Blanchard (2019) notes

Blanchard Question: **What implications do low interest rate environments have on government debt policy?** If the interest rate paid by the government is less than the growth rate, then the intertemporal budget constraint facing the government no longer binds. What should the government do in this case?

Answer: **The signal sent by low rates is not only that debt may not have a substantial fiscal cost, but also that it may have limited welfare costs.**

**Our Question:** Do debt and debt rollovers have significant fiscal cost and welfare cost, even in low interest rate environments?

* Experiments
  + What are fiscal and welfare costs with Blanchard’s experiment as the endowment is reduced to zero?
  + What happens to measures of risk (e.g., spreads, Sharpe ratio’s, riskless rate, risky rate) as endowment is reduced to zero?

Concepts

* Debt rollovers: issuance of debt without a later increase in taxes
* Intergenerational transfer represents a government debt

Four main arguments

1. Current U.S situation of safe interest rate begin below growth rates is more the historical norm than the exception. This would render debt rollovers possible.
2. Public debt reduces capital accumulation even in absence of fiscal costs and may therefore have welfare costs.
3. Marginal produce of capital is lower
4. Arguments against public debt

Model

* Simple Diamond (1965) with certainty: welfare effect of intergenerational transfer from young to old depends on the interest rate.
* Introduce aggregate uncertainty
* Two effects of intergenerational transfer
  + Direct effect: Reduce capital accumulation (crowding out)
    - Welfare effect depends on the safe rate. Positive welfare effect if, on average, the safe rate < growth rate
  + Indirect effect from changes in wage and interest rate
    - Welfare effect depends on the risky MPK (and MPL). Negative if, on average, MPK > growth rate

Questions

* Is it true that the endowment *X* in Blanchard (2019) just drops out of the sky with certainty every period and does not figure into any government budget constraint? I think it does. What are the implications of this? It must crowd out labor supply. It must crowd out savings.
  + Blanchard (2019) recognizes that the same non-default for transfer D could be achieved by truncating the distribution of the aggregate shock *At*. But this would have a slightly different effect than the certain amount *X*.

Section Summaries

* Section 1 argues that safe interest rates being below growth rates allows for new debt issuance and declining debt/GDP and no new taxes.
  + Adjusted interest rate (average of 10-yr, 1-yr, adjusted for taxes) is lower than growth
* Section 2 on whether and when higher debt increases or decreases welfare.
  + In Diamond (1965), if r<g then Hbar is welfare improving
  + Assumes no default risk.
  + Assumes a weighted interest rate across maturities, accounts for differential taxation of foreign vs. domestic debt holders
  + How do equation (1) and the equation before it change if we include default or full confiscation of young income?
    - I think every instance in the paper in which Blanchard refers to “default”, he is referring to an endogenous decision for a government to not pay its accumulated debt. He is not referring to an insolvency condition in which default is forced.

Side notes

* Two really interesting papers looking at the effect of demographics on interest rate spreads and risk premia using OG models.
  + Carvalho, Ferrero, and Nechio (2016), “Demographics and Real Interest Rates: Inspecting the Mechanism,” European Economic Review, 88, pp. 208-226.
  + Mehrotra and Sergeyev (2018), “Debt Sustainability in a Low Interest World.” Unpublished.

Strategy

* Calibrate model to Blanchard (2019)
* replicate results
  + Metric is average realized welfare across simulations, not true expected utility
* Show how results change as x goes to zero (three values [current, mid, 0]
  + Give Default results as in Evans, Kotlikoff, and Phillips (2013)
* Show how results change when exp(mu + sig2/2) is constant but sig2 up [three mu, sig pairs values]