

Zombie Lending and Policy Traps

by Acharya, Lenzu & Wang

Juliane Begenau

Bank of Italy & Bocconi Conference on Financial Stability & Regulation

Stanford GSB & NBER & CEPR

Why have post-financial crisis policies failed to deliver growth?

Contribution

Key model features

Results

Why have post-financial crisis policies failed to deliver growth?

Contribution

- ▶ Model matching qualitative facts on zombie lending
⇒ reg. forbearance effects on economy
- ▶ Formalizes idea of too much reg. forbearance for economy

Key model features

Results

Why have post-financial crisis policies failed to deliver growth?

Contribution

- ▶ Model matching qualitative facts on zombie lending
⇒ reg. forbearance effects on economy
- ▶ Formalizes idea of too much reg. forbearance for economy

Key model features

- ▶ heterog. banks (exg. capital) & firms (exg. risk & productivity)
- ▶ entry and exit of firms (good and bad) (creative destruction)
- ▶ given exog. capital, banks choose b/w safe assets or two firm types
- ▶ policy instruments: R^f and share of guaranteed loan repayment

Results

Why have post-financial crisis policies failed to deliver growth?

Contribution

- ▶ Model matching qualitative facts on zombie lending
⇒ reg. forbearance effects on economy
- ▶ Formalizes idea of too much reg. forbearance for economy

Key model features

- ▶ heterog. banks (exg. capital) & firms (exg. risk & productivity)
- ▶ entry and exit of firms (good and bad) (creative destruction)
- ▶ given exog. capital, banks choose b/w safe assets or two firm types
- ▶ policy instruments: R^f and share of guaranteed loan repayment
- ▶ "diabolical sorting" low e banks pair with bad firms

Results

Why have post-financial crisis policies failed to deliver growth?

Contribution

- ▶ Model matching qualitative facts on zombie lending
⇒ reg. forbearance effects on economy
- ▶ Formalizes idea of too much reg. forbearance for economy

Key model features

- ▶ heterog. banks (exg. capital) & firms (exg. risk & productivity)
- ▶ entry and exit of firms (good and bad) (creative destruction)
- ▶ given exog. capital, banks choose b/w safe assets or two firm types
- ▶ policy instruments: R^f and share of guaranteed loan repayment
- ▶ "diabolical sorting" low e banks pair with bad firms

Results

- ▶ Forbearance worsens blow of large shock ⇒ too many zombie firms

Why have post-financial crisis policies failed to deliver growth?

Contribution

- ▶ Model matching qualitative facts on zombie lending
⇒ reg. forbearance effects on economy
- ▶ Formalizes idea of too much reg. forbearance for economy

Key model features

- ▶ heterog. banks (exg. capital) & firms (exg. risk & productivity)
- ▶ entry and exit of firms (good and bad) (creative destruction)
- ▶ given exog. capital, banks choose b/w safe assets or two firm types
- ▶ policy instruments: R^f and share of guaranteed loan repayment
- ▶ "diabolical sorting" low e banks pair with bad firms

Results

- ▶ Forbearance worsens blow of large shock ⇒ too many zombie firms
- ▶ Optimal policy depends on shock size

Comment 1: Explanation of slow recovery

- ▶ This paper: bank zombie lending due to excessive guarantees

Comment 1: Explanation of slow recovery

- ▶ This paper: bank zombie lending due to excessive guarantees
- ▶ Alternative:

Comment 1: Explanation of slow recovery

- ▶ This paper: bank zombie lending due to excessive guarantees
- ▶ Alternative:
 - ▶ Excessive corporate borrowing driven by shareholder decisions (Leverage ratchet a la Admati et al 2018)

Comment 1: Explanation of slow recovery

- ▶ This paper: bank zombie lending due to excessive guarantees
- ▶ Alternative:
 - ▶ Excessive corporate borrowing driven by shareholder decisions (Leverage ratchet a la Admati et al 2018)
 - ▶ Debt overhang → low investment (e.g., DeMarzo and He 2021)

