A New Structure for U. S. Federal Debt

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November 2015
Structure of U.S. Debt?

Now?

<table>
<thead>
<tr>
<th>Security</th>
<th>Number</th>
<th>Total Value ($b)</th>
<th>Average Issue ($b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bills</td>
<td>32</td>
<td>$1,478</td>
<td>$46</td>
</tr>
<tr>
<td>Notes</td>
<td>232</td>
<td>$8,264</td>
<td>$36</td>
</tr>
<tr>
<td>Bonds</td>
<td>67</td>
<td>$1,607</td>
<td>$24</td>
</tr>
<tr>
<td>TIPS</td>
<td>39</td>
<td>$1,075</td>
<td>$28</td>
</tr>
<tr>
<td>Floating</td>
<td>5</td>
<td>$205</td>
<td>$41</td>
</tr>
<tr>
<td>Total</td>
<td>375</td>
<td>$12,621</td>
<td></td>
</tr>
</tbody>
</table>

Perpetual debt

- 10 year debt: Borrow $100. Pay $5, $5, ...$5, $105. Roll over.
- Perpetuity pays $1/year forever. Auction and repurchase.
- 1 security, 10 times as big. Liquid!
- No roll over! (Currently $6.3b = half rolled over each year.)
Outline II

The securities

1. All perpetual.
2. Fixed-value floating-rate. (Treasury electronic money.)
3. Nominal perpetuities. (Fixed $1 coupon).
4. Indexed perpetuities. ($1 \times \text{CPI} \text{ coupon}.)
5. Taxable + tax free. (All?)
6. Variable coupon. (All long?)
7. Swaps. (= leveraged positions.)
8. Introduce gently, let current debt roll off.

Goals today

1. Explain securities, function.
2. Problems? Objections?
Short debt

Structure

- Fixed-value ($1.00), floating-rate, electronically transferable, arbitrary denominations, perpetual. “Treasury Electronic Money?”
- Fixed value: $1 reserves = 1 bond. Accept for taxes/payments.
- Rate = interest on reserves? Auctions, index? Paid by more bonds.

Why

- Interest-paying outside money. Optimal quantity. Reserves for all!
- Basis for retail electronic transactions.
- Approx. $7 trillion < 2 year become 1 security.
- Size, fixed price fills liquidity, collateral demand for government debt.
- No rollover, no rollover costs. (Sorry, dealers.)

Objections

- Small change relative to floaters/short bills. Danger?
- Price level control?
- Credit to banks? Changes character not (necessarily) quantity.
- ?
Long debt

Nominal Perpetuities

- $1 coupon forever. Auction; Repay by repurchasing.

Why

- Liquidity. One security! No on/off run spread. Collateral value.

Objections

- Crazy new idea? A: Much historical precedent.
- Corporates have principal. A: Legal, tax and accounting that doesn’t apply to Treasuries.
- Desire for other maturities? A: Will strip to 30 zeros + 1 Futures. Banks/funds better set to create complex fixed-income products.
- Really a net demand issue. Which Treasury can diagnose and match? OK, 10 year zeros/declining coupon.
- Need coupon bonds for hedging? A: Level slope, curve, CDS.
- ?
Indexed debt

Indexed debt

- Perpetual. Coupon pays $1 times $CPI$.

Why

- TIPS complex, illiquid.
- Will be one security, independent of issue date.
- Symmetric treatment of inflation / deflation; no option.
- → Should increase (awful) liquidity.
- Indexed perpetuity = ideal risk free asset. Large demand, low yield.
- Clear measure of inflation expectations.
- Also strip.

Objections

- CPI problems/improvements.
- ?
Tax status

**Tax-free debt**
- Free of all tax; personal, corporate, estate, capital gains.

**Why**
- Tax consumption, not rates of return.
- Tax capital gains = future losses? Tax inflation?
- Avoid complex and expensive tax-sheltered investing.
- Bring back taxable investors, lower rates.

**Objections – tax model**
- Same net interest costs: They’ll pay more upfront!
- Lower net interest costs: Treasury gets tax avoidance costs.
- Lowers net interest costs: Bring high tax investors back. Remove subsidy to non-taxable investors.
- Raises net interest costs: Only if 1) high-tax investors pay full tax on all alternatives, and 2) they currently hold taxable debt.
Few high-tax investors holding debt now.

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total public debt</td>
<td>17,352</td>
</tr>
<tr>
<td>SOMA and Intragovernmental holdings</td>
<td>7,205</td>
</tr>
<tr>
<td>Total privately held</td>
<td>10,147</td>
</tr>
<tr>
<td>Depository institutions</td>
<td>321</td>
</tr>
<tr>
<td>U.S. savings bonds</td>
<td>179</td>
</tr>
<tr>
<td>Private Pension funds</td>
<td>492</td>
</tr>
<tr>
<td>State and local government pension funds</td>
<td>203</td>
</tr>
<tr>
<td>Insurance companies</td>
<td>264</td>
</tr>
<tr>
<td>Mutual funds</td>
<td>1,121</td>
</tr>
<tr>
<td>State and local governments</td>
<td>593</td>
</tr>
<tr>
<td>Foreign and International</td>
<td>5,793</td>
</tr>
<tr>
<td>(Foreign official)</td>
<td>3,600</td>
</tr>
<tr>
<td>Other investors (1)</td>
<td>1,179</td>
</tr>
</tbody>
</table>

Ownership of Treasury Securities. ($Billions.) (1) Includes individuals, Government-sponsored enterprises, brokers and dealers, bank personal trusts and estates, corporate and non-corporate businesses, and other investors.
Variable-coupon debt

What it is

- The Government has the right to temporarily lower coupon payments without legal default.

Why?

- Reduce payments in times of extreme fiscal stress, avoiding runs, turmoil, legal battles, high inflation.

Objections

- Rules vs. traditions.
- GDP or GDP growth linked? “Trills”.
- Many forces for restoration of coupons.
- History.
Swaps

Swaps

- The Treasury should trade swap contracts on its debt.

Why?

- Swaps allow quicker adjustments of maturity/inflation/tax structure than buying and selling bonds. Even small banks use swaps.
- Example: Go long/short quickly, without buying back, reissuing.
- Example: Meet liquidity demand for short debt, risk management of long debt.
- Tradeable treasury swaps will open a retail market.

Swaps implementation

- = allow you to take bets on the price of perpetuities, in your fixed-value account
- Unlike regular swaps, it’s a single security, easy to buy and sell.

Objections

- Counterparty risk?
Concluding comments

▶ Why stop here?
▶ Why help the Treasury? Starve the beast!
▶ Inflation and tax don’t matter now (0%) but they may!
▶ These are tools. How to use them? Optimal (state-contingent) maturity structure (bonds+swaps)? Index vs. nonindex? Or target spread? When to raise/lower the coupons?
▶ All tools have fiscal, monetary, macro- policy, financial stability, etc. effects. Better coordination!