Firm Quality Dynamics and the Slippery Slope of Credit Intervention
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This Paper

Implications of government credit intervention

- Government can alleviate financing constraints during crisis
  - ▸ Provide liquidity to all firms ...
  - ▸ ... but hard to discriminate who needs it more
- What are the distortions introduced by credit policies
  - ▸ Subsidize low-quality (-productivity) firms
  - ▸ Overhang of low-productivity firms complicates future credit interventions

In the background

- Two sector equilibrium model with neoclassical investment
- Shocks (disaster risk) to capital stock
- ■

This Discussion

A lot to cover ...

- The tradeoff of government intervention
- What differentiates this work from the "zombie lending" literature?
- What is the empirical content?

Plan

Static Tradeoff

The investment wedge

- First best investment for firms under q-theory

$$x_j^\star = (F')^{-1}(1/q_j)$$

- Second best investment under financing constraints (only in crisis?)

$$x_j = \chi q_j (1 - u) < x_j^\star$$

- Role for government intervention: get level back to first best

The nature of government intervention

- Government provides firm j with g_j units of capital
- Repayment is set **below market rate**: $\gamma < q_j$,
- FOC includes government liquidity and market liquidity $x_j = g_j + i_j$

$$x_j = (F')^{-1}(1/\gamma)$$

Static Tradeoff

Benchmark economy

- Economy without government interventions high-quality firms have two advantages
  - $q_H > q_L$ means higher level of investment and lower impact of financing constraint
  - In bad times: share of **high-quality** jumps up (until there is no low quality firms left?)

Government intervention

- Government allows firms to investment at below market-rate
  - Impact higher on low-quality firms (larger price distortion)

$$\frac{\partial \Delta K}{\partial \gamma} < 0; \quad \frac{\partial K_L/K_H}{\partial \gamma} > 0$$

  - In bad times: share of **low-quality** does not jump down

Dynamic Tradeoff

Government policy shifts expectations

- Low-quality firms invest more knowing future crises won't be so bad

Government policy effectiveness is contingent on current state

- lenient government pricing decreases welfare when there are too many low-quality firms ...
- ... but it also creates the conditions for a higher share of low-quality firms

Slippery slope

- Clever way to present the results: policy trying to limit output drop to 1%
- increase in low quality firms due to underpricing
- ... leads to increasingly greater intervention needed for the same output drop target
- cannot be fixed by a time-varying policy intervention

Plan

How is this different from zombie lending

Zombie lending literature (and the cleansing effect of recessions)

- Banks subsidize loans to failing corporations (to keep loans in good-standing – evergreening)
- Crowds out investment by new firms with higher MPK
- Zombie firms debt overhang have systematically low investment and hinder growth

This paper

- Government "fixes" credit distortion for low-quality firms
- Dynamics of capital quality shows that there is an intertemporal tradeoff of government intervention.
- No debt overhang here (actually there is no debt in this paper), simply an information friction in policy

How to think about recessions?

What is a shock?

- Definition of a shock in the model: sudden destruction of capital

$$\frac{k_t}{k_{t^-}} = 1 - u_t$$

- Tightens the financing constraint because pledgeable capital is at t while current capital (before investment decision) is at t^-:

$$x_j \leq \chi q_j (1 - u)$$

- Modelling shock as destruction of capital and not a pure financing shock
  - ... implications for the MPK and investment decision
  - ... size of government intervention (needs to "rebuild")
- How realistic is this? Clarify why this is a necessary modelization attempt.
- In the data this would mean the effects of the shocks are poorly identified (affects many things at once)

Empirical relevance

Covid-19

- Are credit interventions during covid-19 relevant?
  - ▸ Credit program are targeting ... debt but does the shock fit?
  - ▸ What about programs extended during the financial crisis?
- Model forces repayment in units of capital but firms produce consumption goods not capital units.
  - ▸ See French gov debt relief program

Direct evidence?

- Little evidence of government intervention slippery slope
  - ▸ Time consistency of policies across time
- Changing types
- The authors should try to provide direct evidence of state contingency and how government dynamic tradeoff is a first order effect of credit interventions

Final Thoughts

Very interesting Paper!

Take away

- Credit policies come with static tradeoffs but also **dynamic tradeoffs**
- Indiscriminate credit subsidies leads to lower capital quality in the long run …
- … and less effective future policies

Great Paper!