

Relationship of Saving Motives to Saving Habits

Patti J. Fisher and Sophia T. Anong

This study examines how saving motives are related to saving habits using Katona's (1975) psychological classification of saving, where households save regularly (discretionary), save irregularly (residual), or do not save. Of the 3,822 non-retired households in the 2007 Survey of Consumer Finances, 46% saved regularly, 32% saved irregularly, and 22% did not save. Precautionary and retirement motives increased the likelihood of saving regularly or irregularly as compared with not saving, but only the retirement motive separated the regular savers from irregular savers. A long-term planning horizon and higher income increased the propensity for regular or irregular saving as compared with not saving, and for saving regularly as compared with irregularly, while low risk tolerance had the opposite effect. Financial advisors, educators, and policymakers should facilitate short- to long-term goal seeking with frequent saving by individuals and families.

Key Words: saving habits, saving motives, Survey of Consumer Finances

Introduction

Household saving is important because it affects a family's level of living, emergency reserves, and the ability to meet financial goals such as making purchases using cash rather than credit (Anong & Devaney, 2010; Hira, 1987; Lee, Park, & Montalto, 2000). Saving out of current income is necessary for retirement security, for helping renters become homeowners without excessive risks, and for dealing with emergency situations (Yuh & Hanna, 2010). Livingstone and Lunt (1993) found regular savers to have different psychological motivations than borrowers, viewing debt either as a failure or as a normal part of everyday life. Those who saved while simultaneously having debt felt more optimistic and in control of their lives than those with debt but no savings (Furnham, 1997). Aggregate personal and household saving also directly impacts the economy as a whole (Hira, 1987), and personal saving is increasingly necessary for retirement security as responsibility for this long-term savings goal shifts from employers and the government to individuals (Center for Retirement Research, 2005).

The savings rate of U.S. households generally declined from the end of the 20th century into the beginning of the 21st century (Bucks, Kennickell, Mach, & Moore, 2009; Federal Reserve Board, 2002; U.S. Department

of Commerce, 2011). That trend, as seen in the National Income and Products Accounts (NIPA) personal saving rate, though still low, has reversed since the 2007 Great Recession from around 1% in the first quarter of 2008 to 5% of disposable income as of May 2011 (National Bureau of Economic Research, 2011; U.S. Department of Commerce, 2011). Less than one half of households in the Survey of Consumer Finances (SCF) indicated that they saved on a regular basis, with only about 57% reporting to have spent less than income in 2006 (Bucks et al., 2009). In addition, both the proportion of households in the U.S. holding debt and the average amount of debt continue to increase, leaving many households unable to buffer unplanned expenses or the loss of employment and income during an economic downturn.

Despite varying economic experiences before and as a result of the Great Recession, most families in the 2009 SCF panel of the 2007 wave expressed increased levels of desired precautionary savings and future adjustments to family finances (Federal Reserve Board, 2011). These survey results reinforced the need for all households to engage in regular saving to have adequate emergency reserves to buffer themselves through financial crises resulting from inflation or unemployment. To improve the personal savings rate, it is important to increase our understanding of

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how psychological processes and motivations influence saving habits, such as how saving motives and other factors separate irregular and regular savers from those who do not save.

Saving habits have been examined mostly with lenses focusing on how they influence levels of savings or savings guidelines for different asset accounts (Anong & DeVaney, 2010; DeVaney & Chien, 2001). Saving habits have also been included as independent variables in studies of retirement adequacy (Malroux & Xiao, 1995), in which the saving habit was based on whether respondents were saving at the current time. Rha, Montalto, and Hanna (2006) studied self-control mechanisms and saving behaviors where the saving habits variable was used as an independent variable.

It is well established in the literature that saving motives are directly tied to saving behavior (e.g., Johnson & Widdows, 1985). However, among the many examples of saving patterns that have been studied, the most common patterns include subjective and objective measures of saving levels or spending relative to income (e.g., DeVaney & Chien, 2001; Xiao, 1997; Yuh & Hanna, 2010). Few studies have examined how different saving motives influence saving patterns where people regularly put money aside each month or per pay cycle, save whenever they can, or do not save at all (e.g., DeVaney, Anong, & Whirl, 2007; Fisher & Montalto, 2010). The present study applies Katona's (1975) classification of saving habits related to discretionary and residual saving and also includes non-savers.

The purpose of the current study is to investigate how saving motives are related to household saving habits in the United States. Using a nationally representative dataset, the 2007 wave of the Survey of Consumer Finances (SCF), we focused on how households' self-reported saving motives were related to whether they generally save regularly, save irregularly, or do not save. These three saving habits were constructed from survey responses by households that they either: (a) do not save; (b) save whatever is left over at the end of the month (no regular plan); (c) save the income of one family member and spend the other; (d) spend regular income and save other income; or (e) save regularly by putting money aside each month. We included other socio-demographic and attitudinal determinants mainly as control variables because of the expected influence on household savings behavior as established in prior research.

The current study extends the literature by investigating the relationship of saving motives with saving habits. Analyzing saving habits deviates from the usual manner in which this question has been applied in previous research. Practitioners and educators may find our findings useful in their efforts to help improve personal saving behaviors. Financial institutions and policy makers can also benefit from this study as they can develop products and policies with incentives to promote regular saving.

Literature Review

Framework

Economists and social scientists often consider saving to be what is left of disposable income after consumption is deducted (Lunt & Livingstone, 1991), but according to Katona (1975), this is not what the average person thinks of as saving. To the average person, saving refers to money put in bank accounts or other assets to protect one from future insecurities or to purchase goods and services (Katona, 1975; Lunt & Livingstone, 1991).

