The Ticket to Easy Street?
The Financial Consequences of Winning the Lottery[*]

Scott Hankins	Mark Hoekstra†	Paige Marta Skiba
University of Kentucky	University of Pittsburgh	Vanderbilt University
Scott.Hankins@uky.edu	markhoek@pitt.edu	Paige.Skiba@Vanderbilt.edu

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Abstract

A fundamental question faced by policymakers is how best to help individuals who are in financial trouble. This paper examines the consequences of the most basic approach: giving people large cash transfers. To determine whether this prevents or merely postpones bankruptcy, we exploit a unique dataset of Florida Lottery winners linked to bankruptcy records. Results show that although recipients of $50,000 to $150,000 are 50 percent less likely to file for bankruptcy in the two years after winning relative to small winners, they are equally more likely to file three to five years afterward. Furthermore, bankruptcy filings indicate that even though the median winner of a large cash prize could have paid off all of his unsecured debt or increased equity in new or existing assets, she chose not to do either. Consequently, although we cannot be sure other recipients of financial assistance would react in the same way lottery players did, our results do suggest that some skepticism regarding the long-term effect of cash transfers may be warranted.

JEL Codes: D14 (Personal Finance), K35 (Personal Bankruptcy Law), D12 (Consumer Economics: Empirical Analysis)

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1. Introduction

During economic downturns, a central question governments face is whether and how to help individuals who are struggling financially. The central issue in determining the appropriate policy is whether a bailout will have a permanent impact or whether it will merely postpone financial pain. The goal of this paper is to determine whether the simplest solution to helping indebted individuals—giving them cash—enhances longer-term financial stability and helps them avoid bankruptcy.

While it might seem unambiguous that cash transfers that are large relative to debt should prevent bankruptcy, there are reasons to be doubtful. For example, indebted individuals may strategically consume all of the transfer in the expectation that they will later file for bankruptcy anyway. Alternatively, individuals may simply have high discount rates that lead them to consume the resources in the short run.[1] Individuals may also engage in mental accounting (Thaler, 1990), treat the cash as "house money" and use it to take on additional risks (Thaler and Johnson, 1990), or develop a taste for luxury goods that outlasts the money. Finally, individuals may lack the knowledge to handle large lump-sum payments wisely; surveys have consistently shown that U.S. adults have relatively low levels of financial literacy (e.g., Higert, Hogarth, and Beverly, 2003). The perceived importance of these considerations has been partly responsible for the shift in the legal field from lump-sum payments to structured settlements,[2] a trend that Pryor (2002) states is "perhaps the most striking development in the tort payment structure over the last 25 years." However, to our knowledge the only research on the general question of whether large cash transfers improve the longer term outcomes of financially struggling individuals consists of informal surveys of lump-sum settlement recipients.

To determine whether giving cash to financially distressed individuals causes them to avert bankruptcy or merely postpone it, we apply a straightforward research design to a unique dataset. Specifically, we link winners of the Florida Lottery to bankruptcy records and compare recipients of $50,000 to $150,000 to those who won less than $10,000. By exploiting the randomness of the lottery, we can distinguish the effect of cash transfers from confounding factors typically associated with receipt of such awards. We rely on the identifying assumption

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[1] This behavior could be rational or it could be at odds with the long-run selves' preference against spending in the short run. For more on the latter, see DellaVigna, forthcoming; Frederick et. al, 2002, and O'Donoghue and Rabin, 1999.

[2] This concern is reflected by the words of Judge Joseph Weiss of the United States Court of Appeals for the Third Circuit, who stated that "Lump-sum payments all too often are improvidently invested or squandered by unsophisticated recipients and so fail to provide for the lifetime of medical bills and unemployment faced by victims of serious injury." Judge Weiss also calls the reliance on lump sum awards one of the "enduring weaknesses of the common law tort system" (Jacquette v. Continental, 1999).

that conditional on winning at least $600 one time, the amount won is uncorrelated with the recipients' underlying propensity for bankruptcy. Tests support this assumption: we find no difference in either the demographic characteristics or the bankruptcy rates of large winners versus small winners in the years prior to winning the lottery.

The results show that giving $50,000 to $150,000 to people only postpones bankruptcy. Specifically, while these individuals are 50 percent less likely than small winners to file for bankruptcy immediately after winning, they are equally *more* likely to file for bankruptcy three to five years after winning. Furthermore, bankruptcy cases filed in the 5 years after winning reveal that the net assets and unsecured debt of large winners are no different from those of small winners. This implies that even though the median winner of a large cash prize could have paid off all of his unsecured debt or increased equity in new or existing assets, he did neither. Collectively, these results suggest that policymakers should be cautious in offering cash assistance to heavily indebted individuals with the hope of increasing their longer-term financial security.

2. Data

Data on lottery winners were obtained from the Florida Lottery. The data include every winner of the Fantasy 5 lottery game in Florida from April 29, 1993 through November 27, 2002. These winners represent all individuals who won more than $600, the minimum amount for which Federal Law mandates that records be kept and reported to the Internal Revenue Service. For each lottery winner, we observe the individual's name and home zip code, the amount won (which we adjust for inflation), and the date of the drawing.

Because we ultimately link bankruptcy records to winners using their first and last names and county of residence, it is necessary to identify the set of unique names so as to minimize the number of individuals falsely linked to bankruptcy. Toward that end, we exclude all names that appeared more than once in 2008 phone records for that county. In addition, if lottery records indicated that an individual with a unique name from a given county won more than once, we then use only the first time that individual won.[3] We also limit the sample to individuals who won less than $150,000 since only 153 Fantasy 5 winners won more than that during this time period. As shown in Table 1, this limits the sample to 34,987 individuals. While these amounts represent pre-tax winnings, the Internal Revenue Service requires that the Florida Lottery withhold 25 percent of amounts greater than $5,000.

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[3] Results are unchanged when these individuals are excluded from the analysis.

