Households @ Risk:
US Households' Capacity to Cope with Risk

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This paper reports the results of a 2009 study of a representative sample of US households regarding their risk exposures, risk-bearing capacity, and coping mechanisms. The risk studied is a financial shock requiring an outlay of $2000 within 30 days. Households perceive the likelihood of encountering this financial shock as being rather remote; but risk exposure perceptions are higher for families with children and people who have lost greater wealth in the economic crisis. Many families judge themselves financially vulnerable: almost half of Americans felt that they were unlikely to access $2000 in 30 days in the event of an emergency. Risk-bearing capacity is lowest for people with lower income and wealth, women, younger people, families with children, gamblers, people without prior financial education, and those who do not engage in certain financial planning activities. These cross sectional differences are large in magnitude. Finally, people employ a wide range of coping strategies to deal with financial shocks. While precautionary savings is the top planned coping mechanism, informal networks, increasing work, formal and alternative credit, and selling items are also used substantially to deal with emergencies, especially for some subgroups. Household finance researchers must look beyond precautionary saving to understand how families cope with risk.

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1. Introduction

Despite the long-standing appreciation of household risk in economics, sociology, and public policy, and the advances in risk measurement and management in theory and practice, household risks are much less studied. The purpose of this study is to introduce a new measure of household risk and to use a new, recently collected nationally-representative database to report on (1) households' perceptions of their risk exposures; (2) households' assessments of their risk-bearing capacities; and (3) households' means of coping with these risks. Our new measure examines households' own assessments of the likelihood of, and ability to cope with *modest financial shock that can routinely hit families*. We seek to understand households' capabilities to deal with unexpected expenses such as car and house repairs or medical deductibles or uninsured dental care, rather than larger shocks such as loss of income through unemployment or layoffs or other large shocks. We label the inability to deal with everyday shocks "financial fragility."

Working in conjunction with TNS, a global market research firm, in the late summer of 2009 we collected data from several countries, where each of the national samples was designed and weighted to be nationally representative. This study deals exclusively with US participants of the survey. We asked participants to consider a small financial shock that might require coming up with $2000 in the next 30 days. We have three key findings: (a) *Risk Assessment*: most households believe that they are unlikely to face a small financial shock; (b) *Risk-bearing Capacity*: households' ability to weather a small financial shock is limited. In the US, almost half of Americans lack confidence in their ability to come up with $2000 in the next 30 days; and (c) *Coping Mechanisms*: households cope with shocks using a combination of savings, traditional and alternative credit, informal network support, and changes in life-style, with the mix varying across families. We explore cross-sectional differences in risk assessment, access to financial resources, and coping mechanisms, finding much variation in these elements across subpopulations.

Our partnership with a large survey firm allows us to design questions and collect new and timely information on risk and risk management, not present in other data sets. We believe our study makes five contributions to the growing literature on household finance. First, we establish a simple but concrete baseline metric of financial risk (events requiring $2000 in 30 days) which can be modified in amount and duration, but which is easily understood in a survey

setting. Second, we explicitly study perceived financial risk exposures, a topic that has not been much explored by scholars. Third, we examine risk-bearing capacity, which is broader than precautionary savings, encompassing many ways to deal with risk including family and friend support, mainstream and alternative credit, selling material possessions, and increasing work effort. In this respect, our work provides a link between economics and sociology, which have tended to focus on different elements of this list. Our findings suggest a pecking order of coping responses. Fourth, we uncover large cross sectional differences in risk-bearing capacity and coping mechanisms. Finally, as our survey was conducted in the wake of the global economic crisis in which many households lost substantial amounts of wealth, we can document how wealth changes affected risk exposures, risk bearing capabilities, and risk coping mechanisms.

In section 2, we review economic theories of household precautionary savings and sociological work on social support to provide testable hypotheses about those groups most likely to be financially at risk and the coping strategies they might draw upon when facing emergencies. In section 3, we describe our new survey and database. In section 4, we report households' assessments of their likelihood of encountering a small economic shock, and describe the cross sectional determinants of those assessments. In section 5, we report on households' capabilities to access financial resources in an emergency. In section 6, we report on the coping mechanisms identified by households. In Section 7, we review our findings and lay out our ongoing research agenda.

2. Risk Exposure, Risk-bearing Capacity, and Coping Mechanisms

In finance and economics, there has been extensive research on risk. Some of the work deals with probabilities, or risk *exposures*, e.g., the variance and skewnesss of portfolio returns. Other work deals with the *consequences* of risk, for example, the costs of corporate financial distress or the sizes of losses to a portfolio under certain circumstances. In this paper we jointly examine *households'* perceived *risk exposures*, *capacity* to cope with risks, and the specific *coping mechanisms*. Some of these topics have been studied by economists, sociologists, and policy scholars, which have often focused on different aspects of risk. . Below, we briefly review the extensive literatures upon which we draw.

Risk exposure

Our study examines the exposure of households to shocks, whatever their source, which give rise to modest financial needs ($2000) in a short time frame (30 days). In spirit, our $2000 measure is similar to portfolio at-risk measures used to ascertain the likelihood of financial outcomes, like the loss of a certain fraction of portfolio wealth arising from a combination of equity, interest rate, credit or other exposures. Like these at-risk measures, our $2000 financial shock metric subsumes a number of smaller risks.

Many studies by economists, public health experts, and actuaries examine household exposures to individual risks, such as unemployment and job loss (e.g., Abowd and Card 1989), health risks, disability and death. These studies often seek to understand the relationship between various risk factors and outcomes, e.g., between smoking and health outcomes or mortality. There is good reason to think that households' exposure to everyday financial risks vary systematically. Larger households, especially with children, may be beset by health care expenses. Married people might face the expenses of a divorce. Material possessions break and may require prompt repair or replacement. At the household level, larger families, especially families with many children, or families with older cars, appliances, and homes that might demand emergency repairs would be at greater risk of experiencing such a financial shock. We proxy for these factors with variables that indicate the presence of children in the household and with the respondent's age (with the assumption that acquisition and age of material possessions increases as one gets older.)

Holding constant the unobserved but *actual* risk of a financial shock, there might also be differences in individual *perceptions* of the likelihood of such an event occurring. Recency bias suggests that people may overestimate the probability of certain events if they have already occurred recently. In our context, we examine whether people who have recently suffered an investment loss are more likely to predict that they may face another financial emergency.

Risk-bearing Capacity and Coping Mechanisms

There is substantial research in economics, sociology, and public policy on how households cope with risk. The current U.S. health care debate is partially framed around the lack of risk-bearing capacity by some to deal with health care emergencies. Retirement policy

debates revolve around households' inability to deal with longevity risk. Academic research often looks at risk-bearing capacity and coping strategies simultaneously. Economists tend to focus on financial coping strategies in the form of precautionary savings and, in addition, access to credit. For example, Caner and Wolff (2004), note that assets provide liquidity in times of economic hardship and that there is a relative dearth of assets held by households. Sociologists tend to focus on social coping strategies in the form of networks of family and friends. For example, Biggs (1998) studies social networks of friends and families that provide both "social leverage" and "social support." Both of these examples typify a disciplinary tendency to examine a *single* coping mechanism in isolation. We draw on both of these literatures, but attempt to characterize coping strategies more broadly.

Precautionary Savings and Asset Poverty: According to economic theory, households deal with un-insurable risk by accumulating precautionary savings. If households are sensitive to risk and if financial markets cannot provide alternative hedging or insurance products, then households insure themselves by holding a buffer stock of savings (see reviews by Deaton 1992 and Browning and Lusardi 1996). In several theoretical specifications, the higher the risk, the higher the stock of precautionary savings.

It has been difficult to estimate the size of precautionary saving motives. Estimates range from very large values, such as 50 percent of wealth (Carroll and Samwick 1997, 1998) to moderate values of less than 10 percent of wealth (Hurst, Lusardi, Kennickell and Torralba 2010) to even smaller values (Skinner 1988). One of the difficulties of the empirical estimates has been the measure of risk used by researchers. Many of the estimates have focused exclusively on income risk. However, as Lusardi and Kennickell (2004) show, other types of risk can also affect households, such as emergencies, i.e., broken cars or heating systems or large health care deductibles. For persons with stable employment, these "everyday risks" are probably the most salient risks.

Income-based risk measures also fail to capture the important role that assets can play as a mechanism to cope with emergency (McKernan and Ratcliffe 2008; Schneider and Tufano 2007). Although framed in different language, the literature on asset poverty focuses on financial assets as the key buffer for emergencies. Examining household wealth between 1988 to 2001, Havemann and Wolff (2004) find asset poverty rates between 22 and 25% (when defining assets as net worth) and as high as 33% and 44% (when defining assets as liquid assets).

Drawing on more recent data from the 2007 Survey of Consumer Finances, Ratcliffe and Vinopal (2009) place the asset poverty rate at 16% for net worth and 31% for liquid assets. High levels of asset poverty suggest that many households do not have sufficient funds to cope with an emergency.

