Which Household Have Adequate Emergency Funds After the Great Recession? Estimates Based on an Income Measure and a Spending Measure

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Abstract

We examined the determinants of likelihood of meeting the 3-month guideline for emergency funds. We analyzed two different measures of emergency fund adequacy: one based on spending and the other based on income. We present descriptive analyses comparing the two measures in the 2007 and 2010 Survey of Consumer Finances (SCF) datasets. For both measures the proportion of all households meeting the guideline decreased slightly, from 21.4% in 2007 to 20.8% in 2010 for the income-based measure, and from 24.4% to 23.8% for the spending-based measure. The patterns of meeting the guidelines by household characteristics were two measures were similar, and generally a higher proportion of households met the guideline for the spending-based measure, especially for higher income and higher education households. Households in most categories had lower rates in meeting either guideline in 2010, with a few exceptions, such those with a post-bachelor degree, which had an increase of about 2 percentage points for both measures. We used logistic regression analysis with the 2010 SCF for the two measures. We found that age, race/ethnicity, education, presence of child, employment status, home ownership, current income relative to normal, health status, covered by health insurance, and ability to get emergency fund from friend or relatives were all related to emergency fund adequacy.

Introduction

Starting from 2007 December, the United States economy was suffering an economic downturn, the so-called "great recession". Several unexpected changes occurred during the recession. According to Bricker et al., (2012) between the third quarter of 2007 and the second quarter of 2009, the real gross domestic product (GDP) fell at about 5.1% and major stock market indexes fell nearly 50% during recession. U.S. households were also affected by economic crisis. For instance, median and mean family income before tax fell by 7.7% and 11.1% respectively; median net worth fell 28.8% and mean net worth fell 14.7%. According to the Bureau of Labor Statistics (BLS)[1], the unemployment rate increased from 4.6% in 2007 to 9.6% in 2010.

How might have recession brought change in emergency fund savings? Common personal finance advice on emergency funds is based on the chance of unemployment and other types of financial hardship, so that holding a sufficient amount of easily accessible funds can serve as a safety net against unpredictable events. Financial experts provided recommendations for levels of emergency funds saving, but research found that more than 50% of U.S. households do not meet these guidelines (Chang, 1995; Chang & Huston, 1995; Johnson & Widdows, 1985). Emergency funds are defined as liquid assets that can cover

1 http://www.bls.gov/home.htm

spending without altering the household's current standard of living (Johnson & Widdows, 1985). Because emergency funds are a significant indicator that determines individual's financial well-being, financial experts encourage households to have adequate levels of emergency funds (Hong & Swanson, 1995). Despite the importance, studies found that most households do not tend to meet the recommended level of emergency funds.

The purpose of this study is to examine emergency fund adequacy of households at the peak of the unemployment rate caused by the Great Recession, by using 2010 SCF data in order to examine the impact of economy crisis on emergency fund holdings. We first investigate the percentages of households that have adequate emergency funds, then find the factors of adequacy in the 2010 dataset. Our study is significant in that we used the recently released 2010 SCF data. While there are many emergency adequacy studies conducted by using the SCF dataset that was released before recession, no studies have been used the 2010 SCF data yet. In addition, our study used a replacement ratio method to estimate spending for households in the SCF.

Theoretical Framework

The life cycle hypothesis, which was first introduced by Modigliani and Brumberg (1954) provides a foundation for explaining household consumption and saving. The main assumption is that consumers maximize their utility by choosing the optimal consumption level given their preferences and the resources available both now and in the future. There are two key assumptions of the early formulations of the life-cycle hypothesis. First, the utility function is homogenous in terms of consumption at different points in time. Second, individual do not expect, or desire to leave any inheritance with perfect certainty assumed. According to this model, people desire to smooth consumption over their lifetime. When current period income is more than permanent income, people are expected to save. On the other hand, when current period income is less than permanent income, people are expected to dissave. Within this context, households' lifetime earnings rise during young and middle age and decrease at retirement, thus, they should save in earning years and dissave after the retirement. Historically, the majority of studies that are related to savings used this life-cycle hypothesis as their theoretical background (Hanna, Chang, & Fan, 1995). Since the standard life-cycle hypothesis is based on perfect certainty, saving behaviors such as saving for precautionary funds that cannot be fully explained on the basis of original life-cycle hypothesis. Later studies incorporated uncertainty in the model to be more realistic. Hubbard, Skinner, and Zelses (1994) argued that the life cycle model should include uninsured idiosyncratic risk facing households, including earning uncertainty. Normative studies have found positive relationships between uncertainty and emergency fund savings, indicating that saving should increase with higher level of uncertainty (Yuh & Hanna, 2010; Browning & Lusardi, 1996).