Bankruptcy records were obtained from the Public Access to Court Electronic Records database (PACER) maintained by the Administrative Office of the U.S. Courts. In total, there were 1,433,243 personal bankruptcy records filed in Florida from 1985 to November 27, 2007. These records represent all of the Chapter 7 and Chapter 13 personal bankruptcy cases filed in the three district U.S. bankruptcy courts in Florida. Included in these data are the first and last name of the filer along with his or her residential address, the date filed, and the chapter under which the bankruptcy case was filed. In addition, we also obtained more detailed data from bankruptcies filed between January 1, 2004 and November 27, 2007 since this information was available electronically. These data are discussed in more detail in Section 5.4.

Bankruptcy represents an important outcome for several reasons. First, filing for bankruptcy is arguably the most extreme signal of financial distress. In addition, preventing bankruptcy may be socially desirable both because it is bad for creditors and because by affecting a filer's credit score, it can affect the availability and price of future consumer loans as well as her employment prospects.

The lottery winners were linked to bankruptcy filings on the basis of first and last name and county of residence, with results shown in Table 2. Each winner was linked to any bankruptcy case filed up to five years prior to winning the lottery and within five years after winning the lottery. In all, 1,934 Fantasy 5 winners were linked to a bankruptcy in the five years after winning. This match implies a one-year bankruptcy rate among lottery players of about 1 percent, which is larger than the 0.50 percent bankruptcy rate for all adults in Florida (including those who do not play the lottery) over the same time period.

While it is possible that type I or type II errors were made in linking lottery winners to bankruptcy records, neither type of error should invalidate the research design. Due to the randomness with which amount won is determined, we should be no more or less likely to match winners of large sums than winners of small sums except for the causal effect of amount received on bankruptcy rates.

3. Fantasy 5 and Identification Strategy

To identify the effect of large cash transfers on bankruptcy rates, we compare the bankruptcy rates of large cash prize recipients to those of small prize recipients. This strategy is similar to those employed in other papers to examine the effect of income shocks on health and mortality (Lindahl, 2005) and on labor earnings, savings, and consumption (Imbens et al., 2001). The identifying assumption in our analysis is that conditional on winning at least $600 in Fantasy 5 for the first time, the amount won is uncorrelated with underlying propensity for bankruptcy.

In order to gauge the validity of this assumption, some background regarding the Fantasy 5 game is necessary. Fantasy 5 is a pari-mutuel lottery game in which amount won depends on how many numbers were matched, how many winning tickets were sold, and how many people played. The largest prizes were given for matching five of five numbers and ranged from less than $10,000 to more than $200,000. The amount won depended not only on the number of winning tickets and total plays but also on the structure of the game. From April 29, 1993 through July 15, 2001, individuals who matched five of five numbers won an average of $20,000, though depending on the number of winners the amount varied from $1,300 to $132,000. Beginning on July 16, 2001 the game changed such that the average amount won for matching 5 numbers increased to $120,000. On days in which no one matched five of five numbers, people who matched 4 numbers won an average of $900. Consequently, because the number of small and large winners changed over time, it is important for our main analysis to control for that as well as for year fixed effects. Finally, while it is possible for individuals to play up to ten times on each card, this only presents a problem for identification to the extent that people play identical numbers on each card.[4] In Section 5.3 we show that the results are robust to excluding these individuals.

An important advantage of this identification strategy is that it can be empirically tested in two ways. First, in results available upon request, we show that amount won is not explained by winners' neighborhood characteristics. Second, and more importantly, we show that recipients of large cash prizes were no more or less likely to file for bankruptcy *before* they won than were recipients of small cash prizes. This implies that except for the difference in amount won, we would not expect bankruptcy rates to differ systematically after winning the lottery either. Collectively these tests suggest that any difference between the post-winning bankruptcy rates of large winners and small winners is properly interpreted as the causal effect of the lottery winnings.

A disadvantage of this approach, like all instrumental variable approaches, is that our estimate is of the treatment on the treated (Angrist et al., 1996). However, although we are unaware of any surveys that ask about both lottery-playing behavior and other characteristics that might be targeted by government bailouts such as subprime, adjustable rate, or Alt-A mortgages, we would expect there is considerable overlap between these populations. For example, regardless of whether one takes the cynical view that both populations are similar in that they both have made financially unwise decisions, a less controversial if more mundane

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[4] If individuals play different numbers (say) 10 times on a card, at most one number can win. Consequently, while this means some people are more likely to enter our data than others (i.e., those who play the lottery more frequently or play more numbers on a card), conditional on winning $600 the amount won is still uncorrelated with underlying propensity for filing for bankruptcy.

point is that both groups have below-average incomes and educations. Clotfelter et al. (1999) report that while just over half of the adult population in the U.S. has played the state lottery in the last year, people with below-average incomes and educations play most frequently. Consequently, while our study may not be helpful in predicting the impact of a cash transfer to higher income educated people not near the bankruptcy margin—though for the sake of science we would be happy to participate in that field experiment—we do think it is informative regarding the likely effect of bailouts to low-income people in financial trouble.

4. Methodology

Given the intuitive research design applied, the simplest way to determine the effect of receiving large cash transfers is to compare large prize winners to small prize winners. In addition to comparing the bankruptcy rates of these groups graphically before and after winning the lottery, we also do so using ordinary least squares regression, though results are similar when estimating a probit.[5] Specifically, we estimate:

$Bankruptcy_i = \alpha_i + \beta_0 (After\ Change\ in\ Game\ Structure)_i + \beta_1 (\$10,000 \leq Amount < \$50,000)_i$

$+ \beta_2 (\$50,000 \leq Amount < \$150,000)_i + \varepsilon_i$

where *Bankruptcy$_i$* is a dummy variable equal to one if individual *i* filed for bankruptcy within a given number of years after winning, α_i is a set of fixed effects for the year in which the individual won, *(After Change in Game Structure)$_i$* is a dummy variable equal to one if the individual won after the structure of the game was changed on July 16, 2001, and the remaining variables are dummy variables for various ranges of amounts won where the excluded group is less than $10,000. While one may object that winning $10,000 may have its own effect on bankruptcy rates, we choose that as the cutoff because prior to July 16, 2001 there were relatively few winners of less than $3,000. However, in Section 5.3 we show that the results are robust to using smaller cash prizes as the omitted group.