Asset-poor households appear to be more likely to be less educated, lower income, younger and renters as compared with non-asset poor households (Caner and Wolff 2004; Havemann and Wolff 2004; Ratcliffe and Vinopal 2009). Thus, we might expect that households with such characteristics might be less likely to draw on private savings to cope with financial shocks, and potentially more likely to use other means. The theory of precautionary savings does not account for why those who are likely to face many shocks, such as low-income households, tend to hold little or no wealth. Some have argued that means-tested welfare programs effectively discourage wealth accumulation among prospective welfare recipients (Hubbard, Skinner and Zeldes 1995), but other factors, such as low financial literacy, may also be at play.

Assistance from Family and Friends. The large sociology literature on social support offers other insights into the strategies that households employ to cope with shocks. Early work generally examined *realized* support, asking respondents if they had received assistance from their social network (Wellman and Wortley 1989; Sarkasian and Gerstel 2004; Haider and McGarry 2005). These measures have been critiqued for potentially confounding the experiences of the most needy (who may have many needs but very resource-poor networks) and the most advantaged (who may have few needs but resource-rich networks) (Henley, Danzinger and Offer 2005; Harknett and Knab 2007). More recent work studies *perceived* support, asking respondents if they could access informal support from members of their social networks in the event of an emergency (Henley et al. 2005; Harknett 2006; Harknett and Knab 2007; Ryan et al. 2009). This approach avoids the problem discussed above. However, it does not distinguish between respondents who could access support but likely have little need of it and respondents who could access support and will likely need to. This problem is partially avoided by the focus in the literature on low-income populations who presumably are more likely to actually need to activate such support.

Recent studies on perceived receipt of informal financial support suggest that between 80% and 88% of disadvantaged populations expect that they would be able to draw on such

assistance for small amounts of money ($10 to $200) (Henley et al. 2005; Harknett and Knab 2007). Research on the inter-generational exchange of social support reveals that financial support generally flows from older generations to younger, suggesting a negative relationship between age and the receipt of informal financial support. Additionally, it appears that more highly educated respondents are less likely to report receiving informal support (Henley et al. 2005; Eggebeen and Hogan 1990).

Consumer Credit. While corporations may hold excess cash as a buffer against emergencies, another common strategy is to establish backup credit facilities (e.g., Lins, Servaes and Tufano 2009). Similarly, households without savings or a support network may borrow to deal with emergencies. While much of household credit funds long-term assets (homes, education, automobiles), a segment of household credit can substitute for precautionary savings. These "mainstream" credit products include credit cards, home equity lines, and installment loans. As reported by Lusardi and Tufano (2009), many credit card holders carry a balance on their credit cards. In addition to these forms of credit, "alternative" forms of credit include pawn shops and payday lending. These forms of borrowing are not at all rare among American families. The 2009 Financial Capability Survey found that more than 23% of Americans have relied on pawn shops, payday loans, advance tax returns, auto title loans, and rent-to-own stores in the past 5 years (Lusardi 2010). Caskey (1994) details the history and economic role of these alternative lenders. Elliehausen and Lawrence (2001) find that 66% of payday loan users surveyed claim to use payday loans to deal with an emergency. Morse (2009) studies foreclosures in the wake of natural disasters in California and finds that the availability of payday lenders, which provide short-term buffer funding, materially reduces the incidence of foreclosure. More generally, some financial planners have argued that households with access to borrowing should forgo emergency savings altogether, using credit to deal with emergencies. (For an example of this arguments, see Hatcher 2000).[1]

Work Effort. Households can cope with small emergencies by changing their work efforts: by working additional hours, getting an additional job, or having an unemployed family member join the workforce. For example, the shock we study (raising US$2000 in 30 days)

[1] http://6aa7f5c4a9901a3e1a1682793cd11f5a6b732d29.gripelements.com/pdf/vol1125.pdf

might require someone to work an additional 276 hours at minimum wage (pre-tax) over the next 30 days, or 9.2 hours a day, which probably would not be realistic. However, it is less unrealistic to think that an unemployed family member, especially one who could work at a higher wage rate, might be able to raise these funds, or a portion of them. Warren and Tyagi (2003) note that this additional earning flexibility might be severely compromised in two-wage-earner families whose full-time salaries are already committed to pay for expensive housing in communities with excellent public schools. The testable implication of this work is to suggest that certain family structures (i.e., married with children) may be less able to tap additional labor force income to deal with emergencies.

Selling material possessions. While the resale values on material possessions are likely low, families could sell (as opposed to pawn) smaller or larger items in the event of an emergency. For completeness, we also consider this coping mechanism.

Summary. There are voluminous literatures on savings, support networks, borrowing and labor force participation dealing, in part, with how these activities can be used to cope with emergencies. Focusing on one strategy alone is likely to misrepresent the ways in which families deal with shocks. Our survey enables us to test how these methods are used by families and how differences in their utilization relate to demographic factors.

3. Data and Methods

We analyze a new data source, the TNS Global Economic Crisis survey, fielded between June and September 2009 to 13,853 individuals in thirteen countries: the United States, the United Kingdom, Canada, France, Germany, Italy, the Netherlands, Portugal, Luxembourg, Singapore, Hong Kong, Argentina, and Mexico. The survey was administered by the survey research firm TNS Global under the direction of two of the authors, Lusardi and Tufano. The country samples were designed to be nationally representative and were subsequently weighted to reflect each nation's population. This paper deals exclusively with the 2,148 United States survey participants between the ages of 18 and 65. In the US, the survey was administered via an internet panel. While it is intended to be nationally representative, this approach may tend to under-represent individuals who are the most at risk.

The survey included a battery of standard demographic questions, with the distributions shown in Table 1, Panel A. The panel also shows national data from American Community Survey (ACS) against which one can validate the representativeness of the sample. In general, our sample matches well in terms of basic demographics, including age, gender, and geography. However, our sample is underrepresented with respect to minorities and families with children, and is slightly better educated than the ACS national aggregates. Our study uses measures of income and wealth based on self-reports, which we cannot validate. Note that we allow respondents to not answer some of these questions, and separately control for non-response effects.

In addition to the standard demographic information, we collect other information about certain financial activities. First, we ask respondents about their prior exposure to economics or finance training ("How much were you exposed to economics or finance courses during your schooling (high school, college or higher degrees)?), with the answers being "A lot, some, little, or hardly at all.") This variable is an exogenous proxy for formal financial education, with the expectation that people exposed to some sort of formal training before adulthood might be better equipped to deal with shocks. The distribution of responses is given in Table 1, Panel B. In general, the sample was widely distributed with 72% claiming some exposure (11% claiming a "lot" of exposure) and 28% claiming none.

Secondly, we asked participants if they engaged in a number of financial planning activities in the prior year. "In thinking about the year leading up to the economic crisis, which of the following activities did you do?" The choices, listed in Table 1, Panel B, were written in plain English, staying away from words like "budget," "balance sheet" or "net worth." The choices ranged from "Wrote down a plan for your income and expenses for the coming year" (meant to capture an element of budgeting), "Reviewed your retirement statements and accounts", "Actively learned about financial matters (e.g., by attending seminars or classes, reading financial books, financial sections of newspapers, magazines or websites." (meant to capture self-education.) This set of questions attempted to reflect active management of a person's finances. About 44% claimed to have figured out what they owned and owed—a simple balance sheet. Roughly a quarter or less of participants claimed to do any of the other activities, including reading financial sections of newspapers, magazines or web sites. Given

that participants may overestimate these activities to give socially-acceptable responses, these results are probably upper bounds.

We also asked participants if they engaged in "lottery games" or "placed bets on card games, sporting events, horse races, other gaming activities on- and off-line." These questions were intended to capture one type of risk-taking activity, as well as gain information on respondents with some practical experience in dealing with random events and odds. Notably, more respondents admitted to playing the lottery or gambling (36%) than engaging in any of the financial planning activities apart from putting together a simple balance sheet.

Finally, in addition to asking about the level of their financial assets, we asked respondents to estimate their wealth gains or losses since the onset of the global economic crisis. Respondents were asked if their wealth had increased (> 10% or 1% - 10%), stayed the same, or decreased (1% - 10%; 10% - 29%; 30% - 50%; or > 50%). About 23% claimed that their wealth had not changed, 16% reported wealth gains, 48% reported wealth losses, and 13% did not answer this question. Wealth *changes* could affect risk bearing capacity independently of wealth *levels* for two reasons: First, families may find themselves "off equilibrium" when facing a substantial disruption in wealth. Second, the loss of wealth may leave consumers feeling more vulnerable to shocks.

Finally, we asked a three-part nested question to measure household risk exposure, risk-bearing capacities, and coping strategies. The first part was designed to measure the perceived likelihood of a shock (risk assessment), the second to measure respondents' confidence in being able to cope with such a shock (capacity), and the third, to determine the specific coping strategies that respondents would employ (conditional on having some confidence in ability to cope). The following three sections of the paper describe these three questions and provide empirical findings and cross-sectional determinants.