Chang, Hanna, and Fan (1997) presented a three period optimal saving decisions model, allowing for uncertainty. They found the positive relationship between the probability of an income drop and the percentage of income saved. In other words, households who expected to have decrease in future real income were more likely to hold adequate emergency funds than those who expected to have no decline in real incomes. While most studies assumed that households not following the usual emergency fund guideline are irrational, Chang et al. (1997) concluded that only those who expect decrease in income should save so that those who expect increases in income may actually be behaving rationally.

Literature Review

The literature review is divided into two parts. The first part will clarify the definition of

emergency fund adequacy. The second part will review the determinants of adequate emergency funds, mainly based on household characteristics.

Emergency Fund Adequacy

The household liquidity ratio is defined as the number of months household expenses can be covered by emergency funds, so that even if income stopped, the household could continue spending on its usual needs. There is a consensus among financial experts that the emergency fund should cover a minimum of 2.5 to 3 months (Greninger, Hampton, Kitt, & Achacoso, 1996). Hanna and Wang (1995) suggested that considering low likelihood of substantial income decreases for most households, using the 3 month guideline is appropriate. The emergency fund can be defined to into quick assets, intermediate assets, or comprehensive assets, depending on the desired liquidity level (Johnson & Widdows, 1985; Huston & Chang, 1997). Following Johnson and Widdows' (1985) classification, quick assets includes saving, checking and money market accounts. Intermediate assets includes quick assets, CD's and savings certificates. Comprehensive assets include stocks and bonds as well as intermediate assets, and thus have the lowest liquidity level, given the risk of a substantial loss if the funds are needed when the market is down. While there are studies using all three measures for emergency fund adequacy, some studies used only one of all three measures. Bi and Montalto (2004) provided a summary of empirical studies that used different guidelines and types of emergency funds. Most studies used the 3 month guideline, whereas studies had a variety of measurements of emergency funds.

Determinants of Emergency Funds Savings

There are numerous studies of the determinants of emergency funds savings in term of household demographics. Older households were more likely to have adequate emergency fund holdings than younger households (Devaney, 1995; Hanna, Chang, & Bae, 1993; Huston & Chang, 1997). Xiao and Noring (1994) reported that females are more likely to have saving goals for daily expenses, while males have saving goals for retirement, children and education. With regards to race and ethnicity, black households were less likely to have adequate emergency funds than white households (Chang & Huston, 1995; Huston & Chang, 1997; Chen & DeVaney, 2001). Job status also predicted the likelihood of holding emergency. Bi and Montalto (2004) found that married or partner households with a full-time job were more likely to reserve emergency funds compared to households having part-time job. Bhargava and Lown (2007) concluded that education was a significant determinant of meeting guidelines for emergency funds. When it comes to marital status, results were different depending on researchers. For instance, Bi and Montalto (2004) concluded that single households were 31% more likely to have adequate emergency reserves than households with both spouses who are full-time employed. On the other hand, Huston and Chang (1997) found that multi-person households with two or more people were more likely to accumulate emergency funds more than single parents. This is because married households should take of their family members' well-being, so that they will need a strong motivation to save for emergencies. Another significant determinant of emergency funds is income. Huston and Chang (1997) found that income is positively related to holding adequate comprehensive emergency funds. As mentioned earlier, Chang et al. (1997) found that households expecting decrease in future real income were more likely to hold adequate emergency funds than those who did not expect decline.