Finally, for ease of exposition, we will hereafter refer to recipients of less than $10,000 as "small winners," winners of $10,000 to $50,000 as "moderate winners," and winners of $50,000 to $150,000 as "large winners."

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[5] Although probit or logit estimations can be preferable to ordinary least squares when most values are near zero or one, there are also disadvantages that one might expect to be especially worrisome in this context. For example, omitted variables can cause bias in probit or logit estimations even if they are orthogonal to the treatment variable. In addition, even classical measurement error in the dependent variable can result in inconsistent estimates (Hausman, 2001; Hausman et al, 1998). Still, we find similar results when estimating a probit, as reported in Section 5.3

5. Results

5.1 Tests of the Identification Strategy

To demonstrate that the size of the income shock is random and thus uncorrelated with underlying financial well-being, we examine the extent to which filing for bankruptcy *prior to* winning the lottery is predicted by the amount later won. So long as the amount won is uncorrelated with one's underlying propensity to file for bankruptcy, there should be no difference between the bankruptcy rates of individuals who later win large or small cash prizes.

This is shown graphically in Figure 1a, which plots flows into bankruptcy before and after winning for both small and large winners. While the pre-winning bankruptcy rates of medium and large winners appear lower than those of small winners, this could be due to changes in the game over time that shifted the relative number of large versus small winners. To determine if this is the case, in Figure 1b we graph residual bankruptcy rates by partialing out year fixed effects. The results show that this eliminates the pre-winning rate differences.

This is confirmed more formally in Table 3. Results reveal that although unconditional means in column (1) indicate that medium and large winners were *less* likely to file for bankruptcy than small winners before winning, this difference is dramatically diminished and is no longer statistically significant once one controls for either the change in game structure (column (2)), year fixed effects (column (3)), or both (column (4)). Consequently, once one accounts for the time effects correlated with the structural changes of the Fantasy 5 game over time, there is little correlation between size of the cash prize and one's underlying propensity to file for bankruptcy.

5.2 The Effect of Lottery Winnings on Bankruptcy Rates

We now turn to estimating the impact of receiving large cash prizes on future bankruptcy rates. Figures 1a and 1b show the flows into bankruptcy for large and small winners after winning the lottery and indicate that large winners are much less likely to file for bankruptcy in the two years after winning. This pattern reverses from years three through five, however, during which time large winners are more likely to file for bankruptcy than are small winners.

To investigate this pattern more rigorously, we estimate the impact of winning large lump sums on bankruptcy rates within two years, from three to five years, and within five years after winning. Results are shown in Table 4, where column (1) shows unconditional differences, column (2) controls for the change in the game structure, column (3) controls for year fixed effects, and column (4) controls for both the change in the game structure and year fixed effects. Consistent with Figures 1a and 1b, we find statistically significant decreases in

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bankruptcy rates in the two years after winning, a result that is robust across all of the specifications. Our preferred specification in column (4) shows that the bankruptcy rates of moderate and large winners fall 0.87 and 1.63 percentage points in the first two years, which represents relative declines of 27 and 50 percent. These declines are offset, however, by increases of 0.5 and 1.21 percentage points three to five years after winning, respectively, although the increase is only statistically significant for large winners. The net result is that within five years after winning, moderate and large winners are no more or less likely to file for bankruptcy than are small winners. This is true despite the fact that the median large winner won a cash prize ($65,000) that was sufficient to pay off all of the unsecured debt owed by the most financially distressed lottery players ($52,000) at the time of winning.[6]

In order to show that this pattern is not driven by the admittedly arbitrary definitions of small, moderate, and large winners, we also show how bankruptcy rates over these time periods vary across the full distribution of earnings. Figures 2, 3, and 4 show the bankruptcy rates of all individuals within two years, from three to five years, and within five years of winning the lottery.   The graphical evidence is consistent with the results in Table 4: Figure 2 shows that the likelihood of filing for bankruptcy within the first two years after winning is smaller for winners of large cash prizes while Figure 3 shows that this trend reverses three to five years after winning. Finally, Figure 4 shows there is little evidence that winning larger cash prizes affects overall bankruptcy rates in the five years after winning.

5.3 Robustness of the Results

We investigate the robustness of these results in several ways. First, while we defined the omitted group as amounts less than $10,000 in order to ensure reasonable numbers of small and large winners in each year, one might be concerned that winning up to $10,000 has its own effect on bankruptcy rates. Consequently, we examine whether the effect is different when estimated relative to winning less than $2,500. Results are shown in column (2) of Table 5, where the first column serves as a reference by showing the preferred result from column (4) of Table 4. Results show similar declines in bankruptcy rates for moderate and large winners in the two years after winning and statistically significant increases in bankruptcy rates for moderate and large winners three to five years after winning. In addition, in order to define the control group even more conservatively, in column (3) of Table 5 we include winners from Florida Lotto and control for game fixed effects and find similar results when comparing large winners to those who received less than $1,000.

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[6] The figure of $52,000 comes from the bankruptcy filings of lottery players who filed for bankruptcy in the year prior to winning the lottery. These data are discussed in more depth in Section 5.4.

To further test the validity of our identification strategy we exclude all individuals who played the same number multiple times on the same lottery card. Doing so removes the 20 percent of lottery winners in our sample who received more than the minimum amount won on a given date. For example, an individual who matched five of five numbers one time on December 10, 2002 won $71,662.70 and was kept in the dataset for this robustness check. However, an individual who played two times ($2) on the same card and won twice by playing the same four or five numbers two times was excluded.

As shown in the fourth column of Table 5, this exclusion makes little difference. This suggests that the results are not driven by the variation in the sample that could potentially be correlated with other determinants of financial outcomes.

