Tax Collection from Realized Capital Gains on Equity

Discussion

Harjoat S. Bhamra

Imperial College Business School

9th October 2018

I really wanted to visit Turin

1. Overview

2. Comments

3. Summary

Motivation

What is the optimal tax policy for capital gains?

- When tax rates are low, the number of individual households realizing their gains may rise, but what happens to overall tax revenue?

$$(1) \quad T = \sum_{n=1}^{N} \underbrace{T_n}_{} \text{tax paid by household } n$$

  - T_n may be lower for many households, but the number of households realizing their gains may be high
- Realization of capital gains likely to depend on realized returns, so optimal tax policy needs to account for history of asset prices – path dependent optimal policy.

This Paper

Take a theoretical approach

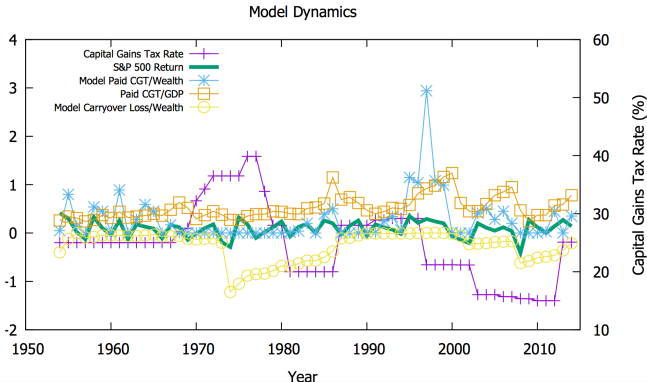
- Single household consumption-portfolio problem
  - Power utility household can invest in stock or bond
  - Partial eqm: stock returns and risk-free rate exogenous
  - capital gains tax rate stochastic
  - hard problem to solve because of capital gains taxes
- Simulate a cross-section of households and compute tax revenues over time as capital gains tax rate changes

Observe tax revenues in an artificial economy.

Findings

- No obvious visual relationship between SP500 returns and tax revenues
- strange spike in simulated data for tax revenues

Figure 7: **Model Capital Gains Tax and Carryover Loss vs. Tax Rate and S&P 500 Return.** The figure shows the time series simulated values of the aggregate capital gains tax to wealth ratio and carryover loss to wealth ratio over the period 1954-2014 vs. the capital gains tax rate, the S&P 500 return, and the actual capital gains taxes paid to GDP ratio.



Optimal tax policy

Questions of optimal capital gains tax policy are very interesting

- Connect more with this literature – Kocherlakota (2010)

Effects of Income Distribution

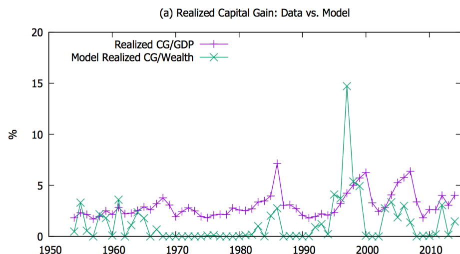
E.g., I can wait till I am drawing my lower retirement income before realizing capital gains.

- Capital gains and losses are classified as long term if the asset was held for more than one year, and short term if held for a year or less.
- Taxpayers in the 10 and 15 percent tax brackets pay no tax on long-term gains on most assets
- Taxpayers in the 25-, 28-, 33-, or 35- percent income tax brackets face a 15 percent rate on long-term capital gains
- For those in the top 39.6 percent bracket for ordinary income, the rate is 20 percent

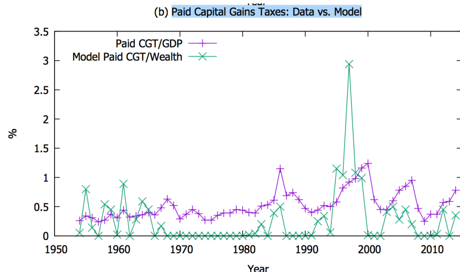
This paper ignores income considerations. When is this ok?

Portfolio Composition I

- My Claim: Households don't hold diversified portfolios, so SP500 is not driver of capital gain realization decisions. Actual portfolio composition is.



Portfolio Composition II



- Does this explain mismatch between data and model for paid capital gains taxes and realized capital gains?

Portfolio Composition III

- Need to consider behavioral frictions which lead to under diversification. [Bhamra & Uppal (2018)].
- This will make numerical solution harder.

Measurement

- How can we measure the gap been a model implied time series and its empirical counterpart?
  - mean difference
  - sd of difference
- Why not report these?

Summary

- Interesting research agenda
- Need to focus on assets households actually hold
- How important is the income distribution?
- We don't really have the tools to solve realistic models (many asset, many state variables) and this is a serious constraint