

# Zombies at Large: Corporate Debt Overhang and the Macroeconomy – Jorda, Kornejew, Schularick and Taylor

Discussion

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# Risk of zombie firm/loan proliferation is real...

- What has history taught us?
  - Japan (1990s) – Caballero et al (2008), Giannetti-Simonov (2013)
  - Europe (post-GFC) – Acharya, Eisert et al (2019), Acharya, Crosignani et al (2020), Acharya, Steffen et al (2020), Blattner et al (forthcoming), ...
  - India (post-GFC) – Krishnamurthy et al (2020), Kulkarni et al (working paper)
- Undercapitalized banks resist recognizing non-performing assets
  - LENDER DEBT OVERHANG: Extend subsidized credit to poorly performing firms, often blessed by policy
- Lost decades: Zombie lending affects the macroeconomy
  - Congestion in input (labor, finance) and output (sales, prices) markets
  - Reduced investment, employment, productivity at healthy firms; lower entry
  - EXTERNALITIES, not BORROWER DEBT OVERHANG

# Paper's focus

- Should we worry about the risk of corporate zombies at large?
- Studies the question in a large panel dataset, analyzing not just corporate debt but also household debt, studying outcomes during recessions as a function of lagged debt growth
- Approach is macroeconomic in its flavor, unlike the microeconomic focus of the literature on zombie lending and its consequences
  - Undercapitalized banks -> Subsidized credit to weak firms-> Industry spillovers VS
  - Aggregate credit growth (-> Debt overhang) -> Macroeconomic outcomes

# Paper's main finding

- Corporate debt growth in the lead-up to recessions does not explain recession depth and recovery
  - Household debt does: See Mian-Sufi-Verner (several), Muller-Verner (2021)

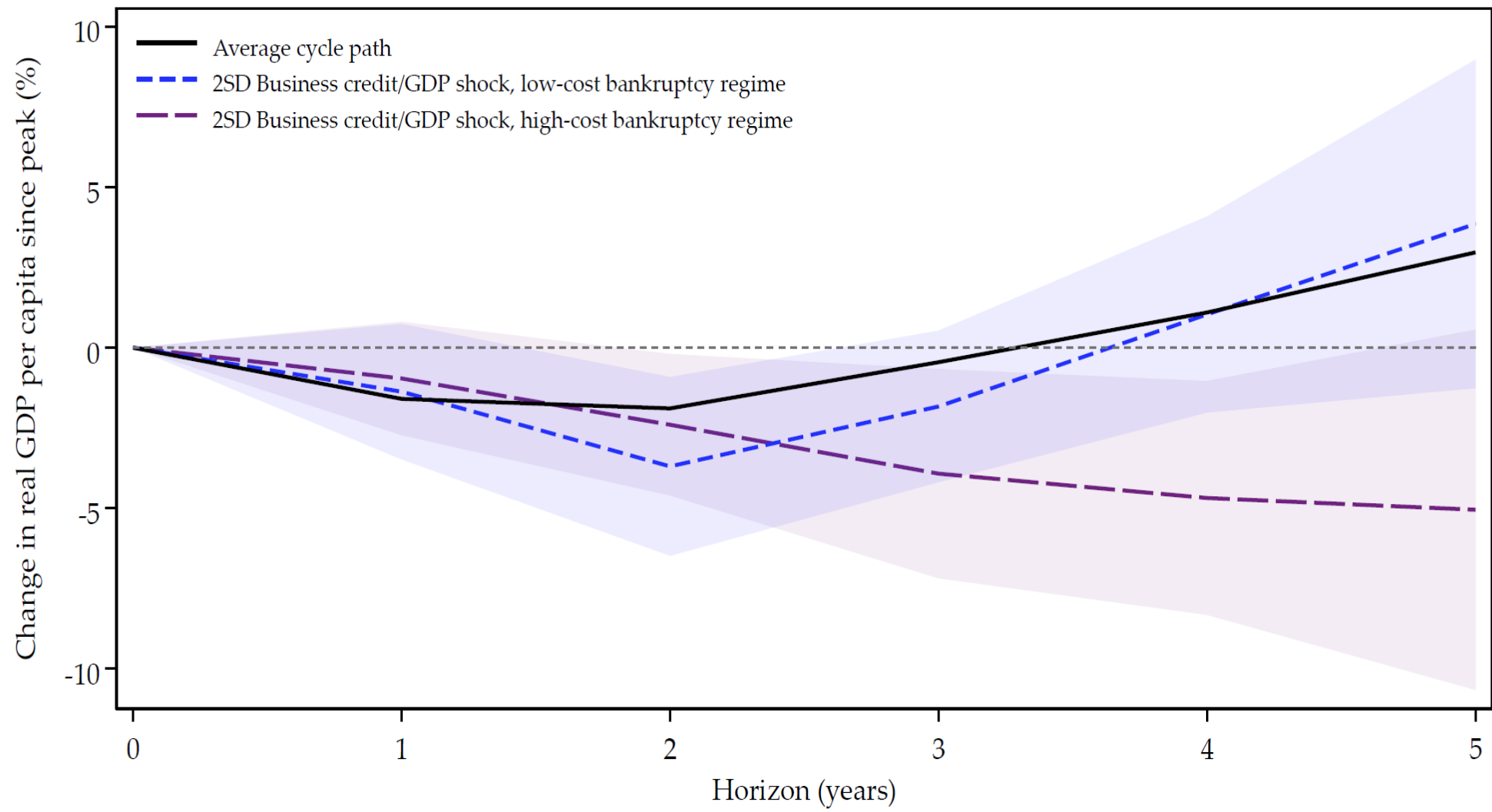
Mian, Sufi, Vener (JF) document the following (from their introduction):

