“Firm-bank linkages and optimal monetary policy in a lockdown”
by Anatoli Segura and Alonso Villacorta

Nicolas Crouzet
Kellogg School of Management, Northwestern University

FIRS 2021
# Government interventions in corporate credit markets

<table>
<thead>
<tr>
<th></th>
<th>Why?</th>
<th>How?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stylized models</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brunnermeier &amp; Krishnamurthy (2020)</td>
<td>Bankruptcy externalities (?)</td>
<td>Subsidized loans</td>
</tr>
<tr>
<td>Hanson, Stein &amp; Sunderam (2020)</td>
<td>Bankruptcy externalities</td>
<td>Subsidized + staged loans</td>
</tr>
<tr>
<td>Segura &amp; Villacorta (2021)</td>
<td>Bank risk constraints</td>
<td>Deposit insurance + firm transfers</td>
</tr>
<tr>
<td><strong>Quantitative models</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elenev &amp; al. (2021)</td>
<td>Bank risk constraints (?)</td>
<td>Firms transfers</td>
</tr>
<tr>
<td>Crouzet &amp; Tourre (2021)</td>
<td>Sudden stop + deadweight losses</td>
<td>Targeted loans w/ “strings attached”</td>
</tr>
</tbody>
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The world in 2019

- $\theta$: aggregate shock; $E(\theta) = 1, \theta \geq \theta$

- $\hat{p}(.), \hat{e}(.): "moral\ hazard"/"debt\ overhang"$
The world in 2020 (without government intervention)

- **$b_L$:** repayment promised to bank in exchange for $\rho$
Option 1: bank finances extra loans with equity

\[ \hat{p}(b_0 + b_1^L) \cdot (b_0 + b_1^L) - \hat{p}(b_0) \cdot b_0 = \rho \]

value of newly issued loans

Constrained optimum s.t.

- moral hazard
- external financing = loans (not equity)
- old/new loans pari-passu
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W_0 = \hat{p}(b_0)A - \hat{e}(b_0)
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W_0 > W_1
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Constrained optimum s.t.

- "moral hazard"
- external financing = loans (not equity)
- old/new loans pari-passu
Option 2: bank finances extra loans using safe deposits

\[ \theta (\hat{p}(b_0 + b_L^2) \cdot (b_0 + b_L^2) - \hat{p}(b_0) \cdot b_0) \geq \rho \]
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\[ b^2 > b^1, \quad W_1 > W_2 \]

- banking sector must provide complete insurance against aggregate risk
- "tax" projects that are successful even in the lowest aggregate state
- distortion gets worse when "unexpected" lending is required \( \implies \) bank lending
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- banking sector must provide complete insurance against aggregate risk
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- distortion gets worse when “unexpected” lending is required \( \implies \) bank lending
Enterprise value in an estimated model

\[ \Delta W \approx -2\% \]

\[ \Delta W \approx -5\% \]
Credit interventions: why?
Credit interventions: why?

because bank need to keep their liabilities safe
Government intervention 1: deposit insurance

\[ I(\theta) = (d_0 + \rho - \theta \hat{p}(b_0 + b^3_L))^+ \]

\[ P = E(I(\theta) | \theta < \kappa) \]

[deposit insurance]

[fairly priced premium]
Government intervention 1: deposit insurance

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\[ \theta (\hat{p}(b_0 + b_3^3) \cdot (b_0 + b_3^3) - \hat{p}(b_0) \cdot b_0) + (\kappa - \theta) (\hat{p}(b_0 + b_3^3) \cdot (b_0 + b_3^3) \geq \rho \]

can issue more safe deposits
Government intervention 1: deposit insurance

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\[ \cdot \text{ zero fiscal cost in expectation, but gov't losses state by state (} \theta < \kappa) \]
Government intervention 2: transfers

Government transfers to firms $X \leq \rho$ at $t = 0$
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Government transfers to firms \( X \leq \rho \) at \( t = 0 \)

\[
\theta \left( \hat{p}(b_0 + b_L^4) \cdot (b_0 + b_L^4) - \hat{p}(b_0) \cdot b_0 \right) \geq \rho - X
\]

(lower funding needs)
Government intervention 2: transfers

Government transfers to firms $X \leq \rho$ at $t = 0$

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lower funding needs
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lower funding needs

\( b^2_L > b^4_L, \quad W_4 > W_2 \)
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\( b_L^2 > b_L^4 \), \( W_4 > W_2 \)

\cdot fiscal cost \( X \)
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lower funding needs

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· fiscal cost \( X \)

· in combination with deposit insurance: can restore constrained efficiency \((W_4 = W_1)\)
Comments

1. Isolate the effect of deposit insurance
2. What is special about the government?
3. Ex-ante bank regulation vs. ex-post intervention?
   presumably, \( \theta \) = some ex-ante motive for gov't to put risk limits on banks
4. Does the optimal policy map to real-world credit guarantees?
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4. Does the optimal policy map to real-world credit guarantees?
Credit guarantees in Europe

(Véron et al., 2021)

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- partial guarantees
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- partial guarantees
- not indexed by $\theta$ (i.e. cover any credit loss, idiosyncratic or aggregate)