4. Risk Exposure: Perceptions of the Likelihood of a Financial Shock

To gauge risk exposure, we asked, "*Thinking about your life and the kinds of things that could happen, how likely is it that you might need to come up with $2,000 for an unexpected expense in the next month*," asking respondents to rate the likelihood on a scale of 1 (very unlikely) to 10 (very likely). We framed the question around an "unexpected expense" versus an

income shock, and selected a dollar value representative of an "everyday" shock that might result from a major car repair, heating system repair or the need to remedy other problems (e.g., medical bills, legal bills, etc.).[2] As mentioned earlier, we expected the incidence of risk exposures to increase with the size and structure of the family, as well with the individual's age.

Figure 1 presents the distribution of respondents' assessments of the likelihood that they might face an unexpected expense costing of $2,000 in the next thirty days. The most common response, listed by 18.5% of respondents, is that such an emergency is very unlikely (ranking one on the ten point scale); and nearly 60% of respondents rated the likelihood of such an expense as five or less on the ten-point scale. About 17% rated the likelihood as eight or higher. Just over 7% of respondents admitted to not knowing the likelihood at all. There is a wide distribution of answers, which allows us to segment respondents on self-perceptions of risk exposures. While we don't report the international results here, the distribution of perceived exposures is flatter in the US than other countries, where there is an even greater weight on the less-likely end of the risk continuum.

Table 2 shows the empirical determinants of perceived risk exposures. We include controls for gender, education, income, region, race, marital status, household composition, employment status, and financial wealth. In addition, we include a control designed to gauge respondents' financial-planning behavior, both in a single additive scale variable (alpha = 0.6973) based on questions about whether respondents had engaged in seven activities described in Table 1, as well as through proxies for gambling and prior finance and economics training. We eliminate cases with missing data on education, age, children, gender, financial planning, likelihood of an emergency, and confidence in ability to cope with an emergency. We use dummy variable indicators for cases in which there are missing data on wealth, change in wealth, or income. These procedures yielded a final sample of 1872 observations.

Everyone is exposed to risk of some sort, so we didn't predict large differences among families. Our strongest *ex ante* predictors were that risk would be most pronounced among families with children and among the middle aged, who often are responsible for both child- and

[2] While the figure is admittedly *ad hoc*, it is grounded in real world data. Brobeck (2008) reports that low-income families claim to need about $1500 in savings. Edmunds.com, the auto web site, suggests that the replacement of an auto transmission can cost $2000. http://www.edmunds.com/ownership/techcenter/articles/43836/article.html

elder-care duties and have more and older material possessions. We also expected that recent financial losses might make someone feel more vulnerable.

As predicted, there were few variables related to the perceived likelihood of facing a modest financial risk. The risk of a broken car or other daily calamity apparently does not differ based on gender, income, wealth, education, gambling behavior or prior financial education. While the coefficients on age are larger for middle-aged respondents relative to the youngest survey respondents, the differences are not statistically significant. In total, despite this extensive specification, we can only explain 6.6 to 8.7% of the cross sectional variation in risk exposures. There are, however, three factors associated with these exposures.

First, the presence of children in the household increases the scaled level by .5 to .6 (from a median of 5 and mean of 4.6, excluding do-not-knows) and is statistically significant. As any parent can attest, having kids increases the probability of small financial emergencies.

Another economically and statistically strong predictor of facing an emergency is wealth losses experienced by the household. There is a nearly monotonic and strong relationship between the size of wealth losses and the perceived level of exposures. Individuals who lost 50% or more of their wealth in the financial crisis (presumably due to losses on equity portfolios) gave response 1.3 points higher than those who did not experience any wealth losses or gains. This result controls for their post-crisis level of wealth, so it reflects the impact of a shock to wealth, reflecting either a change in actual risk, or a change in perceived risk.

There is a positive association between financial planning behavior and perceived risk. Using the scaled metric (ranging from 0 to 1, where each additional activity adds about .14 scale), an additional planning activity is associated with 0.10 points to the ten point scale (=.14*.7253). It is impossible to disentangle the causality of this relationship. Planners may be more aware of the emergencies of everyday life, people more at-risk might be more motivated to plan, or planning and risk perceptions may capture a latent common factor, such as pessimism – these respondents may just be more prone to seeing a worrisome future.

In the third column of Table 2, we include each of the planning activities separately. They do not have equal relations with the perception of risk exposures. The most salient planning activity is "calculating the value of what you own and what you owe." That this activity is related to feelings of risk exposure may reinforce the finding that individuals who were most attuned to their wealth losses were more likely to feel financially exposed.

5. Risk-Bearing Capacity: Confidence in Ability to Cope

To assess respondents' confidence in their capacity to cope with a small financial shock of this kind, we asked, "*How confident are you that you could come up with $2000 if an unexpected need arose within the next month?*" Respondents could reply, "*I am certain I could come up with the full $2000*," "*I could probably come up with $2000*," "*I could probably not come up with $2,000*," or "*I am certain I could not raise $2,000.*" Respondents also could refuse to answer or state that they did not know. It is important to note that the question asks about whether the person could "come up with" or "raise" the funds—not whether they have them in the form of savings. The next section details the methods they would use to access the funds.

Figure 2 presents the distribution of responses, excluding those who did not answer the question. Shockingly, almost half of Americans can't access $2000 in 30 days. Including all respondents, about 46% certainly or probably *could* raise the funds, 47% certainly or probably *could not* raise the funds, and the remaining 7% claimed not to know. In contrast with other countries in our survey, this level of financial fragility is among the highest observed. This result is consistent with the narrower finding from the 2009 Financial Capability Survey regarding precautionary savings. When Americans were asked if they have set-aside funds sufficient to cover expenses for three months (presumably a number larger than $2000) as many as 51 percent said they do not have that level of emergency funds (Lusardi 2010).

In Figure 3b, we plot the confidence in the capacity to cope with a shock (re-coded into a dichotomous measure of confident/probably able to cope = 1 vs. not confident/probably not able to cope = 0) by age, education, income, wealth, and change in wealth. For comparison, Figure 3a plots the mean value of respondents' perceived likelihood of experiencing a financial shock (rescaled from 0 to 10 to 0 to 1.0) by those same covariates. The contrast between the variation in perceived risk and the variation in confidence by these characteristics is striking. In each case a similar pattern emerges: there is little variation across the socio-economic status (SES) gradient in perceived risk exposures, but a strong gradient in terms of respondents' assessments of their ability to respond to such an unexpected expense. For example, among respondents with the median US household income ($50,000-60,000), 52% probably or certainly can't come up with the funds. Among those with incomes greater than $150,000 this fraction falls to 21% and for

those with incomes below $20,000 it is 69%. While the rich and poor may feel equally exposed to emergencies, the poor report less ability to respond to such financial shocks.

These univariate results obviously fail to capture the many interactions in the variables. Table 3 reports marginal effects from a probit regression model of ability to cope, where 1 is a response that the respondent can certainly or probably raise $2000 in 30 days, and where 0 is if he could certainly or probably not raise the funds. (Respondents answering "Do not know" are excluded from this analysis). Model 1 includes only demographic information and Model 2 includes the additional financial activity variables (gambling, financial training, and individual planning activities.)

One would expect households with fewer financial resources (income or wealth) to be less able to deal with a small financial shock. People who experienced a recent shock to wealth might feel even more exposed than other with similar *ex post* wealth. Beyond this, one might expect certain households that are typically considered more financially vulnerable (young, poorly educated, female-headed households) to be less able to deal with small financial shocks, although less so when one controls for income and wealth. Indeed, we find that all of these factors predict households' perceived risk-bearing capacity. Furthermore, the level of explained variation among coping ability is three to four times as great as for risk exposures. Many of these differences are quite large—even after controlling for all of the other demographic information. We summarize the main findings below:

- Education has a large and monotonic relationship with ability to cope; those with college degrees are 15.8 percentage points more able to cope than those with a high school diploma or less.
- Wealth and income have a large and monotonic relationship as well; the wealthiest (highest income) group in the survey are 36 (35) percentage points more able to be able to cope than those with the lowest income (wealth).
- Holding constant a person's *level* of wealth, recent wealth *losses* have a substantial impact on coping ability. Relative to those whose wealth was unchanged in the midst of the economic crisis, those who wealth declined by 30-50% are 13 points less able to cope, and those whose wealth declined by more than 50% are 30 points less able to cope.

- The unemployed are 8.5 percentage points less able to cope.
- Women are 6.9 percentage points less able to cope than men.
- In terms of age, those under 40 are all equally likely to be able to cope as the youngest group (18-24). However, those in their 40s through age 65 are more able to cope, with the oldest best able to cope. People living with their parents (presumably younger) were 12 points less able to cope with emergencies, perhaps reflecting the fact that the choice to live with one's parents indicates a low level of financial capability.

After controlling for these factors, there were a few others that one might predict would matter, yet did not have significant coefficients. For example, while families with children were more likely to feel exposed to shocks, after controlling for other demographic factors, they were no less able to cope with them. Knowing their exposures, parents may take extra steps to ensure that they can cope. Controlling for income, wealth and other variables, there were no differences between families by race, nor by marital status.