*"To broaden the scope of the findings, we construct a novel country-year data set covering 56 economies going back to the 1960s. Results using this data set show that an increase in the household debt to GDP ratio is statistically significantly positively associated with a rise in the non-tradable employment to tradable employment ratio, a rise in the ratio of non-tradable output to tradable output ratio, and a rise in the ratio of non-tradable prices to tradable prices. In contrast, a rise in the firm debt to GDP ratio has almost no significant relationship with any of these variables. Further, consistent with Mian et al. (2017) and IMF (2017), the rise in the household debt to GDP ratio predicts lower subsequent growth whereas a rise in the firm debt to GDP ratio is uncorrelated with subsequent growth."*

<https://onlinelibrary.wiley.com/doi/abs/10.1111/jofi.12869?af=R>

# Paper's main finding

- Corporate debt growth in the lead-up to recessions does not explain recession depth and recovery
  - Household debt does: See Mian-Sufi-Verner (several), Muller-Verner (2021)
- Conclusion is that corporate debt overhang channel is not too strong in data as corporate debt reorganization is relatively smooth and swift
- (CAVEAT) Conversely, weak bankruptcy systems do seem to be associated with a negative impact of corporate debt growth on recovery from recessions
  - Perhaps the only result that gets at the transmission mechanism?



# Macro- and micro-evidence hard to reconcile

- Japan, Europe and India offer important counterpoints to authors' broad conclusion; perhaps even China
- Parts of Europe and India do/did have weak bankruptcy resolution
- CAVEAT offered by authors on the importance of bankruptcy resolution may be the ENTIRE story for several countries for a decade
- Authors recommend to improve bankruptcy efficiency (and move on)



# Why might the narrative/findings be at odds?

- Detecting zombie lending requires microscopic data on
  - Bank capitalization, Borrower quality, Bank-borrower relationships, Bank loan terms relative to reference terms, Spillovers to healthier firms, ...
- Next step is to provide counterfactual exercises (partial equilibrium)
  - Caballero et al (2008) – lost investment years
  - Acharya, Eisert et al (2019) – lost investment and employment years
  - Evidence: several years of efficiency lost in zombified sectors
- Aggregate data may not pick up these effects or allow even partial equilibrium counterfactual exercises
  - At a minimum, study distress, bank debt vs bonds, recessions by bank health
  - Examine “output gaps” (counterfactual?), firm entry, small business lending