Katona (1975) proposed three categories of saving habits among average persons: (a) contractual saving, where one makes routine installment payments for an asset like a home mortgage, which is forced or obligatory saving; (b) discretionary saving, where one deliberately saves; and (c) residual saving, where one does not spend all of income and therefore saves by default. This categorization in Katona's (1975) behavioral or psychological approach to saving is the basis for two of the saver groups compared in this study with the aim of better understanding the factors associated with discretionary and residual saving.

Households engaged in discretionary saving are considered to be saving regularly in the present study because they regularly put aside a portion of their income. Residual saving is referred to as saving irregularly, where consumers save by default because they do not spend all their income and save whatever is left over. Contractual saving is not used as a basis to construct a saving habit due to a lack of such a measure in the saving habit construct available in the data, but homeownership and wealth accumulation, which more than likely result from contractual saving, are incorporated as independent variables to predict the likelihood of having one saving habit over another. The third category is those who do not save. Some people do not save deliberately or by default by spending all of their income (Carroll, 1997; Wärneryd, 1999). Therefore, we compare self-reported regular saving with irregular saving and non-saving.

Keynes (1936) identified eight saving motives, and Browning and Lusardi (1996) added another, providing a title for each motive: (a) precautionary motive, (b) life-cycle motive, (c) intertemporal substitution motive, (d) improvement motive, (e) independence motive, (f) enterprise motive, (g) bequest motive, (h) avarice motive, and (i) down payment motive. Katona (1975) offered six more general saving motives: (a) for emergencies, (b) to have funds in reserve for necessities, (c) for retirement or old age, (d) for children's needs, (e) to buy a house or durable goods, and (f) for holidays. These six motives are included as independent variables in the empirical model to investigate the relationship between saving motives and saving habits.

Saving Motives

Previous studies have focused mostly on the relationship between savings motives and the values contributed to or held in accounts as well as consumption patterns. For example, a reported retirement saving motive was associated with higher 401(k) plan contributions in terms of both the flat amount and percentage of salary contributed (Xiao, 1997). The current study examines the predictive influence of saving motives on saving behavior based on Katona's discretionary and residual saving classifications.

Saving motives are not necessarily mutually exclusive (Dyner, Skinner, & Zeldes, 2004; Smith, 1999). For example, households may save for precautionary reasons but expect any unspent balances to be left as a bequest. It is unlikely that one motive will be sufficient for all members of a population at a given time or for the same person over a long period of time, and many motives are complementary. In recent years, the importance of co-existing saving motives in research on saving has been noted (e.g., Canova, Rattazzi, & Webley, 2005). Some studies have utilized Maslow's (1954) human needs theory proposing a hierarchy of saving motives (e.g., Xiao & Noring, 1994).

Xiao and Noring (1994) and Xiao and Anderson (1997) found saving motives to be related to financial resources. With an increase in income, the priority saving motive of families expands from daily necessities to saving for precautionary or emergencies to children, retirement, and holidays. Xiao and Fan (2002) compared the saving motives of Chinese and American workers and found that the Chinese workers were more likely to identify motives for daily expenses, emergencies, children, and investment while Americans were more likely to report saving for major purchases and retirement. These studies and others examined the determinants of the six saving motives proposed by Katona (1975).

DeVaney et al. (2007) examined the factors likely to influence progression from lower order saving motives to higher order needs on a hierarchy based on Maslow's human needs theory. However, the analysis did not examine how progress upwards on the hierarchy of savings motives could be related to saving patterns such as having a regular saving discipline which would be just as necessary as having the ability to save.

Other Variables

Age, income, income uncertainty, wealth, risk tolerance, saving horizon, homeownership, household composition, health status, education, race/ethnicity, self-employment, and unemployment have all been linked to some aspect of saving. Researchers have found that saving increases with age (Chang, 1994; Katona, 1975; Mirer, 1979). Furnham (1985) found age to be strongly and linearly related to respondents' attitudes toward saving, and age has been found to determine how regularly a household saves, where a household saves, and why a household saves. Yuh and Hanna (2010) found the predicted probability of saving to be the highest among respondents under age 30, with the predicted probability generally decreasing with age.

Saving and income are positively related, with saving increasing with income (Chang, 1994; Foster, 1981; Hefferan, 1982; Lee et al., 2000; Yuh & Hanna, 2010). In the real world, uncertainty about future income affects household saving or net worth accumulation (Yuh & Hanna, 2010). Some researchers have reported that households facing higher income risk are more likely to save (Carroll, 1994; Deaton, 1991; Lusardi, 1998; Sandmo, 1970; Zeldes, 1989), while others have found no significant relationship between income uncertainty and saving behavior (Fisher, 2010b).

Both positive and negative links have been found between household wealth and saving. Hefferan (1982) found a positive effect of wealth on both the decision to save and the level of saving. Rha et al. (2006) and Xiao and Malroux (1994) found a positive relationship between net assets and saving. In Yuh and Hanna (2010), net worth had a positive effect on household saving practices. However, Chang (1994) argued that increases in wealth have a negative effect on personal saving, holding all else equal, finding initial net non-housing assets to be negatively related to non-housing asset accumulation. Fisher and Montalto (2010, 2011) did not find wealth and household saving to be related.

Households with a high level of risk tolerance accumulate more non-housing wealth than those with low risk tolerance (Chang, 1994). Avery and Kennickell (1991) found that households expressing a willingness to bear high risks have much higher levels of saving. Fisher and Montalto (2010b) found that low risk tolerance decreased the likelihood of saving, and Finke and Huston (2003) found that greater risk tolerance was associated with higher net worth and financial assets.

