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Trigger Events and Financial Outcomes over the Lifespan

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Abstract

This research identifies demographic groups vulnerable to trigger events to inform efforts to improve financial education. Specifically, we examine the effects of trigger events on net worth throughout the life course. After reviewing relevant literature, we analyze two panel data sets to examine whether populations that may be identified as more financially literate are more resilient to negative shocks. In general, we find that educational attainment is a better predictor of resilience than intelligence and that effects vary across age groups and by type of shock. The findings provide an opportunity to target financial education where it is most needed.

Trigger Events and Financial Outcomes over the Lifespan

Households face an array of negative financial shocks, including job loss, health problems, and divorce or the death of a spouse. Other life events, such as the purchase of a home or the birth of a child, may be planned but can still have strong economic repercussions. Researchers have argued that educational programs designed to improve individuals' financial outcomes may be more effective when addressing specific life events or demographic groups (Lusardi and Mitchell 2005; McKernan et al. 2010; Seligman 2010). The literature demonstrates that some of these events, which we refer to as 'trigger events,' may have larger effects on financial well-being than others and that certain demographic groups may be more vulnerable to such events. The effectiveness of education programs remains unknown, but these programs tend to be provided in a scattershot manner. Understanding which trigger events have significant negative impacts and which populations are most vulnerable to them provides an opportunity to focus education where it is most needed.

This study uses the Panel Study of Income Dynamics (PSID) and National Longitudinal Survey of Youth 1979 (NLSY79) to identify significant trigger events and vulnerable groups. We specifically examine whether educational attainment and intelligence—factors that may promote financial literacy—can be used to predict resilience to shocks and whether the effects vary at different points in the life course. We measure resilience in terms of change in net worth during the period of the trigger event, and the specific events we analyze are marriage, divorce, widowhood, job loss, birth of a child, death of a child, home purchase, and the onset of disability and other health shocks. Our secondary data analysis is supplemented by an extensive review of the literature on trigger events and financial outcomes. In general, we find that educational attainment strongly predicts resilience to negative financial shocks. Intelligence, however, may

predict resilience among individuals with a higher level of educational attainment better than it predicts resilience among those with a lower level. We also find that resilience varies substantially across age groups and by the type of shock experienced. Overall, job loss and divorce or widowhood are the events associated with the greatest vulnerability.

After providing a brief context for the asset and life-course approach of our study, we discuss previous research on the impacts of trigger events on net worth. Because these studies generally do not address proxies for financial literacy, which are the main variables of interest in this analysis, we discuss previous work on our proxies separately in the subsequent section. Our review of previous research is followed by discussions of the two data sets used in our current study, our findings, and our conclusions.

Asset Accumulation over the Life Course

This study analyzes the impact of trigger events—both planned and unexpected life events that have the potential to cause financial shocks—on net worth at different points in the life course. The traditional life-cycle theory holds that individuals start with few assets in early adulthood, possibly borrowing to invest in education and home ownership. They build assets over the life course, increasing their rate of savings as they near retirement. Finally, they spend down their assets in retirement. While this broad pattern has been empirically supported (Aizcorbe et al. 2003), asset accumulation may exhibit more nuanced patterns at a finer level of analysis. Specifically, trigger events may interrupt larger savings patterns, with implications for both short and long-term financial health.

A similar study uses a life-cycle approach to explore the relationship between income trajectories and trigger events for households in the United Kingdom (Rigg and Sefton 2006),

although the authors do not address opportunities for financial education. Wallace et al. (2010) examine the effects of a variety of trigger events on wealth, but look only at the effects during retirement. Similarly, many of the studies addressing individual trigger events reviewed in this paper focus on specific life segments, especially those near or during retirement. To our knowledge, this is the first study comprehensively examining the effects of trigger events on net worth at different points in the life course.

Traditionally, studies addressing households' financial security have focused on their income rather than their assets. The literature examining the impacts of trigger events is no different; while many have looked at the events' effects on income, fewer have examined effects on net worth. However, assets play an important role in mediating the impacts of trigger events. Households often use assets to smooth consumption before recovery from negative trigger events (Acs and Nichols 2010), and having assets offers resilience to these events. Specifically, households with assets experience less financial strain as a result of negative trigger events (McKernan et al. 2009).

Assets' role as a buffer for financial shocks may become increasingly important, as negative trigger events are leading to greater drops in income than in the past (Gosselin and Zimmerman 2007). At the same time, wealth inequality and the debt-to-wealth ratio have been rising in the United States (Wolff 2010). Identifying the events that trigger financial shocks, as well as the populations particularly vulnerable to them, is important for efforts to mitigate the negative effects of these shocks.

Previous Research on Trigger Events and Net Worth

This section reviews the previous literature on each type of trigger event addressed in this study: marriage, divorce or widowhood, job loss, home purchase, the birth or death of a child, and disability onset and other health shocks. We focus on the literature addressing the impacts of specific trigger events on net worth or wealth accumulation, as well as demographic patterns of vulnerability to the events. These studies often examine effects by demographic characteristics such as income level, minority status, age, and gender, and only in some cases address potential proxies for financial literacy.

Many of these events are typically planned or predictable in the years leading up to the event (such as the birth of a child, the purchase of a home, and marriage or divorce), while others can occur suddenly without warning (such as unexpected job loss or health shocks). The varying natures of the events provide different opportunities for preparation through target saving or precautionary saving, or for adjustment after the event. This section also discusses the strategies that households use to cope with the events—specifically changes in saving, consumption, and borrowing behavior—where these strategies have been addressed in the literature.

The studies use varying definitions of net worth, assets, and debt, and significant differences are noted. Assets are generally defined as all wealth holdings, including home equity and retirement savings, but excluding future pension benefits. Financial assets (or liquid savings) exclude the value of home equity, and net worth refers to the difference between the value of all assets and the value of all liabilities.

Marriage, Divorce, or Death of a Spouse. Unlike most of the trigger events we address in this analysis, marriage has the potential to be a positive financial shock. Two individuals with

combined assets may have lower expenses living in a single household. At the same time, however, a wedding may be a significant expense and marriage may also result in changes in workforce participation. While most studies addressing the effects of marriage on net worth look mainly at long-term impacts, a couple of studies address the impact at the time of marriage as well. Zagorsky (2005) uses data from the NLSY79 covering the period 1985 to 2000. In a descriptive analysis, she finds that wealth falls slightly during the year of marriage, but that over time, married individuals build 77 percent more wealth than non-married individuals. For the median individual who married during the period covered by the data set, net worth reached $10,000 the year before marriage, fell to under $8,000 during the year of marriage, then reached $15,000 by the second year of marriage. Controlling for demographic characteristics, Zagorsky finds that savings increase 16 percent on average for every year of marriage (compared to 8 percent for every year of being single).

Zissimopoulos (2009) uses Health and Retirement Survey (HRS) data from 1992 to 2006 to examine changes in net worth as a result of transitions into marriage for individuals over the age of 50. Controlling for both risk aversion and future orientation, she finds that both marriage and remarriage increase net worth, which can be explained by the wealth consolidation of two individuals. The author determines that asset accumulation in subsequent years continues, but at a lower rate than during the year of marriage.

Unlike the other trigger events addressed in this study, marriage appears to reduce vulnerability to financial strain. Caner and Wolff (2004) find that marriage often brings poor households out of asset poverty, which is defined as having enough savings to replace three months of income.

Divorce, however, may have the opposite effect, and studies show that it significantly affects asset holdings. In addition to the increased expenses resulting from separation into two households, individuals may incur substantial legal fees. Changes in workforce participation are likely in the case of divorce as well. In her descriptive analysis, Zagorsky (2005) finds that individuals' wealth declines four years before divorce and that divorce is associated with a 77 percent average reduction in wealth. Controlling for demographic characteristics, she finds that after divorce, individuals accumulate assets at a rate of 14 percent for each year since the divorce (compared to 16 percent for married individuals and 8 percent for singles). Zissimopoulos's (2009) descriptive analysis demonstrates that wealth for divorcing couples falls by about $40,000 the year before the divorce (representing 14 percent of their wealth),by another $133,000 during the two years of the divorce (53 percent), and then rises about $22,000 after the divorce (19 percent).

We would also expect widowhood to have significant ramifications for net worth. Household income and expenses likely change, funerals may be costly, and widows may be eligible for insurance payments and other benefits. Zissimopoulos (2009) finds that the effects of widowhood are significantly different than that of divorce. Wealth is maintained before the death of a spouse, but falls by about $11,000 over the following two years. This represents a change in wealth of about 5 percent.

Researchers have identified groups particularly vulnerable to the financial effects of divorce and widowhood. The financial well-being of men often improves with divorce, while that of women declines (Holden and Smock 1991; Teachman and Paasch 1994). Widowed women are also vulnerable (Holden and Smock 1991). Zagorsky (2005) finds that both men and women are hurt by divorce, and that it affects the wealth of women to only a slightly greater

degree than the wealth of men. However, Angel and colleagues (2007) find that black and Hispanic women are especially vulnerable to asset loss as a result of divorce or widowhood.

The literature also addresses strategies couples use to cope with the financial ramifications of divorce. While Zissimopoulos (2009) determines that individuals begin to dissave two to four years before divorce and subsequently accumulate assets after divorce, Finke and Pierce (2006) arrive at more nuanced conclusions pointing to rational planning behavior in preparation for divorce. They use the PSID data set to compare the earnings of both spouses in their analysis of saving behavior prior to divorce. Examining net worth both including and excluding home equity, they find that if the husband and wife have similar earnings, the couple saves before divorce. When one member of the couple earns more than the other, however, they dissave before divorce. The authors explain that couples with similar earnings are saving in expectation of a financial shock, while an individual earning significantly more than his or her spouse has little incentive to save if the assets will be split evenly during the divorce.

Job Loss. Job loss is expected to affect net worth because it represents a significant change in income. Much of the literature addressing this event focuses on individuals approaching retirement. Johnson and colleagues (2006) examine job loss among individuals age 51 to 71 using HRS data from 1992 to 2002. Controlling for demographic variables, they find that job loss decreases assets by about 23 percent for single individuals and 19 percent for married individuals. Kosovich (2009) examines younger workers (ages 20 to 37) in the NLSY79 data set, and finds that they have difficulty accumulating wealth after job loss. Assets are lower by $1,814 for the median individual who experiences this event compared to the median individual who does not, and the impact lasts for several years.

Gruber (2001) puts the impact of job loss into context by comparing asset holdings to income loss during periods of unemployment. He uses the Survey of Income and Program Participation (SIPP) covering the period from 1984 to 1992 and finds that the median worker has enough wealth (excluding home equity and retirement savings) to compensate for about two-thirds of his or her income loss from an unemployment spell. However, he also finds that almost one-third of unemployed individuals cannot compensate for 10 percent of their income loss.

The literature also addresses the impact of job loss specifically on retirement savings. Johnson and colleagues (2007) analyze HRS data and find that job loss reduces accumulation in Social Security and pension accounts, but not other types of accumulation. Lin (2006) also uses the HRS and determines that older workers who lose jobs are more likely to dissave from IRAs or pensions two years after job loss (by 3.6 to 11.4 percentage points).