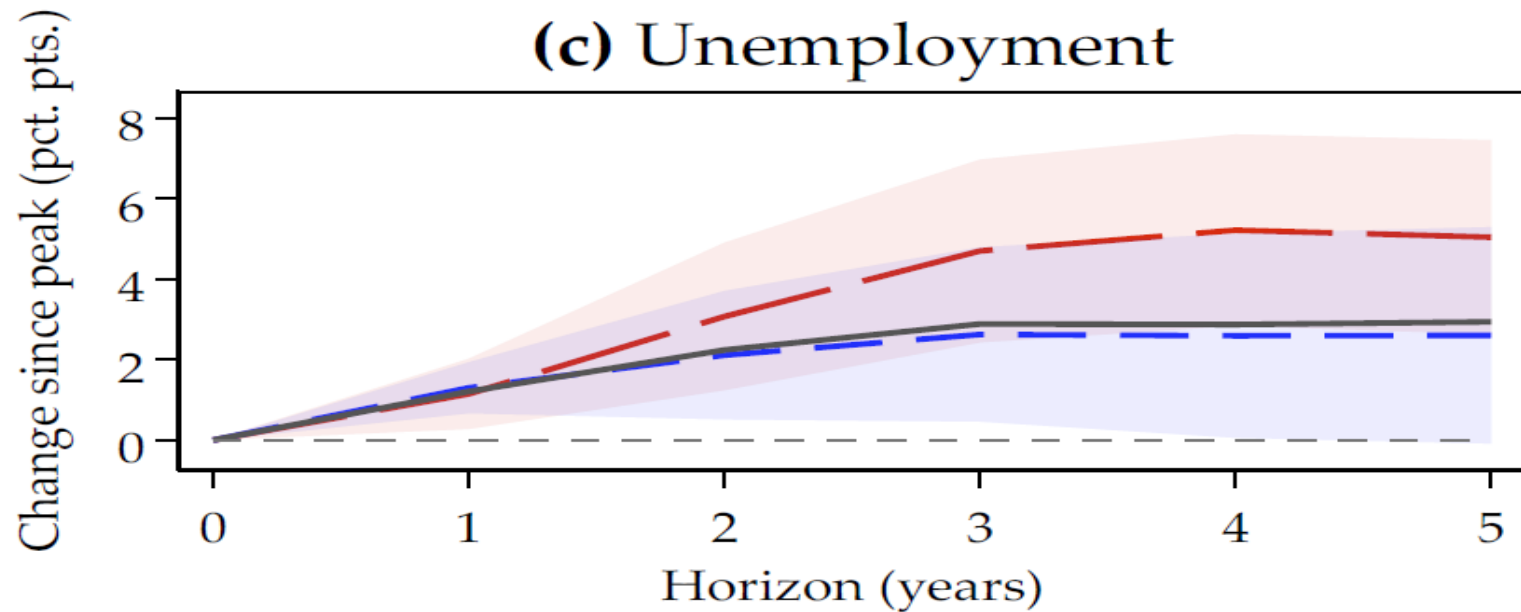
# Lucas Critique I

- Narrative descriptions of the United States over the past three decades, for example, Rajan's "Fault Lines" (2009)
  - Loss of corporate jobs to China and technological change
  - Corporate recessions (1990-91, 2000-2002) led to "jobless recovery"
  - Policy responded by monetary/fiscal stimulus for the housing/banking sector
  - Housing bubble and burst
  - Global financial crisis
  - ... Have we (uniformly) recovered from that yet?
- Understanding policy responses to generate recovery from corporate recessions seems crucial
  - The tendency has been to throw leverage at households – "Let them eat credit"!

