Debt Management Model: Update

- Key Inputs:
  - Macro Variables: GDP, CPI, Deficits
  - Yields: Nominal and Real Yield Curves, Volatilities
  - Auction Calendar

- Key Policy Instrument
  - Issuance Strategy

- Key Outputs: Steady State Portfolio Characteristics
  - Mean and Variance of Interest Costs
  - Debt Turnover
  - Other portfolio characteristics

- Have developed a “beta test version” of the model
Outputs: Scenario Analysis

- Develop a baseline scenario
- Use baseline as a benchmark in consideration of alternatives
- Key parameters set to roughly match current portfolio
  - Debt/GDP ratio
  - Portfolio Composition
    - Maturity
    - Nominal versus inflation-indexed
A Few Sample Outputs from the Baseline

- Debt to GDP Ratio
- Mean Interest Cost
- Interest Cost “Smoothness”
- Interest Cost Uncertainty
- Deficit Uncertainty
- Cash Balance Uncertainty
Evaluation of Alternatives

- Consider implications of alternative maturity composition of portfolio

- Hypothetical Alternative 1: Short End Tilt

- Hypothetical Alternative 2: Long End Tilt
Examples of Possible Evaluation Criteria

- **Debt to GDP Ratio**
  - Baseline: 0.38
  - Long End Tilt: 0.39
  - Short End Tilt: 0.4

- **Average Interest Cost**
  - Baseline: 0.039
  - Long End Tilt: 0.04
  - Short End Tilt: 0.041

- **Interest Cost Smoothness**
  - Baseline: 0
  - Long End Tilt: 0.04
  - Short End Tilt: 0.08

- **Interest Cost Uncertainty**
  - Baseline: 0.004
  - Long End Tilt: 0.008
  - Short End Tilt: 0.012

- **Deficit Uncertainty**
  - Baseline: 0.0087
  - Long End Tilt: 0.0088
  - Short End Tilt: 0.0089

- **Residual Uncertainty**
  - Baseline: 0
  - Long End Tilt: 0.001
  - Short End Tilt: 0.002
Other Types of Analysis

- New securities
- Changes in auction schedule
- Changes in economic parameters
- Tail Risks
Comments/Next Steps

- Continue to develop model
  - Still very preliminary
  - Consult with Board and FRBNY
  - Consult with Other Debt Issuers

- Develop standard charts for Committee’s consideration
Proposal for 30-year Bond Issuance

U.S. Department of the Treasury
Office of Debt Management
August 1, 2006
Interest Rate Risk (DV01 Risk) Adjusted for Inflation

Average Refunding DV01: $27.0 million

Max: $47.5m Nov 86
Min: $12.6

Feb 06 $39.9m
Feb 07 $28.4m
Average Maturity of Issuance and Average Maturity of Treasury Outstanding Debt Assuming Quarterly 30-year Bond Issuance

Average Maturity of Issuance

Average Maturity of Marketable Debt Outstanding

Projected FY

With Quarterly Issuance in 2007