Finally, we examine whether differential exposure of large and small winners to bankruptcy reform is driving the results. The Bankruptcy Abuse Prevention and Consumer Protection Act (BAPCPA) reform was signed on April 20, 2005 and went into effect on October 17, 2005. In anticipation of the change, bankruptcy filings increased beginning in March of 2005 and peaked in October before the law went into effect. While we would expect that year fixed effects would control for much of the effect of bankruptcy reform, we also construct two control variables that capture exposure to these effects more precisely. The first measures the number of months during the time period in question in which the individual faced a greater incentive to file for bankruptcy given the expectation that BAPCPA would take effect. The second control variable measures the number of months during the time period in question in which the lottery winner faced a reduced probability of filing for bankruptcy due to the tougher bankruptcy laws. For example, an individual who won on June 1 of 2001 was exposed to all 7.5 months (from March 1 of 2005 through October 16, 2005) in which consumers expected a tougher bankruptcy law in the future and 7.5 months facing the new bankruptcy law (from October 17, 2005 when the new law went into effect through May 31, 2006, exactly five years after winning).

Results are shown in the fifth column of Table 5 and are consistent with the findings in column (1). Together with results from columns (2) through (4), this implies that the results are unaffected by the choice of control group, the exclusion of individuals who played identical numbers multiple times on a card (and thus won more money), and bankruptcy reform. In addition, in results available upon request we find that similar estimates result when estimating the effect of the cash transfers using a probit instead of ordinary least squares.[7]

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[7] Specifically, marginal effects from probit estimations indicate that large winners are 1.3 percentage points (p=0.000) less likely to file within 2 years of winning and are 1.16 percentage points (p=0.117) more likely to file 3 to 5 years afterward.

5.4 The Effect of Lottery Winnings on Debt and Expenditures at Bankruptcy

Given the similarity in the bankruptcy rates between large and small winners in the five years after winning, we also investigate whether the groups have similar levels of debt upon filing for bankruptcy. For example, even if winning up to $150,000 does not affect the decision to file for bankruptcy, it may be that those individuals who file for bankruptcy have less debt than those who won less than $10,000. Consequently, we obtained data on cases filed after 2004 for which the details of the bankruptcy were available electronically. Specifically, we retrieved data for a random sample of people who won less than $5,000 and 1) filed in the year prior to winning, or 2) filed zero to two years after winning, or 3) filed three to five years after winning. In addition, we retrieved and coded data from the case filings of all recipients of more than $25,000 who filed after 2004 and for whom the filing was either one year *before* winning, zero to two years after winning, or three to five years after winning. We wish to emphasize that many of these lottery winners were not in our original dataset since we could only acquire detailed data for cases filed after 2004.

The descriptive statistics for this sample of individuals are shown in Table 6. Panel A shows that there is no statistical difference between the assets, debts, incomes, and expenditures of large and small winners who filed for bankruptcy *before* winning the lottery. This is consistent the results from Table 3 that show the two groups are otherwise similar in terms of their underlying financial condition and their propensity to file for bankruptcy.

Panel B shows the assets and debts of large and small winners who filed in the two years after winning. It shows that the large winners who filed had over $20,000 less in net assets (assets minus debts) than did small winners. Furthermore, among those lottery winners who reported types of debt incurred, large winners who filed within two years after winning owed $27,000 more in unsecured debt than did small winners. This suggests that the large winners who did not postpone bankruptcy were those who had the most debt.

Panel C shows the assets and debts of large and small winners who filed between three and five years after winning. Over this time period, the large winners who filed had incurred less debt than small winners, which again is consistent with the interpretation that some of these individuals had postponed bankruptcy.

Finally, Panel D of Table 6 shows the characteristics of all lottery winners who filed for bankruptcy within five years after winning. There, it is striking that the net assets of individuals who had won between $25,000 and $150,000 were only $10,000 higher than those of people who won less than $5,000. Furthermore, small winners reported having $63,447 in unsecured

debt while large winners reported having $57,361 in unsecured debt.[8] This suggests that whatever the recipients did with their cash, they did not use it to either pay down debt or increase their assets.

This also means that we find little evidence that lottery winners took advantage of the unlimited homestead exemption in Florida bankruptcy law, since records show that large winners do not pay down their mortgage or buy new real estate. While this result may surprise some economists, it did not surprise the bankruptcy lawyers with whom we spoke[9] and is consistent with other evidence more supportive of a notion of bounded rationality among lottery players (Guryan and Kearney, 2008).

The finding that indebted individuals consume the cash they receive is roughly consistent with that of Agarwal, Liu, and Souleles (2007) who find that although consumers initially used federal rebate checks to reduce debt, eventually debt levels returned to their pre-rebate levels. The fact that the same appears to be true even when consumers receive vastly larger cash transfers is, however, striking.

5.5 Attrition

As noted earlier, individuals were linked to bankruptcy based on first and last name as well as county of residence.   Given this approach, attrition will cause a problem for identification under two conditions: 1) the amount won is correlated with propensity to move out of the county, and 2) some of the individuals who moved out of the county on the basis of amount won filed for bankruptcy in the next five years.   In other words, if migration is orthogonal to amount won, then there will be no bias. Similarly, if none of the individuals who move out of the county file for bankruptcy, then there is no error in who is ultimately matched to a bankruptcy.

Migration is perhaps less likely to be an issue in Florida than in other states for two reasons. First, counties in Florida represent relatively large geographic areas. For example, the average county in Florida (by population) is 1,866 square miles, or more than six times the size of New York City.[10] In addition, Florida is a net in-migration state over this time period. Consequently, one might expect that exiting the county after winning $50,000 to $150,000 would be less likely in Florida than it would be in other states.

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[8] We note that not all bankruptcy cases reported unsecured and secured debt separately.

[9] One in particular commented that this type of behavior is so unlikely that "only economists would be concerned about that."

[10] Sources: www.fl-counties.com and www.census.gov/popest.

We can offer an empirical test of whether receiving large amounts of cash causes people to leave the county. Specifically, we examine whether the amount won is correlated with the likelihood that the individual will be found in the 2008 phone book 1, 2, 3, 4, 5, and 6 years after winning. While this is clearly an imperfect test due to the fact that some households no longer have landlines, some individuals in a household with a landline are not listed in the phone book, and winning the lottery could potentially enable individuals to afford a landline, we would argue that the exercise is instructive nonetheless. One might especially be concerned if large winners were much less likely to show up in the phone book in the first two years after winning the lottery, but then were much more likely to show up in the phonebook three to five years after winning. In that case, one might worry that the results were being driven by selective migration out of the county.