Economists, psychologists, and sociologists have also discussed the importance of “time horizon” in intertemporal choices (Lea, Webley, & Walker, 1995). Rabinovich and Webley (2007) argue that saving horizon is one of the most robust covariates of saving behavior in previous research, and aids in predicting saving behavior. Lusardi (2000) found a positive relationship between planning and saving, and Lee et al. (2000) and Fisher and Montalto (2010, 2011) found that a long-term financial planning horizon is positively related to saving. Households that are willing to have their money tied up for longer periods of time have been found to have higher levels of saving (Avery & Kennickell, 1991), and individuals with a relatively high “subjective discount rate” (Friedman, 1957) were expected to be more likely to save (Lea et al., 1995). Ainslie (1975, 1992) provided a detailed review of the history and implications of time horizon.

Researchers have found that saving is higher among homeowners (Avery & Kennickell, 1991; Bosworth, Burtless, & Sabelhaus, 1991; Browning & Lusardi, 1996; Rha et al., 2006; Yuh & Hanna, 2010) and Chen and DeVaney (2001) found homeownership was positively related to the adequacy of quick, comprehensive emergency funds. Bosworth et al. (1991) found saving to vary by marital status and the presence of dependent children, with single-head households with children having the lowest saving rates in the population. Other researchers also found that single parents had the lowest saving rates in the population, while married couples with no children had the highest saving rates (Avery & Kennickell, 1991; Bosworth et al., 1991; Chang, 1994; Yuh & Hanna, 2010). Lee et al. (2000) found that younger couples without children and older households without dependent children were more likely to save than younger single households or households with dependent children. Single female householders were significantly less likely to save as compared with comparable married households, and single females were also significantly less likely to report spending less than income than single males (Yuh & Hanna, 2010). The presence of a de-

pendent child under age 19 in a household was associated with a significantly lower likelihood of saving as compared with otherwise comparable households that did not contain a dependent child (Yuh & Hanna, 2010). Households with dependent children have been found to save less as a way to meet childrearing costs (Bosworth et al., 1991; Browning & Crossley, 2001; Douthitt & Fedyk, 1989). Mason (1975) found larger family size to be associated with lower levels of saving, *ceteris paribus*.

Saving behavior is affected by an individual’s health status (Davies, 1981; Palumbo, 1999), and Kennickell and Lusardi (2005) argued that it is important to model health risks in studies of consumption and saving. Several researchers have found that health affects total wealth accumulation (National Bureau of Economic Research, 2000; Smith, 1999; Wu, 2003), and Fisher and Montalto (2010, 2011) found a negative relationship between poor health and saving. However, Yuh and Hanna (2010) found that households with poor health are more likely to save than households with fair or excellent health.

Solmon (1975) indicated that average and marginal propensities to save rise with the educational attainment of the household head. In a study of saving in Britain, Furnham (1985) found education had a curvilinear differentiation effect on respondents’ attitudes related to saving. Saving has been shown to be higher among higher education groups (Attanasio, 1993; Avery & Kennickell, 1991; Bernheim & Scholz, 1993; Lee et al., 2000; Yuh & Hanna, 2010), while wealth holdings have been shown to be particularly low for households whose head has low education (Bernheim & Scholz, 1993; Hubbard, Skinner, & Zeldes, 1995).

Racial or ethnic differences in household saving behaviors exist (Avery & Kennickell, 1991; Fisher, 2010a; Lee et al., 2000; Short, 1984), even when the households were otherwise similar (Lee et al., 2000). In a review of earlier studies, Galenson (1972) found that most studies showed that Black households saved more than White households at the same income level, but concluded that previous interpretations were incorrect. Rha et al. (2006) found that households with a White respondent were more likely to save as compared with households having a Black or Hispanic respondent, and Hogarth and Anguelov (2003) found White households to be more likely to be savers than Black or Hispanic households. Households with a Black respondent have a lower likelihood of saving than otherwise similar White households (Yuh & Hanna, 2010). White households have been found to save more as com-

pared with Black or other minority households, and Black householders are less likely to have adequate intermediate emergency funds (Chang & Huston, 1995; Huston & Chang, 1997).

Using 1983 and 1986 data from the Survey of Consumer Finances, Chang (1994) found that savers, those who accumulated non-housing assets between 1983 and 1986, were less likely to be farm and self-employed workers compared to dissavers. Chang (1994) also found that more savers than dissavers were employed in 1983 and 1986. On the contrary, Rodriguez-Flores and DeVaney (2007) found that the self-employed were more likely to have adequate emergency funds. Yuh and Hanna (2010) found that self-employed households were more likely to save than those that were not self-employed. This would suggest they were more likely to be savers to buffer income uncertainty, but whether they save regularly or irregularly is yet to be determined.

Hypotheses

We expect that different saving motives will have varied influence on the likelihood of saving on a regular basis, saving irregularly, or not saving at all. Several studies have shown that having incentives or motives is related to higher contributions or value in saving accounts designated for different goals such as for retirement, children's education, or down payments for major purchases (Anong & DeVaney, 2010; Center for Retirement Research, 2000; DeVaney & Chien, 2001; Xiao, 1997). Certain motives led to typical saving behavior, such as saving regularly for retirement through automatic payroll-deduction programs (e.g., 401k).

Despite evidence of hierarchical saving and given the complexity of mental accounting and pursuing competing goals simultaneously, it is difficult to predict a directional influence for each of the six categories of motives. Families with different socioeconomic characteristics may have different primary savings motives and other saving-related dispositions. We control for expected variation due to the influence of socioeconomic and other saving-related factors.

We conceptualize that lacking an incentive or specific saving motive may affect the likelihood of being a regular saver, irregular saver, or non-saver (see DeVaney et al., 2007; Fisher & Montalto, 2010). Therefore, households identifying one or more of the six saving motives as a primary reason for saving at the time of the survey are com-

pared to the reference group of those who had no particular reason to save or said they were non-savers. The following hypotheses regarding the relationship between saving motives and a household's saving habit are proposed:

- H1. Holding all other demographic and other saving-related factors constant, households with a specific saving motive are more likely to save regularly than to not save.
- H2. Holding all other demographic and other saving-related factors constant, households with a specific saving motive are more likely to save irregularly than to not save.
- H3. Holding all other demographic and other saving-related factors constant, households with a specific saving motive are more likely to save regularly than irregularly.