Methodology

Data

We use the Survey of Consumer Finances (SCF) data, a cross-sectional data which is sponsored by Federal Reserve Board. The purpose of this survey is to collect the U.S. household's financial information such as income, assets, liabilities and investments as well as their socio-demographic information. The SCF data has been conducted every three years since 1983. For a comparison purposes, we first examined the percent meeting emergency fund guidelines in 2007 and 2010 (Table 2). The percentages meeting guidelines in 2007 and 2010 were approximately the same, so for our multivariate analyses we used the 2010 dataset.

Variables

1) Dependent variables

Our dependent variable is whether or not households have met the 3-month guideline of emergency funds. In terms of the adequacy, previous studies using the SCF have used income rather than spending for calculating the ratios because SCF data did not contain information regarding expenditures. That is, if the household has quick assets that contain saving, checking and money market accounts equal to at least three months of gross income, it was coded as 1, and 0 otherwise. Hanna et al. (1993) showed by using the Bureau of Labor Statistics (BLS) Consumer Expenditure Survey that the proportions meeting the emergency fund guidelines were approximately the same using pretax income, after-tax income, or expenditures. Despite of this justification, using income as a proxy for spending has been criticized and researchers acknowledged their limitation. For these reasons, we use the benchmark of replacement ratio created by Kim and Hanna (2013). Spending is estimated for each household in the SCF by applying mean ratios of expenditure to pretax income for each income category. This ratio guideline, referred to as the spending estimate ratio guideline, is defined as 1.0 if quick assets are at least as high as an estimate of three months of spending. For comparison, we also analyze the ratio guideline based on pretax household income, referred to the income ratio guideline, is defined as 1.0 if quick assets are at least as high as three months of income.

2) Independent variables

Our independent variables are selected by following Yuh and Hanna's (2010) study, which examined the saving behavior of households based on life cycle theory. The independent variables include age, marital status, race/ethnicity, education level, presence of child, home ownership, employment status, income, current income compared to normal year, future income expectations, health status, whether or not covered by health insurance and ability to get $3,000 from a friend or relative. These are the variables that Yuh and Hanna (2010) hypothesized as indicators of savings in a normative framework, which is also applicable to our study since emergency fund saving can be included in the broader saving category. Current income compared to normal year indicates whether current income is unusually high, unusually low, and normal compared to normal year. For future income expectation, we differentiated into six categories based on certainty/uncertainty and increase/decrease. For instance, if households reported that they are not sure about their future income but possibly replied that their income will increase, they are in "unsure more" category. Thus the future income variable is divided into sure less, unsure less, sure same, unsure same, sure more, and unsure more. Table 1 shows the independent variables and associated hypotheses based on an extended life cycle model. We basically followed the hypotheses presented by Yuh and Hanna (2010).

Statistical Analysis

We first provide a descriptive statistics table for households who have adequate emergency fundso. Since our dependent variable is dichotomous variable, we use the logistic regression method for our analysis. One logistic regression is based on the whether the three month guideline is met based on using normal income as a proxy for spending, and the other is based on the whether the three month guideline is met based on using a replacement ratio approach to estimating spending. Logistic regression is used to test the effect of each predictor on the likelihood of expecting to meeting the guideline. Because we are interested in hypothesis testing, we do not weight the logistic regression estimation (Lindamood, Hanna, & Bi, 2007).

