

Firm Quality Dynamics and the Slippery Slope of Credit Intervention

A Brief Summary

Link to the full paper: https://yeli-macrofinance.com/intervention_trap.pdf

A key friction in credit markets is limited commitment (i.e., the inability to commit to repay creditors). The government, however, holds a unique advantage: its commitment to repay creditors can be supported by institutional and legal arrangements, and the government can enforce repayment from those who borrow from it. Thus, the government may act as a credit intermediary (Lucas, 2016).

Credit intervention has grown in size and become more direct. The programs during the GFC injected liquidity primarily through the banking sector. During the Covid-19 crisis, not only the GFC-era programs were promptly reinstated, but central banks and governments across the world initiated new programs that lent directly to nonfinancial firms. In light of this trend, it's important to consider: what are the long-term effects of direct credit support for nonfinancial firms, and in particular, what causes credit intervention to grow in scale from one crisis to the next? In this paper, we answer these questions from the perspective of firm quality dynamics.

In our model, firms differ in productivity. High-quality firms have larger debt capacity than low-quality firms. They can borrow more and thus are more likely to survive in crises. Thus, crises exhibit a cleansing effect: the economy emerges from crises with a greater fraction of firms being high-quality. Funding from the government dampens the cleansing effect because, unlike private-sector creditors, the government is unable to differentiate firms by their productivity.

Therefore, credit intervention alleviates the decline of aggregate output but reduces the average firm productivity. A slippery slope of intervention emerges: the economy enters into the next crisis with lower average productivity and thus requires a greater scale of intervention to sustain the output. In our calibrated model, increasing the scale of intervention in the current crisis by one dollar per unit of firm capital leads to an increase of 4 cents per unit of capital in the next intervention should another crisis happen in ten years. Given that capital stock grows over time, the inter-crisis pass-through rate by the total dollar amount is even larger.

A key feature of our model is the trade-off between quantity and quality. Optimal intervention in crises strikes a balance between distorting the firm quality dynamics and preserving the overall production capacity. We show that ignoring the distortionary effects on firm quality dynamics results in a more aggressive intervention that almost doubles the welfare-maximizing amount.

References

Lucas, D. (2016). Credit policy as fiscal policy. *Brookings Papers on Economic Activity* (1), 1-57.