## Credit Supply to Bankrupt Consumers<sup>1</sup> Executive Summary

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Unsecured revolving consumer credit outstanding in the United States totaled \$866 billion by the end of 2009, a five-fold increase in just three decades.<sup>2</sup> Over the same period, personal bankruptcy filings also increased by a factor of five, from less than 300,000 filings in 1980 to over 1.5 million filings in 2010.<sup>3</sup> These large rates of growth are striking particularly because creditors have the greatest exposure to borrowers' credit risk in unsecured credit lending, as unsecured claims are generally wiped out in the event of consumer bankruptcy. Recent work suggests that one driving factor of such rapid growth is the dramatic expansion of credit to risky borrowers, including those previously excluded from the credit market. These studies argue that vast improvements in information technology and financial engineering made it possible for lenders to target specific consumer groups, to narrowly tailor credit offers, and to price-discriminate risk in essentially every corner of the market. However, there is little empirical evidence on how the supply of credit is related to credit risk, especially among high risk consumers.

Our paper attempts to fill this void by providing direct evidence on the supply of unsecured credit to consumers who previously filed for bankruptcy—a group of consumers carrying some of the most severe and conspicuous default risks. Using a unique proprietary data set of credit card mail offers that is administratively linked to recipients' credit records, we study how likely consumers who have filed for personal bankruptcy before are to receive credit card offers. Among offers, we analyze both the general terms of the credit card contract, such as credit limits and regular interest rates, as well as the often-neglected elements, terms that are referred to as "hidden" costs in the literature, such as certain fees disclosed in only the fine print.

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<sup>&</sup>lt;sup>1</sup> The views expressed herein are those of the authors and do not necessarily reflect those of the Federal Reserve

<sup>&</sup>lt;sup>2</sup> Source: Federal Reserve: http://www.federalreserve.gov/releases/g19/Current/ In contrast, over the same period, other types of consumer credit increased at a much slower pace.

<sup>&</sup>lt;sup>3</sup> Source: The Administrative Office of the U.S. Courts. Personal bankruptcy filings peaked at roughly 2 million in 2005, the year of the most recent bankruptcy reform.

The central innovation of this paper is that we are able to observe directly the supply of unsecured credit—credit card mail offers. Students of any market often observe only equilibrium quantities and prices. Because robust instrumental variables are hard to obtain, it is notoriously difficult to infer changes in supply and demand separately from observed variation in equilibrium quantity and price. In this regard, recent studies have examined post-bankruptcy use of credit using household surveys or credit bureau data. However, they have done so by examining the amount of debt borrowed (equilibrium quantity) and the interest rates at which loans were taken (equilibrium price). Consequently, these studies cannot identify the effect of bankruptcy on credit supply *per se*.

Investigating credit supply to consumers with personal bankruptcy history also sheds light on consumers' bankruptcy decisions. As consumers continue to need credit for smoothing consumption, facilitating transactions, and rebuilding creditworthiness after filing for bankruptcy, the extent to which post-bankruptcy access to credit is limited by a filing record should directly influence consumers' bankruptcy decisions. For example, consider the two extremes: If a bankruptcy record permanently traps filers in financial autarky, then the economic costs of personal bankruptcy are much greater than if lenders are immediately forgiving or filing is anonymous. Despite a growing literature that attempts to understand households' bankruptcy decisions, to the best of our knowledge, little has been done to empirically characterize the supply of unsecured credit to bankruptcy filers. Thus, this paper complements the expanding literature that uses dynamic equilibrium models to study consumer credit markets. The results presented herein on post-bankruptcy access to credit provide an empirical benchmark for calibrating these models.

Our main data source is Mintel Comperemedia's (henceforth "Mintel") proprietary surveys on credit offers to U.S. consumers. The surveys are administratively linked to the credit history information of surveyed consumers by TransUnion, one of the three major credit bureaus. Each month, Mintel invites 8,000 consumers to participate in a survey requesting them to forward all incoming mail containing credit solicitations, such as offers of credit cards, home equity loans, and so on. Mintel requests that participating consumers return solicitations sent to any members of the household and that they complete an extensive demographic questionnaire.