The results from this exercise (available upon request) show no evidence of such a pattern. Specifically, we find that large winners were a statistically insignificant 3.0 percentage points more likely to show up in the phone book within two years of winning the lottery relative to small winners, of whom 30.4 percent were listed in the county phone book. The difference in years three through five is a similarly insignificant 3.1 percentage points. Collectively, this provides suggestive evidence that the pattern seen in bankruptcy rates is not driven by selective migration out of the county.

6. Conclusion

We investigate the extent to which receiving large lump sums of cash affect bankruptcy in the short- and long-term. To distinguish the effect of the transfer from other confounding factors, we compare lottery players who won between $10,000 and $50,000 or between $50,000 and $150,000 to those who won less than $10,000. Consistent with the identifying assumption that the magnitude of the prize won is randomly assigned conditional on winning, we find no statistical difference between these groups' bankruptcy rates prior to winning or in the assets, debts, incomes, or expenditures of those winners who did file prior to winning the lottery.

The results indicate that while the lump-sum payments reduce the probability of bankruptcy in the first two years after winning in an economically and statistically significant way, this reduction is followed by statistically significant increases of similar magnitude three to five years after winning. This is true despite the fact that the most indebted recipients could have used the cash to pay off all of their unsecured debt. Furthermore, a deeper examination of the bankruptcy filings shows that not only are the rates of bankruptcy not different overall, but recipients of $25,000 to $150,000 who later filed for bankruptcy did so with similar levels of net assets and unsecured debt. This provides compelling evidence that receiving large cash transfers only enables individuals to postpone rather than prevent bankruptcy. Consequently,

while we cannot be sure that homeowners or other beneficiaries of government aid would respond in the same way lottery winners did, the results may warrant some skepticism about the long-term efficacy of such a bailout.

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Table 1: The Sample of Unique, First-Time Lottery Winners in Florida from May 1993 – December 2002

Amount	All Fantasy 5 Winners		Unique in Phone Book		First Time Winners	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
<$1,000	8,494	15.08	5,670	14.56	4,888	13.93
$1,000 - $2,500	15,239	27.06	10,190	26.17	8,657	24.68
$2,500 - $5,000	413	0.73	295	0.76	274	0.78
$5,000 - $7,500	577	1.02	404	1.04	373	1.06
$7,500 - $10,000	728	1.29	513	1.32	476	1.36
$10,000 - $15,000	3,028	5.38	2,144	5.51	1,964	5.60
$15,000 - $20,000	5,682	10.09	4,038	10.37	3,760	10.72
$20,000 - $25,000	6,298	11.18	4,460	11.45	4,177	11.91
$25,000 - $30,000	5,418	9.62	3,836	9.85	3,610	10.29
$30,000 - $35,000	3,911	6.95	2,764	7.10	2,583	7.36
$35,000 - $40,000	2,183	3.88	1,582	4.06	1,499	4.27
$40,000 - $45,000	1,446	2.57	1,042	2.68	975	2.78
$45,000 - $50,000	802	1.42	574	1.47	539	1.54
$50,000 - $60,000	837	1.49	553	1.42	512	1.46
$60,000 - $70,000	393	0.70	287	0.74	271	0.77
$70,000 - $80,000	209	0.37	150	0.39	134	0.38
$80,000 - $90,000	124	0.22	77	0.20	69	0.20
$90,000 - $100,000	130	0.23	90	0.23	79	0.23
$100,000 - $150,000	248	0.44	167	0.43	147	0.42
Total	56,160	100	38,836	100	34,987	100

Table 2: Lottery Players Linked to Bankruptcy Cases

Amount Won	Within 2 Years			Between 3 & 5 Years			Within 5 Years		
	No Bankruptcy	Bankruptcy	% Bankruptcy	No Bankruptcy	Bankruptcy	% Bankruptcy	No Bankruptcy	Bankruptcy	% Bankruptcy
<$1,000	4,742	146	2.99	4,767	121	2.48	4,621	267	5.46
$1,000 - $2,500	8,367	290	3.35	8,399	258	2.98	8,109	548	6.33
$2,500 - $5,000	264	10	3.65	264	10	3.65	254	20	7.30
$5,000 - $7,500	367	6	1.61	357	16	4.29	351	22	5.90
$7,500 - $10,000	467	9	1.89	462	14	2.94	453	23	4.83
$10,000 - $15,000	1,937	27	1.37	1,886	78	3.97	1,859	105	5.35
$15,000 - $20,000	3,705	55	1.46	3,628	132	3.51	3,573	187	4.97
$20,000 - $25,000	4,112	65	1.56	4,026	151	3.62	3,961	216	5.17
$25,000 - $30,000	3,554	56	1.55	3,474	136	3.77	3,418	192	5.32
$30,000 - $35,000	2,548	35	1.36	2,494	89	3.45	2,459	124	4.80
$35,000 - $40,000	1,476	23	1.53	1,433	66	4.40	1,410	89	5.94
$40,000 - $45,000	959	16	1.64	946	29	2.97	930	45	4.62
$45,000 - $50,000	532	7	1.30	514	25	4.64	507	32	5.94
$50,000 - $60,000	507	5	0.98	493	19	3.71	488	24	4.69
$60,000 - $70,000	269	2	0.74	255	16	5.90	253	18	6.64
$70,000 - $80,000	132	2	1.49	129	5	3.73	127	7	5.22
$80,000 - $90,000	69	0	0.00	66	3	4.35	66	3	4.35
$90,000 - $100,000	77	2	2.53	75	4	5.06	73	6	7.59
$100,000 - $150,000	146	1	0.68	142	5	3.40	141	6	4.08
Total	34,230	757	2.16	33,810	1,177	3.36	33,053	1,934	5.53

Table 3: Falsification Test: The Effect of *Later* Winning the Lottery on Bankruptcy Rates