Gruber's (2001) analysis characterizes those more and less vulnerable to job loss in terms of adequate asset holdings. He finds that minorities are less likely to have enough savings to cover their income loss during periods of unemployment. In contrast, older and white individuals are less vulnerable; they tend to have just enough assets to cover their income loss. Individuals facing temporary layoffs tend to have more savings than those losing jobs permanently, and unemployment insurance decreases dissaving during unemployment.

A number of studies address the strategies households use to cope with job loss. Sullivan (2008) finds that households with initial wealth borrow during unemployment spells and increase debt, while households without much initial wealth do not borrow and probably consume less during these periods. Bloemen and Stancanelli (2005) determine that households in debt before job loss delay paying off the debt. Engen and Gruber (2001) find that households who can expect to receive unemployment compensation, especially those who face a higher risk of job loss,

accumulate less precautionary savings during periods of employment. Cullen and Gruber (2000) find that among households with unemployed husbands, the wives of husbands who receive unemployment compensation participate less in the labor force than the wives of those who do not, suggesting wives compensate for lost income by increasing their earnings. Stephens (2001) finds that households experiencing job loss reduce consumption, but not enough to completely offset lost earnings. He also finds that households anticipating job loss will start to reduce consumption in advance.

Home Purchase. While the purchase of a home often reflects a shift in assets between savings and home equity, the purchase may involve high transaction costs and affect savings behavior and asset liquidity. Additionally, monetary gifts from family members for down payments may significantly affect a households' net worth. To our knowledge, no study has examined the immediate effects of home purchase on net worth. The literature mainly addresses longer-term effects on wealth to determine the financial impact of home ownership, often including the value of home equity in the calculation of wealth. Several studies also address changes in financial behavior in anticipation of home purchase.

Boehm and Schlottman (2008) use the PSID to study the impact of home ownership on asset accumulation over the period 1984 to 1992. Their analysis demonstrates that net worth (both including the value of home equity and excluding it) increases over this period of time for all income levels and racial groups that own homes. Di and colleagues (2007) also use the PSID to examine asset accumulation as a result of homeownership over the period 1989 to 2001. Like Boehm and Schlottman, the authors find that homeownership is associated with wealth accumulation over time (both including and excluding home equity), although income and

previous wealth have a greater effect. Previous wealth also has a greater effect on non-housing wealth accumulation than on housing wealth accumulation. However, circumstances have changed since the periods studied by these authors. During the recent housing crisis, homeownership destroyed considerable wealth, and it is unclear that homeownership will be a path to significant increases in net worth in the future.

Di and colleagues' model controls for both households' predisposition to save and financial literacy. The control for the predisposition to save, measured by savings accumulated between 1984 and 1989, was not statistically significant, although its coefficient was positive. The authors consider their measure of education to be a proxy for financial literacy and find that educational achievement in 1989 is not a statistically significant predictor of asset accumulation over the period studied. However, having at least a college degree in 1989 is a significant predictor of liquid asset accumulation.

Low-income households may be particularly vulnerable to changes in net worth as a result of home purchase. Boehm and Schlottman (2008) find that the median low-income household (including both homeowners and renters) saves little. Specifically, low-income white families save an average of $300 per year while low-income minority households save an average of $0 per year, and the bottom quartile of households by income dissave. The authors point out that many low-income and minority households who purchase a home later return to renting and do not purchase another home. Purchasing a home and moving involve high transaction costs (Dietz and Haurin 2003), which suggests that the short-term effects on assets may be significant for low-income households, especially if a household ultimately does not maintain homeownership.

Several studies address household changes in financial behavior prior to buying a home. Engelhardt (1996) notes that household savings are the largest source of funding for down payments. He finds that households' food-consumption growth is greater during periods of home purchase, suggesting that households reduce consumption to save for down payments and increase consumption after the purchase. Households saving for home purchase may also increase their workforce participation, according to an analysis of Japanese households (Yoshikawa and Ohtake 1989).

Additionally, studies show that monetary gifts from family members constitute a significant portion of down payments (Engelhardt 1996; Mayer and Engelhardt 1996). Households with less income, less wealth, more credit constraints, and more education, as well as families who are buying more expensive houses are more likely to receive gifts. These transfers likely affect household savings behavior; Engelhardt and Mayer (1995) find that households that receive gifts have a 39 to 49 percent lower savings rate.

Home equity constitutes a significant portion of households' assets, especially among low-income and minority households (Herbert and Belsky 2008), which has implications for asset portfolio changes during home purchase. Hoynes and McFadden (1994) find that changes in home value do not appear to affect households' saving behavior, suggesting that home equity is treated differently than financial assets after the purchase of a house. Investing a significant portion of savings in a home may therefore affect households' resilience to other financial shocks.

Disability and Other Health Shocks. The onset of disability and other health shocks may be associated with significant changes in net worth due to resulting reductions in workforce

participation and increases in medical expenses. Some of these differences may be offset by public benefits, however. Numerous studies look at the relationship between health status and wealth, but we focus on a subsample of the literature specifically addressing the onset of new health problems. Because the likelihood of disability onset and other health problems is greater for the elderly, the literature focuses on the effects of these events on individuals who are retired or approaching retirement.

Using the HRS, Johnson and colleagues (2007) find that disability onset near retirement inhibits pension and other retirement savings. Work-limiting health shocks are also associated with $10,600 less wealth accumulation over the period studied (which is about 34 percent of the median growth in wealth). This figure represents a 9 percent reduction in wealth overall.

Johnson and colleagues (2006) use the HRS to examine the effects of disability onset and other health shocks separately for married and non-married elderly individuals. They find that controlling for a number of demographic variables, disability causes assets to fall by about 30 percent for single individuals ages 51 to 71 and by 14 percent for married individuals. Other health shocks decrease assets by 18 percent for singles and 13 percent for married individuals.

McGarry and Skinner (2009) use the HRS to look at elderly individuals in their mid-fifties to mid-seventies who apply for disability benefits. They find that, controlling for other factors, individuals receiving SSDI and SSI or who applied and were rejected have lower wealth than those who do not apply. Rejected applicants often have lower wealth than accepted applicants. In contrast, Kim and Lyons (2008) find that having health insurance supplemental to Medicare significantly reduces the vulnerability of the elderly to financial difficulty when facing health shocks.

Studies examining the length of the impact of health shocks have produced mixed results. Lee and Kim (2008) find that health shocks among elderly individuals cause dissaving concurrent to the shock, but that the effect eventually disappears. Similarly, Coile and Milligan (2009) determine that financial assets decrease with health shocks. However, they also find that the effect of a shock strengthens as time passes.

Several authors identify which populations are particularly vulnerable to health shocks. Lee and Kim (2008) determine that health shocks have a greater impact on wealth when they occur later in life. Coile and Milligan (2009) find that households with physical or mental difficulties are more financially vulnerable. Among married couples, health shocks to the wife may have a greater negative effect on wealth than health shocks to the husband because household expenses increase when the wife develops a health problem, while they do not for the husband (Wu 2003). Ward-Batts (2001) conducted a similar analysis, however, and finds mixed results.

Kim and Lee (2005) determine that health problems differentially affect the assets of elderly individuals in different racial groups. Specifically, single African Americans and whites are more likely to dissave with the onset of a serious chronic problem, while the assets of Hispanics are not affected. However, of married individuals, only white individuals are more likely to dissave with the onset of a serious chronic condition. Married Hispanics are more likely to dissave with the onset of a mild chronic problem. Overall, however, the probability of dissaving is significantly greater for African Americans in general, so they are identified as most vulnerable to asset loss from health shocks.

Birth or Death of a Child. The birth of a child may involve significant costs associated with the addition of a new household member, changes in labor force participation of one or both parents, and medical expenses associated with the birth. Few studies have addressed the effects of the birth of a child on wealth, but two studies—one using data on Dutch households, and the other using data on households in the United States—have produced consistent results. Kalwij (2003) analyzes a panel data set that followed Dutch couples who were married or cohabiting from 1987 to 1993. He finds that households build liquid savings before having their first child and save less afterwards. Household income falls with the birth of a child because mothers leave the workforce, and the lower rate of saving does not compensate for lost income. As a result, households consume less after the birth of a child.

Smith and Ward (1980) use a life-cycle approach to analyze a panel data set covering married households in the United States during the period 1967 to 1970. Like Kalwij, they find that income falls with the birth of a child because mothers leave the workforce and that consumption falls as well. The reduced consumption does not compensate for income loss in young households, where mothers experience a relatively greater reduction in workforce participation, and these households dissave. Specifically, having a child during the first year of marriage causes financial assets to fall by $1,181, and household consumption to falls by $414. Young households lose about 12 percent of their financial assets with the birth of a child.

According to Kalwij's (2003) analysis, households with less-educated mothers are more vulnerable to a reduction in wealth accumulation; these mothers experience relatively greater income loss from reduced workforce participation, and their household consumption falls relatively further. Unlike households with more-educated mothers, these households tend to dissave throughout the period covered by the study.

In contrast, Smith and Ward (1980) also identify household traits that predict an increase in savings with the birth of a child. They find that households with young children build assets when the marriage is five years or older. Couples married for at least nine years see a gain in assets of about 2 percent. If the mother was not part of the workforce before having a child, the household may build savings as well. Additionally, households with children spaced further apart in time have more savings because these households' reduced consumption more than compensates for the mothers' lost income.

A number of changes in a household's financial situation may occur with the death of a child. The death may be associated with significant medical and funeral costs. If a child had chronic health problems before his or her death, medical expenses may end, but disability benefits the family may have received end as well. Parents who reduced their workforce participation to care for the child may return to work after his or her death.

To our knowledge, no study has quantitatively addressed the impact of the death of a child on family assets. However, Corden and colleagues (2002) performed a qualitative analysis illustrating financial difficulties that families may face when they lose a child. They interview 16 parents in the United Kingdom who had a child who died after long-term illness or disability and find that public benefits available to the parents of children with disabilities often do not make up for the additional costs and lost earnings associated with caring for the child. All families experienced reduced income after the death of the child when public benefits ended, and funeral costs could be expensive. However, parents with stable incomes, families providing financial assistance, and access to available benefits faced fewer financial difficulties.

Summary of Previous Findings on Trigger Events. Households experiencing the birth of a child, the onset of disability and other health shocks, divorce, widowhood, and job loss can undergo significant negative changes in net worth. On the other hand, while marriage may be associated with a small reduction in wealth at the time of the event, it has significant benefits in the long run. The effect of home purchase on financial assets is less clear, as the relevant studies do not address the immediate impact on financial assets. Similarly, quantitative data is not available on the effects of the death of a child.

Strategies people employ to cope with these events include dissaving, relying on unsecured debt, adjusting labor force participation, and reducing consumption. The literature demonstrates that different coping mechanisms appear to be used for different types of events, suggesting that appropriate education may need to be event specific.

While the studies identify a variety of populations vulnerable to financial strain as a result of different trigger events, common themes emerge. Those who are younger, minorities and women, and those who have less education and lower income seem to be more vulnerable to at least a couple types of events. These findings are generally consistent with the populations vulnerable to having lower net worth (Lerman 2005). However, because the authors discussed often focus their analysis on specific demographic characteristics, these findings should not be interpreted as comprehensive.