Data and Methodology

Data

The SCF is a triennial survey providing reliable information on the financial behaviors of U.S. households and allows for examining saving behaviors at the micro level (Bucks et al., 2009). The SCF sample design includes two parts: (a) an area-probability sample, which is a geographically based random sample intended to provide coverage of assets that are widely distributed in the population; and (b) the list sample, a supplemental sample which disproportionately includes wealthy households holding a relatively large share of less commonly held assets. In the 2007 survey, 4,422 households were interviewed, with 2,915 from the area-probability sample, and 1,507 from the list sample (Bucks et al., 2009).

Weights played a critical role in interpreting SCF data because the survey sample does not follow an equal-probability design (see Board of Governors of the Federal Reserve System, 2009). The Federal Reserve Board also employs multiple imputation techniques to handle missing responses (Kennickell, 1997), leading to five complete data sets which are referred to as "implicates" (Board of Governors of the Federal Reserve System, 2009). In the current study, all five implicates were used for the analyses. Retired households (head and/or the spouse/partner of the head) were excluded from the sample because they were assumed to be living on fixed incomes and to be dissaving during their retirement years (Ando & Modigliani, 1963). The final unweighted sample consisted of 3,822 households.

Empirical Model

Dependent Variable

In the SCF, respondents are asked to indicate their saving habits by selecting from a list of statements: (1) don't save - usually spend more than income; (2) don't save - usually spend about as much as income; (3) save whatever is left over at the end of the month - no regular plan; (4) save income of one family member, spend the other; (5) spend regular income, save other income; and (6) save regularly by putting money aside each month. Responses to this question were used to create the dependent variable in order to explore how saving motives and other factors in the model were related to a household's saving habits. Two saving habit categories were derived from Katona (1975): save regularly (4, 6), save irregularly (3, 5), and do not save (1, 2). Saving regularly was considered to be the discretionary saving discussed by Katona (1975), while saving irregularly was considered to be residual saving, as these households were saving whatever is left over or windfall income.

Explanatory Variables

The explanatory variables included in the model were guided by the framework of Katona (1975) in addition to the empirical literature. Dummy variables were included for the six saving motives Katona (1975) discussed, including necessities, emergencies, children, house, vacations, and retirement. The SCF data set includes up to six of the most important saving motives for each household in the order reported by the respondent. Thus, households included in this study could have up to six saving motives, with each motive equal to 1 if the household reported it as a saving motive, and 0 otherwise. Detailed definitions and measurements of the variables included in the analysis are provided in the appendix.

Other dummy variables included age category, income quintiles, income uncertainty, risk tolerance, homeownership, household composition, health status of the head and spouse/partner of the head (if present), race/ethnicity, self-employment, and unemployment. The reference category for age of the household head was being less than 32 years old, with four additional dummies for 32-39 years, 40-47 years, 48-55 years, or older than 55. The income quintiles were based on having income less than \$21,500 (reference category), or having income in one of the following ranges: \$21,500-38,999; \$39,000-62,499; \$62,500-98,999; or \$99,000 or higher. The income uncertainty variable was equal to 1 if the household does not usually have a good idea of income in the next year, and 0 otherwise.

Risk tolerance had three categories: above average to substantial, average (reference category), and low. Three dummy variables were included for saving horizon: short (reference category), medium, and long. The homeownership dummy variable was assigned a value of 1 if the household owns a home, and 0 otherwise. The reference category for household composition was single, or households with only one person. Dummies were included for a married or partnered couple with no children, a married or partnered couple with children, non-married/partnered male with children, and non-married/partnered female with children. There were three categories for health status: good to excellent (reference category), fair, and poor.

Race/ethnicity had four categories: non-Hispanic White (reference category), non-Hispanic Black, Hispanic, and other. We used two questions in the SCF to determine the race/ethnicity variable (see Lindamood, Hanna, & Bi, 2007 for details). Dummy variables were also included for whether the head and/or the spouse/partner of the head (if present) were currently self-employed or unemployed within the previous year. Continuous control variables in the model included net worth (scaled by 10,000) and years of education of the head.

Methods

The dependent variable had three categories, so multinomial logistic regression was used to estimate the model of saving habits. Montalto and Sung (1996) recommended using the repeated-imputation inference (RII) technique in order to include the within- and across-imputation variance when generating inferences, as ignoring the extra variance leads to overestimation of the statistical significance of the results. However, the RII method cannot be used because it is not applicable to multinomial logit models with multiple coefficient modes (Kyrychenko & Shum, 2009). An alternative method used by Hogarth, Anguelov, and Lee (2004) and Kyrychenko and Shum (2009) was followed, with the model estimated for each of the five implicates. To compensate for not using an RII technique, the parameter estimates must be significant at .05, .01, or .001 in all five implicates in order to be considered significant at that level. The parameter estimates and the odds ratios for the first implicate data set are presented. An RII scalar technique, also prescribed by Montalto and Sung (1996), was used to compute the weighted means for net worth, income, and education.

Results

Descriptive Statistics

As shown in Table 1, almost half of the sample reported saving regularly (46.1%), while about 32% reported saving irregularly and approximately 22% reported that they do not save. Chi-square and ANOVA tests revealed significant differences among the three saver groups as shown in Table 1. Among the saving motives, only the retirement saving motive was significantly different among the three horizon groups. Those with a retirement motive were more likely to be regular or irregular savers than non-savers. About 61% of households reporting to save regularly also reported a retirement saving motive, as compared with about 41% of irregular savers and about 35% of non-savers.