	(1)	(2)	(3)	(4)
Panel 1	**Bankruptcy Rate in the 2 Years *prior* to Winning**			
Won $10,000 - $50,000	-0.0061***	-0.0011	-0.0028	-0.0006
	(0.0015)	(0.0035)	(0.0031)	(0.0036)
Won $50,000 - $150,000	0.0002	0.0037	0.0026	0.0041
	(0.0041)	(0.0046)	(0.0045)	(0.0046)
Panel 2	**Bankruptcy Rate 3 to 5 Years *prior* to Winning**			
Won $10,000 - $50,000	-0.0134***	0.0024	0.0043	0.0041
	(0.0016)	(0.0039)	(0.0033)	(0.0039)
Won $50,000 - $150,000	-0.0123***	-0.0013	-0.0001	-0.0002
	(0.0044)	(0.0051)	(0.0049)	(0.0051)
Panel 3	**Bankruptcy Rate in the 5 Years *prior* to Winning**			
Won $10,000 - $50,000	-0.0195***	0.0013	0.0015	0.0035
	(0.0022)	(0.0052)	(0.0045)	(0.0052)
Won $50,000 - $150,000	-0.0121**	0.0024	0.0025	0.0039
	(0.0060)	(0.0068)	(0.0066)	(0.0068)
Number of Observations	34,987	34,987	34,987	34,987
Controls for Change in Game Structure?	No	Yes	No	Yes
Includes year fixed effects?	No	No	Yes	Yes

Effects reported are relative to winning less than $10,000. Asterisks *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 4: The Effect of Winning the Lottery on Bankruptcy Rates

	(1)	(2)	(3)	(4)
Panel 1	**Bankruptcy Rate within 2 Years after Winning**			
Won $10,000 - $50,000	-0.0166***	-0.0086**	-0.0106***	-0.0087**
	(0.0016)	(0.0038)	(0.0033)	(0.0038)
Won $50,000 - $150,000	-0.0215***	-0.0160***	-0.0176***	-0.0163***
	(0.0043)	(0.0050)	(0.0048)	(0.0050)
Panel 2	**Bankruptcy Rate 3 to 5 Years after Winning**			
Won $10,000 - $50,000	0.0084***	0.0040	0.0081**	0.0050
	(0.0020)	(0.0047)	(0.0041)	(0.0047)
Won $50,000 - $150,000	0.0143***	0.0113*	0.0143**	0.0121**
	(0.0054)	(0.0062)	(0.0059)	(0.0062)
Panel 3	**Bankruptcy Rate within 5 Years after Winning**			
Won $10,000 - $50,000	-0.0082***	-0.0046	-0.0025	-0.0036
	(0.0025)	(0.0059)	(0.0051)	(0.0060)
Won $50,000 - $150,000	-0.0072	-0.0047	-0.0034	-0.0042
	(0.0068)	(0.0078)	(0.0075)	(0.0078)
Number of Observations	34,987	34,987	34,987	34,987
Controls for Change in Game Structure?	No	Yes	No	Yes
Includes year fixed effects?	No	No	Yes	Yes

Effects reported are relative to winning less than $10,000. Asterisks *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 5: Robustness Checks

	(1)	(2)	(3)	(4)	(5)
Panel 1	Bankruptcy Rate within 2 Years after Winning				
Won $10,000 - $50,000	-0.0087**	-0.0116*	-0.0035**	-0.0087**	-0.0087**
	(0.0038)	(0.0067)	(-0.0018)	(0.0038)	(0.0038)
Won $50,000 - $150,000	-0.0163***	-0.0184***	-0.0100***	-0.0163***	-0.0163***
	(0.0050)	(0.0064)	(0.0031)	(0.0050)	(0.0050)
Panel 2	Bankruptcy Rate 3 to 5 Years after Winning				
Won $10,000 - $50,000	0.0050	0.0117	0.0042**	0.0040	0.0053
	(0.0047)	(0.0084)	(0.0022)	(0.0051)	(0.0047)
Won $50,000 - $150,000	0.0121**	0.0171**	0.0105**	0.0073	0.0122**
	(0.0062)	(0.0080)	(0.0053)	(0.0068)	(0.0062)
Panel 3	Bankruptcy Rate within 5 Years after Winning				
Won $10,000 - $50,000	-0.0036	0.0002	0.0007	-0.0045	-0.0034
	(0.0060)	(0.0106)	(0.0028)	(0.0065)	(0.0060)
Won $50,000 - $150,000	-0.0042	-0.0014	0.0006	-0.0080	-0.0041
	(0.0078)	(0.0101)	(0.0061)	(0.0086)	(0.0078)
Excluded Group	<$10,000	<$2,500	<$1,000	<$10,000	<$10,000
Sample	All Fantasy 5 Winners	All Fantasy 5 Winners	All Fantasy 5 and Florida Lotto Winners	Only Fantasy 5 Winners Who Played the Same Number Once Per Card	All Fantasy 5 Winners
Controls for quadratic of the months of exposure to bankruptcy reform?	No	No	No	No	Yes
Number of Observations	34,987	34,987	164,268	29,271	34,987

Each column controls for year fixed effects and the change in the structure of the Fantasy 5 game. Column (3) also includes game fixed effects. Estimates reported in column (1) are the same as those reported in column (4) of Table 4. Column (5) includes a quadratic of the months exposed to the anticipation of bankruptcy reform during March 1, 2005 through October 16, 2005 as well as a quadratic of the months exposed to the new bankruptcy law which took effect on October 17, 2005. Robust standard errors are in parentheses. Asterisks *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 6: Debts, Assets, Expenditures, and Income of Lottery Winners Who File for Bankruptcy

Panel A: Filed prior to Winning

	Prize ≤ $5000	Prize $25,000-150,000	Difference
Total Debt ($)	111,061	120,888	9,827
Total Assets ($)	75,022	100,127	25,104
Net Assets ($)	-36,039	-20,761	15,278
Current Monthly Income ($)	2,171	2,230	59
Current Monthly Expenditures ($)	2,378	2,403	26
N	36	17	

Panel B: Filed within 2 Years after Winning

	Prize ≤ $5000	Prize $25,000-150,000	Difference
Total Debt ($)	129,963	160,895	30,932
Total Assets ($)	108,884	119,238	10,354
Net Assets ($)	-21,078	-41,656	-20,578
Current Monthly Income ($)	2,484	2,629	144
Current Monthly Expenditures ($)	2,517	3,244	726*
N	50	14	