The effects of trigger events on net worth have been addressed in the literature, but previous studies use different models, controls, and definitions of wealth and often examine different points in the life course. This presents difficulties for comparing the research. For example, many studies consider home equity in their assessments of asset holdings, while others look specifically at financial wealth. Home value makes up a significant portion of assets held in

the United States (reaching 33.5 percent in 2004; Wolff 2010), which means its inclusion in the assessment of net worth could result in significantly different results than its exclusion. Home equity may not be as liquid as financial assets, and as mentioned earlier, households may treat home equity differently than liquid wealth (Hoynes and McFadden 1994). This study offers an opportunity to directly compare the effects of trigger events through a consistent methodology.

While some of the studies reviewed above address a couple types of trigger events (e.g., job loss and health shocks or marriage and divorce), few studies have addressed the effects of a wide range of trigger events on net worth. Lusardi (2000) controls for the effects of past positive and negative financial shocks in her study of the effects of precautionary savings motives on wealth accumulation. She finds that positive shocks (such as inheritances, family gifts, and insurance settlements) are correlated with higher wealth, while negative shocks (such as health shocks, job loss, divorce, and separation) are correlated with lower wealth. However, the types of events are not analyzed separately, which is where this study fills a gap in the literature.

Previous Research on Financial Literacy and Asset Accumulation

A growing body of literature has been addressing the importance of financial literacy in determining financial outcomes. As defined-contribution retirement plans have replaced defined-benefit plans, greater responsibility for retirement planning has shifted to individuals, and researchers are striving to understand the role of financial literacy in individuals' financial decision-making. Financial literacy has been defined and measured in multiple ways and typically involves a number of components such as knowledge, skills, and behavior (Hung et al. 2009).

Because financial literacy has been associated with better financial decisions and outcomes, we expect that literacy predicts resilience to financial shocks. While a clear and consistent measure of financial literacy is lacking across our two data sets, correlates can be used to identify populations vulnerable to the financial effects of trigger events. We therefore examine two factors that may serve as proxies for financial literacy: educational attainment and intelligence. While these are not perfect proxies, researchers have found that education is positively correlated with financial literacy and intelligence is probably positively associated as well (Hung et al. 2009; Lusardi et al. 2010). This section reviews the literature on these proxies' effects on asset accumulation.

Education. As mentioned earlier, less-educated individuals are likely to be more financially vulnerable. The 2004 Survey of Consumer Finances reveals that the median family head without a high school degree has $49,900 in assets and $21,000 in net worth, while the median family head with a college degree has $357,000 in assets and $226,000 in net worth (Carasso and McKernan 2008). In his analysis of asset accumulation over the life course, Lerman (2005) finds that median net worth in the 25–29 age group is comparable across levels of educational attainment. However, median net worth for individuals with a college degree begins to increase during this age segment, while median net worth for those without a high school degree does not start to rise until they are in their fifties. This leads to significant differences in net worth by retirement age.

Intelligence. Zagorsky (2007) uses the NLSY79 data set to estimate the relationship between intelligence and net worth. Measures of intelligence are provided by scores from the Armed

Forces Qualification Test (AFQT). He finds that while these test scores predict income—which supports previous research—they do not appear to predict net worth. The author notes that if the scores are correlated with net worth, their effect is very small (up to $83 increase in net worth for every IQ point).

McArdle and colleagues (2009) use the 2006 wave of the HRS in a similar study. They use several measures of cognitive abilities—episodic memory, intactness of mental status, numerical reasoning, broad numeracy, and vocabulary—and examine the ability of these indicators to predict both total wealth and total financial wealth. Numeracy and memory recall were significant predictors of wealth, while the other variables were not. Each correct answer on the numeracy test (of three questions total) predicts $20,000 more in total wealth and $7,000 dollars more in total financial wealth. The effect of numeracy skills increases with income, while the effect of memory recall increases less across income levels for total wealth and is consistent across income levels for total financial wealth. The authors also look at changes in wealth between 2000 and 2006 and find similar results.

Banks and Oldfield (2006) perform a cross-sectional analysis using a data set of individuals in England and find that numeracy skills are correlated with retirement savings. They note that financial numeracy skills fall as people age, which suggests that elderly individuals may become increasingly vulnerable. They also show that women and less-educated individuals possess weaker numeracy skills.

Summary of Financial Literacy Proxies. Having examined the measures available to us in both the PSID and NLSY79 data sets, we elected to use two different, but similar, measures to examine whether financial literacy level differentially predicts resilience to shocks. In the

NLSY79, we chose to use AFQT score, as done in Zagorsky (2007). In the PSID, we chose to simply dichotomize individuals into college-educated and non-college-educated groups, given the frequency with which education itself was mentioned in the literature as a predictor of financial well-being. Additionally, researchers have shown that educational attainment is correlated with other proxies for financial literacy, such as discount rate and risk preference (Lawrance 1991; Sung and Hanna 1996; Wang and Hanna 1997). For consistency with our PSID analysis, we also use education to dichotomize individuals in our NLSY79 analysis.

Based on findings in the literature, we expect that educational attainment measured by completion of a college degree, and possibly intelligence measured by AFQT score, predicts resilience to trigger events. Additionally, our analysis examines whether these variables are differentially associated with resilience across age groups and trigger events.

Panel Study of Income Dynamics (PSID) Analysis

The first part of our study is a cross-sectional analysis comparing the net worth of families experiencing trigger events to the net worth of those that do not experience these events. The effects are broken down by age segment and whether the family head has a college degree.

Data. We construct the data set for this portion of our study from the Panel Study of Income Dynamics (PSID) database. The PSID is a nationally representative longitudinal survey of families in the United States that started with observations of 4,800 families in 1968. As the children in these families have aged and formed their own families, the survey followed their new family units, and now includes 7,500 families in the most recent wave. PSID data were collected annually from 1968 to 1996, and biennially thereafter. Detailed information on family

assets was collected every five years from 1984 to 1999, and every other year thereafter. Given our need for asset data to perform our analysis, the data set used in this report covers only the PSID waves that include asset data, specifically the 1984, 1989, 1994, 1999, 2001, 2003, 2005, and 2007 waves. Our analysis combines information from both the individual file and the family file. The data contain detailed information on family members' demographic information, such as race, age, education, number of children, health status, and marital status, as well as information on income, assets, debt, and employment.

To characterize asset accumulation at different points in the life course, we divide the life span of the family head into six age segments: ages 18–24, 25–34, 35–44, 45–54, 55–61, and 62 and older. Each segment reflects a period during which—according to the life-cycle theory—life events are expected to influence savings patterns in a particular way. The 18–24 age segment covers postsecondary education and/or first employment. Most individuals are expected to accrue debt to cover education and other early career expenses, or at best have a constant net worth. The 25–34 age segment covers early career, marriage, home purchase, and child birth. These individuals are expected to incur substantial debts, such as mortgages and car loans. However, their net worth is expected to grow as they accumulate housing and other wealth. Those in the 35–44 age segment are expected to begin accumulating significant assets, while also incurring costs on behalf of their children. Those in both the 45–54 and 55–61 segments are expected to accelerate their accumulation of assets in preparation for retirement, while those age 62 and above begin to reduce their stock of assets as they use them to finance consumption in retirement. Despite this overarching pattern, we observe individuals at each stage in the life course who incur significant debts, have a constant net worth, or accumulate significant assets.

Net worth is defined as assets minus debt. We define assets in this paper as the sum of the value of the primary home, other homes or property, vehicles, bonds, stocks, cash, and pensions. Aggregate debt is taken directly from the data set. The survey does not specify the sources and nature of the debt, as family heads are simply asked to provide a value summing all debts. Given that the amount of debt is relatively small compared with assets, we postulate that the debt does not include the outstanding mortgage. Because home value is included as an asset, net worth may therefore be overestimated.

Summary Statistics: Net Worth Distribution. Table 1 shows the distribution of assets, debt, and net worth in each age group. The levels of assets in the age groups 18–24 and 25–34 are approximately the same. Assets increase substantially between age groups 25–34 and 35–44 and stay at a relatively high level until the age group 55–61. The median assets of family heads in the age group 62 and above decrease by around 10 percent compared with the age group 55–61, but the asset distribution is greater. The magnitude of debt is relatively steady across age groups compared with the significant change in asset holdings. This is contrary to our expectation that debt increases dramatically for the 25–34 and 35–44 age groups, when families typically make their first home purchase. This may be a result of family heads not including mortgages in their assessment of debt.

Table 1 here

Table 2 provides more detail about the distribution of net worth in each age group. Among all age groups, families with net worth in the top 10 percent of the distribution tend to

have male family heads. These family heads also tend to have a higher education level compared to family heads in the bottom 10 percent of the distribution, and the difference in education level widens in the older age groups. Family heads in the top 10 percent of the distribution are significantly and consistently more likely to be married than their counterparts in the bottom 10 percent.

Table 2 here

Employment rates are higher among family heads with large net worth for the three youngest age groups, but the effect is reversed for the age groups 45–54 and 55–61. As we would expect for individuals at retirement age, the employment rates for the two levels of net worth are equally low for the age group 62 and older. Household heads with net worth in the lower 10 percent of the distribution have greater unemployment rates, except in the oldest age group, where the rate is 0 percent for both income levels. Note that missing answers on the employment question cause the sum of those answering 'employed,' 'unemployed,' and 'out of labor force' to be below 100 percent in each age group.

Families with net worth in the top 10 percent of the distribution tend to have more children in the household at ages 35–44 and 45–54 than those in the bottom 10 percent. The relationship between family net worth and number of children is reversed in the two youngest age groups. This is consistent with wealthier households delaying child birth.

Trigger Events and Net Worth. In order to examine the relationship between education and the net worth of families experiencing financial shocks, we define a series of common trigger events: marriage, divorce or widowhood, family head's job loss, main home purchase, and family head's

disability onset. We define marriage and divorce or widowhood using changes in the marital status variable of the family head between adjacent waves of the PSID. We set the dummy variable 'marriage' equal to one if the family head answered that he or she was married in that year and had a different marital status in the previous wave; otherwise, we set it equal to zero. Similarly, we set the dummy variable 'divorce or widowhood' equal to one if the family head answered that he or she was widowed or divorced in that year and was married in the previous wave. Job loss is defined as a change in the employment status of the family head. The variable equals one if the family head answered that he or she was unemployed in that year and was employed in the previous wave; otherwise, it equals zero. We define the onset of disability as a dummy variable equal to one if the family head answered that he or she was disabled in that year and had not reported being disabled in the previous wave and equal to zero otherwise. The PSID survey does not directly ask questions about the purchase of a family's primary residence, so we derived that information from related variables. Specifically, we set the dummy variable for home purchase equal to one if there was a record about the main home value or mortgage in the current wave and there was no information about mortgage and main home value in the previous wave.

Tables 3 to 7 show how a trigger event may affect family asset holdings. For each age group, we assess trigger event incidence and compare the net worth of families who experience a trigger event to the net worth of families who do not. We also compare the event incidence and net worth of families with college-educated and non-college-educated heads. While we do not discuss asset and debt holdings here, refer to Appendix A for a breakdown of net worth by assets and debt for each age group and trigger event.

