cash Balance | 35 | 35 | 33 |
| Ending Cash Balance | 35 | 33 | 20 |

* By December 31, 2003 Compensating Balances were replaced with Depositary Compensation Securities, which have no cash impact.
** Includes direct loan activity, changes in accrued interest and checks outstanding and minor miscellaneous transactions.

Financing Residuals Given Current Issuance Calendar
Assumes current coupon issuance pattern and issuance amount-- Bill issuance at levels required to
maintain outstanding FY \$ amounts nearly equal to September 30, 2003 total outstanding


# Economic Risks of Fiscal Outlook 

## Real GDP Growth, Inflation, and Interest Rates Average Absolute Forecast Errors From FY 1996 to FY 2002

## Source: Historical and Current OMB Budgets



## Expected Changes in Annual Deficits if Real GDP Growth is 1\% Lower Than Projected

Source: FY 2005 OMB Budget, Analytical Perspectives


* A $1 \%$ shock just in 2004 also assumes unemployment is $0.5 \%$ in 2005. For a sustained shock over 2004-09, unemployment is assumed to be unchanged.


# Expected Changes in Annual Deficits if Inflation and Interest Rates are 1\% Higher than Projected <br> Source: FY 2005 OMB Budget, Analytical Perspectives 



* The $1 \%$ increase is sustained from 2004 to 2009 . That is, each year's forecast is $1 \%$ higher than currently projected.


## Treasury Inflation-Protected Securities

We believe our current issuance calendar can meet the government's projected financing needs. We are also committed to further growing the TIPS market. We would like the Committee's advice on what criteria to use to assess our overall portfolio composition, keeping in mind our need to balance short and long term issuance as well as both nominal and TIPS issuance.

## Composition of Treasury's Debt

Percentage Breakdown of Annual Issuance


* Assumes current coupon auction sizes remain constant. Annual issuance composed of coupon issuance over the previous four quarters plus bills outstanding at the end of the period.

Distribution of Treasury's Marketable Debt


* Assumes current coupon auction sizes remain constant.

A Hypothetical Issuance Distribution
and the Ultimate Portfolio Composition Achieved


* Assumes constant net nominal borrowing needs.


## Benefits and Characteristics of TIPS

## Distribution of Competitive Auction Awards of 10-Year Treasury Notes

10-Year Inflation-Indexed Notes
January 2003, July 2003, \& October 2003

## 10-Year Fixed-Rate Notes

September 2003, November 2003, \& December 2003


## Sample of State and Local Government <br> Pension Fund Investment in TIPS*


*TIPS allocation started from 1998-2004. Includes both separate TIPS portfolios and allocations within a fixed income portfolio.
** Just a Sample. Does not represent all state and local pension funds.

Sample of Target Allocations by State and Local Pension Funds to TIPS
(\% of total assets)

*Just a sample. Does not represent all state and local government pension funds.

## Sensitivity of the Real Value of <br> 10-Year Debt Liabilities to Changes in Inflation



* Assumptions for graph include 10-yr nominal coupon of $4.5 \%, 10-\mathrm{yr}$ TIPS coupon of $2 \%$, and initial expected annual inflation of $2.5 \%$.


## Hypothetical Nominal Payments

\$Dollars Per Initial \$100 Par Amount

*Assuming constant $5 \%$ nominal coupon, constant $2.5 \%$ TIPS coupon, and $2.5 \%$ inflation. Graph excludes payment of initial principal at maturity.

## Changes to Auction Calendar

The November refunding calendar is complicated by several potential market-moving events and Veterans Day. We would like the Committee's advice on the scheduling of auctions in the final quarter of this year.

## Calendar Options for November 2004

Option 1:Keep announcement the same but auction 3y on Monday, 5y on Tuesday, and the 10y on Friday

| Monday | Tuesday | Wednesday | Thursday | Friday |
| :---: | :---: | :---: | :---: | :---: |
| 1 | Election day/TBAC | ANNOUNCEMENT | 4 | $\int^{5}$ Employment Report |
|  |  |  |  |  |
| 8 | 9 | 10 | ${ }^{11}$ | 12 |
| AUCTION 3-YEAR NOTE ${ }^{3 /}$ | AUCTION 5-YEAR NOTE ${ }^{3 /}$ | FOMC |  | AUCTION 10-YEAR NOTE ${ }^{3 /}$ |

Option 2:Keep announcement the same but auction 3y on Friday, 5y on Monday, and 10y on Tuesday

| Monday | Tuesday | Wednesday | Thursday | Friday |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1 |  |  |  |  |  |

Option 3:Keep announcement the same but auction 3y on Monday, 5y on Tuesday, and $10 y$ on Wednesday after the FOMC meeting