The proportion of households within each of the income categories was also significantly different for all three saving habit groups. The majority of households reporting that they do not save were in the lower two income categories, while the majority of households saving regularly were in the upper income categories, and those who save irregularly fell in between. About 30% of the sample did not usually have a good idea of income in the next year, and the proportion falling into this category was significantly different for the three saver groups. About 37% of non-savers experienced such income uncertainty, with about 32% of irregular savers and 25% of regular savers reporting income uncertainty. The mean net worth of each of the saver groups was significantly different, with a mean net worth much lower for those reporting that they do not save as compared with those who reported saving irregularly. The net worth of those who reported saving regularly was the highest.

The non-saver group had a much higher proportion of households with low risk tolerance (57.9%), while about 43% and 25% of households reporting to be irregular and regular savers had low risk tolerance, respectively. Almost one third (29.4%) of regular savers reported an above average to substantial risk tolerance, with only about 18% and 16% of regular and irregular savers reporting above average to substantial risk tolerance, respectively. Over half of non-savers reported a short saving horizon (52.2%), while only 34.4% of those saving irregularly and 24.3% of those saving regularly reported a short saving horizon, respectively. About 40% of respondents who reported that they do not generally save had a medium saving horizon, as compared with 54% of irregular savers and 56% of regular savers. Only about 8% of non-savers had a long saving horizon, while about 12% of irregular savers and about 20%

of regular savers had a long horizon. Almost three quarters (72.5%) of regular savers were homeowners, with about 61% and 53% of irregular savers and non-savers owning a home, respectively.

Health status was also significantly different for the three groups. About 80% of households with a head and/or the spouse/partner of the head (if present) in good to excellent health reported saving regularly, about 73% reported saving irregularly, and about 59% reported that they do not save. Only about 3% and 19% of households with a head and/or the spouse/partner of the head (if present) in poor or fair health, respectively, reported saving regularly, with about 6% and 23% saving irregularly and 13% and 30% not saving, respectively. The mean years of education were highest for the regular savers (14.1 years) and lowest for the non-savers (12.5 years). A smaller proportion of households experiencing unemployment currently or in the last 12 months reported saving regularly (15%) as compared with the proportion saving irregularly (18%) or not saving (27%).

Multinomial Logit Analysis

As previously discussed, the multinomial logit regressions were estimated for each implicate. The results for the first implicate are reported in Table 2. A coefficient is only reported as significant if it was significant at that level in all five implicates.

Saving regularly versus not saving. Having an emergency saving motive was positively associated with the likelihood of being a regular saver versus a non-saver, with the odds of saving regularly about 1.8 times as high as a household not reporting an emergency saving motive. Having a retirement saving motive also had a positive relationship with the likelihood of saving regularly versus not saving, with households reporting this motive having odds of saving regularly that were 1.34 times as high as a household not reporting a retirement saving motive. The other four saving motives were not significant in the model. This provided partial support for Hypothesis 1, in that having an emergency or retirement saving motive increased the likelihood of saving regularly versus not saving, while other saving motives were not significant.

Falling into the four upper income quintiles was associated with a significant increase in the likelihood of being a regular saver versus not saving. As compared with the lowest income group (less than \$21,500), households falling into the \$21,500 to \$38,999 income category had odds of saving regularly versus not saving 1.5 times that of the refer-

Table 1. Descriptive Statistics of Non-Retired Households in the 2007 SCF (all implicates)

Variable	Total sample (N = 3,822) %	Save regularly (n = 1,763) %	Save irregularly (n = 1,221) %	Don't save (n = 838) %
Save regularly	46.12	100.00		
Save irregularly	31.95		100.00	
Don't save	21.93			100.00
Necessities saving motive	10.94	8.95	11.95	13.63
Emergencies saving motive	34.98	37.61	36.35	27.46
Children saving motive	25.02	25.38	23.21	26.88
House saving motive	11.74	10.47	12.71	12.98
Holidays/vacation saving motive	10.34	11.05	11.10	7.70
Retirement saving motive***	48.83	60.85	40.75	35.31
Saving horizon				
Short***	33.69	24.34	34.44	52.24
Medium**	51.8	55.94	53.82	40.13
Long***	14.52	19.72	11.74	7.63
Net worth (mean)***	\$490,656	\$655,902	\$493,206	\$139,426
Income (mean)***	\$84,778	\$109,033	\$79,953	\$40,799
Less than \$21,500***	19.43	10.16	22.00	35.17
\$21,500 - \$38,999***	19.54	14.67	21.02	27.62
\$39,000 - \$62,499***	20.81	19.09	24.84	18.54
\$62,500 - \$98,999***	19.09	23.50	17.15	12.64
\$99,000 or higher**	21.14	32.58	15.00	6.03
Income uncertainty***	29.91	25.05	31.96	37.13
Risk tolerance				
Low***	37.73	24.59	42.84	57.90
Average**	39.40	46.00	38.99	26.15
Above average to substantial***	22.87	29.41	18.17	15.95
Homeowner***	64.45	72.51	60.77	52.82
Household composition				
One person	28.62	27.28	30.69	28.45
Couple no children***	25.81	30.29	24.54	18.27
Couple with children	31.24	34.41	35.05	32.71
Male with children	1.68	1.55	1.35	2.43
Female with children***	9.64	6.48	8.38	18.14

Table 1. Descriptive Statistics of Non-Retired Households in the 2007 SCF – continued (all implicates)