The second specification adds gambling, prior financial training and financial planning variables. Our prediction was that those with some financial training or who were planners might be better able to cope. We also predicted that those who admitted to gambling activities would be less able to cope, perhaps because of willingness to take risks, diminished resources due to gambling activities, or because gambling may detract resources from the family.[3]

People who had prior financial training (economics or finance) in school are nearly 10 percentage points more able to cope—even after controlling for level of education, wealth, income and other demographic factors. This evidence is consistent with a positive impact of financial or economics education on financial outcomes.

Gamblers and lottery players are 6.9 points less able to cope with emergencies. While this result could reflect many different mechanisms, it is consistent with these activities reducing the risk-bearing capabilities of families.

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[3] In 2008, US lottery sales raised $60.6 billion in the 42 states, DC and Puerto Rico where they were offered. (http://www.naspl.org/index.cfm?fuseaction=content&PageID=3&PageCategory=3) Spread out over the 112.4 million households in the entire US, this represents $540 per household. In comparison, Americans spent $430 per household on all dairy products and $444 on alcohol in 2008. (http://www.bls.gov/cex/2008/Standard/age.pdf)

Using a scaled measure of financial planning activities (not shown), people who engaged in mindful financial activities (or risk-measurement tasks) are better able to cope. In Model 2, however, we disaggregate the individual elements in our planning variable, and the results are far less clear. People who reviewed their retirement statements or admitted to gaining more financial knowledge were indeed more able to cope with small emergencies. This could reflect some causality, or the fact that people who are more mindful of their finances would both carry out these activities and have stronger finances. However, carrying out budgeting activities—which are highly promoted by financial counselors—was unrelated to coping ability. Furthermore, those who calculated the value of what they owned and owed were substantially less likely to be able to cope. This relationship is harder to square with a simple story of between planning and coping.

Overall, we believe that these results show a fairly high level of financial fragility: large fractions of national populations seem unable to cope with fairly small, everyday financial shocks. In the United States, almost half of Americans cannot raise $2000 within 30 days, from any means. This suggests that not just a financial crisis, but also broken cars and heating systems, as well as unexpected medical expenses, legal bills, and funeral expenses may have serious ramifications for many families. In other words, many US families display financial fragility. As predicted, people with weaker finances, less education and no jobs are less able to cope. Coping is a function not only of wealth levels, but of wealth losses—probably reflecting the fact that shocks to wealth, but not to lifestyle and fixed commitments, can lead to financial instability. Finally, the relations with financial education, gambling, and planning activities suggest that coping capacity may be related to other aspects of household behavior.

The consequences of being hit by shocks or not having enough resources to deal with shocks can be hard and painful. In a companion paper using the other data from this survey, we show that people that are unemployed or suffered wealth losses during the economic crisis stopped or dramatically reduced going to the doctor (Lusardi, Schneider and Tufano 2010).

While the prior two sections have treated risk exposures and coping capacity separately, it is interesting to look at the interaction between the two, as shown below, which collapses the 10x4 matrix into a slightly more manageable 3x2 table, by combining risk exposures 1 - 3 as "low", 4-7 as "moderate" and 8-10 as "high" perceived likelihood of unexpected expense, and combining those who "certainly" or "probably" could (not) cope into one category.

		Confidence in Ability to Cope with Unexpected Expense	
		Not Confident	*Confident*
Perceived Likelihood of Unexpected Expense	*Low*	19.54%	20.44%
	Moderate	20.26%	21.83%
	High	10.23%	7.71%

These self-perceptions of risk and coping suggest that 10% of Americans judge themselves likely to experience a financial shock but acknowledge that they are incapable of dealing with it through any set of means. Another 20% judge a financial shock as moderately likely, but can't deal with it. A substantial portion of American households judge themselves to be severely at risk.

6. Coping Mechanisms

How specifically do respondents plan to cope with a financial shock? As discussed in section 2, economists tend to focus on precautionary savings and sociologists on social support. In reality, both of these—along with traditional and alternative credit, changing labor patterns, and selling what one owns—are ways in which households plan to cope with small financial shocks. Our goal in this section of the survey was to document the ways that people cope rather than to focus exclusively on one coping mechanism. Except for those who claimed they definitely could not raise the funds, we asked survey participants: "*If you were to face a $2,000 unexpected expense in the next month, how would you get the funds you need?*" Respondents were presented with a list of 14 options (plus "other" and "don't know") and were instructed that "*if there is one source that you would use, select it. If you would use multiple sources, please select up to three*." The list of 14 options was randomized onscreen to avoid response-order bias, and the category labels given below were not part of the survey. The list the following:

- Savings: (1) *draw from savings*, (2) *liquidate or sell investments*, (3) *liquidate some retirement investments even if it required me to pay a penalty* (4) *borrow against my retirement savings at my employer*[4]
- Social networks: (5) *borrow or ask for help from my family*, (6) *borrow or ask for help from my friends (not members of my family*)
- Traditional credit: (7) *use credit cards*, (8) *open or use a home equity line of credit or take out a second mortgage*, (9) *take out an unsecured loan*
- Alternative credit: (10) *get a short term payday or payroll advance loan*, (11) *pawn an asset I own*
- Work more: (12) *work overtime, get a second job, or another member of my household would work longer or go to work*)
- Selling possessions : (13) *sell things I own, except my home*, (14) *sell my home*

Figure 4 Panel A presents data on the percentage of respondents listing each of responses, and Panel B shows the responses grouped by category. Many respondents list multiple coping mechanisms and therefore the percentages do not sum to 100%. In particular, of those answering the question, 47%, 19% and 34% gave one, two or three choices, respectively, for an average of 1.9 coping mechanisms. People who were *certainly able* to cope averaged 1.43 coping mechanism, with 72% selecting only one method. People who were *probably able* to cope averaged 2.01 methods, and those who thought they *probably could not cope* averaged 2.21 methods. Of this latter group, only 29% selected one method, 20% two methods, and 51% selected all three.

Economists and sociologists are both correct in focusing on savings and network support. Of the 14 specific alternatives, drawing from savings is the most commonly used coping mechanism, selected by 49% of respondents. The second most common response is borrowing or asking for funds from family, selected by 28% of the sample. The next three most common responses, given by 22%, 20%, and 18% of respondents respectively, were increasing work

[4] Due to the institutional details of certain retirement plans, funds can be accessed prematurely through borrowing. According to the Financial Capability Survey, 9% of individuals who have self-directed retirement accounts have taken out a loan from their retirement accounts and 5% have taken a hardship withdrawal (Lusardi 2010)). We include these coping mechanisms as drawing upon savings, rather than as borrowing from a third party.

effort, using credit cards, and selling material possessions.

When we group the coping strategies by type (savings, social networks, work, traditional credit, alternative credit and sales of possessions), savings remains the most commonly selected alternative, with some sort of savings selected by 58% of the respondents. The second most popular strategy is seeking assistance from family or friends, selected by 32% of respondents, followed by using mainstream credit (29%). Increasing work effort, selling material possessions and using alternative credit were less popular, selected by 22%, 18% and 10% respectively.

Figure 5 divides respondents based on the number of coping strategies that they list and presents the share of respondents in each group listing each broad coping response. The figures show a clear divide between drawing from savings and all of the other coping strategies. Conditional on listing only one coping strategy (i.e., one was sufficient), about two-thirds of respondents cope using only savings, with small fractions using one of the other methods. However, when the respondents needed more than one means to cope with an emergency, savings decreased in importance relative to social support and credit. In the extreme, people needing three coping strategies to raise $2000 were more likely to seek aid from family and friends than draw upon their own savings. They were also twelve times more likely to use alternative credit than people drawing upon only one coping mechanism.

Table 4 present the results of analysis of the association between the demographic characteristics of respondents and the functional groups of coping mechanisms as the outcome variables. The variables included are similar to those in the earlier tables. The columns in Table 4 report marginal coefficients from the probit models, where each coefficient reflects the increase in probability (in percentage points) that this form of coping mechanism was used. Table 4 shows a number of significant associations between coping mechanisms and many individual and household characteristics, as summarized below.

- Reflecting precautionary savings motives, people with greater wealth are more likely to turn to savings, and less likely to use other means to cope (except perhaps traditional credit). People who lost substantial amounts of wealth, however, are no different from those whose wealth was not reduced in the economic crisis. While wealth losses affect the perception of exposure and the capacity to deal with it, they apparently don't relate to the means of coping with emergencies.

