Savings Account Ownership During the Great Recession

By

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Financial Vulnerability

- Families most affected by the Great Recession had:
  - Lower income or less wealth
  - Fewer years of education or lost employment
  - Larger families
- 63% of all households lost wealth
- 44% of all households do not have enough liquid savings to cover a least 3 months worth of expenses
- 25% of all middle-income households do not have at least 3 months worth of expenses in liquid savings

Financial Stability Through Saving

- Owning a basic savings account facilitates saving in a safe way on a regular basis, especially for families with limited liquidity
- Basic savings accounts serve as a pathway to other more sophisticated savings and investment products that contribute to a family's economic mobility
- Consumer groups, educators, local community leaders, and policymakers support savings-related initiatives because of the asset and wealth building opportunities to families

Purpose

Determine how a household's economic circumstances, demographic characteristics, and certain attitudes or financial behaviors influence basic savings account ownership during the Great Recession

Reasons for Saving – Models of Uncertainty

- Households faced with uncertainty will self insure against risk by holding funds for precautionary purposes (Leland 1968)

- **Buffer-Stock Saving** – Intertemporal model of consumption behavior under uncertainty (Deaton 1991 and Carroll 1996,1997)

  - **Targeted savings-to-income ratio** to insure against risk and uncertainty

Reasons for Saving – Life Cycle Hypothesis

- Life-Cycle Hypothesis of Saving – Looks at life-cycle consumption and saving, (Modigliani and Brumberg, 1954 and Ando and Modigliani, 1963)
  - **Incorporate risk and uncertainty** into consumer decision making (Kahneman and Tversky, 1979)
  - **Use reference points** in time rather than longer (permanent) time horizon to base consumption and savings decisions

Insights From Behavioral Economics

- **Self Control** – challenging when consumers are farsighted planners and short-term decision makers

- **External Constraints** – constructing situations aimed at reconciling the short- and long-term tendencies (e.g., automatic saving)

- **Mental Accounts** – multiple savings motives which are influenced by household's position in life cycle

Overview of Findings

- Households more likely to **open** a basic savings account
  - Are younger
  - Have greater family income
  - Are more highly educated
  - Are willing to take higher financial risks
- Households more likely to **close** their basic savings account
  - Have had a loss of liquidity
  - Possess other liquid assets
  - Are intensive credit shoppers

Data

- 2007-2009 Survey of Consumer Finances Panel
- Sample size 3,857; 5 implicates (19,285)
- Response rate of 89% over the panel
- Increase in basic savings account ownership
  - 46% in 2007
  - 50% in 2009

Ownership Outcomes

Basic Savings Account Ownership: 2007 – 2009		
	To 2009	
	Savings Account %	No Savings Account %
From 2007		
Savings Account %	31	15
No Savings Account %	19	35

Cell values represent the baseline probability of being in one of the four possible outcomes over the two periods, 2007 - 2009.

Economic Model and Econometric Framework

- From a consumer choice theoretical viewpoint, we define the net utility for consumer i of holding a basic savings deposit account in period *t* as

$$y_{it}^{*} = \boldsymbol{\beta}'\mathbf{x}_{it} + \varepsilon_{it} + u_i \qquad (1)$$

$\mathbf{x}_{it}$ = observed effects

ε_{it} = unobserved effects that may vary from period to period

u_i = unobserved effects that are invariant across periods

Bivariate Probit Model

- We observe the consumer in two periods, denoted period 0 and period 1.
- Considering the dynamic aspects of the model

$$y_{i0}^* = \boldsymbol{\beta}'\mathbf{x}_{i0} + \varepsilon_{i0} + u_i \qquad (2a)$$

$$y_{i1}^* = \boldsymbol{\beta}'\mathbf{x}_{i1} + \boldsymbol{\alpha}'(\Delta\mathbf{x}_i) + \varepsilon_{i1} + u_i \qquad (2b)$$

- Having a savings account in period t is then determined by the observation:

$$y_{it} = 1 \text{ if } y_{it}^* > 0 \text{ and } 0 \text{ otherwise}$$

Joint Probabilities

- The model predicts probabilities for four joint outcomes over the two periods

Has an account in period 0 and in period 1

No account in period 0 and in period 1

Has an account in period 0 and not in period 1

Has no account in period 0 and has account in period 1

Empirical Model

- Previous research helps inform the model specification.
  - **Economic factors**
    Family income, other liquid assets, family (nonliquid) wealth, educational level, employment, health insurance coverage, and risk taking behavior
  - **Socio-demographic factors**
    Age group, number of children, and household race and ethnicity
  - **Change factors**
    Loss of job, drop in liquidity, becoming uncovered by health insurance, and becoming unmarried, change in credit shopping habit, change in planning horizon for saving and spending

Results

- Model estimates
- Partial effects
  - Estimates
  - Implications
- Concluding remarks

Effect of Family Income on Savings Account Status

	Opened Account SavAcct07=0 SavAcct09=1 Prob = 19%		**Closed Account** SavAcct07=1 SavAcct09=0 Prob = 15%	
	%▲	%	%▲	%
Quintile 5	1.1	20.1	-0.9	14.1
Quintile 4	10.7***	29.7	-8.2***	6.8
Quintile 3	6.9***	25.9	-5.3***	9.7
Quintile 2	4.4***	23.4	-3.4***	11.6

Omitted Quintile 1.
*** significant at the .01 level.