Variable	Total sample (N = 3,822) %	Save regularly (n = 1,763) %	Save irregularly (n = 1,221) %	Don't save (n = 838) %
Health status				
Good to Excellent***	72.58	79.13	72.76	58.53
Fair***	22.41	18.79	22.61	29.73
Poor***	6.00	2.65	6.14	12.86
Education (years)***				
Age**	43.82	44.08	43.79	43.30
Less than 32 years*	20.70	18.93	23.01	21.06
32 to 39 years	18.19	17.85	17.87	19.39
40 to 47 years	20.77	20.33	20.33	22.34
48 to 55 years***	21.39	24.20	18.00	20.41
56 years and older	18.95	18.69	20.79	16.81
Race/ethnicity				
Non-Hispanic White	67.34	68.53	67.42	64.70
Non-Hispanic Black	13.54	12.93	13.24	15.25
Hispanic	14.5	13.61	14.30	16.66
Other	4.63	4.93	5.04	3.39
Self-employment				
Unemployment***	18.60	15.05	18.25	26.56

Note. Source: 2007 Survey of Consumer Finances. Statistics on categorical variables derived from weighted analyses of data pooled from all five implicates. Statistics on continuous variables derived from RII techniques.

Note: Chi-square test was used to test for a significant difference among the three saver groups for categorical variables with ANOVA used for continuous variables.

* $p < .05$. ** $p < 0.01$. *** $p < .001$.

ence group, while households with income in the highest quintile (\$99,000 or higher) had odds of saving that were 10.5 times that of the reference group. Income uncertainty, or not usually having a good idea of income in the next year, and net worth were not significant in explaining the likelihood of saving regularly versus not saving.

As compared with average risk tolerance, low risk tolerance was associated with a significantly lower likelihood of saving regularly versus not saving, while above average

to substantial risk tolerance was not significant. Having a medium or long saving horizon significantly increased the likelihood of saving regularly versus not saving as compared with the short saving horizon group. Relative to being a single person household, couples with children, male household heads with children, and female household heads with children were significantly less likely to save regularly than to not save. There was no significant difference between the likelihood of saving regularly for single person households and couples with no children. Poor

Table 2. Results of the Multinomial Logit Regression on Saving Habits (Unweighted N = 3,822)

Variable	Parameter Estimates			Odds Ratios		
	Save Regularly vs. Don't Save	Save Irregularly vs. Don't Save	Save Regularly vs. Irregularly	Save Regularly vs. Don't Save	Save Irregularly vs. Don't Save	Save Regularly vs. Save Irregularly
Emergencies saving motive	0.585***	0.418***	0.168	1.795	1.519	1.182
Retirement saving motive	0.294*	-0.081	0.369***	1.341	0.922	1.455
Children saving motive	0.163	0.087	0.070	1.177	1.091	1.079
Home saving motive	0.167	0.100	0.072	1.182	1.105	1.069
Necessities saving motive	-0.041	-0.007	0.041	1.042	0.993	1.049
Holidays/vacation saving motive	0.175	-0.334	-0.168	1.191	0.716	0.823
Saving horizon (short)						
Medium	0.616***	0.462***	0.131	1.851	1.587	1.166
Long	1.01***	0.682***	0.314*	2.734	1.978	1.383
Net worth	0.010	0.012*	-0.002**	1.010	1.002	0.998
Income (< \$21,500)						
\$21,500 - \$38,999	0.416*	0.152	0.326	1.516	1.165	1.303
\$39,000 - \$62,499	0.881***	0.607**	0.259	2.414	1.835	1.315
\$62,500 - \$98,999	1.425**	0.744***	0.770***	4.156	2.104	1.975
\$99,000 or higher	2.349***	1.481***	0.913***	10.472	4.397	2.381
Income uncertainty	-0.151	0.026	-0.193*	0.860	1.026	0.838
Risk tolerance (average)						
Low	-0.788***	-0.451***	-0.331**	0.455	0.637	0.714
Above average to substantial	-0.136	-0.136	0.005	0.873	0.873	0.999
Homeowner	-0.002	-0.150	0.150	0.998	0.861	1.159
Household composition (one person household)						
Couple no children	-0.128	-0.053	-0.090	0.880	0.948	0.927
Couple with children	-0.532**	-0.285	-0.258	0.588	0.752	0.782
Male head with dependents	-0.894*	-0.745	-0.155	0.409	0.475	0.861
Female head with dependents	-0.855***	-0.758***	-0.100	0.425	0.469	0.907
Poor health	-0.883***	-0.633**	-0.242	0.414	0.531	0.779
Education	0.058*	-0.002	0.056**	1.060	1.002	1.057
Age (< 32 years)						
32 – 39 years	-0.272	-0.207	-0.084	0.762	0.813	0.938
40 – 47 years	-0.409*	-0.241	-0.181	0.664	0.786	0.845
48 – 55 years	-0.339	-0.302	-0.048	0.713	0.739	0.964
56+ years	-0.278	-0.034	-0.322*	0.757	0.967	0.732
Race/ethnicity (Non-Hispanic White)						
Non-Hispanic Black	0.715***	0.292	0.442**	2.045	1.339	1.527
Hispanic	0.604***	0.092	0.532***	1.829	1.096	1.668
Other	0.044	0.217	-0.159	1.045	1.242	0.841
Self-employment	-0.301*	-0.016	-0.276**	0.740	0.984	0.753
Unemployment	-0.284*	-0.415**	0.150	0.752	0.660	1.139

* $p < .05$. ** $p < .01$. *** $p < .001$.

health and saving regularly were significantly and negatively related (as compared with fair to excellent health), and each year of education significantly increased the likelihood of being a regular saver versus a non-saver.

Relative to households with a White respondent, households with a non-Hispanic Black or Hispanic respondent were significantly more likely to save regularly versus not save, with odds of saving regularly versus not saving that were 2.0 and 1.8 times that of the reference group, respectively. Self-employment and unemployment were significantly and negatively associated with the likelihood of saving regularly versus not saving.