- Coping mechanisms don't show a systematic relationship with income. Scholars of asset poverty have argued that wealth, and not income, is the primary determinant of coping activity, and this evidence supports that proposition.
- Relative to the youngest respondents, older people generally are less likely to draw upon support of social networks and are more likely to work more (except the oldest group). While our survey didn't report on who *provided* family and friends support, this evidence is consistent with the findings that older individuals tend to be the lenders in these transactions (Henley et al. 2005; Eggebeen and Hogan 1990).
- Relative to individuals with high school diplomas or less, better educated people are more likely to cope using savings. They are less likely to cope using support from family and friends (again consistent with Henley et al. 2005; Eggebeen and Hogan 1990), alternative credit, selling things, or working more.
- Relative to the employed, the unemployed are less likely to draw from savings, but are more likely to draw upon family and friend support and to sell material possessions.
- Relative to men, women are more likely to draw upon savings and to work more.
- Relative to other households, families with children are less likely to draw upon savings and somewhat more likely to draw upon assistance from family and friends as well as to use alternative credit.
- People who admit to gambling activities are slightly more likely to turn to credit (traditional or alternative) relative to those who don't admit to gambling.
- Those with prior financial training are slightly more likely to use alternative credit (which provides one of the more curious of our results).
- People who reviewed retirement statements (and presumably have retirement plans) are more likely to turn to savings and mainstream credit, and less likely to turn to friends/family or alternative credit. Yet other planning variables are harder to explain. People who calculated a balance sheet had nearly the opposite pattern: more likely to turn to everything except for savings. Consistent with the results in the prior section, "calculating the value of what you own and debts you owe" may be an activity pursued by more financially desperate households.

While these observations are organized by factor, it is interesting to consider the predictive power of all of these variables to explain differences in the use of each of the six categories of coping mechanisms. In terms of adjusted R^2 values, this vector of factors can best explain the choices of savings or alternative credit use, but least explains the choice of mainstream credit. This latter result may reflect the ubiquity of credit cards.

These preliminary, and albeit messy, findings should help to inform and build theories in the emerging area of household finance. Models or empirical work that focuses solely on one financial activity runs the risk of failing to capture the richness of household behavior. Neither precautionary savings, social support, nor any other mechanism is used alone to cope with emergencies. Rather, households use many methods to cope with emergencies. The results begin to suggest a pecking order of coping devices, with the order varying for different individuals.

This ordering may reflect a combination of complex effects. The economic cost of foregoing interest on savings accounts is relatively small and the direct cost of borrowing from friends and family is quite low.[5] The cost of mainstream credit is higher, and of accessing alternative credit even higher. The revealed preferences in terms of coping mechanisms broadly reflect these relative costs. Yet, this pecking order cannot simply be interpreted in terms of an economic "cost of funds." For example, while the economic cost of raising money from family and from friends is likely similar, the social costs can be quite different, with family far more commonly serving as a buffer in emergencies than are friends. And while selling material possessions likely entails a significant discount, this method of dealing with emergencies is more popular than most other coping mechanisms, which suggests that storing value in physical property is not just a phenomenon in developing countries. Furthermore, beyond traditional financial buffers and social networks, labor force participation is an integral element in coping with emergencies. "Working more" is a more frequently selected choice than all but savings and borrowing from family. To understand US households at risk requires the financial economists' focus on assets and credit, the sociologists' appreciation for social network, and the labor economists' perspective on work.

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[5] The interest rate on more than 75% of family and friends loans is zero (El Hage, Schneider and Tufano 2006).

7. Preliminary Conclusions and Next Steps

Using new survey data, we document US households' perceptions of their risk exposures, risk-bearing capacity, and coping mechanisms. The risk we study is not a major but rare event, such as a severe financial crisis, but a more commonplace emergency giving rise to an unexpected and modest expenditure of $2000 required within 30 days. In general, we find that households perceive the likelihood of this financial shock as being rather remote; but risk exposure perceptions increase for families with children, people who have lost greater wealth in the economic crisis, and for people who engage in certain risk measurement or planning activities. Our main finding is that the financial capability to deal with such a shock is strikingly low, with about half of Americans unable to raise these funds in a timely manner. This financial capability is weakest among those with lower income, lower wealth, people who experienced recent wealth losses, women, young people, gamblers, those without prior financial training, and those who do not engage in certain planning activities. Finally, people anticipate using a wide range of coping strategies to deal with a financial shock. While drawing upon savings is the top planned coping mechanism, large fractions of households—and in some cases, even larger fractions—plan to rely on informal networks, traditional and alternative credit, and other means, such as increasing work, to deal with emergencies.

This preliminary paper is the first step in a larger work plan. Specific analyses to be completed in the future include addition of other countries' data to permit cross-national comparisons; analysis of the impact of poor risk bearing on decisions regarding marriage, child-bearing, and retirement; and analyses of certain population segments (e.g., those who feel they are likely to face a shock but do not have the resources to deal with it).

As the field of household finance (see Campbell 2006) develops, it will be critical to expand our research beyond studying single functions (e.g;, saving or borrowing) as well as to broaden out beyond studies of behavioral foibles. We believe that a greater understanding of household risk is central to deeper inquiry into household decisions about savings, borrowing, and insurance. Furthermore, while studies of larger and more consequential risks (health, unemployment, death, and longevity) are critical, it is important to document and understand everyday risks. Families who are financially fragile and unable to deal with these smaller shocks will almost surely be unable to cope with more substantial risks.

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Table 1a. Descriptive Statistics: Economic and Demographic Characteristics in Percent
TNS Global Economic Crisis Survey 2009 (TNS)and American Community Survey 2006 – 2008 (ACS) Sample

	TNS	ACS
Age		
18 – 24	16.29	15.64
25 – 29	10.23	10.92
30 - 34	12.19	10.26
35 - 39	12.62	11.11
40 - 44	12.96	11.66
45 - 49	10.61	12.07
50 - 54	11.36	11.09
55 - 59	7.81	9.61
60 - 64	5.94	7.64
Female	50.01	50.05
Race/Ethnicity[1]		
White	79.78	66.55
Black	7.75	12.06
Hispanic	4.27	14.44
Asian	4.94	4.69
Other Race/Ethnicity	2.41	2.26
Marital Status[2]		
Married/Cohabiting	53.77	56.24
Never Married	23.32	31.81
Divorced or Widowed	11.44	11.95
Other Marital Status	11.47	--
Household Composition[3]		
Children in Household	41.16	53.41
Live with Parents	11.62	--
Region		
South	36.32	36.54
North-East	18.67	18.25
Mid-West	22.45	21.83
West	22.56	23.37
Education		
High School or Less	22.39	42.71
Trade School	8.37	--
Some College	34.81	31.15
College (Bachelor's Degree)	26.59	17.21
Graduate Education	7.84	8.93
Income		
Less than $20,000	12.37	14.8
$20,000 - $29,999	11.13	9.17
$30,000 - $39,999	11.90	9.72
$40,000 - $49,999	12.42	9.25
$50,000 - $59,999	10.29	8.67
$60,000 - $74,999	12.10	11.15
$75,000 - $99,999	10.32	13.79
$100,000 - $149,999	8.63	13.85
$150,000 or more	3.35	9.59
Missing	7.49	--

[1] The census categorizes Hispanic as an ethnic category separate from racial categories. Calculations were done on ACS data to ensure that the race data presented here were for ages 18-64 and that Hispanics were not also included in other racial categories (e.g., white, black).
[2] The ACS does not categorize separately those who "cohabitate". The ACS category "married" includes all married persons who are either living together, separated or designated as "other married".
[3] The most comparable ACS data are provided here: all persons who have their own children in the household.

Table 1b. Descriptive Statistics: Employment, Wealth, and Financial Planning Characteristics (TNS Survey only)

	TNS
Wealth	
Zero	11.39
Less than $1000	12.62
$1,000 - $2,999	6.24
$3,000 - $4,999	4.58
$4,000 - $9,999	6.54
$10,000 - $19,999	7.14
$20,000 - $49,999	10.38
$50,000 - $99,999	10.45
$100,000 - $249,999	8.67
$250,000 or more	7.01
Missing	13.86
Change in Wealth Since Crisis	
Same	23.43
Increase Wealth > 10%	6.82
Increase Wealth < 10%	9.23
Decrease Wealth < 10%	11.06
Decrease Wealth 10% to 29%	18.85
Decrease Wealth 30% to 50%	10.21
Decrease Wealth > 50%	7.68
Missing	12.72
Financial Education/ Gambling/ Planning	
Any financial education while in school	72.68
Gambled	36.15
Wrote plan for income and expense for coming year	28.70
Reviewed your retirement statements and accounts	27.09
Tried to figure out how much you need to save for retirement	19.37
Calculated value of what you own and debts you owe	43.97
Tried to determine type/amount of insurance coverage need	21.32
Considered how much your financial holdings might change	24.24
Actively learned about financial matters	18.11
Unemployed	14.02

Table 2. Relationship between Economic and Demographic Characteristics and Perceived Likelihood of an Unexpected Expense