Results

Table 2 displays descriptive analyses of households in 2010 and in 2007 who met the 3 month guideline of emergency fund holdings, for both the income-based guideline and the spending-based guideline. Overall, in 2010 SCF data, 20.8% met the 3 month guideline of emergency fund that is based on income, meaning that about 20% of the US households had emergency funds that could cover their 3 months of gross income. When 3-month guideline based on spending was used, 23.8% of the households had adequate emergency funds, which was slightly higher than the income-based guideline. For most of the variables, households were more likely to meet the guideline for spending guideline However, there was no big difference of proportions between two guidelines for various characteristics, but the percentage distributions were similar. Households of head's age of 70 and over had the highest percentages of having adequate emergency fund. In terms of marital status, married couples had slightly higher percentages than single households, while partners had the least of meeting the guideline. In employment status category, retirees had the highest percentages compared to salary workers, self-employed workers and those who do not work. But when spending ratio was used, more than 30% of self-employers had adequate emergency fund whereas about 24% had adequate emergency fund when income ratio was used. For income, we created six categories based on the 10th, 25th, 50th, 75th, and 90th percentiles. The higher the income, the higher the percentage of households meeting either 3-month guideline. Households who reported that their current income is lower than normal were least likely to meet the guideline. When it comes to health status, households who indicated that they are in excellent health were more likely to meet the guideline than any other health categories. More than 20% of the households who are all covered by health insurance had adequate emergency fund, whereas less than 10% of the households who are not all covered by health insurance had adequate emergency fund. If households were able to get $3,000 of emergency fund from their friends or relatives, they had higher percentages of meeting the guideline than those who could not borrow. For future income expectation, households in the "sure" categories were more likely to meet the guideline than those in "unsure" categories, and the differences were about 10%.

In 2007, about 21.5% of met the 3 month guideline of emergency fund that is based on income, and 24.4% met the spending guideline. The overall percentages meeting the guideline slightly decreased from 2007 to 2010, which was contrary to normative models that imply saving should increase with higher levels of uncertainty (Yuh and Hanna, 2010; Browning and Lusardi, 1996). However, the recession may have depleted emergency savings for many households. The 2007 patterns were very similar to the 2010 patterns, and the percentages were mostly higher in 2007 than 2010 except for employment status and current income compared to normal year. While salary workers and self-employed were more likely to meet the guideline in 2007, retired households and not working households

were more likely to have adequate emergency fund in 2010. In 2007, proportions between two guidelines for various characteristics were similar to the 2010 patterns. For the Asian/other racial/ethnic group, bachelor degree, post-bachelor degree, and self-employed categories, households were more likely to meet the spending-based guideline than the income-based guideline.

Table 3 shows the multivariate analysis results, the effects of independent variables on the likelihood of meeting both income-based and spending-based guideline. Logistic regression results had similar patterns with descriptive results in Table 2. That is, age, race/ethnicity, education, presence of child, employment status, home ownership, current income relative to normal year, health status, covered by health insurance, ability to get emergency fund, and future income expectation were significantly related to the likelihood of meeting the guideline. Age was positively related to emergency fund adequacy, indicating that old households were more likely to have adequate emergency fund than younger households. In terms of race/ethnicity, Whites were more likely have adequate emergency fund than Blacks and Hispanics, but they were not significantly different from Asian and other groups. Households with college degree and more were more likely to meet the guideline for adequate emergency funds, than those without high school degree. Households with a dependent child under age 19 were less likely to meet the guideline than those without a child. Self-employed and retired households were more likely to meet the guideline than salary workers. Households with home ownership, all covered by health insurance, and ability borrowing emergency fund from friends or relatives were more likely to meet the guideline compared to those who were not. Households with unusually high current income are more likely to have emergency adequacy, while those with unusually low current income were less likely to have adequate emergency fund compared to households who indicated that their current income was about normal. Compared to households with excellent health, good, fair, and poor health household were less likely to meet the guideline. Household income was not significantly related to emergency fund adequacy for both regressions.

The only different results between income-based guideline and spending-based guideline was for marital status and future income variables. When income ratio was used as the dependent variable, none of the marital status categories were significant. However, when meeting the guideline based on spending was used for the dependent variable, single female households were less likely to meet the guideline than married households. Future income expectation also had different results. When income-based guideline was used, households who were sure that their future income would increase next year were more likely to have emergency fund adequacy. On the other hand, when spending-based guideline was used, only those who were sure that their future income will be the same were more likely to meet the guideline than those who were sure that their income will be less in the future.

