# The Effectiveness of the Negative Interest Rate Policy in Japan

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#### 1 Introduction

- We live in a Gilbert and Sullivan opera: a topsy turvy world. Monetary policy has become quasi-fiscal policy.
- Moving to negative interest rates we are also moving to a Soprano-like behavior.
- By Soprano, I mean Tony, the Italian-American mafia chief who kept his ill-gotten earings with the chicken feed.
- At least he would not have to pay negative interest rates. Of course he ran the risk of his wife Carmella helping herself to some of his cash.
- Paper raises the issue of how important monetary policy really is.
- In a related paper, he also asks some questions about the effectiveness of fiscal policy.

## 2 Fiscal Theory of the Price Level

- Is Japan not a perfect case for testing the fiscal theory of the price level?
- Despite the massive liquidity expansion, interest rates are still below the target low rate of 2% annual inflation.
- FTPL: debt matters more than money.
- Theory:  $\frac{B_t}{P_t} = \sum_{i=0}^{\infty} \frac{Surplus_{t+i}}{(1+\rho)^i}$
- Real value of government debt is the present discounted value of current and expected future government budget surplus values
- This comes form forward recursion of the government budget constraint:  $b_{t+1} = (1+\rho)b_t Surplus_t$

- Basic idea with constant very low interest rates: with aging population, many expect that the future will bring fiscal austerities in order to pay back debt, limit entitlement programs.
- People are living longer, their horizon is longer, so they are de-leveraging, saving more, spending less, since they know that the day of fiscal reversal will come.

### 3 Sims on FTPL

- Sims has noted in several lectures that money is only a small proportion of government liabilities
- He also noted that the distinction between money and debt has been blurred.
- Tobin: money pays zero interest no longer holds true.
- Similary, many short-term debt instruments pay zero or very low interest.
- So the distinction between money and bonds is not as hard and fast as we once thought.
- The FTPL is a bit more complex than the quantity theory since it involes three variables: bonds, future surplus values and the expected interest rates.
- Sims also notes that the FTPL is more limited in countries where a lot of the debt is held by foreigners. But this is not true for Japan, where most of the debt, large as it is, is internal debt.

### 4 Leeper: Fiscal Policy is Darned Hard

- Leeper notes that all to often, whenever there is a fisal expansion, there are promises to tighten in the future.
- Too often fiscal authorities given with one hand and take back with another
- Our revered professor, the late Jurg Niehans, would say, time and time again, that the key issues for macro policy are nore moneatry policy issues but fiscal issues.
- Debt has exploded around the world, there will be repurcessions in asset prices, real exchange rates and prices, which will take time.
- We are seeing this play out in the current lack of inflation in highly indebted countries.