Discussion of

"Default Risk and Aggregate Fluctuations in an Economy with Production Heterogeneity"

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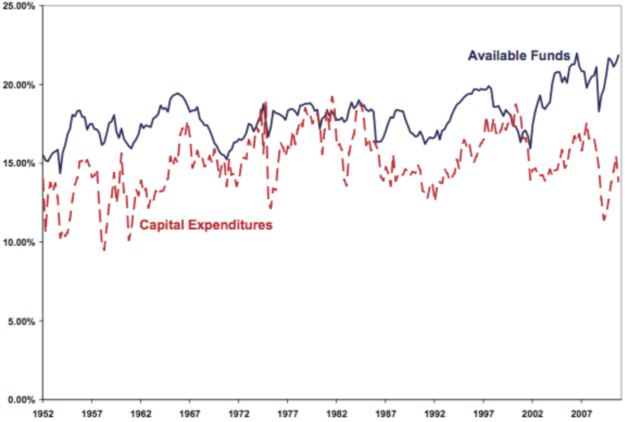
Summary

- My Discussion:
  - (very) brief summary
  - some comments and suggestions
- Impact of credit shocks in an economy with:
  - financing frictions
  - heterogeneous firms

Financing in the US



Source: Shourideh, Zetlin-Jones (2012) from Compustat

Firm problem

The (simplified) investment/financing problem of a firm

$$\max_{k',b'} x - k' + \underbrace{q(k', b', \epsilon)}_{\text{debt is risky}} b' + E\left[mV^0\left(x', \epsilon'\right)\right]$$

where x is cash-on-hand

$$x = \pi(\epsilon, k) + (1-\delta)k - b \underbrace{-\xi_0 - \chi_\theta \xi_1(\epsilon)}_{\text{fixed cost of operation}}$$

The firm cannot raise equity:

$$\boxed{x - k' + q(k', b', \epsilon)b' \geq 0}$$

The terms of the loan q are set in a competitive market.

Firm problem

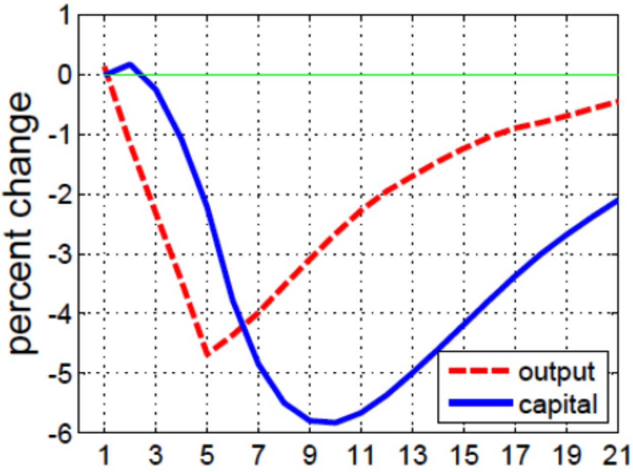
Credit shock ($\chi_\theta = 1$)

- extra cost of operation ξ_1
- in case of default, lenders do not get anything back (usually they get 37% back)
- no direct real effect!

Credit shocks affect **small** and **entering** firms disproportionally

- they are far from their optimal capital stock and must borrow a lot to grow

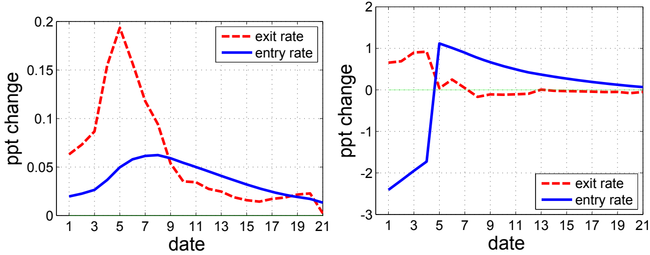
After a credit shock...



The shock ends at $t = 4$ but capital continues to drop. Debt overhang?

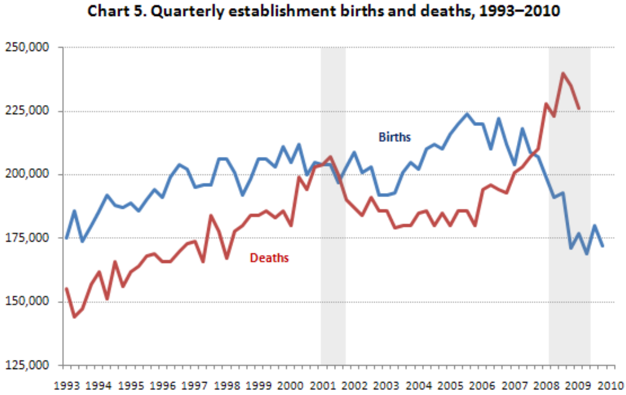
After a credit shock...

Lots of action in entry/exit of firms
(TFP shock on left, credit shock on right)



After a credit shock...

In the data



Source: BLS Business Employment Dynamics

Entry process

The impact of financial friction on the entry process is crucial.

- Potentially entering firms draw k from a Pareto distribution with lower bound $k_0 = 0.023$ and a curvature of 3. They also have a debt of $b = 0.04$.
  - 81% of potential entrant have more debt than capital
- It would be interesting to see robustness on this margin
  - Free entry

Financial frictions

It would be nice to see the terms of the loans $q(\cdot)$ and how they change in response to shocks.

- Does it look like the data?

The financial frictions are probably very strong in the model:

- Firms cannot raise equity
- No long-term debt (better for short downturns)
- The lender and the firm cannot renegotiate the debt
    - During a credit shock, the lender loses everything if the firm defaults. Huge incentive to renegotiate.

As a result, financial frictions are responsible for a reduction of 27% in GDP in the long-run.

- Cost of issuing equity