The Interest Rate Paradox

John H. Cochrane
University of Chicago Booth School of Business,
Hoover institution, Cato institute,
http://faculty.chicagobooth.edu/john.cochrane
“The Grumpy Economist” blog
Johnhcochrane.blogspot.com
Constant-maturity treasury yields and 3 month rate. Source: Fred
Revenue: $2.5T
Expense: $3.5T
Debt: $16T
Promises: Gazillions
The increase in the size of the Federal Reserve's balance sheet has been accompanied by changes in the composition of the assets held over time. The level of securities held outright declined at the end of 2007 into 2008 as the Federal Reserve sold Treasury securities to accommodate the increase in credit extended through liquidity facilities. The level of securities holdings has risen significantly since 2009, principally reflecting purchases of Treasury, agency, and agency-guaranteed mortgage-backed securities under the large scale asset purchase programs announced by the FOMC. The various liquidity facilities wound down significantly over the course of 2009.

Source: http://www.federalreserve.gov/monetarypolicy/bst_recenttrends.htm
• Growth (or not) drives deficits
• Tax revenue = tax rate x income
The Effect of Economic Growth on Deficits

The graph illustrates the relationship between economic growth and government deficits as a percentage of GDP. The x-axis represents years from 2010 to 2050, while the y-axis shows the percentage of GDP. Three scenarios are depicted:

- **Spending** as a black line.
- **Deficit** as a red line, which is the difference between revenue and spending.
- **Revenue** as a green line.

The scenarios for growth are:

- +1% Growth (dotted black line)
- +2% Growth (dashed black line)

The graph shows how increases in economic growth affect government spending, revenue, and the deficit over time.
Bad news (or rumor!)

“Financial crises are always and everywhere the result of short term debt”
• But even the CBO’s dire forecast assumes a return to growth! (and magical spending cuts)

The Effect of Slower Growth on Deficits

- Spending
- 1% Growth
- Deficit
- Revenue

Percent of GDP

2010 2015 2020 2025 2030 2035 2040 2045 2050

Revenue
Spending
Deficit

-1% Growth
Constant-maturity treasury yields and 3 month rate. Source: Fred
Zero-coupon yield curve 4/2/2013. Source: Gurkanyak, Sack and Wright (FRB)
Scenarios

• **Consensus.** Economy improves slowly, slow tightening inflation “anchored.” Enough entitlement reform to stop a crisis.

• **Japan.** 10-20 year stagnation, inflation to zero, rates stay zero, great time to hold long term bonds. Debt builds up to magical levels (200%+ GDP)

• **Mild crisis.** Inflation to 3-4%, Fed tries to tighten, can’t from fiscal / bank/ political limits, stagflation breaks out.

• **Severe crisis 1:** Rates rise, debt spiral

• **Severe crisis 2:** Europe, state bankruptcy, etc. trigger “run on long sovereign debt” then “run on dollar.”

• **Miracle of common sense:** Tax reform, entitlement reform, structural reform, return to strong growth, pay off debt, inflation stays low.

• **Forward curve:** Averages all these + risk premiums.

• **What to do:** Wise portfolio allocation starts with risk management not alpha.
The End
Figure 1-3.
Projected Spending in Major Budget Categories
(Percentage of gross domestic product)

Source: Congressional Budget Office.

a. Includes Medicare (net of receipts from premiums), Medicaid, the Children’s Health Insurance Program, and subsidies offered through new health insurance exchanges and related spending.

b. Other than mandatory spending for major health care programs and Social Security.
Figure 2-4.
Actual Values and CBO's Projections of Key Economic Indicators

- **Real GDP**
  - 2000-2008: Actual values ranging from 1% to 4%
  - 2012-2020: Projected values ranging from 1.4% to 2%

- **Unemployment Rate**
  - 2000-2008: Actual values ranging from 5% to 7%
  - 2012-2020: Projected values ranging from 7.9% to 4%

- **Inflation**
  - 2000-2008: Actual values ranging from 2% to 4%
  - 2012-2020: Projected values ranging from 1.5% to 1.3%
  - **Core Inflation** (2000-2008): Actual values ranging from 1% to 2%

- **Interest Rates**
  - 2000-2008: Actual values ranging from 6% to 7%
  - 2012-2020: Projected values ranging from 2.1% to 0.1%
  - 10-Year Treasury Notes (2000-2008): Actual values ranging from 5% to 3%
  - 3-Month Treasury Bills (2000-2008): Actual values ranging from 0% to 1%
The attraction of short-term debt

$1,000 Investment

$1,500 Revenue
$300 profit
$1,200 Debt

$1,100 Debt

$1,100 Debt

$1,000 Investment
“Financial crises are always and everywhere the result of short term debt”