# Lucas Critique II

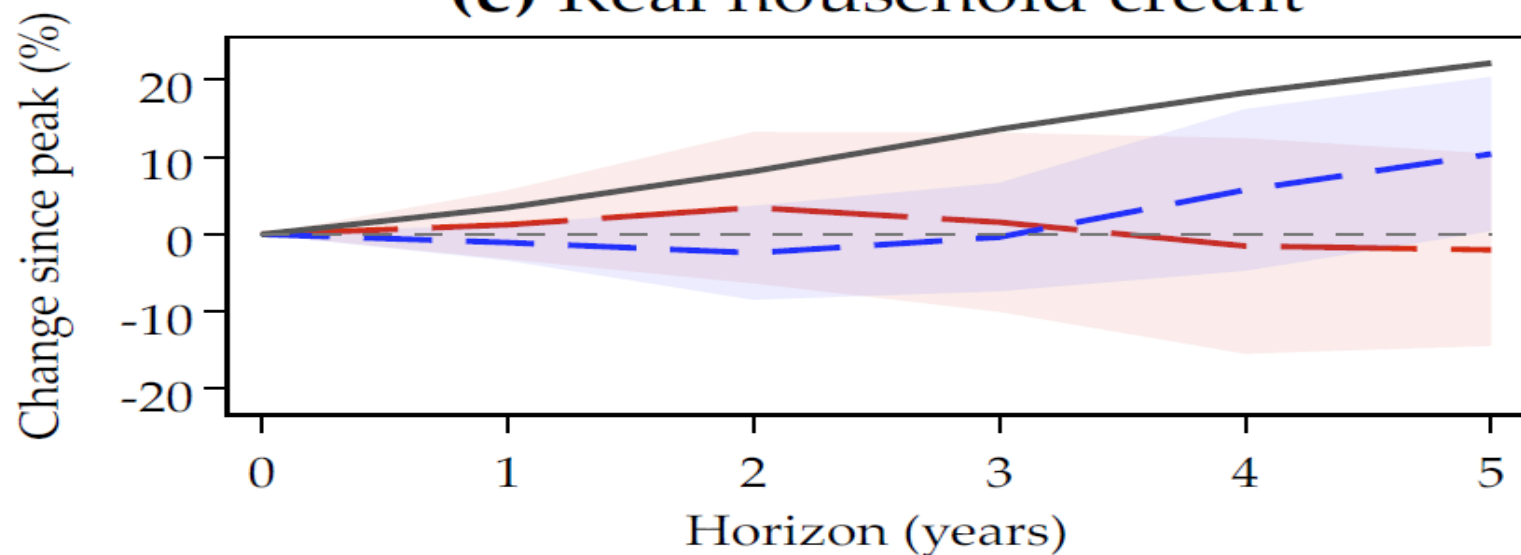
- Some evidence presented by authors suggests there is support for this channel of corporate recessions causing
  - Higher unemployment
    - Leads to accommodative monetary, macroprudential and fiscal policies
  - > Household leveraging

**(c) Unemployment**



- 2SD Business credit/GDP shock
- 2SD Household credit/GDP shock

**(e) Real household credit**



# Goodhart's Law

- Goodhart's Law: Put simply

*“When a measure becomes a target, it ceases to be a good measure.”*

- There may be a variant of this playing out:
  - No observable impact on growth and inflation – policy targets
  - Fiscal stimuli have worsened municipal, state and sovereign credit risks
  - Deterioration palpably visible even in developed economy sovereign spreads
  - Can the impact on fiscal variables be tracked too?
    - Reinhart and Rogoff channel from high sovereign debt / fiscal deficit to growth

# Other points

- Should we focus instead of credit growth on expected default risk?
  - Credit ratings, Expected default frequency (EDF) of Moody's KMV or Bharath-Shumway, Credit spreads
- Authors seem to suggest corporate default correlation is low
  - Evidence elsewhere suggests that corporate default rates and recoveries are HIGHLY cyclical and correlated with recessions (Altman et al, several papers)
- Measure leverage as book debt to book equity and not market equity
  - Market equity run-ups/collapse may be important to credit risk
- External sector borrowings and maturity of financing may be important
  - South East Asian crisis: Mop-up costs were on the order of 50-70% of GDP

# Summary

- Impressive panel data with state-of-the-art panel data econometrics
- Important inquiry but main results seem available in existing literature
- The paper is really not about “Zombies at large”, a popular current theme
- Is macroeconomic/aggregate analysis the right framework given the body of microeconomic evidence on zombie lending and its mechanisms?
- Broad conclusion fails my “smell test” for policy relevance based on prior research and central banking experience in dealing with zombies at large
- CAVEAT on the importance of legal institutions may be “the” robust finding
  - BUT... Bankruptcy codes have been suspended right now in many countries
  - Can regulatory forbearance and credit misallocation be prevented once distressed cases are many and (normal-time efficient) bankruptcy courts are clogged?
  - Can we just build efficient bankruptcy codes and move on hoping to “mop up”?