	Model 1		Model 2		Model 3		Model 4	
Change in Wealth Since Crisis								
Same (reference)								
Increase Wealth > 10%	-0.0238		-0.0459		-0.0603		-0.0789	
Increase Wealth < 10%	0.3403		0.3449		0.2962		0.2529	
Decrease Wealth < 10%	0.4520	*	0.4449	*	0.4184	+	0.4256	+
Decrease Wealth 10% to 29%	0.6575	**	0.6411	**	0.5927	**	0.5928	**
Decrease Wealth 30% to 50%	1.1182	***	1.1036	***	1.0305	***	0.9523	***
Decrease Wealth > 50%	1.3579	***	1.3497	***	1.3189	***	1.3049	***
Education								
High School or Les (reference)								
Trade School	-0.0605		-0.0665		-0.0725		-0.0534	
Some College	-0.0286		-0.0255		-0.0548		-0.0642	
College	0.0097		0.0209		-0.0302		-0.0212	
Graduate Education	-0.0510		-0.0468		-0.1311		-0.1860	
Region								
South (reference)								
North-East	-0.0691		-0.0786		-0.0609		-0.0451	
Mid-West	-0.3465	+	-0.3531	+	-0.3324	+	-0.3469	+
West	-0.3965	*	-0.3954	*	-0.3727	*	-0.3509	+
Race/Ethnicity								
White (reference)								
Black	0.1095		0.1152		0.0950		0.1118	
Hispanic	0.1087		0.1464		0.1414		0.0858	
Asian	0.6196	*	0.6317	*	0.5501	+	0.5136	+
Other Race/Ethnicity	0.1424		0.1570		0.1178		0.0963	
Female	-0.1596		-0.1542		-0.1317		-0.1407	
Marital Status								
Married/Cohabiting (reference)								
Never Married	-0.2194		-0.2256		-0.2194		-0.1930	
Divorced or Widowed	-0.2105		-0.2309		-0.2216		-0.1896	
Other Marital Status	0.0123		-0.0036		0.0237		0.0180	
Household Composition								
Children in Household	0.5776	***	0.5747	***	0.5461	***	0.5135	**
Live with Parents	-0.3072		-0.2809		-0.2439		-0.2566	
Unemployed	0.1508		0.1748		0.1839		0.1588	
Income								
Less than $20,000 (reference)								
$20,000 - $29,999	0.0211		0.0308		0.0304		0.0133	
$30,000 - $39,999	0.1842		0.1677		0.1480		0.1234	
$40,000 - $49,999	-0.2005		-0.2017		-0.2394		-0.2681	
$50,000 - $59,999	-0.3126		-0.3309		-0.3625		-0.3547	
$60,000 - $74,999	-0.0368		-0.0477		-0.0791		-0.0458	
$75,000 - $99,999	-0.2227		-0.2340		-0.2925		-0.2465	
$100,000 - $149,999	-0.3215		-0.3405		-0.3799		-0.3559	
$150,000 or more	-0.2216		-0.2368		-0.3455		-0.2448	

Wealth								
Zero (reference)								
less than $1000	0.0086		0.0133		-0.0233		-0.0650	
$1,000 - $2,999	-0.0385		-0.0377		-0.0801		-0.0740	
$3,000 - $4,999	-0.0475		-0.0451		-0.0970		-0.1582	
$4,000 - $9,999	0.3582		0.3466		0.2327		0.2507	
$10,000 - $19,999	0.6033	+	0.6092	+	0.5157		0.5214	
$20,000 - $49,999	0.1706		0.1645		0.0663		0.0971	
$50,000 - $99,999	-0.1369		-0.1236		-0.2263		-0.1510	
$100,000 - $249,999	0.4044		0.4053		0.2754		0.3799	
$250,000 or more	-0.1332		-0.0985		-0.2312		-0.1130	
Age								
Age	0.3102							
Age Squared	-0.0003							
18 – 24 (reference)								
25 – 29			0.2801		0.2734		0.2441	
30 – 34			-0.0493		-0.0462		-0.0567	
35 – 39			0.4138		0.4385		0.4703	
40 – 44			0.4032		0.4279		0.4436	
45 – 49			0.3912		0.4342		0.5059	+
50 – 54			0.3800		0.3836		0.3977	
55 – 59			0.1680		0.1582		0.2128	
60 – 64			0.2315		0.2569		0.3771	
Financial Education/ Gambling/ Planning								
Any financial education while in school					-0.0175		0.0340	
Gambled					0.0610		-0.0017	
Financial Planning Activities					0.7253	**		
Wrote plan for income and expense for coming year							-0.0994	
Reviewed your retirement statements and accounts							-0.4403	*
Tried to figure out how much need to save for retirement							0.3910	*
Calculated value of what you own and debts you owe							0.6754	***
Tried to determine type/amount of insurance coverage need							0.3080	+
Considered how much your financial holdings might change							-0.1473	
Actively learned about financial matters							-0.0469	
Missing Data Dummies								
Wealth Change Missing	0.2368		0.2168		0.2210		0.2276	
Income Missing	-0.5979		-0.6069	+	-0.6405	+	-0.6191	+
Wealth Missing	-0.4559		-0.4477		-0.4887	+	-0.4079	
Constant	3.6671	***	4.1355	***	4.0656	***	3.9590	***
Observations	1872		1872		1872		1872	
R^2	0.066		0.068		0.072		0.087	

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Table 3. Relationship between Economic and Demographic Characteristics and Confidence in Ability to Cope with Unexpected Expense, Marginal Effects from Probit Regression

	Model 1		Model 2	
Change in Wealth				
Same (reference)				
Increase Wealth > 10%	0.0105		0.0224	
Increase Wealth < 10%	0.0212		0.0315	
Decrease Wealth < 10%	-0.0091		-0.0120	
Decrease Wealth 10% to 29%	-0.0515		-0.0548	
Decrease Wealth 30% to 50%	-0.1302	**	-0.1131	*
Decrease Wealth > 50%	-0.3044	***	-0.2975	***
Education				
High School or Less (reference)				
Trade School	0.0117		0.0135	
Some College	0.0880	*	0.0800	*
College	0.1584	***	0.1346	***
Graduate Education	0.2472	***	0.2332	***
Region				
South (reference)				
North-East	-0.0050		0.0001	
Mid-West	-0.0014		-0.0037	
West	0.0120		0.0020	
Race/Ethnicity				
White (reference)				
Black	-0.0009		-0.0139	
Hispanic	0.0103		0.0371	
Asian	0.0795		0.0775	
Other Race/Ethnicity	0.0029		-0.0071	
Female	-0.0690	*	-0.0612	*
Marital Status				
Married/Cohabiting (reference)				
Never Married	-0.0237		-0.0306	
Divorced or Widowed	-0.0511		-0.0574	
Other Marital Status	-0.0723		-0.0646	
Household Composition				
Children in Household	-0.0389		-0.0388	
Live with Parents	-0.1217	*	-0.1264	**
Age				
18 – 24 (reference)				
25 – 29	-0.0416		-0.0209	
30 – 34	0.0706		0.0960	+
35 – 39	-0.0052		0.0158	
40 – 44	0.1321	*	0.1492	**
45 – 49	0.1128	+	0.1350	*
50 – 54	0.1458	*	0.1655	**
55 – 59	0.1053		0.1203	+
60 – 64	0.2890	***	0.3072	***
Unemployed	-0.0842	*	-0.0856	*

Income				
Less than $20,000 (reference)				
$20,000 - $29,999	0.0667		0.0663	
$30,000 - $39,999	0.1336	*	0.1453	**
$40,000 - $49,999	0.0439		0.0394	
$50,000 - $59,999	0.0573		0.0567	
$60,000 - $74,999	0.1663	**	0.1679	**
$75,000 - $99,999	0.2848	***	0.2872	***
$100,000 - $149,999	0.2777	***	0.2824	***
$150,000 or more	0.3483	***	0.3409	***
Wealth				
Zero (wealth)				
less than $1000	-0.0909		-0.0757	
$1,000 - $2,999	0.0999		0.1105	
$3,000 - $4,999	0.2193	***	0.2233	***
$4,000 - $9,999	0.2557	***	0.2721	***
$10,000 - $19,999	0.3013	***	0.3051	***
$20,000 - $49,999	0.3332	***	0.3290	***
$50,000 - $99,999	0.2890	***	0.2750	***
$100,000 - $249,999	0.3170	***	0.3118	***
$250,000 or more	0.3616	***	0.3458	***
Financial Education/Gambling/Planning				
Any financial education while in school			0.0992	**
Gambled			-0.0685	*
Wrote plan for income and expense for coming year			0.0025	
Reviewed your retirement statements and accounts			0.0796	*
Tried to figure out how much you need to save for retirement			-0.0520	
Calculated value of what you own and debts you owe			-0.0867	**
Tried to determine type and amount of insurance coverage need			-0.0517	
Considered how much your financial holdings might change			0.0401	
Actively learned about financial matters			0.1040	**
Missing Data Dummies				
Wealth Change Missing	-0.0609		-0.0610	
Income Missing	0.1138	+	0.0930	
Wealth Missing	0.2989	***	0.2983	***
Observations	1872		1872	
Pseudo R^2	0.225		0.241	

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001
Dependent variable = 1 if respondent is certainly or probably able to cope and = 0 if certainly or probably unable to cope

Table 4. Relationship between Economic and Demographic Characteristics and Types of Coping Responses, Marginal Effects from Probit Regression