Panel C: Filed between 3 and 5 Years after Winning

	Prize ≤ $5000	Prize $25,000-150,000	Difference
Total Debt ($)	156,786	82,312	-74,474***
Total Assets ($)	135,696	85,695	-50,001**
Net Assets ($)	-21,091	3,383	24,474**
Current Monthly Income ($)	2,275	1,771	-504*
Current Monthly Expenditures ($)	2,708	2,187	-521*
N	53	33	

Panel D: Filed between 0 and 5 Years after Winning

	Prize ≤ $5000	Prize $25,000-150,000	Difference
Total Debt	143,890	105,720	-38,171**
Total Assets	122,680	95,687	-26,994
Net Assets	-21,210	-10,033	11,177
Monthly Income	2,381	2,016	-365*
Monthly Expenditures	2,612	2,489	-123
N	103	47	

Notes: Each Panel shows average dollar amounts of current monthly income, current monthly expenditures, total debt, total assets, and net assets at the time of bankruptcy filing for winners in Florida's Fantasy 5 lottery game. * , ** and *** represent significant difference in means of large and small winners at the 10%, 5% and 1% levels, respectively. Total assets may not equal unsecured debt plus secured debt because each of the bankruptcy districts in FL use different forms to consolidate debt and asset information. Source: PACER.

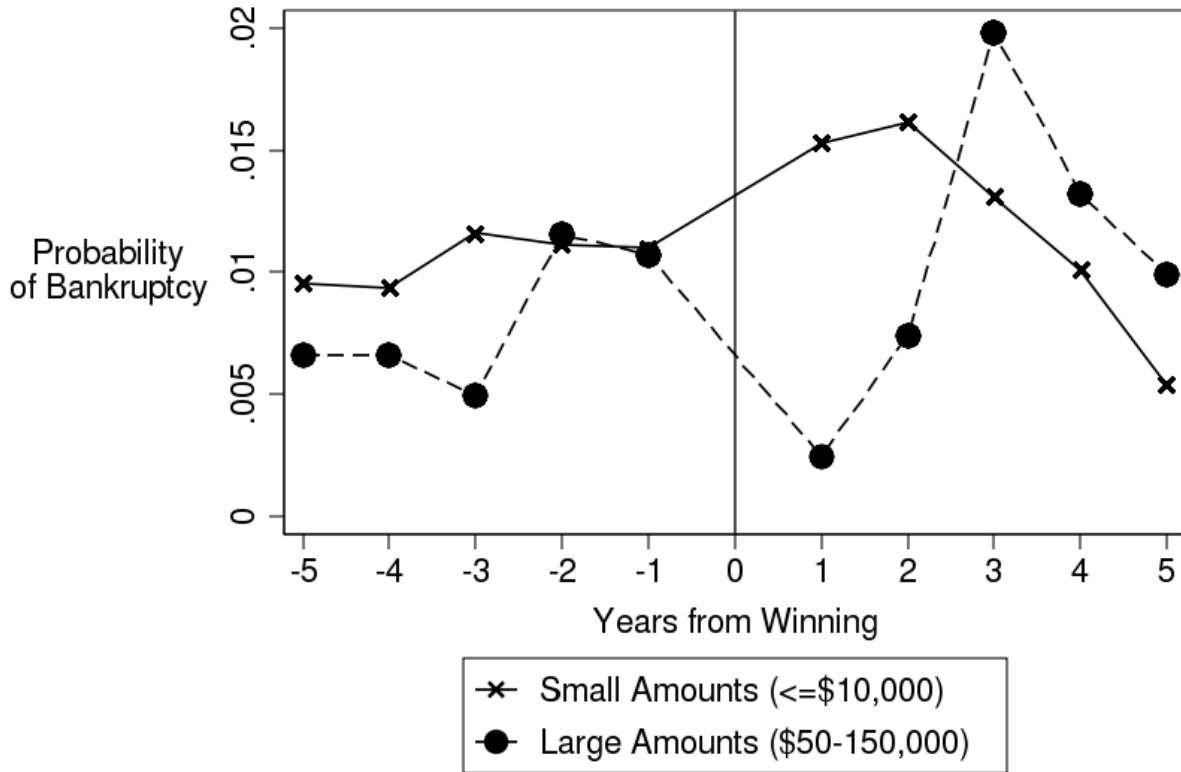Figure 1a: Flows into Bankruptcy Before and After Winning the Lottery

