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Who gets credit after bankruptcy and why? An information channel

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ABSTRACT

Conventional wisdom holds that individuals find it difficult to obtain new credit post-bankruptcy. Using credit bureau data, we test this hypothesis and show that more than 90% of bankrupt individuals receive credit shortly after filing. Individuals with good credit history prior to filing have reduced credit availability after bankruptcy while those with ex-ante low credit quality receive more credit. We show that credit supplied to low quality individuals is severely curtailed during the financial crisis. We also find that the default probability on new debt increases after bankruptcy, especially among individuals with high ex-ante credit score. These findings are consistent with an information channel, in which bankruptcy reveals new information about a borrower's credit quality.

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1. Introduction

As consumer credit and personal bankruptcy have grown in the past two decades (see White, 2007), an extensive literature studying the dynamics of these two has grown as well. However, there has been little work on what happens to consumers' access to credit after they file for bankruptcy, primarily due to the relative lack of suitable data.[3]

Post-bankruptcy credit access has a number of implications. For example, access to credit markets after bankruptcy can be an important factor in an individual's original decision to file for bankruptcy. Similarly, understanding post-bankruptcy dynamics is important for the debate on "fresh start"—the option to discharge one's debt as a mechanism to smooth household consumption against idiosyncratic risks. Finally, the patterns of post-bankruptcy lending can provide key insights into whether bankruptcy signals an increased propensity to default on new debt; or instead, it leads to improved credit quality as borrowers debts are discharged.

In this paper, we use credit bureau data to provide empirical evidence on access to credit after bankruptcy. Analyzing post-bankruptcy credit is important because it helps us understand how lenders use the information available in credit reports to make their lending decisions. In accordance with the Fair Credit Reporting Act (FCRA), a bankruptcy flag may appear on an individual's credit report for up to ten years after filing, and therefore, the bankruptcy event may affect credit supplied to these individuals in the future. Additionally, bankruptcy law precludes individuals from filing again within 8 years of the filing date, which may also affect lenders' decision to provide credit to bankrupt individuals. In this paper, we argue that the patterns observed in the data are consistent with an information channel under which the bankruptcy filing itself confers new information about a borrower's future credit quality. This channel is very similar to the reputation literature that goes back to the seminal paper by Diamond (1989) on acquisition of reputation in debt markets and the international literature on sovereign debt default and its impact on access to credit markets as in Cole et al. (1995). Chatterjee et al. (2011) provides a nice application of these papers to unsecured credit markets where lender learns from an individual's borrowing and repayment behavior about his type and encapsulates his reputation for not defaulting in his credit score.

Our empirical methodology comprises two steps. The first step is a counterfactual analysis in which we compare the actual amount of credit received by individuals after they file for bankruptcy to the amount of credit that individuals with similar

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[3] Han and Li (2011) and Musto (2004) provide two notable exceptions. Fisher et al. (2004) discuss survey evidence and the legal literature on this topic.

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observable characteristics receive in the absence of a filing. The key to our analysis is a dataset of more than 2 million individual level credit reports from one of the major credit bureaus, Transunion. Moreover, our data has two observations per individual which allows us to observe an individual's access to credit *before* as well as *after* a bankruptcy filing.[4] Using these data, we have a close proxy to the information set that a new lender would use to make lending decisions, and so we are able to assess how much credit an individual *could* have received if she had not filed for bankruptcy. These data allow us to test the hypothesis that access to credit is negatively impacted by a bankruptcy filing. In the second step, we analyze the variables that correlate with credit availability after bankruptcy. More specifically, we analyze the extent to which credit availability after bankruptcy is a function of the individuals' ex-ante credit score and aggregate credit conditions. This analysis sheds light on the information content of the bankruptcy filing itself about a borrower's creditworthiness going forward. For example, if credit supplied to certain groups of individuals decreases substantially after bankruptcy, we can infer that bankruptcy revealed some negative information on the future repayment behavior of these borrowers.

The counterfactual analysis reveals three empirical patterns. One, using data for the period 2003–2004, available consumer credit declines after bankruptcy by about $19,000 on average. This represents a substantial decline from the average of $23,600 in unsecured credit limit before bankruptcy.[5] Despite this decline in credit availability, we show that 90% of individuals have access to some sort of credit within 18 months of filing and 75% have access to revolving credit. Two, the ex-ante lowest quality borrowers are more likely to experience an increase in the amount of credit after filing for bankruptcy than the high quality ones are.[6] Our analysis shows that 65% of individuals in the lowest ex-ante credit score bracket receive more credit after bankruptcy than they did before they filed while only 4.5% do for the highest ex-ante credit score groups.[7]

Three, we find that these results depend on the aggregate credit environment. In particular, we analyze data for the 2006–2007 period and find a decline in revolving credit after bankruptcy of $23,000 on average, which is about $4000 more than in the credit boom period of 2003–2004 noted above. We also find that the difference in decline in credit between individuals with good and bad credit history shrinks across the two time periods. As the economy moved into crisis by 2007, access to credit is severely curtailed for low quality borrowers, and as a result, they no longer show 'gains' from bankruptcy. This finding is also consistent with the general idea of a 'flight-to-quality', where lenders redistribute available resources away from low quality borrowers. For an example, see Gropp et al. (1997) who find that in high exemptions states, there is a redistribution of credit to households with more financial assets while poor households receive less credit.