	Savings	Family/Friends	Mainstream Credit	AFS Credit	Sell Things	Work More
Change in Wealth						
Same (reference)						
Increase Wealth > 10%	0.0576	-0.1044 *	-0.0663	-0.0310 +	-0.0129	-0.0222
Increase Wealth < 10%	0.1396 **	-0.1244 **	-0.0447	0.0139	-0.0142	-0.0377
Decrease Wealth < 10%	0.1012 *	-0.0796 +	0.0289	-0.0090	0.0230	-0.0054
Decrease Wealth 10% to 29%	0.0091	-0.0062	-0.0459	0.0429 +	0.0475	0.0032
Decrease Wealth 30% to 50%	0.0801	-0.0849 +	-0.0482	0.0200	0.0311	-0.0274
Decrease Wealth > 50%	-0.0768	-0.0194	-0.0320	0.0224	-0.0021	-0.0233
Education						
High School or Less (reference)						
Trade School	0.1207 *	-0.0412	0.0127	-0.0092	-0.0590 +	-0.0799 *
Some College	0.0749 +	0.0028	0.0394	-0.0269 +	-0.0270	-0.0037
College	0.1983 ***	-0.0545	0.0400	-0.0544 ***	-0.0663 *	-0.0411
Graduate Education	0.1834 ***	-0.0377	0.0827	-0.0533 ***	-0.0640 +	-0.0811 *
Region						
South (reference)						
North-East	-0.0051	-0.0354	0.0190	-0.0309 *	0.0329	0.0195
Mid-West	-0.0355	0.0280	-0.0100	-0.0291 *	0.0320	-0.0182
West	-0.0161	0.0174	0.0452	-0.0133	0.0124	-0.0116
Race/Ethnicity						
White (reference)						
Black	-0.0159	0.0339	0.0162	-0.0019	-0.0767 *	0.0231
Hispanic	-0.0311	0.1044	-0.0743	-0.0409 **	-0.0336	0.0459
Asian	-0.0762	-0.0024	0.0907	-0.0291 +	-0.0777 *	-0.0242
Other Race/Ethnicity	-0.0894	0.0536	0.0196	-0.0129	-0.0987 *	0.1231
Female	0.0810 *	0.0466	-0.0011	-0.0163	-0.0285	0.0539 *
Marital Status						
Married/Cohabiting (reference)						
Never Married	0.0351	0.0039	-0.0413	0.0076	0.0269	-0.0082
Divorced or Widowed	-0.1086 +	0.1275 *	0.0082	0.0331	0.0866 +	0.0309
Other Marital Status	-0.0055	0.0642	-0.0201	0.0228	0.0482	0.0569
Household Composition						
Children in Household	-0.1030 **	0.0624 +	0.0245	0.0374 *	0.0107	-0.0235
Live with Parents	0.0936 +	0.0623	-0.0042	-0.0107	0.0392	-0.0274

Age												
18 – 24 (reference)												
25 – 29	0.0597		-0.0852	+	-0.0821	+	0.0316		0.0431		-0.0905	**
30 – 34	-0.0006		-0.0902	+	-0.0360		0.0002		0.0426		-0.0368	
35 – 39	0.1105	+	-0.1078	*	-0.0225		-0.0084		-0.0141		-0.1098	***
40 – 44	0.0912		-0.1315	**	-0.0176		0.0156		0.0239		-0.0795	*
45 – 49	0.0518		-0.1591	***	-0.0760		-0.0081		-0.0300		-0.1323	***
50 – 54	0.1806	**	-0.1944	***	-0.0661		-0.0113		-0.0278		-0.1320	***
55 – 59	0.0849		-0.2640	***	-0.0533		-0.0377	+	-0.0675	+	-0.1924	***
60 – 64	0.1165		-0.2350	***	-0.0789		-0.0291		0.0031		-0.1397	***
Unemployed	-0.1283	**	0.1692	***	-0.0430		0.0426	+	0.0790	*	-0.0336	
Income												
Less than $20,000 (reference)												
$20,000 - $29,999	-0.0814		-0.0051		0.1067		0.0188		0.0387		-0.0065	
$30,000 - $39,999	-0.0777		0.0017		0.0629		0.0046		0.0423		0.0467	
$40,000 - $49,999	-0.0464		0.0698		0.0515		0.0011		-0.0330		0.0158	
$50,000 - $59,999	0.0245		-0.0730		-0.0141		-0.0369	*	-0.0024		0.0589	
$60,000 - $74,999	-0.0242		-0.0304		0.0790		-0.0382	*	-0.0183		0.0664	
$75,000 - $99,999	0.0696		-0.0904		0.0908		-0.0224		-0.0421		0.0790	
$100,000 - $149,999	0.0983		-0.0679		0.1190		-0.0417	*	-0.0639		-0.0517	
$150,000 or more	0.0737		0.0275		0.0376		0.0443		-0.0637		-0.0500	
Wealth												
Zero (reference)												
less than $1000	-0.0959		0.1759	*	0.0205		0.0058		0.0134		-0.0084	
$1,000 - $2,999	0.0675		0.0807		0.1103		-0.0117		0.0524		0.0306	
$3,000 - $4,999	0.1995	**	-0.0489		0.2239	*	-0.0405	**	-0.0025		0.0191	
$4,000 - $9,999	0.2963	***	-0.0515		0.1035		-0.0267		-0.0378		-0.0763	+
$10,000 - $19,999	0.2437	***	-0.0904		0.1627	*	0.0029		-0.1296	***	-0.0433	
$20,000 - $49,999	0.2853	***	-0.1090	*	0.0405		-0.0231		-0.0233		-0.0648	
$50,000 - $99,999	0.2473	***	-0.0818		0.1208	+	-0.0266		-0.0244		-0.1232	***
$100,000 - $249,999	0.2884	***	-0.0975	+	0.0186		-0.0271		-0.1042	***	-0.1355	***
$250,000 or more	0.2752	***	-0.1733	***	-0.0033		-0.0562	***	-0.0819	*	-0.0656	
Financial Education/Gambling/Planning												
Any financial education while in school	0.0340		-0.0110		-0.0142		0.0335	**	0.0023		0.0324	
Gambled	-0.0063		0.0332		0.0539	+	0.0470	**	0.0227		-0.0111	

Wrote plan for income and expense for coming year	0.0458		-0.0150		-0.0593	+	0.0095		0.0554	*	0.0595	*
Reviewed your retirement statements and accounts	0.1522	***	-0.0894	**	0.0686	*	-0.0507	***	-0.0346		-0.0364	
Tried to figure out how much need to save for retirement	0.0211		-0.0291		-0.0286		0.0174		0.0279		-0.0197	
Calculated value of what you own and debts you owe	-0.0934	**	0.0626	*	0.1059	***	0.0329	*	0.0543	*	0.0604	*
Tried to determine type and amount of insurance coverage need	-0.0384		0.0373		0.0169		0.0352	+	-0.0121		0.0341	
Considered how much your financial holdings might change	0.0441		0.0194		-0.0008		-0.0338	**	-0.0113		-0.0281	
Actively learned about financial matters	0.0081		0.0287		-0.0641	+	0.0265		0.0521	+	0.0708	*
Missing Data Dummies												
Wealth Change Missing	-0.0159		-0.0695		0.0182		-0.0130		0.0225		-0.0145	
Income Missing	-0.0340		0.0795		0.1077		-0.0240		-0.0185		0.0374	
Wealth Missing	0.2461	***	-0.0410		-0.0059		-0.0365	*	-0.0680	+	-0.0360	
Observations	1353		1353		1353		1353		1353		1353	
Pseudo R^2	0.190		0.152		0.054		0.200		0.105		0.124	

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001
Savings = (1) draw from savings, (2) liquidate or sell investments, (3) borrow against retirement savings, or (4) liquidate some retirement investments
Family/Friends = (1) borrow or ask for help from family or (2) borrow or ask for help from my friends (not family)
Mainstream Credit = (1) use credit cards, (2) open or use home equity line of credit/second mortgage, or (3) unsecured loan
AFS Credit = (1) payday or payroll advance loan or (2) pawn an asset
Sell Things = (1) sell things I owned, except my home or (2) sell my home
Work More = (1) Work overtime, get a second job, or another member of my household would work longer or go to work

Figure 1. Perceived Risk of Unexpected Expense, USA Only
scale: 1 (very unlikely) to 10 (certain)

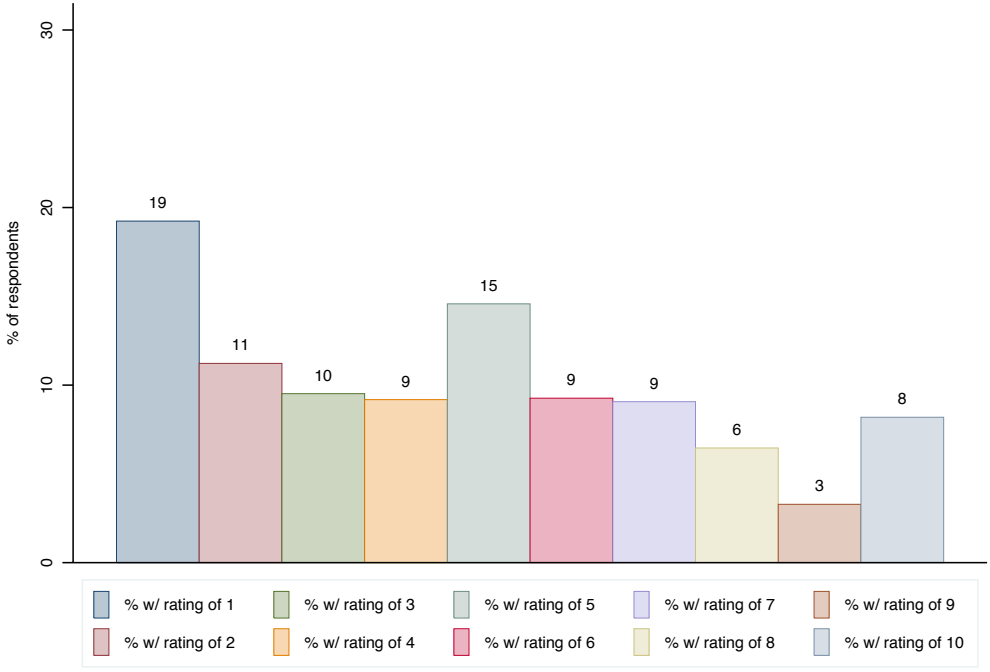


Figure 2. Distribution of Confidence in Ability to Cope with an Unexpected Expense, US Only