We interpret the results of this cross-sectional analysis with caution, because there are two main reasons the correlation between trigger events and net worth may not be causal. First, the trigger events may not occur independently of one another. For example, the rate of home purchase may not be identical among recently married couples and other families. While marriage, divorce, and widowhood are not independent, there is little possibility that a respondent's marital status will change more than once in a year, so we are not concerned that this significantly affects our analysis. Second, there may be systematic differences between families who experience a trigger event before the event occurs and those who do not. In other words, families are probably not homogeneous, and there may be selection bias of individuals with certain characteristics into the groups experiencing trigger events.

In order to address these issues, we would need to employ a more complex analysis strategy, such as difference-in-difference analysis, but this approach has shortfalls as well. For example, we would have to construct the asset, debt, and net worth data one year before the 1984, 1989, 1994, 1999, 2003, 2005, and 2007 survey years. We could do so using a linear projection method, but the method itself is problematic. First, the linear projection method assumes equal changes in asset (or debt) values across every year between two waves, when the changes may have occurred primarily in one year. Second, it is possible that more than one trigger event happened to a family between two waves, especially during the five-year gap between 1984 and 1989. Since we cannot assume multiple trigger events do not occur between two waves, we cannot identify the effect of a single event.

Marriage. Table 3 shows the mean and median net worth by age group and educational attainment of family heads experiencing marriage. Marriage is a significant event across the life

course. The event's frequency is greatest in the youngest two age segments (about 9 percent) and decreases somewhat in the next three segments (to 7.1 percent in the 55–61 group). Marriage rates are lowest for the 65 and older group, at 2.2 percent. Marriage is consistently more common throughout the life course for family heads without a college education (for example 12.9 percent compared to 6.8 percent for the youngest age group and 10.1 percent compared to 6.3 percent for the 45–54 group).

Table 3 here

Family net worth tends to be higher among recently married couples, except for the younger two age groups. The only exception is college-educated family heads who marry in the 18–24 group; they have 14.1 percent more wealth on average than those in their cohort who do not marry. In the younger groups, the relative difference in net worth between those who marry and those who do not is significantly greater for non-college-educated family heads. For example, the relative difference in median net worth for those who marry in the youngest group compared to those who do not is 32.1 percent lower for non-college-educated family heads, but only 3.6 percent lower for college-educated family heads.

The difference in net worth increases as family heads age and accumulate more wealth, but falls later in life. Specifically, mean net worth is 15.4 percent greater for recently married couples in the age group 35–44, reaching 23.6 percent greater for the age group 55–61, and falling back to 10.7 percent greater for those 62 and older. Median net worth follows a similar pattern but peaks somewhat earlier, at 22.0 percent greater in the 45–54 age group.

Interestingly, recently married families in the age group 62 and older without a college degree have a mean net worth 47.4 percent greater while recently married families with a college degree have a mean net worth 6.4 percent lower. However, the marriage rate for college-educated family heads in this age group is very small (1.5 percent).

Divorce or Widowhood. Table 4 provides data for the family heads that experience divorce or widowhood. Divorce or widowhood rates are about 3 percent across the life course, except for the age group 55–61, where they reach about 5 percent. The event is consistently more common for family heads without a college education (for example 3.6 percent compared to 2.2 percent for the youngest age group and 5.1 percent compared to 3.2 percent for the 45–54 group).

Table 4 here

If a family head becomes divorced or widowed, family net worth is significantly lower, which is consistent with previous research. Again, the average difference increases with age, but falls in the oldest age group (the relative difference in mean net worth is 32.0 percent lower for families in the age group 18–24, reaching 46.1 percent lower for the age group 55–61 and falling back to 24.0 percent lower for the oldest group). College-educated families tend to have a greater relative change in net worth, but they have greater wealth in the first place.

Job loss. Table 5 shows the net worth of family heads that experience job loss. The rate of job loss falls throughout the life course, from 3.8 and 4.0 percent in the two youngest age groups to 2.3 percent in the 45–54 group and 0.3 percent in the oldest group. Family heads without a

college education are significantly and consistently more likely to experience job loss (for example, the rate is 6.6 percent compared to 2.5 percent in the youngest group and 3.5 percent compared to 1.4 percent in the 45–54 group).

Table 5 here

The most dramatic relative difference in net worth between families experiencing a trigger event and families not experiencing the event are seen when a family head loses his or her job. However, for non-college-educated family heads who lose their jobs, the relative change mostly decreases with increasing age (from a mean net worth 44.5 percent lower in the youngest group to 27.8 percent lower in the oldest group), while college-educated family heads who lose their jobs face relatively greater drops in net worth that increase somewhat consistently with age (from a mean net worth 50.3 percent lower in the youngest group to 72.4 percent lower in the oldest group). Job loss lowers the net worth of college-educated families to levels near or below the net worth of non-college-educated families who do not experience job loss (significantly below in the case of the oldest age group, where college-educated families experiencing job loss have a net worth of $62,424, while the net worth of non-college-educated families not experiencing job loss is $92,463).

Home purchase. Table 6 shows the mean and median net worth by age group and educational attainment of families who purchase homes. As we would expect, home purchase rates are highest in the 25–34 and 35–44 age group (7.8 and 13.1 percent, respectively). The event's frequency is around 6 or 7 percent for the other age groups, except in the oldest group, where the

frequency is 2.2 percent. While family heads without a college education have a higher rate of home purchase in the two youngest age groups, the pattern is reversed for the remaining age groups. The frequency is significantly higher for college-educated 35 to 44-year-olds, at 18.7 percent.

Table 6 here

No clear pattern emerges for families that have recently purchased a home. Overall, families who have recently purchased a home have lower net worth than those who do not (except in the age group 25–34, where mean net worth is 32.5 percent higher for those who have purchased a home). In the three youngest age groups, net worth is higher for non-college-educated families that have purchased a home compared to those that have not, while among these age groups net worth is only higher for college-educated families in the group 25–34.

Disability Onset. Lastly, Table 7 provides data for disability onset. The incidence of disability is about 3 or 4 percent for the three youngest age groups, rises to about 5 percent in the 45–54 and 55–61 groups, and falls to 2.7 percent in the oldest group. This pattern is similar for college-educated family heads, though of a smaller magnitude; rates range from 1.3 to 3.6 percent. The frequency ranges from 4.5 to 7.1 percent across all age groups for the non-college-educated family heads, except for the 62 and older segment, where it is 11.7 percent.

Table 7 here

If the family head develops a disability, net worth is lower compared to families who do not experience disability onset. The lower net worth appears to be consistent with earning potential across the life course: $16,808 lower for youngest age group, leveling somewhat between age groups 35–44 and 55–61 (reaching a maximum of $26,599 lower in the group 55–61), and falling to $14,958 lower for the oldest age group. Families in the three younger age groups whose heads experience disability onset have a greater relative difference in mean net worth compared to families in the three older age groups (18–23 percent less compared to 9 to 17 percent less). The relative difference is lowest in the oldest age group (9 percent less), probably because many of the family heads in this age group have retired and disability onset does not reduce workforce participation. The fluctuations in the difference in net worth associated with disability onset with increasing age do not support Lee and Kim's (2008) finding that the effects of disability on wealth may increase with age.

Non-college-educated families appear to have a relatively smaller loss of net worth as a result of disability onset than college-educated families. However, the net worth of college-educated families experiencing disability onset is still greater than the net worth of non-college-educated families not experiencing disability onset.

National Longitudinal Survey of Youth 1979 (NLSY79) Analysis

The second part of our analysis examines the changes in net worth associated with trigger events using the National Longitudinal Survey of Youth 1979 (NLSY79). This analysis looks at the potential effects of both educational attainment and intelligence, which is measured by the Armed Force Qualifications Test (AFQT) administered to all respondents.

Data. The NLSY79 data set is a nationally representative sample of 12,686 young men and women who were 14–22 years old as of December 31, 1978. Interviews began in 1979 and were conducted annually until 1994. Since 1994, the interviews have been conducted biennially. The respondents were in their forties during the 22nd round of interviews, which took place in 2006 and early 2007. The sample consists of a core random sample and an oversample of blacks, Hispanics, poor whites, and the military. The survey gathers detailed information on employment, education and training, income, assets, marital status, fertility and children, health, household composition, and attitudes.

We include data from 1979 to 2004. Each respondent is included in our sample once he or she finishes the transition from school to the labor market. We define the labor market transition as the first two consecutive years the respondent works at a primary job for least 520 hours per year (20 hours per week for 26 weeks) after completing his or her highest level of education. Our final sample comprises 9,902 individuals.

Like the first portion of our study, this analysis uses education as a proxy for financial literacy. We use the highest completed degree variable during the wave in which a trigger event occurs to determine whether or not the respondent has a college degree. Intelligence scores, which are also available in NLSY79 in the form of the AFQT score, are used as a second proxy. The AFQT score is a general measure of trainability and a primary criterion of enlistment eligibility for the United States Armed Forces. Two methods of calculating AFQT scores developed by the U.S. Department of Defense have been used by the Center for Human Resource Research at the Ohio State University to create two percentile scores for each respondent, an AFQT80 score and an AFQT89 score. We use the AFQT89 score in this analysis. While the AFQT measures various competencies, including numeracy, the NLSY79 only

includes the aggregate score. As such, we cannot examine whether any one subcomponent of the score is particularly predictive of financial well-being. We run an OLS regression of AFQT89 scores on age dummies and then use the residual (normalized to have a mean of zero and a standard deviation of one) as the variable to denote the individual's intelligence level.

We define net wealth as the sum of family assets net debt. Asset and debt data for the previous year are collected in every wave, except for the 1991 and 2002 waves. Additionally, asset information from 2006 has not been released yet. These waves were therefore excluded from the analysis. We deflate the value of net worth to 2004 dollars using the CPI-U from the U.S. Bureau of Labor Statistics.

To compute changes in net worth, we subtract the net worth in the wave prior to the wave in which the event occurred from the net worth in the wave following the wave in which the event occurred. We demean the real net worth value to abstract from the age-asset accumulation trend using two methods. First, we demean net worth by age average. We calculate the mean net worth value by age and then subtract the age-specific mean from net worth. We also demean net worth by regression. We regress assets on age, age squared, and a marital status dummy (one if married, zero otherwise) and then take the residual as the demeaned value.

Because interviews were conducted annually until 1994 and biennially thereafter, and the 1991 and 2002 waves were excluded from the analysis, changes in net worth reflect change over the course of two to six years. While our detrending by age partially addresses this issue, the inconsistency represents a limitation of the analysis results.

We construct monthly and yearly event data for six types of trigger events: unemployment, birth of a child, death of a child, marriage, divorce, and the onset of a work-limiting health problem. To develop an unemployment variable, we construct data on weekly

labor status, hours worked, and dual jobs from January 1, 1978, to the present. We derive the monthly and yearly labor force status and hours variables from the weekly data combined with the job and employer information. We collect information about child birth, child death, marriage, and divorce from the 1994 through 2008 waves. Information about work-limiting health problems is collected in each wave.