Figure 1b: Flows into Bankruptcy Before and After Winning the Lottery (After Removing Year Fixed Effects)
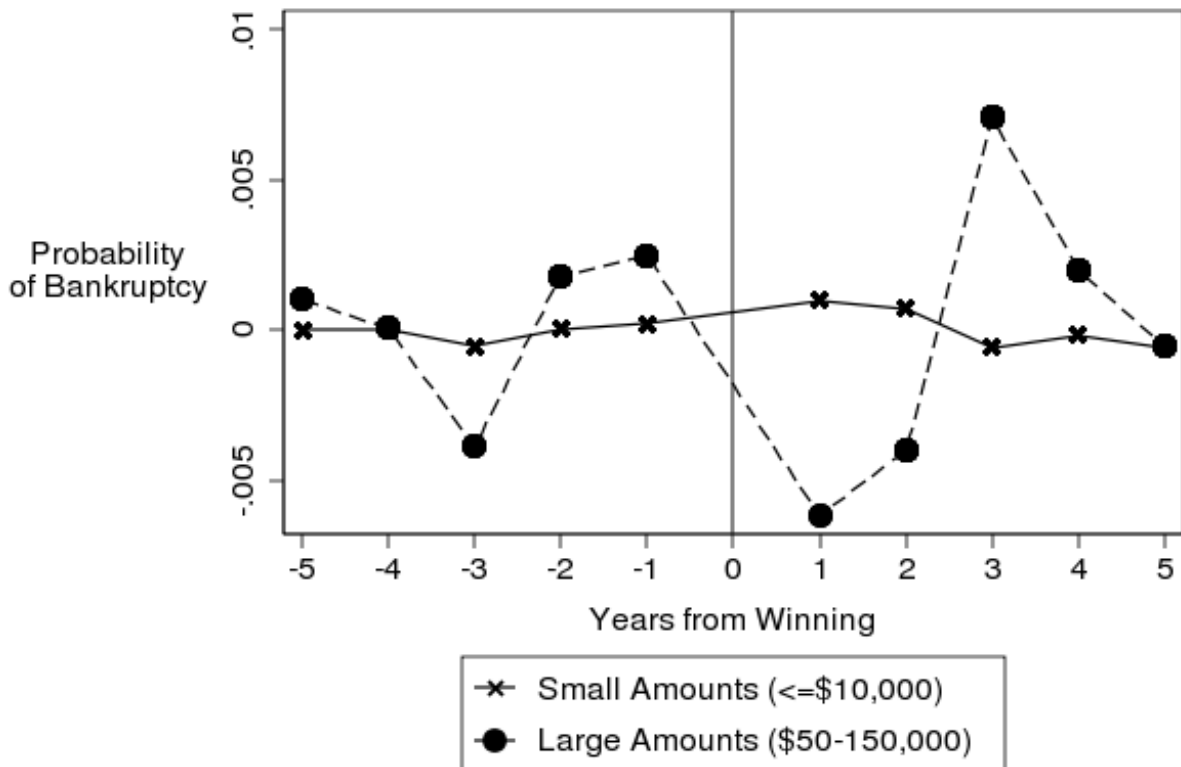
Figure 2: Bankruptcy Rates in the First 2 Years after Winning the Lottery
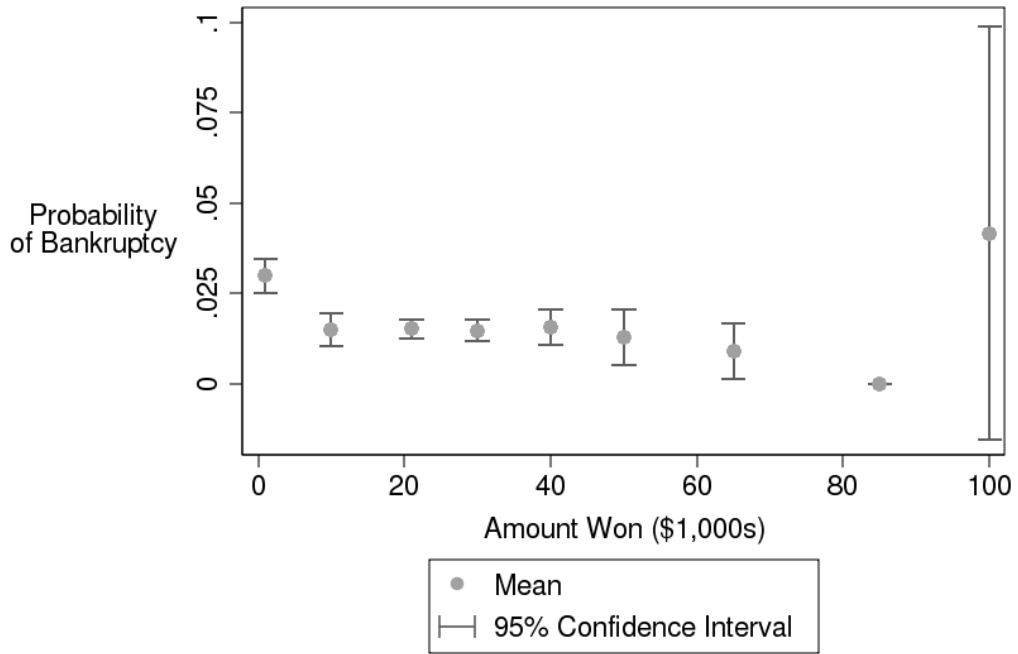

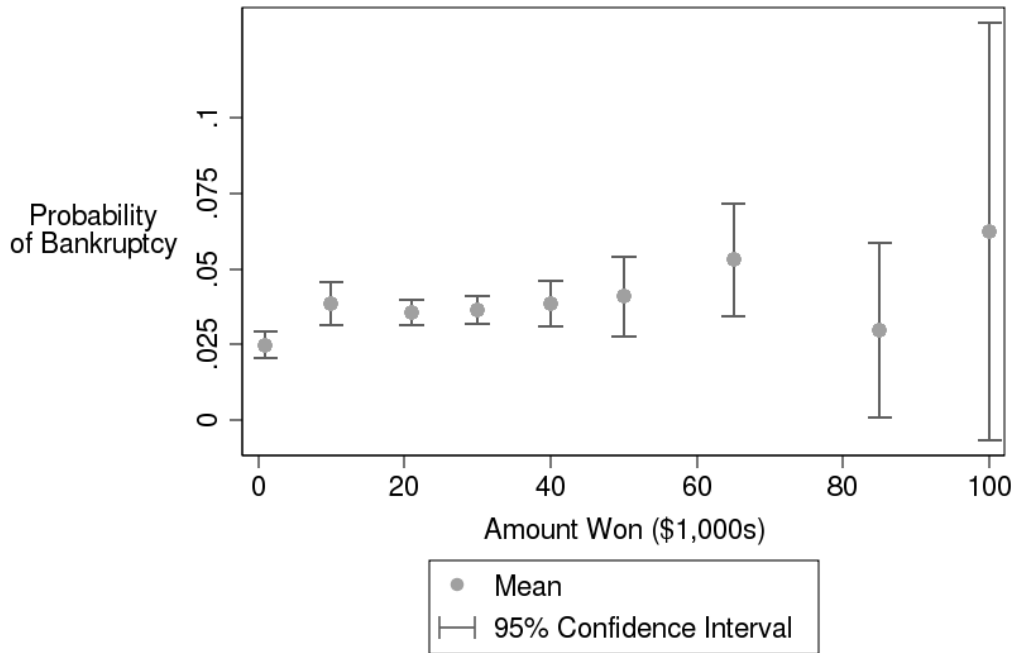Figure 3: Bankruptcy Rates 3 to 5 Years After Winning the Lottery

Figure 4: Bankruptcy Rates in the 5 Years After Winning the Lottery