The observed patterns in the data are consistent with the idea that a bankruptcy filing may contain valuable information on borrowers' credit quality going forward. This kind of asymmetric information in lending is what led to the creation of consumer credit bureaus, including the one that provided information for this study. However, even with credit bureau information, information asymmetries between lenders and borrowers persist.[8] In a framework where lenders have limited information about a borrower's type and earnings realizations, they can use repayment behavior and bankruptcy as a signal. In fact, bankruptcy does negatively affect credit scores, and because the bankruptcy flag remains on credit reports for up to 10 years after a filing, this disadvantage may persist for some time. Accordingly, it is not surprising that bankruptcy is associated with at least some penalty on average.

To the extent that bankruptcy signals higher future default probabilities, the filing of an ex-ante low credit-quality borrower who already had a bad repayment record carries less information than the filing of a high-quality borrower who had a demonstrated good credit history. Thus as our analysis reveals, credit access of the latter would change more dramatically than the former. To support this interpretation, we test the hypothesis that the change in credit score fully captures the credit risk changes of a bankruptcy filing. We reject this hypothesis and conclude that the bankruptcy filing contains information about borrowers' creditworthiness beyond what is implied by the change in credit score. This result is significant because it implies that credit scoring models may be insufficient to characterize the credit risk of bankrupt individuals, which could lead to misallocation or mispricing of credit.

More specifically, we show that the probability of default on new loans after bankruptcy increases significantly for the ex-ante high-quality borrowers, but not for the lowest quality ones who already had high default probabilities before bankruptcy. For example, the 90-day delinquency increases by a factor of 10 for the highest credit score group while it remains about the same for the lowest credit score group. This finding reinforces the idea that bankruptcy confers more information on ex-ante high-quality borrowers than it does on low quality ones. The empirical patterns observed in the data from the credit boom period (2003–2004) to the onset of the financial crisis (2006–2007) are similarly consistent with this information channel. With the overall rise in bankruptcies and defaults during the financial crisis,[9] the interpretation of each individual bankruptcy signal became somewhat confounded. It is more difficult for lenders to infer information from the bankruptcy signal and to learn about an individual borrower's type when aggregate factors affect all borrowers simultaneously.

The primary confounding factor in our empirical analysis is the potential interaction between the borrowers' demand for credit and the lenders' credit supply. For example, individuals with good

[4] The fact that we have credit reports before bankruptcy is the key distinction of our data with respect to existing empirical research on post-bankruptcy access to credit. The two closest related papers to ours, Han and Li (2011) and Musto (2004), use data exclusively after bankruptcy filings, and therefore they do not control for observable characteristics before filing. More specifically, their analysis compares filers and non-filers while our analysis compares the same individual before and after bankruptcy. Our data is comprised of two panels taken at different points in time and each panel has two observations for the same individual. Individuals in the first panel are observed in June 2003 and December 2004. In the second panel individuals are observed in June 2006 and December 2007. We identify bankrupt individuals as those with no bankruptcy flag in 2003 or 2006 and a bankruptcy flag in 2004 or 2007, respectively. More details regarding the data can be found in Section 2.

[5] We use revolving credit limit as the main credit variable in our analysis because it is generally unsecured and as such it is generally discharged in Chapter 7 bankruptcy proceedings. Credit limit is a better proxy for the total amount of credit supplied to an individual than credit balance, which is more closely associated to the demand for credit. We provide a more extensive discussion on supply and demand issues in the robustness section.

[6] Because the bankruptcy filing itself changes a credit score, we use the ex-ante and ex-post labels when necessary to refer to the credit score an individual had prior to filing and after filing for bankruptcy.

[7] This result is consistent with Musto (2004), which analyzes the credit impact of the removal of a borrowers' bankruptcy flag from their credit history. In particular, he finds that the removal of the bankruptcy flag leads to a greater benefit to high quality borrowers. In our results, these are the borrowers that experience a greater relative decline in credit availability due to bankruptcy and thus have more to gain from the removal of the flag from their record. These findings are also consistent with survey evidence reported in the legal literature, such as Stanley and Girth (1971) and Porter (2008), on the widespread availability of credit post-bankruptcy. These data show how lenders quickly offer credit even to low credit quality borrowers after bankruptcy, as removing debt obligations of borrowers allows new lenders to step into service a potentially profitable borrower.

[8] There is a large literature analyzing these asymmetries; see, for example, Agarwal and Hauswald (2010) and Hauswald and Marquez (2006).

[9] Personal bankruptcies increased from 601,535 in 2006 to 821,275 in 2007, which is a 37% annual increase. Personal bankruptcies peaked in 2010 with a total of 1,536,623. Data retrieved from ProQuest Statistical Insight.