Equity Depletion from Government Guaranteed Debt

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Comments on Robert Hall’s “Equity Depletion from Government-Guaranteed Debt”

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Paper works out the implications of government guarantee of private debt in a dynamic general equilibrium model.

Topical (”Macro-Financial Linkages”).

Structure of my comments:
- summary of the model
- empirical and policy relevance
Model: a two-period, real version

Assumptions

- Two periods $t = 1, 2$, constant returns to capital.
- Continuum of (bank+consumer) pairs.
Model: a two-period, real version

- Bailout: if negative equity \((K < D)\), government makes transfer \(D - K\) to maintain \(K \leq D\) (financed by lump-sum tax).
- Bank maximizes depositor/shareholder welfare.
- Each (bank+consumer) pair chooses consumption and investment so as to maximize

\[
U = \frac{C_1^{1-\gamma}}{1-\gamma} + \frac{C_2^{1-\gamma}}{1-\gamma}
\]
Result 1: high leverage $\implies$ equity depletion.

- Classical "moral hazard" distortion.
- But new macroeconomic twist: there is a cost (overconsumption) so this will occur only if benefit is large enough, i.e., debt large enough relative to capital.
Is equity depletion a concern?
Yes: more generally, moral hazard induced by safety nets certainly is.
This is the main justification for capital adequacy ratios.
Example: FDICIA has prompt corrective action mechanisms triggered by capital adequacy thresholds.
Those mechanisms would prevent equity depletion, if they worked (as noted by Hall).
However, recent developments show that mechanisms for prompt corrective action do not work in a fast-evolving, systemic crisis.

Furthermore, financial institutions distributed large dividends very late into the crisis:

- example: AIG distributed its largest dividend in years on September 3, 2008, two weeks before its (first) bailout
- but not all: e.g., Wachovia reduced its dividend in April 2008

Equity depletion a concern looking forward? (mild restrictions on dividends in TARP Capital Purchase Program)
Comments

- Did financial institutions distribute large dividends late in the crisis because of equity depletion a la Hall?
- Maybe, but one may think of other mechanisms
  - first, myopia
  - then, signaling and gambling for redemption
On the macro side, the main result is overconsumption (underinvestment) before bailout.

Does this work in the open economy?

How large can this effect be?
Comments

Source: BEA.
"the model falls short of capturing reality. It makes no claim to portray the actual events in financial markets in 2007 and 2008." (Hall)

But this is a nice, elegant model, and it does clarify the logical implications of having government debt guarantees in a dge framework.