Discussion

Our multivariate analysis results showed that most of the household characteristic variables except for marital status, income, and future income expectation were significantly related to the likelihood of meeting the 3-month guideline of emergency fund in 2010 SCF dataset. By using the after-recession dataset, we found that age, race/ethnicity, education, presence of child, employment status, home ownership, current income relative to normal, health status, covered by health insurance, and ability to get emergency fund from friend or relatives were all significantly related to emergency fund adequacy. Income was particularly interesting as multivariate results showed different pattern compared to the descriptive results. Our descriptive results in Table 2 displayed that the likelihood of meeting the guideline

increased with the current income, but our multivariate analysis showed non-significant results.

A number of variables had contrary results from what the normative hypotheses in Table 1. While we did not expect any differences among different racial/ethnic groups, Whites were more likely to meet the 3-month guideline than Blacks and Hispanics. When it comes to employment status, while households who do not work were not significantly different from salary workers, self-employed and retired households were more likely to have adequate emergency fund than salary worker households when controlling for other variables. This is also different from what we hypothesized. While we expected that home ownership, health insurance, and ability to obtain emergency fund will be negatively related to emergency fund, our results actually showed that they were positively related. . The result for health insurance was consistent with Starr-McCluer's (1996) study, which found a positive relationship between presence of health insurance and precautionary savings. One possible explanation for positive effect of health insurance was that the eligibility of Medicaid might have discouraged low income households to accumulate emergency fund savings. Health status was also significantly related in an opposite direction; poor health status household were less likely to meet the guideline. This may be due to the time frame, meaning that poor health status households might have already spent substantial amount of medical expenses, so that they were unable to cover their expenses in case of the emergency.

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Table 1. Hypotheses and Theoretical Justifications

Independent variable	Category	Expected effect on emergency fund adequacy	Theoretical justification
Age		+	Accumulation of financial assets for lifecycle smoothing
Marital status	**married**		Differences in subjective rate of time preference
	single male	-	
	single female	-	
	partner	-	
Racial/ethnic status	**White**		Controlling for income and other factors, should be no difference
	Black	0	
	Hispanic	0	
	others	0	
Education	**< high school**		Educational level is related to subjective rate of time preference, with higher education signaling more future oriented individuals.
	high school	**+**	
	some college	+	
	college	+	
	more than college	+	
Child<age 19	yes	**-**	Marginal utility of consumption higher when child at home
	no		
Employment status	**salary worker**		
	self-employed	-	Self-employed households have riskier income stream.
	retire	-	Lower uncertainty of pension income.
	no work	+	Should save more with no income

Independent variable	Category	Expected effect on emergency fund adequacy	Theoretical justification
Homeowner	yes	**-**	Homeowners have less need to save to pay rent after retirement.
	no		
Current income		+	Replacement rates for unemployment, Social Security higher for lower income
Current income relative to normal	**normal**		
	higher than normal	+	Consumption smoothing
	lower than normal	-	Consumption smoothing
Future income	**Sure less**		Should save more with income uncertainty For consumption smoothing, the higher the future growth rate, the lower the saving
	Unsure less	+	
	Unsure same	+	
	Sure same	-	
	Unsure more	0	
	Sure more	-	
Health status	**excellent**		If expect worse health in future, should save more today
	good	+	
	fair	+	
	poor	+	
All in household covered by health insurance	yes	-	With health insurance, less need to save for possible medical expenses
	no		
In emergency could get $3,000 or more from friend or relative	yes	-	Less need to save for emergency
	no		

[1] Bold is the reference category.
[2] + positive effect, - negative effect, 0 neutral

Table 2. Meeting the 3 month guideline by selected characteristics, 2007 and 2010.

