Evergreening

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Financial Frictions, Zombie Firms and the Macroeconomy

March 13, 2023

Research question

Why is an evergreening happening? What is the macroeconomic implications?

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What this paper does

1. Provides a simple model framework that micro-founds evergreening.

2. Documents the empirical evidence of evergreening.

3. Quantitatively analyze the macroeconomic implication of the evergreening in a heterogeneous-firm model.

▶ An *excellent* paper with a sharp theory + empirical evidence + careful implementation.

▶ The paper throws interesting questions for macroeconomists:

  – Is it always happening?

  – What are the macroeconomic consequences?

  – What should the policymaker do?

▶ I have some comments as follows:

1. Macroeconomic implications

   – Channels through which the evergreening can affect the economy.

   – Evergreening vs. default.

   – Asset specificity and fire sale: welfare implications

2. The competitive lending protocol

3. A violation of the global concavity

DISCUSSION I

► As the bank is deeply pocketed there is no (asymmetric) direct effect of evergreening across the firms.
► Aren't the incentives of "bank/firm/social planner" all aligned in the evergreening region? The FWT.
► What is more important between *more* production vs. *quality* production?
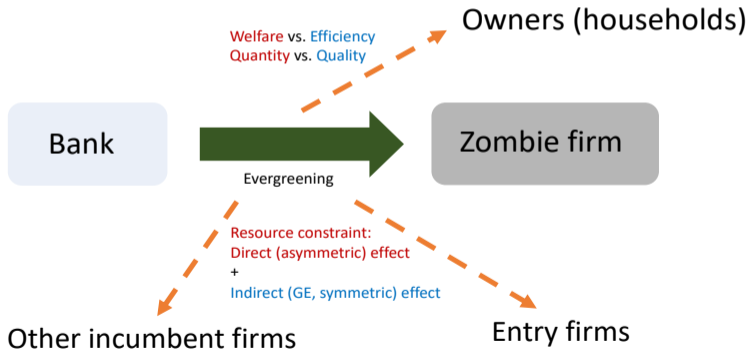
▶ What if the asset specificity is substantially strong? A massive social cost of default.

    – We all know the firm is run by zombie management, but no one can run the firm better than the zombies...

    – Society will lose a massive value by the default due to the asset specificity, evidenced by fire sales.

    – Depending on the asset specificity parameter, can't the evergreening be even beneficial?

▶ Evergreening coverage rises in z.

$$\widehat{b}(z) - \overline{b}(z) = \left(1 - \alpha^{\frac{\alpha}{1-\alpha}}\right)(1 - \alpha)\left[\frac{\beta}{(1 - \theta(\beta^k - \beta^f))^\alpha}\right]^{\frac{1}{1-\alpha}} z^{\frac{1}{1-\alpha}}$$

    – In the current model, an advantage is given to high productivity firms in extensive margin, also.

▶ The macroeconomic consequence is rather a *quantitative* result than a *theoretical* one.

    – If the household is introduced, the welfare consequence can be compared.

    – Or in a reduced form, $C = Y - I$?

▶ Depending on the benchmark (bank's reservation: competitive market of banks), the evergreening might not be evergreening to a firm.
 – The equilibrium captures the evergreening in an economy with banks' market power.
▶ In the evergreening region, comparison becomes "evergreening vs. default," rather than "evergreening vs. normal lending." Thus, a *preemptive* evergreening is missing in the model: the ***intensive-margin*** evergreening.
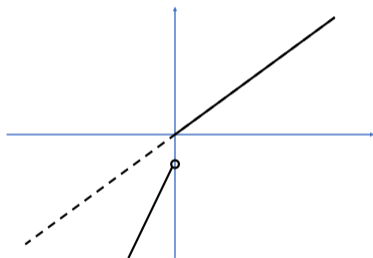
Figure 2.1: Relationship Lending Economy
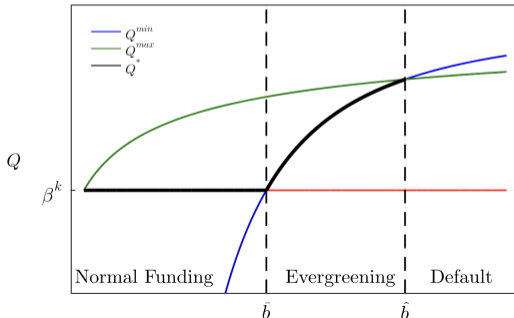
The contemporaneous component of objective function is not concave and continuous.

$$d - \mathbb{I}[d < 0][e_{con} + e_{slo}|d|]$$

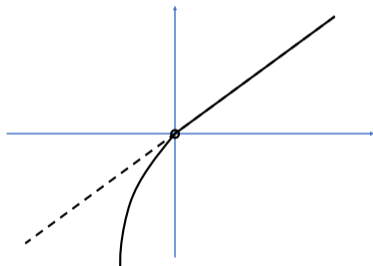▶ The intercept term makes the objective function non-concave and discontinuous around 0.
▶ Is the intercept necessary?

Alternatively, one can consider the following form

$$d - \mathbb{I}[d < 0][e_{slo}d^2],$$

which I used in one of my papers (Lee, 2022).

▶ The slope change is smooth around 0: the contemp. objective function belongs to $\mathcal{C}^1$.
▶ The standard utility–based optimization theory (the analytical FOC) can be smoothly applied.

The comments were mostly about quantitative and macro implications that could be further improved in my thought. Still, this is

an *excellent* paper with a sharp theory + empirical evidence + careful implementation.