Behavioral Aspects of Financial Decision Making

FDIC 5th Annual Consumer Research Symposium

October 15 2015

Overview

- Both studies examine behavior in light of a naturally occurring experiment:
  - "Identity Theft as a Teachable Moment"—
    The effect of realizing one's identity was stolen.
  - "Knowing When to Quit"—
    The effect of court assignment into either subscription cancellation as default or subscription continuation as default.

Behavioral Aspects?

– **Identity Theft as a Teachable Moment"—**

The study, examining the effect of identity theft on future financial consequences, is not behavioral per-se.

The results show an unintended *positive* consequence on low SES individuals.

→This is difficult to explain with usual machinery. One way to explain this is that the event increased *attention*.

Contribution: ID theft can be thought of as a <u>strong reminder</u>.

Behavioral Aspects?

– **“Knowing When to Quit”—**

The goal of this study is to measure the effect of defaults on subscription cancellation.

→This study is a direct measure of the effects of defaults which, according to the standard model, should not play a role.

Contribution: while default were shown to affect behavior in other context, this paper explores default effects in an environment where the optimal action is known.

Identity Theft as a Teachable Moment

- Goal: To examine financial behavior and outcomes post realizing ID theft.

- Measure of ID Theft:
  - Extended fraud alert on credit report.
  - This remains on the report for 7 years; during the first 5 years prescreened credit and insurance offers are banned.
  - Further proxy of severity of the ID theft is address change at the alert quarter. This is often the case when there are attempts to open fraudulent accounts.

Identity Theft as a Teachable Moment

- Empirical Strategy:
  - Using propensity score—the probability of being assigned to the "treatment" group—to match similar individuals that ended up not being subject to ID theft.
  - Propensity score calculated based on a year lag measures.
  - Compare behavior (credit score, number of accounts in collection, number of inquiries, etc.) of treated vs. matched-control groups, splitting analysis by prime status.

Identity Theft as a Teachable Moment

- Results:
  - Reported by prime(>660) and subprime(≤660) consumers
    - **Prime:** no significant difference after the alert
    - **Subprime:** significant increase in risk/credit scores, fewer accounts in collection, but higher number of inquiries.

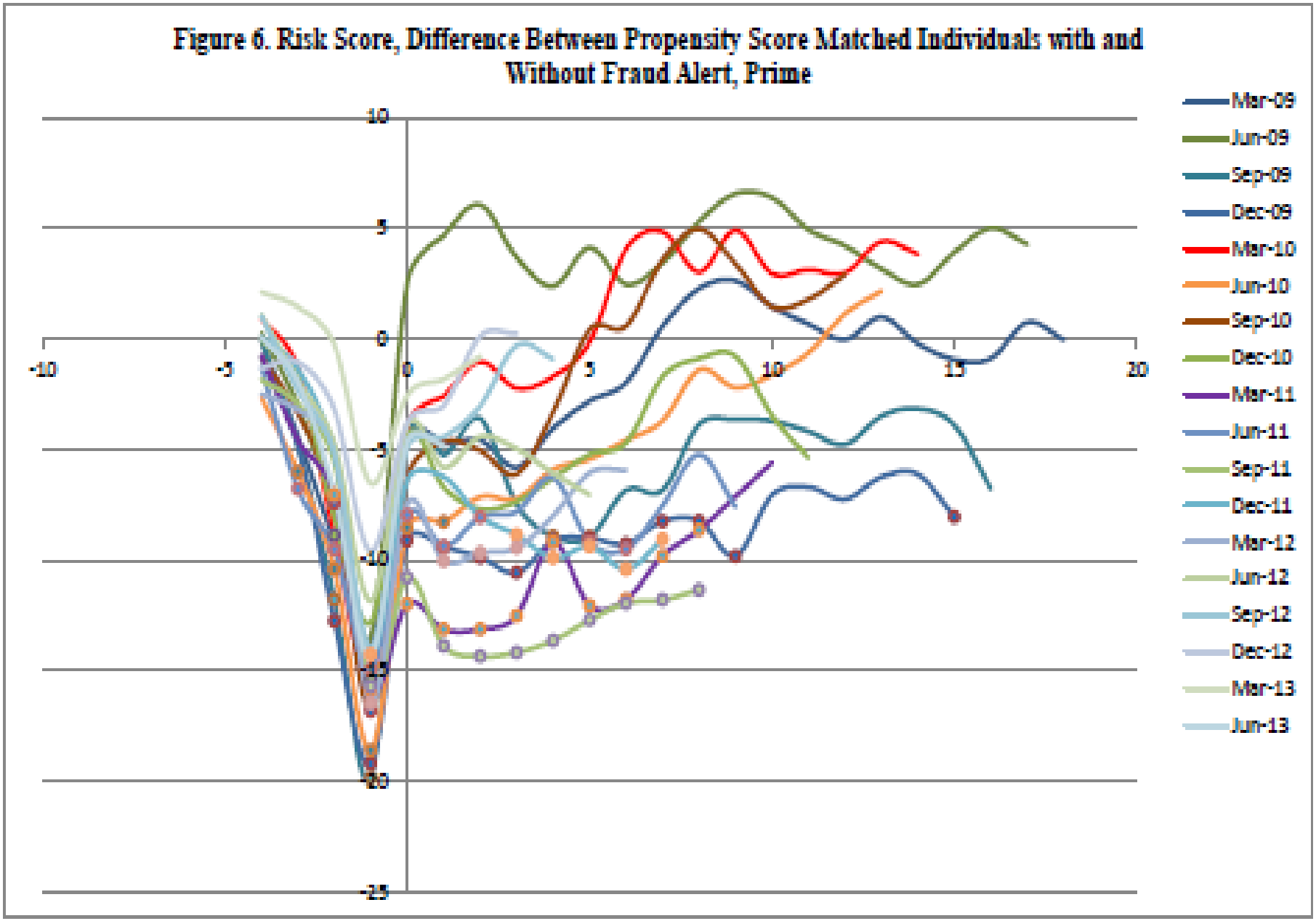
Figure 6. Risk Score, Difference Between Propensity Score Matched Individuals with and Without Fraud Alert, Prime
10
5
0
-5
-10
-15
-20
-25
-10
-5
0
5
10
15
20
Mar-09
Jun-09
Sep-09
Dec-09
Mar-10
Jun-10
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Jun-13