Saving irregularly versus not saving. Households with an emergency saving motive were significantly more likely to save irregularly versus not save, with odds of saving that were 1.5 times that of households not reporting an emergency saving motive, providing partial support for Hypothesis 2. Other saving motives were not significant in explaining the likelihood of saving irregularly versus not saving. Being in one of the top three income quintiles was also associated with a significantly higher likelihood of saving irregularly versus not saving as compared with the lowest income group (less than \$21,500), with households having income in the top quintile having odds of saving irregularly versus not saving that were 10.5 times of the reference group. An increase in net worth was associated with a significant increase in the likelihood of saving irregularly versus not saving. As compared with average risk tolerance, low risk tolerance had a significantly negative effect on the likelihood of saving irregularly (versus not saving). Households with a medium or long saving horizon had greater odds of saving irregularly versus not saving (the odds of saving irregularly versus not saving were 1.9 and 2.7 times that of households with a short saving horizon, respectively) as compared with those having a short saving horizon.

Female household heads with children were significantly less likely to save irregularly than to not save compared to single person households. Households with a head and/or the spouse/partner of the head (if present) in poor health were significantly less likely to save irregularly versus not save as compared with those in fair to excellent health. Unemployment in households significantly reduced the likelihood of saving irregularly versus not saving.

Saving regularly versus saving irregularly. Households reporting a retirement saving motive had odds of saving regularly versus irregularly that were 1.5 times higher than

those without a retirement saving motive, providing partial support for Hypothesis 3. Other saving motives were not significant. Relative to the lowest income group (less than \$21,500), having income in the fourth or fifth quintile was significantly and positively related to the likelihood of saving regularly versus saving irregularly. Households in the fourth quintile had odds of saving regularly versus irregularly that were about 2.0 times higher, and households in the fifth quintile had odds of saving regularly versus irregularly that were 2.4 times higher. Income uncertainty and net worth were associated with a significant decrease in the likelihood of saving regularly versus saving irregularly.

Relative to having average risk tolerance, low risk tolerance significantly decreased the likelihood of saving regularly versus irregularly. Having a long saving horizon significantly increased the probability of saving regularly versus saving irregularly (as compared with the short saving horizon group), as did each year of education.

Relative to households with a White respondent, households with a Black or Hispanic respondent were significantly more likely to save regularly versus save irregularly. Households with a Black respondent had odds of saving regularly versus irregularly that were 1.5 times higher, while households with a Hispanic respondent had odds that were 1.7 times higher. Households with a self-employed respondent or spouse were less likely to save regularly versus to save irregularly.

Conclusions and Implications

We explored how saving motives are related to saving habits in terms of whether a household saves regularly, irregularly, or does not generally save. Katona's (1975) discretionary and residual savers were clearly identified and well represented in the data. Descriptive analysis showed clear differences across these savers and the non-saving group. With respect to motives, those who held a motive to save for retirement were most likely to be discretionary regular savers or residual irregular savers. However, the regression results confirmed that emergency and retirement saving motives are important predictors of saving behavior, which is consistent with the results of Carroll (1997) and Xiao (1997).

The emergency saving motive was significant in explaining the likelihood of saving regularly versus not saving and saving irregularly versus not saving, while the retirement saving motive was significant in explaining the likelihood of saving regularly versus not saving and saving

regularly versus irregularly. The results extend the literature by showing that these motives are stronger predictors of disciplined or facilitated saving. Financial educators and advisors must continue to emphasize the importance of identifying appropriate goals to encourage a regular habit of discretionary saving to achieve financial goals.

Households that report saving regularly may be enrolled in automated savings plans, where the money from their paycheck is automatically deposited into a saving vehicle, whether a retirement saving account, money market account, or a saving account for a special purpose. Recently, financial providers have been offering automatic saving programs, such as Keep the Change program from Bank of America, where the totals of debit card purchases are rounded up to the nearest dollar and the difference is transferred to a savings account. Educating households on how these automated saving accounts work and the benefit to them of using such an account could help them develop the habit of saving regularly. As suggested by Gutter and Fontes (2006), the use of Individual Development Accounts (IDAs) could encourage saving among individuals with low income or wealth. Similarly, having retirement saving plans through employers that are opt-out rather than opt-in could encourage more individuals to save.

While previous studies were mixed regarding the influence of income on saving, the current study indicates that households in all income groups can be regular savers even though saving for those in lower income groups could be considered a luxury (Xiao and Fan, 2002). Some lower income groups participate in employer-sponsored retirement plans, IDAs, or other automatic savings programs while focusing on lower level needs as much as their resources allow. Yuh and Hanna (2010) argued that an implausibly high proportion of the lowest income households report spending less than income, so programs designed to increase savings among low income households are not likely to be successful. This issue could benefit from further investigation, as the present results show that a large number of households in the lowest income groups are non-savers. Advisors and educators must stress to all consumers the importance of regular saving with long-term plans for higher order goals.

Households with low risk tolerance are less likely to save regularly or irregularly as compared with households with average risk tolerance. Yao, Gutter, and Hanna (2005) also found that those with lower risk tolerance were less likely to invest in risky assets, so these households may not be building the wealth that they could to establish economic

security. The relationship between low risk tolerance and a reduced likelihood of general saving was also found in Fisher (2010a, 2010b), and requires further investigation.

According to Yu and Hanna (2010), single female households might have potential for higher saving given that their calculated rate of saving at mean values of income and other independent variables was significantly lower than the rate for single male households. In the present study, the univariate results showed that the proportion of male householders with children who save regularly, save irregularly, or do not save was not significantly different, while the proportions across those categories differed significantly for single female householders. Thus, it does seem that single female households have potential for increased saving. Research aimed at providing a better understanding of what prevents these single female householders from saving as well as how to change their behaviors is needed.