Trigger Events and Net Worth. We examine the net worth of families experiencing trigger events by separating the sample according to whether or not family heads have a college degree and whether or not their AFQT score falls into the top half of the score distribution (which we refer to as a 'high' score, while a 'low' score falls in the bottom half of the distribution). This differentiation results in four groups: those with no college degree and a low AFQT score, those with no college degree and a high AFQT score, those with a college degree and a low AFQT score, and those with a college degree and a high AFQT score. We assess trigger event incidence for each group and compare the net worth of families who experience a trigger event to the net worth of families who do not. Table 8 shows the results when net worth is demeaned by either age or regression. To see separate analyses of educational attainment and AFQT score, refer to Appendix B.

Table 8 here

Overall, the incidence of trigger events is very similar across low and high AFQT scores, except for unemployment and the onset of health limitations. The frequency of unemployment is somewhat lower for family heads with college degrees (26.3 percent for those with a low AFQT score and 27.5 percent for those with a high score, compared to 30 to 33 percent for those

without a college degree). Health limitations are less common for family heads with college degrees as well (2.7 percent compared to 3.2 and 4.5 percent).

Unemployment is the event with the highest frequency. The remaining events are significantly less common. The frequency of child birth is about 5 to 6 percent, marriage about 4 to 5 percent, health limitations about 3 to 5 percent, and divorce about 2 percent. The death of a child is quite rare (0.1 percent for all four groups).

Because the difference in net worth reflects changes over the course of two to six years, their magnitudes should be interpreted with caution. However, their signs offer insight into the relative resilience of the four groups. The results for marriage and child death are ambiguous because the different detrending methods yield different results, so we exclude these events from this discussion. The other trigger events, however, generally show consistent results. For families with heads who have a college degree and a high AFQT score, the change in net worth is positive for all trigger events, which is not true for the other three groups. This suggests that the college-educated group with high AFQT scores is the most resilient to the effects of financial shocks. The change in net worth is positive for family heads with college degrees and low AFQT scores experiencing unemployment, child birth, and the onset of health limitations. However, this group shows a negative change in net worth when experiencing divorce. The two groups without college degrees show a negative change in net worth for all trigger events, except in the case of health limitations. For this event, families whose heads have no college degree and a low AFQT score experience a positive change in net worth.

The magnitude of change for families whose heads do not have a college degree is similar between low and high AFQT scores for divorce and unemployment. However, among families whose heads do not have college degrees, high AFQT scores indicate a greater negative

change in net worth with the onset of health problems and child birth. Among families whose heads have college degrees, those with high AFQT scores have greater positive changes in net worth than those with low scores.

Improving the Financial Literacy of Vulnerable Populations

Findings on the effectiveness of financial education are mixed (Bayer et al. 2009; Bernheim and Garrett 2003; Bernheim et al. 2001; Duflo and Saez 2004), and improving the focus of education programs may improve their success rate. Lusardi and Mitchell (2005) suggest, 'Education programs targeted specifically to particular subgroups may be better suited to address large differences in preferences and saving needs' (17). Additionally, some authors argue that financial education may be more effective when addressing specific life events (McKernan et al. 2010) or segments of the life course (Seligman 2010). This research identifies a number of specific demographic groups and key life events for which targeted financial education may prove particularly effective.

The PSID analysis highlights a number of places where targeted financial education may be valuable. The trigger events that have the greatest negative impact appear to be job loss and divorce or widowhood. While divorce or widowhood do not occur at particularly high rates in any age group, they occur throughout the life course and have significant impacts at all ages for families with both college-educated and non-college-educated heads. Job loss, meanwhile, is associated with the largest difference in net worth between those who experience the event and those who do not. Family heads without college degrees are more likely to experience this event, and the difference in net worth is substantial for all age groups and both education levels. The NLSY79 analysis also demonstrates that this is an event with a particularly high rate of

incidence. These findings suggest that both divorce or widowhood and job loss are good targets for educational intervention across the life course.

However, families with and without college-educated heads exhibit different effects associated with job loss as age increases, suggesting that these two groups may be affected differently by job loss. These two groups may therefore require different information to cope effectively with the financial ramifications of this trigger event. Further research identifying possible causes for these patterns could inform educational-program design.

Families with heads who experience disability onset have substantially less net worth across the life course than families whose heads do not experience the event, but to a lesser degree than job loss and divorce or widowhood. Because families whose heads do not have college degrees have less net worth overall, they appear to be more vulnerable and may benefit more from financial education.

Marriage, however, is an event where it would probably be beneficial to target a specific demographic group for financial education, specifically younger, non-college-educated families. These families are more vulnerable to having lower net worth, and a substantial number of people are getting married in the younger age segments.

Overall, it is not clear whether home purchase is associated with higher or lower net worth across the life course. Families with higher net worth may be more likely to purchase a home when they are younger, which may explain the higher net worth among families who have purchased a home in the 25–34 age group. The results regarding home purchase are difficult to interpret for a number of reasons. As discussed above, mortgage debt is probably not included in assessment of debt, which would bias net worth upwards. However, some families may report their mortgage debt while others do not, which would cause discrepancies. Additionally, the

receipt of family gifts—which are a common source of down payments for homes (Engelhardt 1996; Mayer and Engelhardt 1996)—may complicate assessments of net worth. Further studies that are better able to measure home equity and mortgage debt are needed.

While the PSID analysis demonstrates that age may affect the changes in net worth associated with trigger events, the NLSY79 results are not able to show this nuance. Overall, however, the NLSY79 findings suggest that educational attainment may be more closely correlated with resilience to trigger events than the measure of intelligence used in this analysis. Additionally, AFQT scores may be more closely associated with resilience among those with college degrees than those without. This is consistent with previous findings that educational attainment is a significant predictor of net worth, while intelligence may not be.

The NLSY79 findings suggest that beyond targeting specific groups for education, generally improving the financial literacy of individuals who do not go to college may be important. Programs should be designed for the non-college educated in terms of accessibility and content. Since the results of the AFQT analysis suggest that learning ability may be less important than other factors that affect whether or not individuals receive higher education, access to financial education may be particularly significant (assuming financial education is effective in improving financial outcomes). Strengthening financial education in high school may be one route to achieve this.

The literature review supplements the findings of our analysis by highlighting demographic groups vulnerable to trigger events, which can inform educational efforts as well. For example, African Americans of all ages are more susceptible to asset depletion following a health shock than persons of other races, suggesting that targeted financial education on dealing with health costs may be more effective than general education.

Women are vulnerable as well. The negative financial effects of divorce are particularly concentrated among African American and Hispanic women, as they experience the greatest loss in income and assets post-divorce. Moreover, women of all races suffer significantly from divorce and need to rebuild assets following a divorce. This suggests a role for financial planning or education targeted to women during and/or post-divorce.

Conclusions and Next Steps

This study examines households' responses to a variety of negative financial shocks experienced throughout the life course, including the birth of a child, the death of a child, home purchase, the onset of disability and other health shocks, marriage, divorce or widowhood, and job loss, for the purpose of identifying predictors of financial resilience to these shocks. Using the PSID and NLSY79, the relationship between these shocks and net worth are examined by age group and also by educational attainment and AFQT score, which serve as potential proxies for financial literacy

Our findings suggest that households with a college education better weather financial shocks than those without a college degree, while intelligence (as measured by AFQT score) is more likely to predict greater resilience to shocks at higher levels of educational attainment. Moreover, we find interesting patterns of resilience to the various shocks by age even within our dichotomies of financial literacy level, suggesting that persons at different stages of the life course require different types of information in order to weather the same shocks.

This study compares the potential effects of a number of trigger events as a first step toward effectively targeting education to improve financial literacy. We have identified vulnerable populations and age groups that may benefit the most from financial education

programs, as well as particular life events that should be addressed by such programs. Future research should examine the causal relationships behind the various patterns we have observed and further evaluate the effectiveness of financial education strategies.

Appendix A: Additional Results from the PSID Analysis

Mean Net Worth, Assets, and Debt by Age Group and Trigger Event

Table A.1
Mean Net Worth, Assets, and Debt by Age Group and Education, Marriage Event

Age group Event occurred	Overall			No college education			College and above		
	Net worth	Assets	Debt	Net worth	Assets	Debt	Net worth	Assets	Debt
18–24									
No	90137	92523	9399	64216	65800	6484	107698	110628	11327
Yes	95473	99646	8775	62071	65373	7153	122861	127749	10023
25–34									
No	73548	76733	10912	52386	54229	7615	89961	94186	12893
Yes	69849	75349	10285	48048	50813	5924	88601	96452	13279
35–44									
No	114127	116576	10600	77244	79014	8383	143579	146570	12199
Yes	131649	135857	8985	86047	89004	6897	174662	180049	10671
45–54									
No	152862	155719	11718	94806	96863	9668	208612	212239	13236
Yes	186440	191068	10268	107606	110539	7375	267022	273383	12649
55–61									
No	152478	154509	11062	93480	94539	7213	241903	245406	14651
Yes	188420	191346	8318	106636	109007	6825	318391	322199	10577
62 & older									
No	162510	165566	13359	89229	89712	5340	226110	231399	15196
Yes	179954	185302	14674	131482	132195	3931	211620	219994	17529

Note: Assets are defined as the sum of the value of the primary home, other homes or property, vehicles, bonds, stocks, cash, and pensions. Debt is an aggregated number taken directly from the survey. Net worth is defined as assets minus debt. Data source is the PSID data set covering 1984 to 2007.

Table A.2
Mean Net Worth, Assets, and Debt by Age Group and Education, Divorce or Widowhood Event

Age group Event occurred	Overall			No college education			College and above		
	Net worth	Assets	Debt	Net worth	Assets	Debt	Net worth	Assets	Debt
18–24									
No	92169	94779	9224	64498	66316	6620	111387	114547	11006
Yes	62646	66611	9485	49619	52809	7332	72940	77518	11091
25–34									
No	73933	77480	10896	52288	54289	7292	91030	95798	13129
Yes	47645	51291	8153	34984	36841	4847	57149	62139	10346
35–44									
No	117999	120627	10387	79506	81424	8158	149404	152613	12048
Yes	73898	77297	8417	51036	53132	6437	91900	96324	9726
45–54									
No	159654	162669	11650	97278	99406	9401	219957	113829	13345
Yes	97911	101828	9063	77078	79843	7099	118198	123238	10595
55–61									
No	159852	161993	10956	96908	98109	7432	255650	259222	14472
Yes	86094	87858	6033	55953	57058	3919	132676	135458	8676
62 & older									
No	166733	170040	13873	93091	93582	5423	227613	233248	15664
Yes	126794	129258	9275	83204	83807	3494	178561	183237	12624

Note: Assets are defined as the sum of the value of the primary home, other homes or property, vehicles, bonds, stocks, cash, and pensions. Debt is an aggregated number taken directly from the survey. Net worth is defined as assets minus debt. Data source is the PSID data set covering 1984 to 2007.