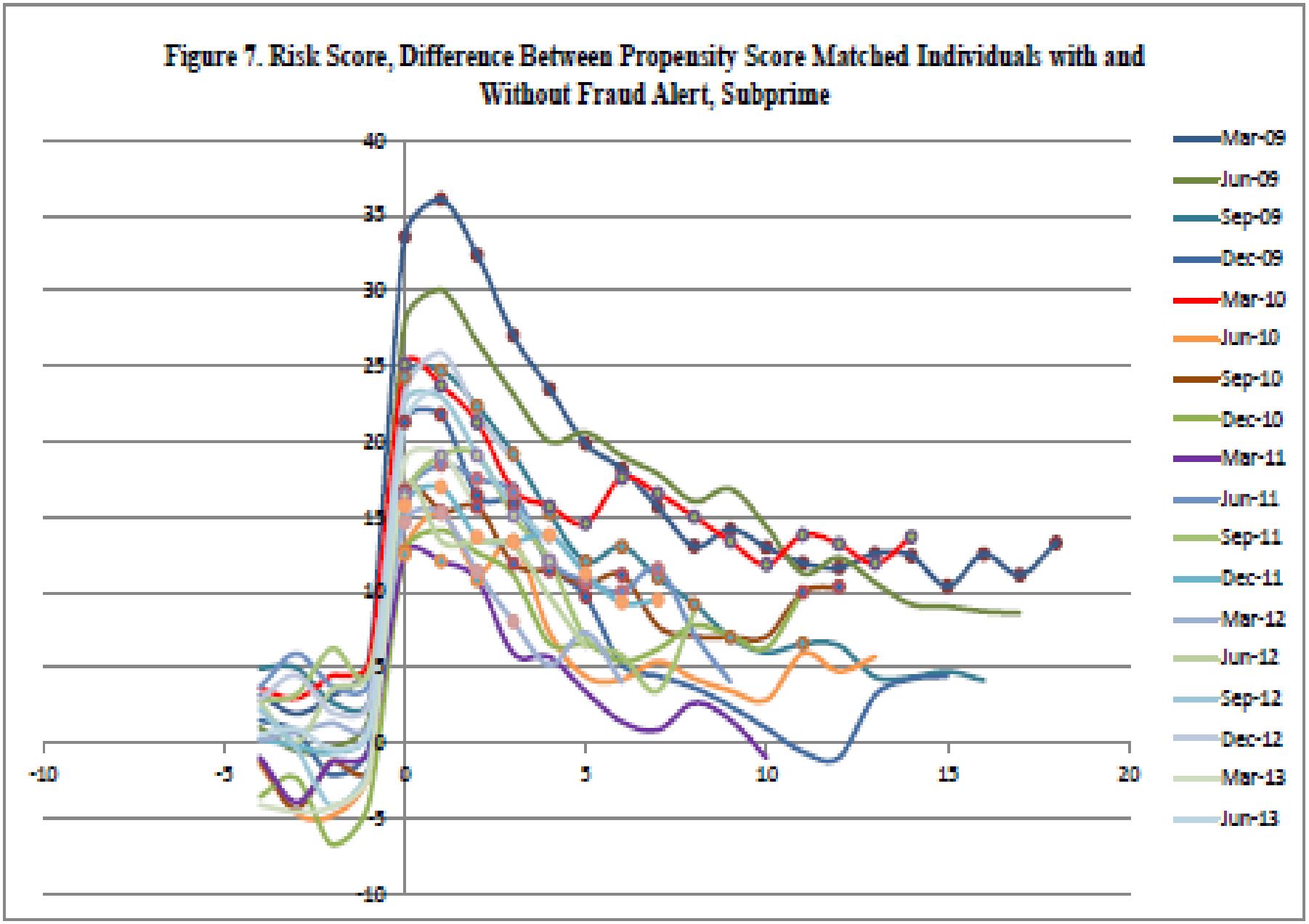


Figure 7. Risk Score, Difference Between Propensity Score Matched Individuals with and Without Fraud Alert, Subprime
40
35
30
25
20
15
10
5
0
-5
-10
-10
-5
0
5
10
15
20
Mar-09
Jun-09
Sep-09
Dec-09
Mar-10
Jun-10
Sep-10
Dec-10
Mar-11
Jun-11
Sep-11
Dec-11
Mar-12
Jun-12
Sep-12
Dec-12
Mar-13
Jun-13

Identity Theft as a Teachable Moment

- Comments:
  - At the core of the study is the comparison of individuals in the treatment vs. matched-control groups.
  - If the effect is truly of inattention, and the ID theft event act as a reminder, it may be the case that individuals were subjects to fraud long before the alert, even more than a year or two.
    - Inattentive prime individuals may be compared to subprime individuals (in the control)
    - One robustness check shows that less attentive consumers (those w/o inquiry 6 months prior), experience a larger effect. This is consistent with the possibility of a mismatch.

Identity Theft as a Teachable Moment

- Comments:
  - Results using matching based on measures 8 quarters after the alert show that immediately after the alert the treatment group is similar to the control, but before the alert the treatment group has significantly lower scores. That is consistent with a story of mismatch of types.
- Suggestions:
  - It may be more appropriate to compare those who file other, less involved, forms of alert to a match-control. Since these people probably did not end up having ID theft, but the suspicion did increase their attention.

Identity Theft as a Teachable Moment

- Suggestions:
  - Maybe it is possible to identify identity theft in the data that is not yet flagged—such as a sudden reduction in score along with change in address and increase in collection a few quarters later that is out of the ordinary—and match these individuals to the treatment group?
  - Lastly, by filing a report to put on alert, these individuals may not only be paying more attention, but they reveal that they are also action-minded people.