Comment 1: Explanation of slow recovery

- ▶ This paper: bank zombie lending due to excessive guarantees
- ▶ Alternative:
 - ▶ Excessive corporate borrowing driven by shareholder decisions (Leverage ratchet a la Admati et al 2018)
 - ▶ Debt overhang → low investment (e.g., DeMarzo and He 2021)
 - ▶ Crouzet and Tourre (2021) use DeMarzo and He model to quantify short-run vs. long run trade-off of government support via credit for corporations during pandemic
 - ▶ Similar in spirit to this paper just w/o banks & w/ debt overhang mechanism

Comment 2: Ad-hoc assumptions

Ad-hoc assumptions

Purpose of the model

Comment 2: Ad-hoc assumptions

Ad-hoc assumptions

- ▶ E.g., negative externality from presence of zombie firms
- ▶ Positive analysis stronger

Purpose of the model

Comment 2: Ad-hoc assumptions

Ad-hoc assumptions

- ▶ E.g., negative externality from presence of zombie firms
- ▶ Positive analysis stronger

Purpose of the model

- ▶ Model designed to fit zombie induced slow recovery narrative

Comment 2: Ad-hoc assumptions

Ad-hoc assumptions

- ▶ E.g., negative externality from presence of zombie firms
- ▶ Positive analysis stronger

Purpose of the model

- ▶ Model designed to fit zombie induced slow recovery narrative
But which insights are entirely new?

Comment 2: Ad-hoc assumptions

Ad-hoc assumptions

- ▶ E.g., negative externality from presence of zombie firms
- ▶ Positive analysis stronger

Purpose of the model

- ▶ Model designed to fit zombie induced slow recovery narrative
But which insights are entirely new?
- ▶ Model could also be used to test & size narrative

Comment 3: Calibrate the Mechanism

How much of slow recovery is driven by forbearance induced zombie firm

Comment 3: Calibrate the Mechanism

How much of slow recovery is driven by forbearance induced zombie firms

- ▶ As opposed debt overhang?

Comment 3: Calibrate the Mechanism

How much of slow recovery is driven by forbearance induced zombie firms

- ▶ As opposed debt overhang?
- ▶ Get a sense of model's implied magnitudes

Comment 3: Calibrate the Mechanism

How much of slow recovery is driven by forbearance induced zombie firms

- ▶ As opposed debt overhang?
- ▶ Get a sense of model's implied magnitudes
 - ▶ What fraction of zombie firms does the model imply?
 - ▶ What shock size is large?
 - ▶ What bank capital size is considered low vs. high?

Key considerations

Key considerations

- ▶ Size of bank dependent sector (differs in EU vs US)
- ▶ Size of loans to productive sector (C& I) in bank assets
- ▶ How large is the zombie firm externality on good firms?
- ▶ Incentives for "good" firms to seek funding elsewhere? E.g., private equity, shadow banks

- ▶ Very interesting paper with important policy message
- ▶ Key open question
What is the strength of this bank-centric mechanism in explaining the slow recovery?

Smaller comments for authors

- ▶ The write up can be sharpened: Examples
 - ▶ Abstract not clear
 - ▶ Question isn't clear after diving into the paper
 - ▶ Some associate "unconventional" policy with bond purchases etc not reg. forbearance
 - ▶ Argument missing why you need a model.
- ▶ Clarify contribution: Empirically the effects have been described & even quantified. Theoretically, some overlap with other work.
 - ▶ Literature on unconventional policy
 - (1) Gertler and Karadi (2011)
 - (2) Curdia and Woodford (2009)
 - (3) Joyce, Miles, Scott, Vayanos (2012)
 - ▶ Recent theoretical literature on zombie lending
 - (1) Faria e Castro et al paper cited has also (at least the version I saw) a theoretical part
 - (2) My paper with Bigio, Majerovitz & Vieyra delivers some of your results (different focus/model)
 - ▶ Other explanations of slow recovery (e.g., Crouzet and Tourre)