Table A.3
Mean Net Worth, Assets, and Debt by Age Group and Education, Job Loss Event

Age group Event occurred	Overall			No college education			College and above		
	Net worth	Assets	Debt	Net worth	Assets	Debt	Net worth	Assets	Debt
18–24									
No	92636	95370	9387	65132	67069	6803	111540	114822	11140
Yes	45494	46292	3981	36164	36776	2876	55403	56398	5203
25–34									
No	74233	77860	10912	52617	54668	7280	90854	95712	13113
Yes	36036	37045	4788	31918	32785	4371	42574	43810	5449
35–44									
No	118005	120706	10325	79354	81308	8069	149053	152355	11980
Yes	58261	59569	7177	53369	54525	7370	64561	66064	6972
45–54									
No	158982	162102	11464	97731	99943	9215	216968	220947	13148
Yes	72984	73797	9466	59507	60282	9202	102111	103005	9967
55–61									
No	158601	160767	10656	96035	97256	7200	252466	256049	14114
Yes	71544	72133	5234	61065	61526	4117	99968	100906	8338
62 & older									
No	164805	168079	13576	92463	92966	5157	226274	231903	15542
Yes	64122	64366	2092	66775	66915	1976	62424	62735	2123

Note: Assets are defined as the sum of the value of the primary home, other homes or property, vehicles, bonds, stocks, cash, and pensions. Debt is an aggregated number taken directly from the survey. Net worth is defined as assets minus debt. Data source is the PSID data set covering 1984 to 2007.

Table A.4
Mean Net Worth, Assets, and Debt by Age Group and Education, Home Purchase Event

Age group Event occurred	Overall			No college education			College and above		
	Net worth	Assets	Debt	Net worth	Assets	Debt	Net worth	Assets	Debt
18–24									
No	91811	94576	9660	63268	65240	6939	111245	114550	11541
Yes	86118	88208	6835	66893	68279	5063	101610	149568	18069
25–34									
No	68932	72589	11110	48265	50329	7433	85125	90031	13399
Yes	91331	94395	9090	66872	68565	5879	111165	115431	11078
35–44									
No	116555	119221	10690	77492	79449	8389	147900	151135	12420
Yes	114021	116638	7939	84070	85787	6138	141060	144488	9161
45–54									
No	160491	163637	11941	97942	100219	9913	218848	222804	13411
Yes	125100	127437	7746	84720	86043	4899	177666	181322	10667
55–61									
No	160326	162503	11289	96935	98147	7764	254273	257879	14585
Yes	122520	124202	6283	79528	80606	4214	204867	207705	9768
62 & older									
No	167082	170285	13620	92543	93042	5436	229741	235217	15440
Yes	134495	138178	12765	89929	90440	3400	175428	182023	15877

Note: Assets are defined as the sum of the value of the primary home, other homes or property, vehicles, bonds, stocks, cash, and pensions. Debt is an aggregated number taken directly from the survey. Net worth is defined as assets minus debt. Data source is the PSID data set covering 1984 to 2007.

Table A.5

Mean Net Worth, Assets, and Debt by Age Group and Education, Disability Event

Age group Event occurred	Overall			No college education			College and above		
	Net worth	Assets	Debt	Net worth	Assets	Debt	Net worth	Assets	Debt
18–24									
No	91750	94397	9075	64303	66121	6507	110794	114017	10816
Yes	74942	77973	12486	55215	58236	9303	90583	93622	15400
25–34									
No	73478	76936	10453	51881	53768	6775	90407	95097	12720
Yes	60050	65929	17961	46714	51256	15267	72195	79292	20031
35–44									
No	117369	119994	10142	78779	80690	8027	148622	151826	11692
Yes	90820	94245	12559	70233	72432	8487	109961	114527	16181
45–54									
No	157826	160845	11377	96565	98652	8969	216590	220502	13190
Yes	136544	140273	12467	91965	95260	12825	186173	190385	12182
55–61									
No	157892	159930	10184	95432	96607	6951	252501	255847	13503
Yes	131293	134645	16002	86799	88296	9863	204820	211236	21354
62 & older									
No	165319	168619	13391	92888	93368	4930	224697	230308	15280
Yes	150361	153094	15273	87203	87868	6933	225409	230597	18491

Note: Assets are defined as the sum of the value of the primary home, other homes or property, vehicles, bonds, stocks, cash, and pensions. Debt is an aggregated number taken directly from the survey. Net worth is defined as assets minus debt. Data source is the PSID data set covering 1984 to 2007.

Appendix B: Additional Results from the NLSY79 Analysis

Table B.1

Mean Change in Net Worth by AFQT Score or Education, Detrended by Age and Regression

Trigger event	AFQT Score		College Degree	
	Low	High	No	Yes
Marriage				
Event frequency	4.6%	4.4%	4.4%	4.5%
Detrended by age	22923.0	16068.3	1091.5	37372.5
Detrended by regression	-17975.4	-23014.3	-36872.0	-4193.6
Divorce				
Event frequency	2.1%	2.0%	2.2%	2.0%
Detrended by age	-40655.4	-12607.9	-25181.0	-11763.1
Detrended by regression	-15871.5	9084.1	-3460.3	11754.8
Unemployment				
Event frequency	28.3%	30.8%	32.3%	27.1%
Detrended by age	-9804.4	-14871.9	-25056.5	6652.4
Detrended by regression	-8486.4	-13594.9	-22873.3	6389.1
Health limitation				
Event frequency	2.9%	3.8%	4.2%	2.7%
Detrended by age	11256.3	-12529.8	-19124.9	15205.1
Detrended by regression	12306.1	-11430.4	-16715.6	13400.4
Child birth				
Event frequency	5.2%	5.3%	5.2%	5.6%
Detrended by age	13136.3	13562.2	-10742.4	42698.9
Detrended by regression	12397.9	12065.9	-11664.3	40928.1
Child death				
Event frequency	0.1%	0.1%	0.1%	0.1%
Detrended by age	-8203.9	18622.7	8272.2	30548.2
Detrended by regression	5131.8	20271.9	10365.6	40305.2

Note: Change in mean family net worth between the wave before a trigger event and the wave after, grouped by AFQT scores ('high' denotes a score in the upper half of the score distribution), and grouped by whether or not the family head has a college degree. Wealth values have been demeaned by age and regression. Data source is the NLSY79 covering the period 1979 to 2004.

References

Acs, Gregory, and Austin Nichols (2010). 'America Insecure: Changes in the Economic Security of American Families.' Low-Income Working Families Paper 16. Washington, DC: The Urban Institute.

Aizcorbe, Anna M., Arthur B. Kennickell, and Kevin B. Moore (2003). 'Recent Changes in U.S. Family Finances: Evidence from the 1998 and 2001 Survey of Consumer Finances,' *Federal Reserve Bulletin*, Jan: 1–32.

Angel, Jacqueline L., Maren A. Jiménez, and Ronald J. Angel (2007). 'The Economic Consequences of Widowhood for Older Minority Women,' *The Gerontologist*, 47(2): 224–234.

Banks, James, and Zoe Oldfield (2006). 'Understanding Pensions: Cognitive Function, Numerical Ability and Retirement Saving.' Institute for Fiscal Studies WP06/05. Longdon, England: Institute for Fiscal Studies.

Bayer, Patrick J., B. Douglas Bernheim, and John K. Scholz (2009). 'The Effects of Financial Education in the Workplace: Evidence from a Survey of Employers,' *Economic Inquiry*, 47(4): 605–624.

Bernheim, B. Douglas, and Daniel M. Garrett (2003). 'The Effects of Financial Education in the Workplace: Evidence from a Survey of Households,' *Journal of Public Economics*, 87: 1487–1519.

Bernheim, B. Douglas, Daniel M. Garrett, and Dean M. Maki (2001). 'Education and Saving: The Long-Term Effects of High School Financial Curriculum Mandates,' *Journal of Public Economics*, 80: 435–465.

Bloemen, Hans G., and Elena G. F. Stancanelli (2005). 'Financial Wealth, Consumption Smoothing and Income Shocks Arising from Job Loss,' *Economica*, 72: 431–452.

Boehm, Thomas P., and Alan Schlottmann (2008). 'Wealth Accumulation and Homeownership:

  Evidence for Low-Income Households,' *Cityscape: A Journal of Policy Development and
  Research*, 10(2): 225–256.

Caner, Asena, and Edward N. Wolff (2004). 'Asset Poverty in the United States, 1984–99: Evidence

  from the Panel Study of Income Dynamics,' *Review of Income and Wealth*, 50(4): 493–518.

Carasso, Adam, and Signe-Mary McKernan (2008). 'Asset Holdings and Liabilities,' in S. McKernan

  and M. Sherraden, *Asset Building and Low-Income Families*. Washington, DC: Urban Institute

  Press, pp. 33–66.

Coile, Courtney, and Kevin Milligan (2009). 'How Household Portfolios Evolve after Retirement: The

  Effect of Aging and Health Shocks,' *Review of Income and Wealth*, 55(2): 226–248.

Corden, A., P. Sloper, and R. Sainsbury (2002). 'Financial Effects for Families after the Death of a

  Disabled or Chronically Ill Child: A Neglected Dimension of Bereavement,' *Child: Care, Health
  and Development*, 28(3): 199–204.

Cullen, Julie B., and Jonathan Gruber (2000). 'Does Unemployment Insurance Crowd out Spousal Labor

  Supply?,' *Journal of Labor Economics*, 18(3): 546–572.

Di, Zhu X., Eric Belsky, and Xiaodong Liu (2007). 'Do Homeowners Achieve More Household Wealth

  in the Long Run?,' *Journal of Housing Economics*, 16(3–4): 274–290.

Dietz, Robert D., and Donald R. Haurin (2003). 'The Social and Private Micro-Level Consequences of

  Homeownership,' *Journal of Urban Economics*, 54(3): 401–450.

Duflo, Esther, and Emmanuel Saez (2004). 'Implications of Pension Plan Features, Information, and

  Social Interactions for Retirement Saving Decisions,' in O. Mitchell and S. Utkus, *Pension

  Design and Structure: New Lessons from Behavioral Finance*. Oxford, England: Oxford

  University Press, pp. 137–153.

Engelhardt, Gary V. (1996). 'Consumption, Down Payments, and Liquidity Constraints,' *Journal of Money, Credit & Banking*, 28(2): 255–271.

Engelhardt, Gary V., and Christopher J. Mayer (1995). 'Intergenerational Transfers, Borrowing Constraints, and Saving Behavior: Evidence from the Housing Market.' FRBB Working Paper No. 95-11. Boston, MA: Federal Reserve Bank of Boston.

Engen, Eric M., and Jonathan Gruber (2001). 'Unemployment Insurance and Precautionary Saving,' *Journal of Monetary Economics*, 47(3): 545–579.

Finke, Michael S., and Nancy L. Pierce (2006). 'Precautionary Savings Behavior of Maritally Stressed Couples,' *Family and Consumer Sciences Research Journal*, 34(3): 223–240.

Gosselin, Peter, and Seth Zimmerman (2007). 'Trends in Income Volatility and Risk, 1970–2004.' Prepared for presentation at APPAM, November 23, 2007.

Gruber, Jonathan (2001). 'The Wealth of the Unemployed,' *Industrial and Labor Relations Review*, 55(1): 79–94.

Herbert, C. E., and E. S. Belsky (2008). 'The Homeownership Experience of Low-Income and Minority Households: A Review and Synthesis of the Literature,' *Cityscape*, 10(2): 5–60.

Holden, Karen C., and Pamela J. Smock (1991). 'The Economic Costs of Marital Dissolution: Why Do Women Bear a Disproportionate Cost?,' *Annual Review of Sociology*, 17(1): 51–78.