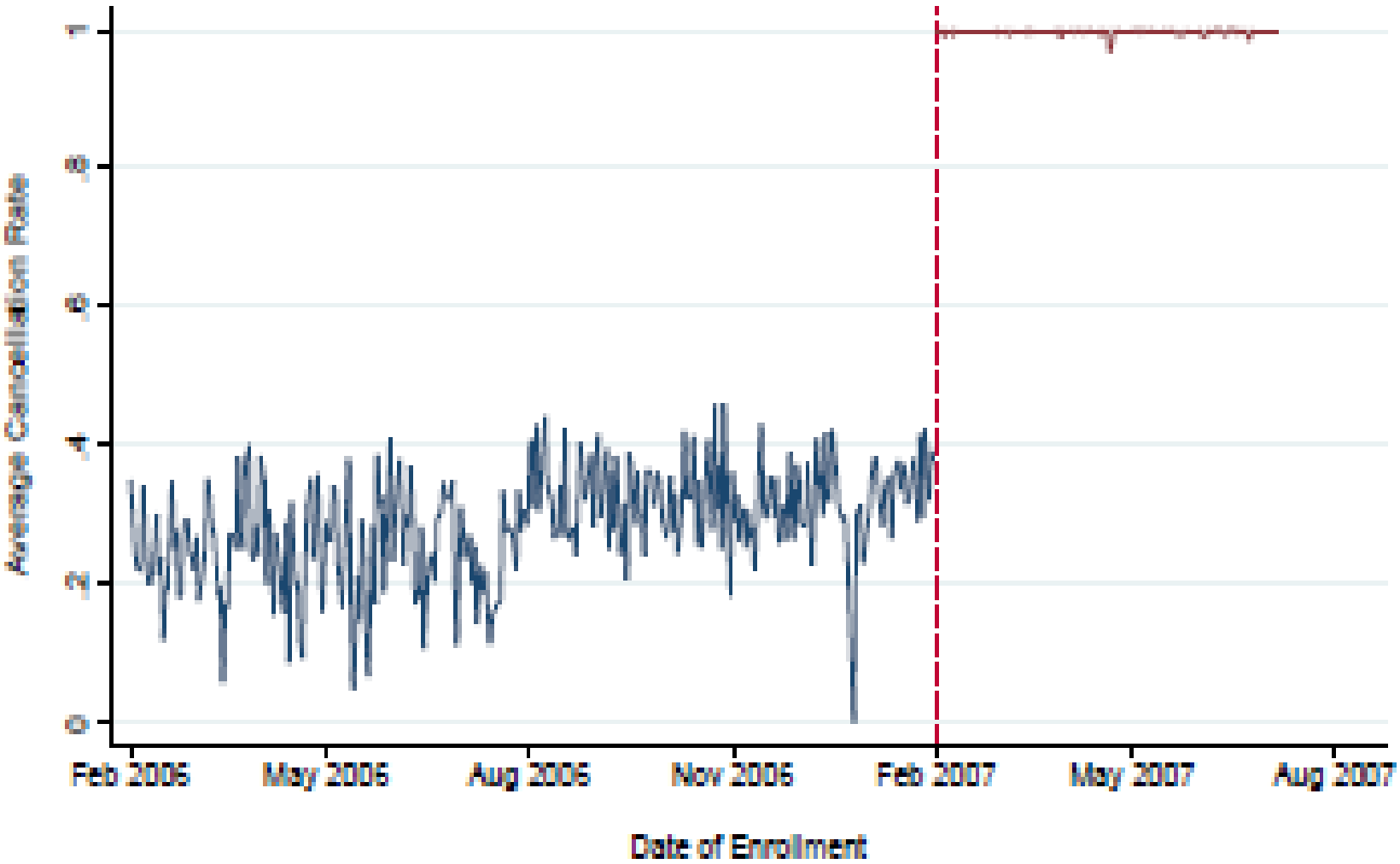
Knowing When to Quit:
Default Choices, Demographics and Fraud

- Goal: Examine the effect of default on behavior in a naturally occurring experiment in the case of Suntasia Marketing.