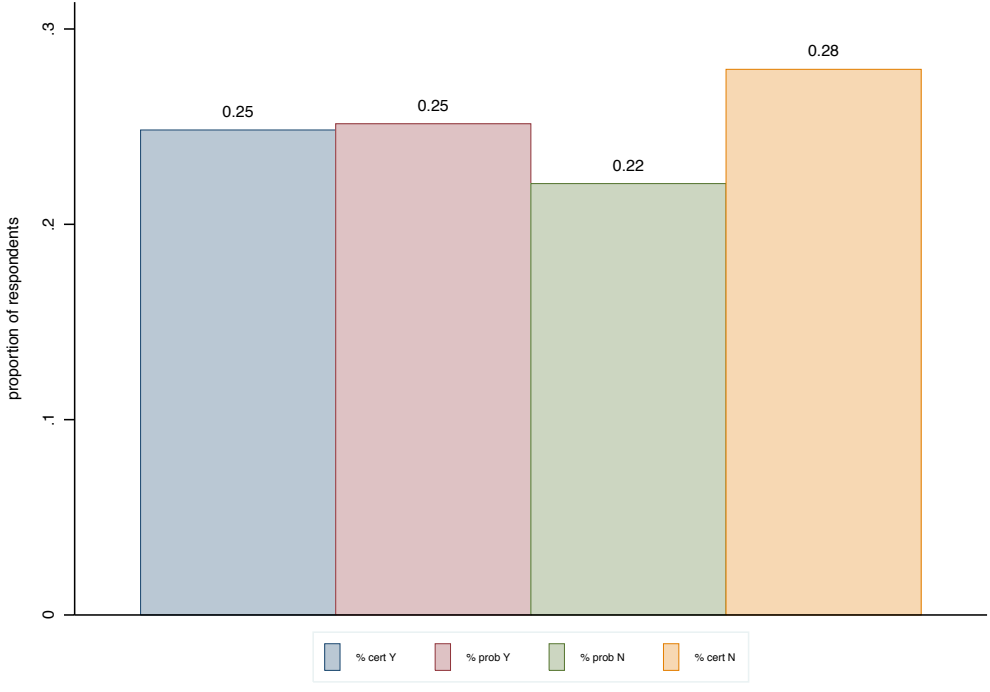
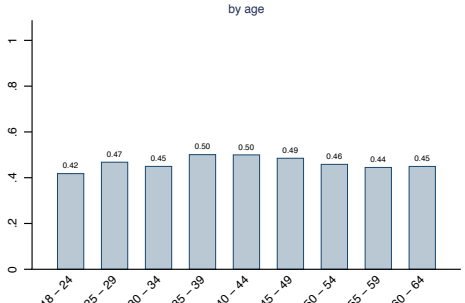
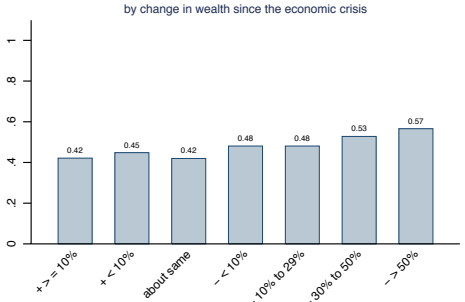
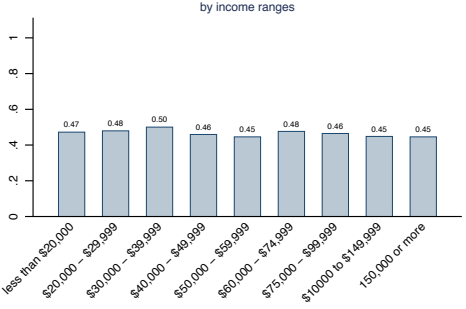


Figure 3A. Likelihood of Needing to Cope with an Unexpected Expense, USA only







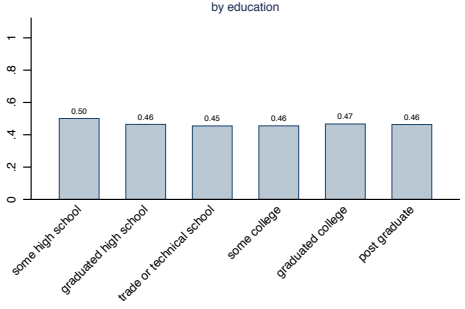
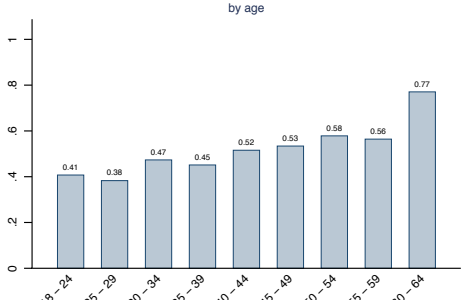
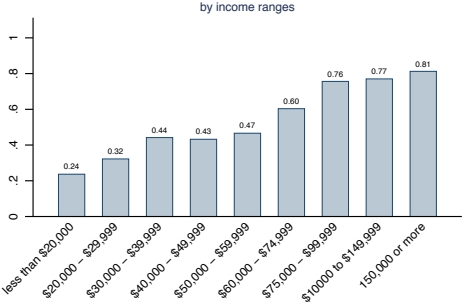


Figure 3B. Confidence in Ability to Cope with an Unexpected Expense, USA only





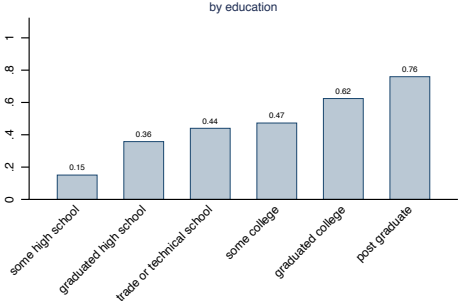
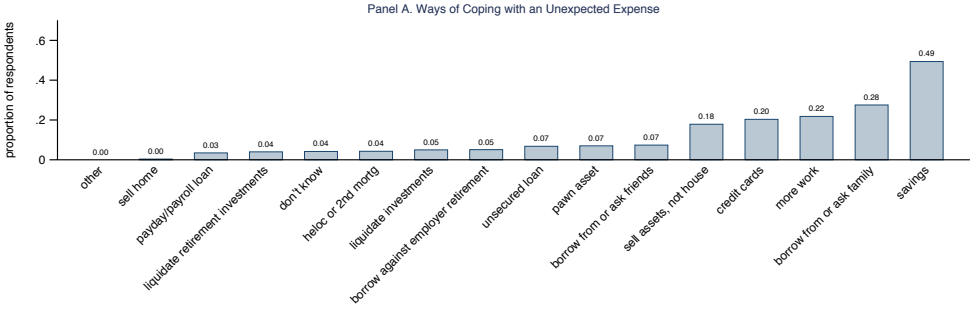


Figure 4. Methods of Coping with an Unexpected Expense, US only (% using any of each type)



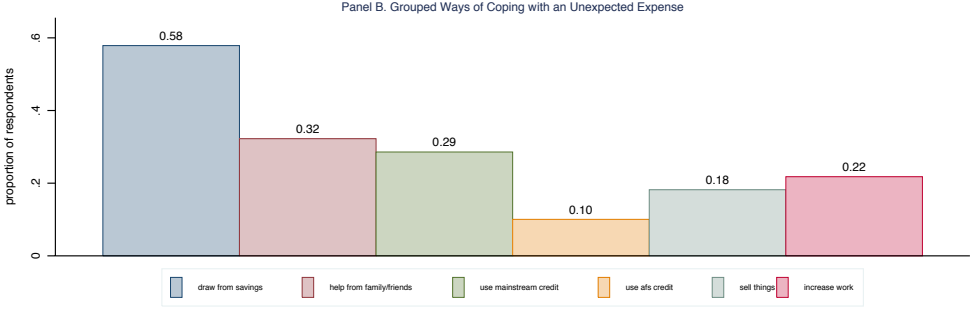


Figure 5. Ways of Coping by Number of Listed Coping Strategies, USA only