

# The Aggregate Consequences of Default Risk: Evidence from Firm-Level Data

BESLEY, ROLAND, VAN REENEN

Discussion by Thomas Drechsel  
(University of Maryland)

**ASSA 2021 Virtual Annual Meeting**

3 January 2021

## QUESTION AND ANSWER

- ▶ Are financial frictions at the firm level important for aggregate outcomes?
- ▶ Yes!
  - ▶ UK output 28% lower per year than it would be without frictions
  - ▶ Frictions stronger for smaller firms
  - ▶ Aggregate losses driven by a lower capital stock
  - ▶ Much less driven by misallocation of capital across firms

# STRATEGY

## 1. Theoretical model

- ▶ Firm default probability 'sufficient statistic' for credit frictions
- ▶ Default risk distorts factor input prices

## 2. Detailed firm-level data

- ▶ Compute individual default probabilities
- ▶ 'Rating' method which uses firms' historical financial indicators

## 3. Combine 1. and 2.

- ▶ Guided by model, aggregate up individual default risk
- ▶ Compute economy-wide output and productivity losses

## HIGHLIGHTS

- ▶ Skillful combination of theory and rich micro data
- ▶ Advantages over approaches that compare *measured MRPKs*
  - ▶ Hsieh and Klenow (2009) exercise does not reveal precise source of misallocation
- ▶ Ambitious goal
  - ▶ Naturally opens a big surface for (sometimes cheap) criticism ...

## MY COMMENTS

### 1. Default risk $\nrightarrow$ credit frictions

- ▶ a.k.a. “your numbers are too big!”

### 2. Static vs. dynamic distortions

- ▶ a.k.a. “your numbers are too small!”

### 3. Additional practical suggestions

## DEFAULT RISK $\Leftrightarrow$ CREDIT FRICTIONS

- ▶ In the model, default risk and the financial friction map into each other directly
  - ▶ No moral hazard would mean no default
- ▶ In reality, however, measured default risk could capture some **efficient default**
- ▶ Think of airlines in the post-pandemic economy:
  - ▶ Suppose permanently lower need for airtravel
  - ▶ It may be socially optimal to unwind a few airlines
  - ▶ Avoiding default may actually result in misallocation of capital
  - ▶ Output in the long run could be lower without airline default

## DEFAULT RISK $\nrightarrow$ CREDIT FRICTION

- ▶ Default risk could be preferences & technology, not frictions
  - ▶ Technology/preferences may necessitate firm exit
  - ▶ Risk in itself is not a friction
  - ▶ Some agents bear the cost of such primitive exit risk
  - ▶ It might be socially optimal that debt holders are the ones that do so
- ▶ Admittedly, it is challenging to cleanly separate efficient from inefficient bankruptcy (even in theory)

## DEFAULT RISK $\nrightarrow$ CREDIT FRICTION: SPECIFIC SUGGESTIONS

1. Be more transparent in differentiating 'financial frictions' from 'default risk'
2. Perhaps it is possible to explore in the model how/when/why the 'sufficient statistic' approach fails
  - ▶ Clarifying the efficient vs. inefficient default distinction with some formality could be an additional contribution of the paper
3. In the credit scoring step, there could be ways of selecting only frictional default
  - ▶ E.g. separate liquidity measures from profitability measures
  - ▶ Default risk coming from low liquidity captures "frictions"
  - ▶ Default risk coming from low profitability captures "efficient default"



## STATIC VS. DYNAMIC DISTORTIONS

- ▶ Credit frictions may actually represent primarily a **dynamic** distortion
  - ▶ Firm cannot undertake investment project because financially constrained
  - ▶ Therefore output lower *in the future*
  - ▶ Reasoning may be stronger if we think about potential entrants etc.
- ▶ True effect of frictions could be larger because of additional dynamic channels

## STATIC VS. DYNAMIC DISTORTIONS: SPECIFIC SUGGESTION

1. Model is static but firm-level measure picks up dynamic effects
  - ▶ Paper should help us to think about this
2. It could be insightful to get a rough sense of how dynamic distortions would enter (probably out of the scope of the paper to make the model fully dynamic)
  - ▶ Could borrow insights from [Buera and Moll \(2015\)](#)
  - ▶ Dynamic heterogeneous firm model with financial friction
  - ▶ Different dimensions of micro heterogeneity show up in different aggregate wedges
  - ▶ How do these wedges link to factor price distortions in static model?

## ADDITIONAL PRACTICAL SUGGESTIONS

1. Add table with the regressions underlying the credit scoring (PD) model
  - ▶ Show statistical and economic significance of different financial indicators
  - ▶ Makes that step of the procedure less of a black box
  - ▶ Could deliver some interesting standalone insights  
E.g. how predictive are earnings (EBIT) for default? (see [Drechsel, 2020](#))
2. Add more results on link between predicted default and performance (Table 2)
  - ▶ Show regressions *without year FE & without industry FE*, and report R-squared
  - ▶ How much employment/investment/... variation can variation in default probabilities explain, also across firms, industries and time?
  - ▶ Could provide interesting additional reading of the data
  - ▶ In fact, these results would be directly in the spirit of the paper's objective!

## IN A NUTSHELL

- ▶ Important, ambitious and competently executed paper
- ▶ To me, its merit is not in the face value of the results, but in learning a lot from understanding how the results are obtained
- ▶ My comments should not be viewed as suggestions to recompute the numbers, but as providing additional scope to what the paper can teach us

## BIBLIOGRAPHY

- BUERA, F. J. AND B. MOLL (2015): “Aggregate Implications of a Credit Crunch: The Importance of Heterogeneity,” *American Economic Journal: Macroeconomics*, 7, 1–42.
- DRECHSEL, T. (2020): “Earnings-based borrowing constraints and macroeconomic fluctuations,” *Working paper*.
- HSIEH, C.-T. AND P. J. KLENOW (2009): “Misallocation and Manufacturing TFP in China and India,” *The Quarterly Journal of Economics*, 124, 1403–1448.