variable	category	2010 SCF			2007 SCF		
		% in category	Met guideline		% in category	Met guideline	
			Ratio to income	Ratio to estimated spending		Ratio to income	Ratio to estimated spending
total			20.81	23.82		21.47	24.40
age	younger than 30	11.91	13.06	12.99	12.79	12.16	12.17
	30-39	17.54	10.44	13.95	17.93	11.22	14.08
	40-49	19.91	13.81	18.34	21.52	14.64	20.09
	50-59	20.86	19.36	24.00	19.13	20.60	24.82
	60-69	14.27	29.18	32.85	13.34	31.95	35.29
	70 and over	15.71	41.45	41.55	15.29	42.81	42.77
marital status	married	49.84	22.36	27.44	50.56	22.45	27.72
	single male	15.74	20.27	22.91	14.57	25.56	25.44
	single female	26.94	20.77	20.39	27.55	19.93	20.01
	partner	7.47	11.71	13.94	7.31	12.33	15.88
race/ethnicity	White	70.80	24.69	28.46	73.92	24.90	28.18
	Black	13.83	10.30	10.61	12.58	8.90	9.41
	Hispanic	10.76	7.86	9.48	9.41	9.73	11.01
	Other	4.62	22.92	25.67	4.08	25.11	33.02
education	less than high school	11.97	10.46	10.06	13.53	13.28	12.72
	high school	32.19	16.51	17.38	32.85	19.19	19.59
	some college	24.85	18.44	20.19	24.32	16.33	19.16
	bachelor degree	19.49	28.95	35.35	17.96	31.38	38.00
	more than bachelor degree	11.50	34.95	44.46	11.34	33.13	41.96
child<age18	yes	43.53	13.80	16.87	43.94	14.57	19.13
	no	56.47	26.22	29.17	56.06	26.87	28.53
employment status	salary worker	59.92	15.53	19.20	61.44	15.66	19.65
	self-employed	13.93	23.87	30.44	13.02	27.99	34.02

variable	category	2010 SCF			2007 SCF		
		% in category	Met guideline		% in category	Met guideline	
	retired	21.61	35.79	35.13	22.14	35.15	34.48
	not work	4.54	9.81	10.70	3.41	12.38	7.87
Home ownership	yes	67.29	25.98	30.26	68.64	25.69	30.32
	no	32.71	10.17	10.56	31.36	12.22	11.44
Income Percentile	$<10^{th}$	10.46	14.03	10.74	9.34	15.03	12.07
	10th-25th	14.07	16.38	14.80	16.48	19.87	16.98
	25th-50^{th}	24.51	18.83	18.87	24.76	18.41	18.36
	50th-75^{th}	26.06	19.71	23.45	24.50	20.12	23.64
	75th-90th	14.81	24.30	31.11	15.02	25.02	32.70
	90^{th}	10.09	36.54	52.25	9.90	35.77	52.76
Current income	normal	68.65	22.91	25.91	76.34	22.90	25.52
	higher	6.03	28.14	31.31	9.21	26.46	31.80
	lower	25.32	13.37	16.36	14.45	10.74	13.77
Future income	sure less	23.57	24.69	27.61	27.03	23.03	25.03
	unsure less	12.57	14.31	16.25	10.60	17.42	18.65
	unsure same	15.09	13.07	14.72	12.69	17.03	18.86
	sure same	31.65	25.46	29.29	29.52	26.79	30.48
	unsure more	7.46	14.29	15.63	8.14	14.20	16.40
	sure more	9.66	21.71	27.02	12.03	18.06	24.37
Health status	excellent	25.75	25.18	30.05	26.14	22.18	28.68
	good	47.97	20.90	23.97	48.71	22.00	24.20
	fair	19.94	17.40	18.99	19.35	20.37	20.84
	poor	6.33	13.04	12.54	5.8	17.43	18.64
All covered by health insurance?	yes	88.45	22.53	25.82	80.05	24.36	28.05
	no	11.55	7.68	8.52	19.95	9.87	9.74
Emergency fund from friends or relatives	yes	63.72	26.46	30.54	66.52	25.72	29.59
	no	36.28	10.88	12.01	33.48	13.02	14.08

Analysis by authors, weighted analyses of the 2007 and 2010 SCF datasets

Table 3. Logistic Analyses, Likelihood of Meeting Three Month Emergency Fund Guidelines, Using Two Estimates of Needs, Pretax Income and Spending Estimated from Replacement Ratios, 2010 SCF