Effect of Non-Liquid Wealth on Savings Account Status

	Opened Account SavAcct07=0 SavAcct09=1 Prob = 19%		**Closed Account** SavAcct07=1 SavAcct09=0 Prob = 15%	
	%▲	%	%▲	%
Quintile 5	5.3**	24.3	-4.0**	11.0
Quintile 4	10.6***	29.6	-8.1***	6.9
Quintile 3	8.6***	27.6	-6.6***	8.4
Quintile 2	6.4***	35.4	-4.9***	10.1

Omitted: Quintile 1

*** significant at the .01 level and ** significant at the .05 level.

Effect of Holding Other Liquid Assets on Savings Account Status

	Opened Account SavAcct07=0 SavAcct09=1 Prob = 19%		**Closed Account** SavAcct07=1 SavAcct09=0 Prob = 15%	
	%▲	Prob	%▲	Prob
Other Liquid Assets	-5.0***	14.0	3.8***	18.8

Other liquid assets include: money market accounts, certificates of deposit, and brokerage call accounts.

*** significant at the .01 level.

Effect of Loss in Liquidity on Savings Account Status

	Opened Account SavAcct07=0 SavAcct09=1 Prob = 19%		**Closed Account** SavAcct07=1 SavAcct09=0 Prob = 15%	
	%▲	Prob	%▲	Prob
Loss in Liquidity Between 2007 and 2009	-2.6**	16.4	2.0*	17.0

Loss of liquidity relates to household having income greater than or equal to expenses in 2007 and having income less than expenses in 2009.

** significant at the .05 level and *significant at the .10 level.

Effect of Education on Savings Account Status

	Opened Account SavAcct07=0 SavAcct09=1 Prob = 19%		**Closed Account** SavAcct07=1 SavAcct09=0 Prob = 15%	
	%▲	Prob	%▲	Prob
High School	4.9***	23.9	-3.8***	11.2
Some College	4.2**	23.2	-3.2**	11.8
College	5.0***	24.0	-3.9***	11.1

Omitted: Less than a high school education.

*** significant at the .01 level and ** significant at the .05 level.

Effect of Age Groups on Savings Account Status

	Opened Account SavAcct07=0 SavAcct09=1 Prob = 19%		**Closed Account** SavAcct07=1 SavAcct09=0 Prob = 15%	
	%▲	Prob	%▲	Prob
18<=Age<=30	11.8***	30.8	-9.0***	6.0
30<Age<=40	5.2***	24.2	-3.9***	11.1
40<Age<=54	3.5**	22.5	-2.7**	12.3
54<Age<=64	1.0	20.0	-0.7	14.3

Omitted: Age >=65.

*** significant at the .01 level and ** significant at the .05 level.

A Closer Look at Age Groups

	Opened Account SavAcct07=0 SavAcct09=1 Prob = 19%		**Closed Account** SavAcct07=1 SavAcct09=0 Prob = 15%	
	%▲	Prob	%▲	Prob
Age <= 30	8.4***	27.4	-6.5***	8.5
Age >= 65	-2.6**	16.4	2.0**	17.0

Omitted: 30 < Age <= 64.

*** significant at least at the .01 level and ** significant at the .05 level.

Effect of High Risk Taking on Savings Account Status

	Opened Account SavAcct07=0 SavAcct09=1 Prob = 19%		**Closed Account** SavAcct07=1 SavAcct09=0 Prob = 15%	
	%▲	Prob	%▲	Prob
High Risk Taking	3.1**	22.1	-2.3**	12.7

High risk taking is equal to one if the respondent was willing to take risk or be aggressive in decision making concerning money and investments in 2009.

** significant at the .05 level.

Effect of Greater Credit Shopping on Savings Account Status

	Opened Account SavAcct07=0 SavAcct09=1 Base Prob = 19%		**Closed Account** SavAcct07=1 SavAcct09=0 Base Prob = 15%	
	%▲	Prob	%▲	Prob
Did not shop for credit in 2007 and shopped a great deal for credit in 2009	-8.6***	10.4	6.6***	21.6

*** significant at the .01 level.

Effects of Race/Ethnicity on Savings Account Status

	Opened Account SavAcct07=0 SavAcct09=1 Prob = 19%		**Closed Account** SavAcct07=1 SavAcct09=0 Prob = 15%	
	%▲	Prob	%▲	Prob
Black	-1.8	17.2	0.8	14.2
Asian and Other Race	0.9	19.9	-1.4	13.6
Hispanic	-0.05	18.95	-0.8	14.2

Omitted: White relative to black and Asian and other racial groups and Non-Hispanic relative to Hispanic group.

Concluding Remarks

- Our study offers further support for the efforts being made to encourage basic savings account ownership. Findings suggest that:
  - Low-cost basic savings products can be useful in helping lower-income, less wealth, and liquidity constrained families begin to accumulate assets and build wealth
  - There may be a distinct advantage in making savings programs available to consumers earlier in life
  - Financial education programs can help fill the gap in knowledge needed for families making financial decisions

Future Research

- **Replicate Findings** - Compare to studies that analyze account ownership over financially stable timeframes or different recessions
- **Savings Accumulation -** Conduct analyses that identify in what ways and how much households accumulate and use liquid saving
- **Minority Gap –** Determine what factors are contributing to differences in basic savings account ownership by race/ethnicity

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