Hoynes, Hilary W., and Daniel McFadden (1994). 'The Impact of Demographics on Housing and Non-Housing Wealth in the United States.' NBER Working Paper No. 4666. Cambridge, MA: National Bureau of Economic Research.

Hung, Angela A., Andrew M. Parker, and Joanne K. Yoong (2009). 'Defining and Measuring Financial Literacy.' RAND Labor and Population Working Paper WR-708. Santa Monica, CA: RAND Corporation.

Johnson, Richard W., Gordon B. T. Mermin, and Dan Murphy (2007). 'The Impact of Late-Career Health and Employment Shocks on Social Security and Pension Wealth.' Retirement Project Discussion Paper 07-07. Washington, DC: The Urban Institute.

Johnson, Richard W., Gordon B. T. Mermin, and Cori E. Uccello (2006). 'Health Problems and Job Layoffs Crack Retirement Nest Eggs.' Older Americans' Economic Security Brief No. 8. Washington, DC: The Urban Institute.

Kalwij, Adriaan S. (2003). 'Household Consumption and Savings around the Time of Births and the Role of Education.' AIAS Working Paper 2003-23. Amsterdam, the Netherlands: Amsterdam Institute for Advanced Labour Studies.

Kim, Hyungsoo, and Jinkook Lee (2005). 'Unequal Effects of Elders' Health Problems on Wealth Depletion across Race and Ethnicity,' *Journal of Consumer Affairs*, 39(1): 148–172.

Kim, Hyungsoo, and Angela C. Lyons (2008). 'No Pain, No Strain: Impact of Health on the Financial Security of Older Americans,' *Journal of Consumer Affairs*, 42(1): 9–36.

Kosovich, Stephen M. (2009). 'Effect of Job Loss on Wealth Accumulation of Younger Workers,' *The Empircal Economics Letters*, 8(11): 1089–1095.

Lawrance, Emily C. (1991). 'Poverty and the Rate of Time Preference: Evidence from Panel Data,' *Journal of Political Economy*, 99(1): 54–77.

Lee, Jinkook, and Hyungsoo Kim (2008). 'A Longitudinal Analysis of the Impact of Health Shocks on the Wealth of Elders,' *Journal of Population Economics*, 21(1): 217–230.

Lerman, Robert I. (2005). 'Are Low-Income Households Accumulating Assets and Avoiding Unhealthy Debt?' Opportunities and Ownership Project Policy Brief No. 1. Washington, DC: The Urban Institute.

Lin, Emily Y. (2006). 'Job Loss and Retirement Fund Distributions among Older Workers.' Prepared for presentation at the Society of Labor Economists 11th Annual Meeting, May 5–6, Cambridge, MA.

Lusardi, Annamaria (2000). 'Precautionary Saving and the Accumulation of Wealth.' JCPR Working Paper No. 204. Chicago, IL: Joint Center for Poverty Research.

Lusardi, Annamaria, and Olivia S. Mitchell (2005). 'Financial Literacy and Planning: Implications for Retirement Wellbeing.' MRRCR Research Paper No. 2005-108. Ann Arbor, MI: Universiy of Michigan Retirement Research Center.

Lusardi, Annamaria, Olivia S. Mitchell, and Vilsa Curto (2010). 'Financial Literacy Among the Young,' *Journal of Consumer Affairs*, 44(2): 358–380.

Mayer, Christopher J., and Gary V. Engelhardt (1996). 'Gifts, Down Payments, and Housing Affordability,' *Journal of Housing Research*, 7:59–78.

McArdle, John J., James P. Smith, and Robert J. Willis (2009). 'Cognition and Economic Outcomes in the Health and Retirement Survey.' Prepared for presentation at the NBER Conference on Economics and Aging, November, Carefree, AZ.

McGarry, Kathleen, and Jonathan Skinner (2009). 'The Long-Term Financial and Health Outcomes of Disability Insurance Applicants.' Prepared for presentation at the 11th Annual Retirement Research Conference, August 10–11, Washington, DC.

McKernan, Signe-Mary, Caroline Ratcliffe, and Katie Vinopal (2009). 'Do Assets Help Families Cope with Adverse Events?' Low-Income Working Families Project Brief No. 10. Washington, DC: The Urban Institute.

McKernan, Signe-Mary, C. Eugene Steuerle, and Serena Lei (2010). 'Opportunity and Ownership over

    the Life Cycle.' Opportunity and Ownership Project Brief No. 11. Washington, DC: The Urban

    Institute.

Rigg, John, and Tom Sefton (2006). 'Income Dynamics and the Life Cycle,' *Journal of Social Policy*,

    35(3): 411-435.

Seligman, J. (2010). 'Financial Literacy: Evidence from the Cusp of Retirement.' *Mimeo.* Ohio State

    University.

Smith, James P., and Michael P. Ward (1980). 'Asset Accumulation and Family Size,' *Demography*,

    17(3): 243–260.

Stephens Jr., Melvin (2001). 'The Long-Run Consumption Effects of Earnings Shocks,' *Review of*

    Economics and Statistics, 83(1): 28–36.

Sullivan, James X. (2008). 'Borrowing During Unemployment: Unsecured Debt as a Safety Net,'

    Journal of Human Resources, 43(2): 383–412.

Sung, Jaimie, and Sherman Hanna (1996). 'Factors Related to Risk Tolerance,' *Financial Counseling*

    and Planning, 7(1): 11–20.

Teachman, Jay D., and Kathleen M. Paasch (1994). 'Financial Impact of Divorce on Children and Their

    Families,' *The Future of Children*, 4(1): 63–83.

Wallace, Geoffrey L., Robert Haveman, Karen C. Holden, and Barbara Wolfe (2010). 'Trigger Events

    and Financial Outcomes among Older Households.' CFS Working Paper. Madison, WI:

    University of Wisconsin Center for Financial Security.

Wang, Hui, and Sherman D. Hanna (1997). 'Does Risk Tolerance Decrease with Age?,' *Financial*

    Counseling and Planning, 8(2): 27–32.

Ward-Batts, Jennifer (2001). 'Health, Wealth and Gender: Do Health Shocks of Husbands and Wives Have Different Impacts on Household Wealth?' MRRC Working Paper No. 2001-016. Ann Arbor, MI: University of Michigan Retirement Research Center.

Wolff, Edward N. (2010). 'Recent Trends in Household Wealth in the United States: Rising Debt and the Middle-Class Squeeze--an Update to 2007.' Levy Economics Institute Working Paper No. 589. Annandale-on-Hudson, NY: Levy Economics Institute of Bard College.

Wu, Stephen (2003). 'The Effects of Health Events on the Economic Status of Married Couples,' *Journal of Human Resources*, 38(1): 219–230.

Yoshikawa, Hiroshi, and Fumio Ohtake (1989). 'An Analysis of Female Labor Supply, Housing Demand and the Saving Rate in Japan,' *European Economic Review*, 33(5): 997–1023.

Zagorsky, Jay L. (2005). 'Marriage and Divorce's Impact on Wealth,' *Journal of Sociology*, 41(4): 406–424.

Zagorsky, Jay L. (2007). 'Do You Have to Be Smart to Be Rich? The Impact of I.Q. On Wealth, Income and Financial Distress,' *Intelligence*, 35(5): 489–501.

Zissimopoulos, Julie M. (2009). 'Gain and Loss: Marriage and Wealth Changes over Time.' MRRC Working Paper No. 2009-213. Ann Arbor, MI: University of Michigan Retirement Research Center.

Table 1
Net Worth, Assets, and Debt by Age of Family Head and Net Worth Percentile

Age group	Net worth percentile	Net worth	Assets	Debt	No. of obs. per age group
18–24	10%	1022	2700	500	21637
	50%	50000	50000	3600	
	90%	200000	200000	20000	
25–34	10%	900	3000	500	33522
	50%	48000	49600	4000	
	90%	170000	173997	25000	
35–44	10%	5300	7500	600	33950
	50%	74500	75000	4800	
	90%	250000	252985	21000	
45–54	10%	10000	11000	700	21764
	50%	85000	85000	5000	
	90%	344750	350000	25000	
55–61	10%	13500	15000	400	10698
	50%	79700	80000	3500	
	90%	325500	330000	24000	
62 & older	10%	3904	5650	496	34773
	50%	70300	73000	5000	
	90%	373920	380000	33000	

Note: Assets are defined as the sum of the value of the primary home, other homes or property, vehicles, bonds, stocks, cash, and pensions. Debt is an aggregated number taken directly from the survey. Net worth is defined as assets minus debt. Data source is the PSID data set covering 1984 to 2007.

Table 2
Summary Statistics of Family Heads by Age Group and Net Worth

Age group Net worth percentile	Sex	Education	Married	Employed	Unemployed	Out of labor force	No. of children
18–24							
above 90%	0.72	13.07	0.72	0.25	0.02	0.24	0.68
below 10%	0.58	12.38	0.33	0.22	0.05	0.09	0.95
25–34							
above 90%	0.74	14.37	0.69	0.29	0.01	0.03	1.09
below 10%	0.61	12.98	0.37	0.21	0.03	0.03	1.16
35–44							
above 90%	0.76	14.93	0.71	0.26	0.01	0.01	1.63
below 10%	0.57	12.29	0.34	0.19	0.03	0.03	1.42
45–54							
above 90%	0.81	15.01	0.72	0.12	0.01	0.01	0.81
below 10%	0.56	11.72	0.25	0.20	0.02	0.06	0.79
55–61							
above 90%	0.82	14.85	0.77	0.13	0.01	0.05	0.17
below 10%	0.52	10.33	0.25	0.23	0.03	0.22	0.46
62 & older							
above 90%	0.76	14.31	0.74	0.02	0	0.06	0.46
below 10%	0.53	9.05	0.32	0.02	0	0.13	0.77

Note: Sex: 1 if male, 0 if female. Education: highest grade or year of school completed. Married: 1 if married, 0 otherwise (i.e. single, divorced, separated, or widowed). Employed: 1 if employed, 0 otherwise. Unemployed: 1 if temporarily laid off or looking for a job, 0 otherwise. Out of labor force: students, retired individuals, permanently disabled individuals, or house wives. Because of missing observations, the sum of employed, unemployed, and out of labor force observations is less than one. Data source is the PSID data set covering 1984 to 2007.

Table 3
Mean and Median Net Worth by Age Group and Education, Marriage Event

Age Group	Overall	No college education	College education
18–24			
Event frequency	9.0%	12.9%	6.8%
Mean net worth (% difference)	95473 (5.9%)	62071 (-3.3%)	122861 (14.1%)
Median net worth (% difference)	43050 (-13.9%)	25800 (-32.1%)	59700 (-3.6%)
25–34			
Event frequency	9.3%	12.2%	7.5%
Mean net worth (% difference)	69849 (-5.0%)	48048 (-8.3%)	88601 (-1.5%)
Median net worth (% difference)	40500 (-17.5%)	26400 (-25.2%)	57860 (-4.8%)
35–44			
Event frequency	7.7%	10.4%	6.0%
Mean net worth (% difference)	131649 (15.4%)	86047 (11.4%)	174662 (21.6%)
Median net worth (% difference)	76200 (3.0%)	55400 (2.6%)	102100 (11.7%)
45–54			
Event frequency	7.8%	10.1%	6.3%
Mean net worth (% difference)	186440 (22.0%)	107606 (13.5%)	267022 (28.0%)
Median net worth (% difference)	100000 (22.0%)	70000 (20.4%)	160000 (33.3%)
55–61			
Event frequency	7.1%	8.9%	5.3%
Mean net worth (% difference)	188420 (23.6%)	106636 (14.1%)	318391 (31.6%)
Median net worth (% difference)	88600 (15.8%)	68800 (14.7%)	153750 (23.2%)
62 & older			
Event frequency	2.2%	5.8%	1.5%
Mean net worth (% difference)	179954 (10.7%)	131482 (47.4%)	211620 (-6.4%)
Median net worth (% difference)	80000 (14.3%)	77000 (40.0%)	83000 (-14.4%)

Note: The percentage change is computed as follows: (Yes-No)/No*100%. Data source is the PSID data set covering 1984 to 2007.

