U.S. Currency Demand and Issuance in Times of Uncertainty

Board of Governors of the Federal Reserve System
Drivers of Uncertainty

- Changes in demand
- Changes in technology and policy
- Changes in counterfeiting
- Changes in note design
Value of Currency in Circulation: 1960-2011

*Data point for 2011 represents the Federal Reserve's liabilities for Federal Reserve notes, net, as reported on the Board of Governors weekly H.4.1 report, as of September 22, 2011.

$ (Billions)

Month

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Value of Total Payments and Receipts to Circulation:
2005 – 2011

12-Month Rolling Average

$ (Millions)

Payments

Receipts
Value of Payments to and Receipts from Circulation: 2005 – 2011

12-Month Rolling Average
Value of $100 Note Payments and Receipts to Circulation: 2005 – 2011

12-Month Rolling Average

$ (Millions)


- Domestic Payments
- Domestic Receipts
- International Payments
- International Receipts
Technology and Policy Changes

• Note life increases are attributable to processing and policy changes
  • 2002 and 2003: implementation of the Optical Currency Inspection Sensor (OCIS)
  • 2006 and 2007: implementation of the recirculation policy for $10 and $20 notes
  • 2007 – 2009: focus on conditioning and facing $1 notes before processing
• All of these changes directly affected either rate of return or destruction rates
Factors That Influence Note Life

- Rate of return and destruction rate decreased.
Past, Present, and Future Note Life

Average Note Life (years)

<table>
<thead>
<tr>
<th></th>
<th>1s</th>
<th>5s</th>
<th>10s</th>
<th>20s</th>
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<tr>
<td>1990</td>
<td>1.5</td>
<td>1.3</td>
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<td>2009</td>
<td>3.5</td>
<td>2.9</td>
<td>3.2</td>
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</table>

- Note life has increased for all denominations because of processing equipment, circulation pattern, and policy changes
- Note life may continue to increase in the future
  - Note facing policy change effective April 2011 for $1 – $20 notes
  - Advances in technology available for sensors
- What about the $1 note v. $1 coin?
Rate of Counterfeits Passed: 2003 – 2011
### Series-1996 Design Changes

<table>
<thead>
<tr>
<th>Year</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q1</th>
<th>Q2</th>
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<th>Q4</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
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<tbody>
<tr>
<td>1996</td>
<td>March</td>
<td><strong>Board begins issuing</strong> Series-1996 $100 note</td>
<td>• First major re-design of U.S. currency in 50 years</td>
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<td>1997</td>
<td>October</td>
<td><strong>Board begins issuing</strong> Series-1996 $50 note</td>
<td><strong>June</strong></td>
<td><strong>Board begins issuing</strong> Series-1996 $100 note reaches 50% saturation</td>
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<tr>
<td>1998</td>
<td>September</td>
<td><strong>Board begins issuing</strong> Series-1996 $20 note</td>
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<tr>
<td>2000</td>
<td>May</td>
<td><strong>Board begins issuing</strong> Series-1996 $10 and $5 notes</td>
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# Series-2004 Design Changes

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<td>Q3</td>
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<tr>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
<td>Q1</td>
</tr>
</tbody>
</table>

### 2003
- **October**: Board begins issuing Series-2004 $20 note
- **Introduction of colored background**

### 2004
- **September**: Board begins issuing Series-2004 $50 note

### 2006
- **March**: Board begins issuing Series-2004 $10 note

### 2008
- **March**: Board begins issuing Series-2004 $5 notes
Rollover Strategy

• For each new design introduction, the Board must decide whether to continue co-circulating the older-design notes along with the new-design notes ("natural rollover") or to destroy the older-designs as they are returned to the Federal Reserve Banks ("Reserve Banks") for processing and to issue only the new-design notes ("accelerated rollover").
Natural Rollover Experience

NXG Saturation Rates


- NXG $5s
- NXG $10s
- NXG $20s
- NXG $50s
The Board has recommended a natural rollover for the new-design $5, $10, $20, and $50 notes

The ACD recommends an accelerated rollover for the new-design $100 note because of its international circulation

<table>
<thead>
<tr>
<th>Year</th>
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<th>20s</th>
<th>50s</th>
<th>100s</th>
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<td>1.0</td>
<td>1.8</td>
<td>0.9</td>
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</table>
Number of $100 Notes in Circulation (billions of pieces)

*Data for 2011 are through July
• A short educational video providing an update on the status of the new $100 note is posted to NewMoney.gov, FederalReserve.gov, Facebook, and YouTube