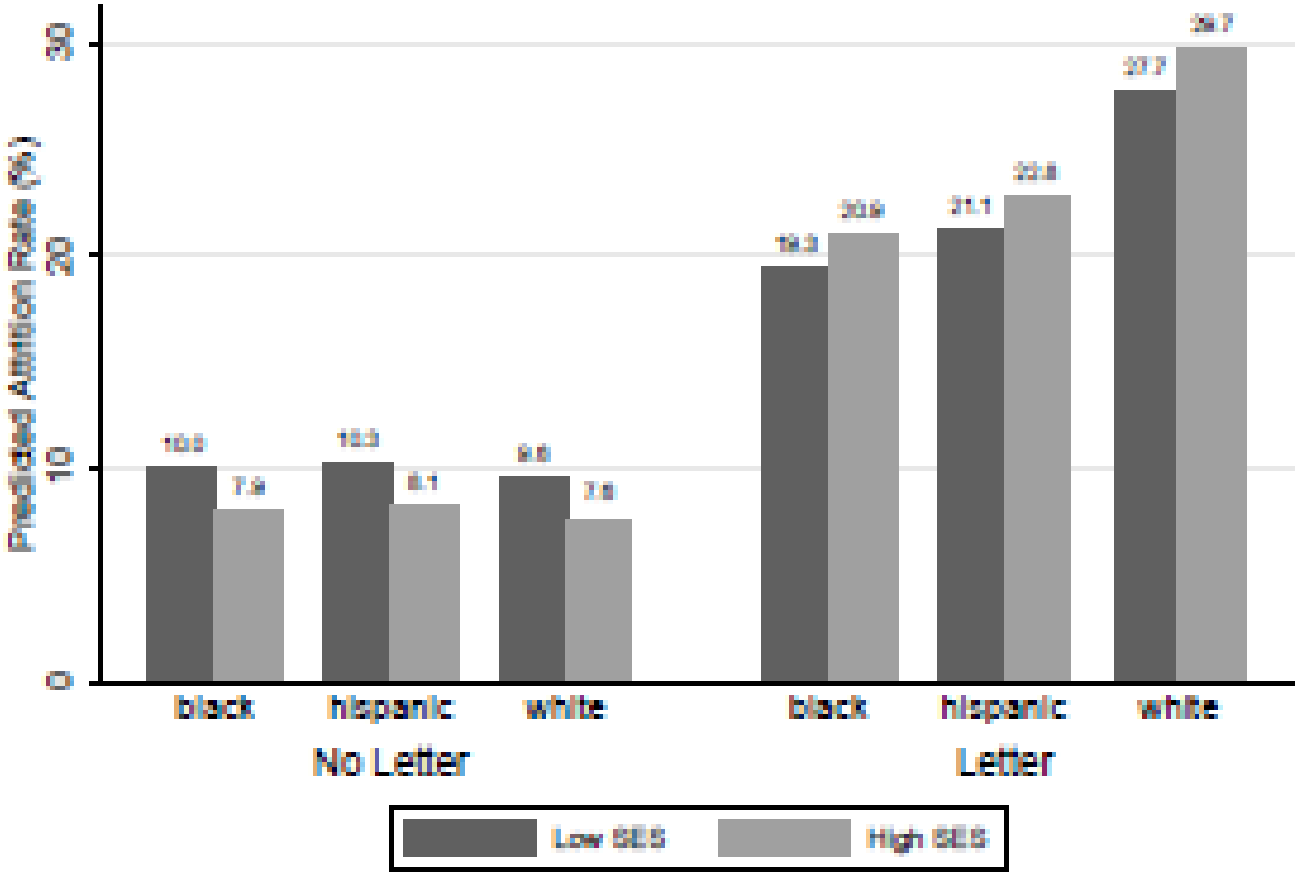
- Measure:
  - Rate of subscriptions cancellation by the type of default , where the default was determined by the court.

Knowing When to Quit:
Default Choices, Demographics and Fraud

- Details:
  - In Feb 2008, while FTC vs. Suntasia case was in court the firm was allowed to resume operations under the condition that:
    - Those who enrolled before Feb 1, 2007 will be sent an "Enrollment Letter". **The default is to stay enrolled**
    - Those who enrolled after Feb 1 2007 will be sent a "Cancellation Letter". **The default is to cancel subscription.**



Note: Excludes customers who enrolled after February 1 2007 and received notification of enrollment letters


Predicted Attrition Rate (%)
0
10
20
30
10.0
7.9
10.3
8.1
9.6
7.6
19.3
20.9
21.1
22.8
27.7
29.7
black
hispanic
white
black
hispanic
white
No Letter
Letter
Low SES
High SES

Knowing When to Quit:
Default Choices, Demographics and Fraud

- Contribution:
  - Unlike in previous studies showing the effect of defaults, there is no ambiguity of what is the optimal decision for the individual.
  - Hence, it shows that even in a very simple decision making environment, where optimal action is clear, defaults still have a very strong effect.
  - …and much more effective than an alternative that requires taking only a very easy action.

Knowing When to Quit:
Default Choices, Demographics and Fraud

- Comments:
  - The hazard rate is such that most people cancel in the first two months.
  - Hence, the studied group of individuals may be different than the overall population.
    - Possibly the estimated effect is exaggerated.
    - The others may have been more responsive taking an action followed by an “Enrollment” letter.

Knowing When to Quit:
Default Choices, Demographics and Fraud

– Staying enrolled for so long may be for very different reasons for low SES and high SES:

- Low SES: may stay enrolled because they did not understand that they can cancel; a letter mentioning a lawsuit could confuse some of them further, reducing their chance of cancellation

- High SES: may stay enrolled since they do not pay attention. If this is indeed case, the enrollment letter would lead to higher cancellation rate among this group

- Can you think of measures of attention? If available, the number of accounts cancelled may be helpful.