	3 month guideline based on income				3 month guideline based on spending estimated from replacement ratios			
Parameter	**Estimate**	**Pr > Chi Sq**	**SE**	**odds ratio**	**Estimate**	**Pr > ChiSq**	**SE**	**odds ratio**
Intercept	-4.2322	<.0001	0.309		-4.4695	<.0001	0.3035	
Age	0.0221	<.0001	0.0029	1.022	0.0205	<.0001	0.00285	1.021
Marital status (Married)								
Single male	0.0584	0.575	0.1042	1.06	-0.0792	0.4396	0.1024	0.924
Single female	-0.0354	0.7027	0.0928	0.965	-0.2487	0.0068	0.0918	0.78
Partner	-0.0688	0.6681	0.1606	0.933	-0.1195	0.4373	0.1539	0.887
Race/ethnicity (White)								
Black	-0.5647	<.0001	0.1367	0.569	-0.6739	<.0001	0.1351	0.51
Hispanic	-0.437	0.006	0.1592	0.646	-0.4518	0.0027	0.1506	0.637
Asian and other	0.1837	0.2202	0.1498	1.202	0.1295	0.3776	0.1468	1.138
Education (less than school)								
High school degree	0.4581	0.0057	0.1658	1.581	0.4639	0.0046	0.1637	1.59
Some college	0.8072	<.0001	0.1687	2.242	0.8262	<.0001	0.1664	2.285
Bachelor degree	1.1512	<.0001	0.1689	3.162	1.3329	<.0001	0.1662	3.792
More than bachelor degree	1.3139	<.0001	0.1721	3.721	1.5623	<.0001	0.1698	4.77
Presence of child under age 18	-0.2577	0.0005	0.0744	0.773	-0.3353	<.0001	0.0724	0.715
Employment status (salary)								
Self-employed	0.2799	0.0006	0.0813	1.323	0.4061	<.0001	0.0789	1.501
No work	0.2508	0.2619	0.2236	1.285	0.3423	0.1141	0.2167	1.408
Retired	0.7386	<.0001	0.1081	2.093	0.5884	<.0001	0.1079	1.801
Homeownership	0.663	<.0001	0.0951	1.941	0.775	<.0001	0.0923	2.171

	3 month guideline based on income				3 month guideline based on spending estimated from replacement ratios			
Parameter	**Estimate**	**Pr > Chi**	**SE**	**odds**	**Estimate**	**Pr > C**	**SE**	**odds**
Log(income)	-0.0248	0.0677	0.0136	0.976	0.0186	0.1756	0.0137	1.019
Current income relative to normal (normal)								
High	0.5333	<.0001	0.1181	1.705	0.5441	<.0001	0.1188	1.723
Low	-0.2904	0.0007	0.0861	0.748	-0.2133	0.0099	0.0827	0.808
Health status (Excellent)								
Good	-0.1518	0.037	0.0728	0.859	-0.1946	0.0062	0.0712	0.823
Fair	-0.4502	<.0001	0.1089	0.637	-0.4849	<.0001	0.1059	0.616
Poor	-0.8257	<.0001	0.1871	0.438	-0.8899	<.0001	0.1859	0.411
All covered by health insurance	0.5675	0.0004	0.1613	1.764	0.6064	<.0001	0.1544	1.834
Emergency fund from friends or relatives	0.6436	<.0001	0.0825	1.903	0.6164	<.0001	0.0793	1.852
Future income expectation (sure less)								
unsure less	-0.1374	0.1362	0.0922	1.009	-0.15	0.0935	0.0895	0.943
unsure same	-0.1491	0.0878	0.0873	0.997	-0.1341	0.1139	0.0848	0.958
sure same	0.0998	0.0969	0.0601	1.279	0.1728	0.0034	0.0591	1.302
unsure more	0.1575	0.1207	0.1015	1.355	0.0496	0.6245	0.1014	1.151
sure more	0.1756	0.0293	0.0806	1.38	0.1528	0.0549	0.0796	1.276

Analysis by authors, unweighted analyses averaged across 5 implications, 2010 SCF datasets