The sample is stratified to represent the U.S. population in terms of household size and composition, age and education of household head, geographic region, market size, and total household income. On average, about 3,000 consumers choose to participate each month. To keep the sample of participating consumers nationally representative, Mintel subsequently assigns a weight to each respondent to account for differential propensities of participation across demographic groups. After processing the forwarded mail offers, Mintel sends the database to TransUnion, where participating consumers' credit history information is merged before the final data set is delivered to subscribers.

Our main findings are summarized as follows: First, we find that bankruptcy filers are not excluded from unsecured credit markets, even in the aftermath of the most severe financial crisis in recent history. On average, more than 20 percent of consumers with personal bankruptcy history receive at least one credit card offer in a given month. The likelihood of a filer receiving an offer is only slightly lower than a nonfiler with comparable observable characteristics, including credit scores. Further, those who filed fewer than two years before are at least as likely to receive an offer as comparable nonfilers. In contrast, those who filed for bankruptcy more than five years earlier face a significantly lower likelihood of receiving any credit card offers. Such differences between recent and more seasoned filers are consistent with the hypothesis that lenders target filers who remain years away from being eligible to file for bankruptcy again. As borrowers approach the lifting of the repeat-filing restriction, lenders are wary of greater default risk and thus extend less credit to such filers.

Second, we find both anecdotal and statistical evidence that offers to bankruptcy filers are not sent out simply as part of a non-discriminatory "blanket campaign." Indeed, some lenders design their offers specifically to bankruptcy filers. For example, the header of one mail offer from a top credit card lender states: "You deserve some credit for getting through bankruptcy."

Third, we find that, despite relatively small differences in the probability of receiving a credit card offer, offers to bankruptcy filers are more restrictive, more expensive, and provide fewer take-up incentives than offers to their nonfiler counterparts. Such a distinction confirms the hypothesis that lenders narrowly tailor offers to subgroups of consumers. Specifically, we find that relative to offers to comparable nonfilers, those to filers have an interest rate about 80 basis

points higher, have a minimum credit limit 30 percent lower, and are 30 percent less likely to be pre-approved. Filers are over 50 percent less likely to receive any rewards, yet are 50 percent more likely to pay an annual fee. Furthermore, filers benefit less from improving their credit scores than nonfilers. For instance, on average, the credit limit triples for nonfilers who improve their credit scores from the first quartile to the maximum of the filers' score range, but the credit limit for filers does not rise at all with the same improvement in their credit scores.

Fourth, we present (to the best of our knowledge) the first set of evidence on potential "shrouding" in credit card offers. In particular, we examine the effect of bankruptcy status on a set of contract terms that often show up in only the fine print, such as terms related to balance transfers and fees related to less frequently used transactions (e.g., transactions involving foreign exchanges). We find that credit card offers to filers tend to contain higher "hidden" costs than offers to comparable nonfilers, suggesting that even in a competitive market, lenders may choose to shroud terms in credit offers to consumers who may be either myopic or imperfectly informed.

In summary, depending on one's perspective, the glass appears to be either half-full or half-empty for filers' post-bankruptcy access to credit. The "subprime" credit card market remains functional, even during the sharpest credit contraction since the great depression, as recent bankruptcy filers are as likely to receive offers as comparable nonfilers. However, filers' offered terms tend to be far less favorable than nonfilers', with lower credit limits, higher interest rates, and more fees. Thus, bankrupt consumers may find it difficult to smooth consumption over time or ensure against idiosyncratic income risk using their credit cards. However, having a new credit card, notwithstanding its low credit limit and expensive interest rates, helps borrowers rebuild their credit records, which in turn may lead to better treatment in other credit markets, such as mortgages and car loans. Studying the broader welfare implications of access to credit for bankrupt consumers represents a promising research agenda.