Table 4
Mean and Median Net Worth by Age Group and Education, Divorce or Widowhood Event

Age Group	Overall	No college education	College education
18–24			
Event frequency	2.8%	3.6%	2.2%
Mean net worth (% difference)	62646 (-32.0%)	49619 (-23.1%)	72940 (-34.5%)
Median net worth (% difference)	31600 (-36.8%)	23680 (-34.2%)	38000 (-39.7%)
25–34			
Event frequency	2.7%	3.5%	2.3%
Mean net worth (% difference)	47645 (-35.6%)	34984 (-33.1%)	57149 (-37.2%)
Median net worth (% difference)	19000 (-61.2%)	11900 (-66.0%)	23050 (-62.8%)
35–44			
Event frequency	3.1%	3.9%	2.7%
Mean net worth (% difference)	73898 (-37.4%)	51036 (-35.8%)	91900 (-38.5%)
Median net worth (% difference)	35000 (-53.3%)	26350 (-52.1%)	45525 (-52.1%)
45–54			
Event frequency	3.0%	5.1%	3.2%
Mean net worth (% difference)	97911 (-38.7%)	77078 (-20.8%)	118198 (-46.3%)
Median net worth (% difference)	54700 (-35.6%)	41000 (-31.7%)	70000 (-44.0%)
55–61			
Event frequency	5.1%	5.3%	2.9%
Mean net worth (% difference)	86094 (-46.1%)	55953 (-42.3%)	132676 (-48.1%)
Median net worth (% difference)	47250 (-40.9%)	38370 (-36.1%)	70000 (-46.2%)
62 & older			
Event frequency	3.0%	8.1%	1%
Mean net worth (% difference)	126794 (-24.0%)	83204 (-10.6%)	178561 (-21.6%)
Median net worth (% difference)	55000 (-24.7%)	45000 (-23.7%)	75000 (-22.9%)

Note: The percentage change is computed as follows: (Yes-No)/No*100%. Data source is the PSID data set covering 1984 to 2007.

Table 5

Mean and Median Net Worth by Age Group and Education, Job Loss of Family Head Event

Age Group	Overall	No college education	College education
18–24			
Event frequency	3.8%	6.6%	2.5%
Mean net worth (% difference)	45494 (-50.9%)	36164 (-44.5%)	55403 (-50.3%)
Median net worth (% difference)	28000 (-44.0%)	17500 (-52.8%)	35000 (-44.4%)
25–34			
Event frequency	4.0%	6.9%	2.3%
Mean net worth (% difference)	36036 (-51.5%)	31918 (-39.3%)	42574 (-53.1%)
Median net worth (% difference)	19000 (-61.6%)	15000 (-57.1%)	25000 (-59.7%)
35–44			
Event frequency	2.9%	4.6%	2.0%
Mean net worth (% difference)	58261 (-50.6%)	53369 (-32.7%)	64561 (-56.7%)
Median net worth (% difference)	40000 (-46.7%)	35700 (-35.1%)	45000 (-52.6%)
45–54			
Event frequency	2.3%	3.5%	1.4%
Mean net worth (% difference)	72984 (-54.1%)	59507 (-39.1%)	102111 (-52.9%)
Median net worth (% difference)	50500 (-40.6%)	45000 (-25.0%)	75000 (-40.0%)
55–61			
Event frequency	2.1%	3.1%	1.1%
Mean net worth (% difference)	71544 (-54.9%)	61065 (-36.4%)	99968 (-60.4%)
Median net worth (% difference)	50000 (-37.5%)	45000 (-25.0%)	75000 (-40.2%)
62 & older			
Event frequency	0.3%	0.7%	0.2%
Mean net worth (% difference)	64122 (-61.1%)	66775 (-27.8%)	62424 (-72.4%)
Median net worth (% difference)	42000 (-41.3%)	50000 (-12.3%)	35000 (-63.6%)

Note: The percentage change is computed as follows: (Yes-No)/No*100%. Data source is the PSID data set covering 1984 to 2007.

Table 6
Mean and Median Net Worth by Age Group and Education, Home Purchase Event

Age Group	Overall	No college education	College education
18–24			
Event frequency	6.4%	8.2%	5.4%
Mean net worth (% difference)	86118 (-6.2%)	66893 (5.7%)	101610 (-8.6%)
Median net worth (% difference)	56000 (12.0%)	45300 (33.2%)	65000 (8.3%)
25–34			
Event frequency	7.8%	9.3%	6.9%
Mean net worth (% difference)	91331 (32.5%)	66872 (38.6%)	111165 (30.6%)
Median net worth (% difference)	67100 (59.8%)	50000 (66.7%)	82000 (49.1%)
35–44			
Event frequency	13.1%	9.7%	18.7%
Mean net worth (% difference)	114021 (-2.2%)	84070 (8.5%)	141060 (-4.6%)
Median net worth (% difference)	75000 (1.4%)	60000 (15.4%)	95000 (2.2%)
45–54			
Event frequency	6.7%	4.9%	9.2%
Mean net worth (% difference)	125100 (-22.1%)	84720 (-13.5%)	177666 (-18.8%)
Median net worth (% difference)	76700 (-9.8%)	62000 (3.9%)	108250 (-13.4%)
55–61			
Event frequency	6.8%	4.6%	9.1%
Mean net worth (% difference)	122520 (-23.6%)	79528 (-18.0%)	204867 (-19.4%)
Median net worth (% difference)	73350 (-8.3%)	60000 (0.0%)	111850 (-10.5%)
62 & older			
Event frequency	2.2%	1.3%	7.1%
Mean net worth (% difference)	134495 (-19.5%)	89929 (-2.8%)	175428 (-23.6%)
Median net worth (% difference)	74700 (6.7%)	51900 (-10.5%)	100000 (5.3%)

Note: The percentage change is computed as follows: (Yes-No)/No*100%. Data source is the PSID data set covering 1984 to 2007.

Table 7
Mean and Median Net Worth by Age Group and Education, Disability Event

Age Group	Overall	No college education	College education
18–24			
Event frequency	3.6%	5.3%	2.7%
Mean net worth (% difference)	74942 (-18.3%)	55215 (-14.1%)	90583 (-18.2%)
Median net worth (% difference)	45000 (-10.0%)	35000 (-2.6%)	50000 (-19.3%)
25–34			
Event frequency	3.2%	4.5%	2.4%
Mean net worth (% difference)	60050 (-18.3%)	46714 (-10.0%)	72195 (-20.1%)
Median net worth (% difference)	37700 (-21.9%)	28650 (-18.1%)	45000 (-26.8%)
35–44			
Event frequency	3.7%	5.2%	2.8%
Mean net worth (% difference)	90820 (-22.6%)	70233 (-10.8%)	109961 (-26.0%)
Median net worth (% difference)	60000 (-20.0%)	43000 (-21.8%)	75000 (-21.1%)
45–54			
Event frequency	4.7%	6.4%	3.5%
Mean net worth (% difference)	136544 (-13.5%)	91965 (-4.8%)	186173 (-14.0%)
Median net worth (% difference)	74000 (-12.9%)	57600 (-4.0%)	100000 (-20.0%)
55–61			
Event frequency	5.3%	7.1%	3.6%
Mean net worth (% difference)	131293 (-16.8%)	86799 (-9.0%)	204820 (-18.9%)
Median net worth (% difference)	69857 (-12.7%)	55000 (-8.3%)	105800 (-15.4%)
62 & older			
Event frequency	2.7%	11.7%	1.3%
Mean net worth (% difference)	150361 (-9.0%)	87203 (-6.1%)	225409 (0.3%)
Median net worth (% difference)	68000 (-5.0%)	60000 (6.9%)	90000 (-5.6%)

Note: The percentage change is computed as follows: (Yes-No)/No*100%. Data source is the PSID data set covering 1984 to 2007.

Table 8
Mean Change in Net Worth by AFQT Score and Education, Detrended by Age and Regression

	No college Low AFQT	No college High AFQT	College Low AFQT	College High AFQT
Married				
Event frequency	4.5%	4.4%	4.7%	4.4%
Detrended by age	28197.4	-4668.9	33478.2	43162.0
Detrended by regression	-13210.8	-40845.7	-9004.7	21.2
Divorce				
Event frequency	2.1%	2.2%	2.2%	1.9%
Detrended by age	-29400.8	-24021.3	-48053.1	6054.5
Detrended by regression	-3391.5	-3111.7	-22316.1	28896.3
Unemployment				
Event frequency	30.3%	32.8%	26.3%	27.5%
Detrended by age	-25659.1	-22935.9	5416.4	7605.4
Detrended by regression	-23349.6	-20756.4	5370.3	6637.4
Health limitation				
Event frequency	3.2%	4.5%	2.7%	2.7%
Detrended by age	4879.4	-22207.5	45305.8	10699.8
Detrended by regression	6455.4	-20276.3	45539.4	9313.8
Child birth				
Event frequency	5.0%	5.2%	5.5%	5.6%
Detrended by age	-6283.4	-10539.9	39359.6	47062.7
Detrended by regression	-6812.6	-11460.4	37694.4	45059.1
Child death				
Event frequency	0.1%	0.1%	0.1%	0.1%
Detrended by age	131655.4	1014.3	-7586.5	52339.4
Detrended by regression	167816.8	1103.8	1313.3	62586.3

Note: Change in mean family net worth between the wave before a trigger event and the wave after, grouped by whether or not the family head has a college degree and AFQT score ('high' denotes a score in the upper half of the score distribution). Wealth values have been demeaned by age and regression. Data source is the NLSY79 covering the period 1979 to 2004.

The Financial Literacy Research Consortium

The Financial Literacy Research Consortium (FLRC) consists of three multidisciplinary research centers nationally supported by the Social Security Administration. The goal of this research is to develop innovative programs to help Americans plan for a secure retirement. The Center for Financial Security is one of three FLRC centers and focused on saving and credit management strategies at all stages of the life cycle, especially helping low and moderate income populations successfully plan and save for retirement and other life events, including the use of Social Security's programs.

The Center for Financial Security

The Center for Financial Security at the University of Wisconsin-Madison conducts applied research, develops programs and evaluates strategies that help policymakers and practitioners to engage vulnerable populations in efforts which build financial capacity. The CFS engages researchers and graduate students through inter-disciplinary partnerships with the goal of identifying the role of products, policies, advice and information on overcoming personal financial challenges.

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