



## Distressed Banks, Distorted Decisions?

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As is well known, recovery from the recessions that occurred across advanced economies in the wake of the global financial crisis of 2008 was associated with dismal productivity growth. While the cause of the weakness in productivity is not well understood, one possible contributing factor is the apparent intensification of credit market imperfections that lasted for a number of years after the crisis. Weaker productivity growth clearly coincided with more intense credit frictions in the United Kingdom. By 2013, UK productivity had fallen to around 15% below a continuation of its pre-crisis trend. At the same time, the stock of real bank debt owed by UK corporations was more than 20% below its pre-crisis peak, in part reflecting a tightening of credit supply.

In this paper we investigate some of the channels by which an intensification of credit market imperfections might have contributed to productivity weakness. We focus on how distortions in bank lending markets due to the financial crisis affected the exit rates of different UK businesses. Normally, one of the key drivers of aggregate productivity improvements over time is the process whereby more productive firms gain market share and less productive firms lose market share or go out of business altogether. In a typical "cleansing" recession, this reallocation process might be accelerated, freeing resources to be used more productively elsewhere. But this reallocation process might be hindered or even reversed in banking crises if the key mechanisms through which productivity growth normally arises are distorted. For example, credit market frictions may reverse the cleansing effect of recessions if highly productive firms are forced to exit as a result of not being able to access finance. An additional channel through which financial crises might dampen the cleansing process of recessions is through increased forbearance by banks. Banks with weak balance sheets may be unwilling to crystalise losses on loans and so continue to support a number of low productivity "zombies" that would otherwise have gone out of business.





We use a quasi-experimental approach to identify the impact of changes in credit market imperfections, exploiting differences in pre-crisis business banking relationships. The UK banking system is highly concentrated. Four banking groups account for around 80% of business current accounts. Moreover, typical business banking relationships are long term and it is rare for businesses either to borrow from more than one lender or to switch from one lender to another. The financial crisis impacted all UK banks to some extent, but dramatically affected two large banks accounting for around half of bank lending to UK businesses in particular: Lloyds Banking Group and Royal Bank of Scotland both required public injections of capital in order to survive. The differential experience of these banks and their customers provides a natural experiment by which to assess the effects of stress among banks on their business customers.

We use UK company-level information on business banking relationships to identify the impact of credit market imperfections on firm exit rates by exploiting exogenous variation in credit availability induced by the contrasting effects which the crisis had on UK banks, distinguishing between banks which needed state support in order to survive (Distressed Banks) from those that did not (Non Distressed Banks). We divide companies into Treatment and Control groups based on banking relationships established prior to the crisis. Specifically, we gauge the importance of credit imperfections on company survival, comparing whether the exit rate for firms which, prior to the financial crisis, had relationships with banks which later became distressed, differed from those which had relationships with banks which did not become distressed.

We find that companies that had established relationships with Distressed Banks prior to the crisis had a higher probability of going out of business after the financial crisis than firms which had relationships solely with Non Distressed Banks. Furthermore, the impact of being attached to Distressed Banks was not uniform across the distribution of firm productivity. The probability of exit for firms in the lower tail of the productivity distribution was not adversely affected by having a relationship with Distressed Banks. Indeed there is some evidence that the least productive businesses had a better chance of survival with Distressed Banks, consistent with them supporting zombie businesses. But for relatively more productive firms, the probability of exit was adversely affected by being with Distressed Banks. This suggests that the intensification of credit market imperfections following the financial crisis distorted the possible "cleansing" effect of the recession. We also present a highly stylised theoretical model that helps explain why credit market imperfections might impinge particularly on businesses in the middle of the productivity distribution.

The evidence we present in this paper contributes to a better understanding of the causes of strikingly weak performance of the United Kingdom economy following the global financial crisis and the effects of financial imperfections more generally. By drawing attention to the role of an





intensification of credit market imperfections in this process we contribute to a growing post-financial crisis literature, which uses the crisis as an unanticipated exogenous shock to credit conditions, and that is more widely applicable outside of just the UK context.