

Which Households Changed Their Risk Tolerance During the Great Recession? Evidence From the 2007-2009 SCF Panel Dataset

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The Great Recession that began in 2007 has caused widespread financial losses for U.S. households. About 60% of households dropped in wealth during the period of 2007-2009 (Bricker, Bucks, Kennickell, Mach, & Moore, 2011). The Dow Jones Industrial Average decreased from 14,164 in October 2007 to below 8,000 in April 2009, a decline of 43%. Furthermore, this financial crisis has impacted households' financial decisions such as asset allocation, personal saving, and timing of retirement. The main purpose of this study is to investigate how the recent economic downturn impacted individuals' risk tolerance, which plays a salient role in a household's financial decisions. The panel of Survey of Consumer Finances (SCF) responses provides a unique view of the changes in households' risk tolerance during the years 2007-2009.

Literature Review

Malmendier and Nagel (2011) analyzed the 1983 to 2007 SCF datasets and found that risky asset return experience has a significant effect on willingness to take financial risks. They used the price/earning (P/E) ratio of the S&P 500 to measure average experienced return. Individuals who had experienced high stock market returns reported higher tolerance of financial risk. Yao and Curl (2011) investigated changes in risk tolerance in response to stock market returns by using the 1992-2006 Health and Retirement Study. They found a positive relationship between risk tolerance and stock market returns measured using 12-month returns of the S&P 500 index.

Methods

Data and Sample Selection

The 2007-2009 SCF panel is used for this empirical analysis. In my study, I restricted the sample to currently working households with heads aged from 30 to 60, similar to recent retirement studies using the SCF dataset (Hanna & Zhang, 2013; Kim, Hanna, & Chen, 2014) because these households are very active in making a number of financial decisions including retirement planning. One argument for exclusion is that households who are younger than 30 are more likely to have major changes in jobs or marital status. The total sample size of the 2007-2009 SCF panel dataset is 3,857, and 2,018 households met my sample criteria.

Measurement of Risk Tolerance

Risk tolerance, defined as an individual's financial attitude toward accepting risk, is measured by four dummy variables for no risk, average, above, and substantial risk in the SCF panel dataset. I created a dependent variable having three ordinal categories of risk tolerance change. If the level of risk tolerance in 2009 is lower (higher) than the response in 2007, this household is coded as having lower (higher) risk tolerance. Otherwise, the household is coded as having no change in risk tolerance in the period of 2007-2009.

Stock Holding Variables

In order to test the impact of the exposure to stock market shock on changes in risk tolerance, two stock holding variables are created in the first wave. The stock ownership variable is measured using

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a binary indicator of whether a household held stocks directly and/or indirectly in 2007. And the ratio of stock holding to total financial assets is created as a continuous indicator of exposure to the stock market.

Result

Table 1 shows the overall proportion of each risk tolerance category for 2007 and 2009 from the SCF panel dataset. The rates of substantial and above average risk decreased, while the proportion of average and no risk increased, during the financial crisis.

Table 2 shows how households changed risk tolerance during the survey period. About 46% of households changed their risk tolerance level between 2007 and 2009; 29% had lower risk tolerance while 17% had higher risk tolerance in 2009 than in 2007. Table 3 shows characteristics of two stock holding variables by categories of change in risk tolerance. Households with decreases in risk tolerance had the highest proportion of stock ownership in 2007. Moreover, households with decreases in risk tolerance had a higher proportion of stock holding to financial assets in 2007 than the other two groups, which had lower stock market exposure.

Table 1

Overall Proportion of Risk Tolerance Between 2007 and 2009, SCF Panel

Category	2007 (Percent)	2009 (Percent)	Percentage Change
Substantial	6.0	5.4	-0.6
Above average	26.9	19.5	-7.4
Average	45.2	47.1	+1.9
No risk	21.9	27.9	+6.0
Total	100.0	100.0	

Note. Weighted data. Sample restricted to household heads age 30-60 and who are labor force participants.

Table 2

Changes in Risk Tolerance Between 2007 and 2009, SCF Panel

Category	Distribution (%) ^a
Decrease in risk tolerance (Risk07 > Risk09)	28.7
No change in risk tolerance (Risk07 = Risk09)	54.4
Increase in risk tolerance (Risk07 < Risk09)	16.9
Total	100.0

^aWeighted proportion of households.

Table 3

Stock Holding Characteristics by Categories of Change in Risk Tolerance, 2007-2009 SCF Panel

Category	Ownership of Stock Equity (%) ^a		Mean Ratio of Stock Holdings to Financial Assets in 2007 (%)
	2007	2009	
Decrease in risk tolerance	70.6	69.9	33.7
No change in risk tolerance	61.3	64.6	27.4
Increase in risk tolerance	64.1	71.8	28.4

^aWeighted proportion of households.

Discussion

This study examines how the recent financial downturn impacts household risk tolerance, which plays a salient role in a household's financial decisions. Based on the 2007-2009 Survey of Consumer Finances panel data, about 46% of households changed their risk tolerance level during the Great Recession. Households with higher stock market exposure had decreases in risk tolerance than those that had low stock market exposure as captured by two stock holding indicators. Future research should investigate with more in-depth analysis, whether households with a greater exposure to financial shocks reduce their risk tolerance, controlling for other individual characteristics such as age, race/ethnicity and education, as well as individual financial and personal circumstances including changes in income, net worth, marital and job status.

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