Having a medium or long saving horizon was significant in explaining the likelihood of saving regularly or irregularly versus not saving. This was consistent with previous studies indicating that a longer horizon was associated with saving (Fisher & Montalto, 2010, 2011). Education programs must stress the importance of goal-setting with realistic time horizons, preferably for long horizons with regular saving of smaller amounts, which makes goal attainment more feasible.

One limitation of the current study is that Katona's (1975) framework includes contractual saving, where one makes installment payments for an asset like a home, but the question asked in the SCF regarding saving habits does not include such a category. However, the homeownership variable included in the study did not have any statistical impact on any of the models. Future research should explore psychological and economic motivations for contractual or forced saving behavior.

The present study examined the impact of saving motives on a household's saving habit. Further research is needed to fully understand the mental accounting and dilemmas that consumers face when dealing with multiple savings motives and other financial constraints. The NIPA rates following the Great Recession, peaking at around 6%, signal a more cautious consumer, a trend similar to the Great Depression cohort of compulsive savers (National Bureau of Economic Research, 2011). It is important to continue to expand our understanding of the motivations behind personal saving behaviors to sustain higher levels of personal saving.

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Appendix. Description of Variables

Variables	Measurement
Saving (dependent variable):	Which of the following statements comes closest to describing your [and your (husband/wife/partner)'s] saving habits?
Save regularly:	Save regularly by putting money aside each month Save income of one family member, spend the other
Save irregularly:	Save whatever is left over at the end of the month - no regular plan Spend regular income, save other income
Don't save:	Don't save - usually spend more than income Don't save - usually spend about as much as income
Saving motives (each saving motive variable is dichotomous):	Now I'd like to ask you some questions about your attitudes about savings. People have different reasons for saving, even though they may not be saving all the time. What are your (your family's) most important reasons for saving? (Note: Respondent can indicate up to 6 reasons.)
Emergencies:	Reserves in case of unemployment In case of illness; medical/dental expenses Emergencies; "rainy days"; other unexpected needs; for "security" and independence Liquidity; to have cash available/on hand
Retirement:	Retirement/old age
Children:	Children's education; education of grandchildren "For the children/family", n.f.s.; "to help the kids out"; estate To have children/a family
Home:	Buying own house (not "summer cottage") Purchase of cottage or second home for own use Home improvements/repairs
Necessities:	Buy durable household goods, appliances, home furnishings; hobby and recreational items; for other purchases not codable above or not further specified; "buy things when we need/want them"; special occasions Burial/funeral expenses To meet contractual commitments (debt repayment, insurance, taxes, etc.), to pay off house Ordinary living expenses/bills Pay taxes
Holidays/vacation:	Wedding, Bar Mitzvah, and other ceremonies To travel; take vacations; take other time off "To enjoy life" To give gifts; "Christmas"
Saving horizon:	In planning (your/your family's) saving and spending, which of the following is most important to [you/you and your (husband/wife/partner)]: the next few months, the next year, the next few years, the next 5 to 10 years, or longer than 10 years? Short: Next few months; Next year Medium: Next few years; Next 5-10 years Long: Longer than 10 years
Net worth:	Assets minus debts (code from SCF website used)
Income:	Household income in previous calendar year (code from SCF website used)

Appendix. Description of Variables – continued

Variables	Measurement
Income uncertainty:	Do you usually have a good idea of what your (your family's) next year's income will be? Income uncertainty: no
Risk tolerance:	Which of the following statements comes closest to describing the amount of financial risk that you and your (husband/wife/partner) are willing to take when you save or make investments?
Above average to substantial:	Take substantial financial risks expecting to earn substantial returns Take above average financial risks expecting to earn above average returns
Average:	Take average financial risks expecting to earn average returns
Low:	Not willing to take any financial risks
Homeowner:	Household owns home (code from SCF website)
Household composition:	
One person:	If household head is female or male and only person in household
Couple no children:	If household head is married/partnered and no dependent children in household
Couple with children:	If household head is married/partnered and has dependent children in household
Male head with dependents:	If household head is male and dependent children are present
Female head with dependents:	If household head is female and dependent children are present
Poor health:	Would you say your (your husband/wife/partner)'s health is excellent, good, fair, or poor? Poor health: If respondent and/or husband/wife/partner in poor health
Education:	Education of the household head (code from SCF website)
Age:	Age of the household head (code from SCF website)
Race/ethnicity:	Race/ethnicity of the household head (code from SCF website) (a) Do you consider yourself to be Hispanic or Latino in culture or origin? (b) Which of these categories do you feel best describe you: (white, black or African-American, Hispanic or Latino, Asian, American Indian or Alaska Native, Hawaiian Native or other Pacific Islander, or another race?)
Non-Hispanic White:	If household head self-identifies as white and does not consider him/herself to be Hispanic or Latino in culture or origin
Non-Hispanic Black:	If household head self-identifies as black and does not consider him/herself to be Hispanic or Latino in culture or origin
Hispanic:	If household head self-identifies as Hispanic and considers him/herself to be Hispanic or Latino in culture or origin
Other:	Those not classified in one of the three other groups
Self-employment:	Next are some questions about your (your wife's/partner's) current, main job. (Do you/Does [he/she]) work for someone else, (are you/is [he/she]) self-employed, or what? Self-employment: If household head and/or spouse's current, main job is "self-employed"
Unemployment:	(a) We are interested in your (wife's/partner's) present job status. (Are you/Is [he/she]) working now, temporarily laid off, unemployed and looking for work, on sick leave, disabled and unable to work, retired, a student, a homemaker, or what? (b) At any time during the past twelve months, were you unemployed and looking for work? Unemployment: If household head and/or wife/partner's present job status is temporarily laid off or unemployed and looking for work OR respondent and/or wife/partner was unemployed and looking for work in past 12 months