STANFORD
CENTER ON
LONGEVITY

THE **SIGHTLINES** PROJECT

SEEING OUR WAY TO FINANCIAL SECURITY IN THE AGE OF INCREASED LONGEVITY

OCTOBER 2018

THE **SIGHTLINES** PROJECT

Sightlines Special Report: Seeing Our Way to Financial Security in the Age of Increased Longevity

Contents

Preface

I n the past century, the developed world has experienced a rapid, transformative shift in aging resulting in a modern-day miracle where people can realistically expect to enjoy 100 year lives. How we are doing as a society after being gifted with an additional 30 plus years of life? Are we taking full advantage of this gift? Or are we missing the mark, reaching old age ill-prepared and in worse shape than preceding generations? In 2016, we launched the Sightlines Project beginning with a first look at just this question by zooming out to paint a bird's eye portrait of how well Americans are living in this newfound era of longevity. To do so, we focused on three domains of well-being known to be the building blocks of not just living longer, but living better: financial security, social engagement, and healthy living.

The inaugural Sightlines Project report illustrated many trends, most of which indicate that we, as a society, are moving in the wrong direction. Americans are more sedentary today than in generations past and fewer report being socially connected within their communities compared to 20 years ago. The most prominent downward trends, however, emerged in the domain of financial security. This is not surprising given that we are witnessing unprecedented shifts in life expectancy, and at the same time, experiencing a period of unprecedented economic uncertainty. In concert, these shifts put generations of Americans at enormous risk for lifetimes of financial insecurity. Overall, these downward trends are especially steep for younger generations, the less educated, ethnic minorities, and women. Instead of making progress toward equality, improvements in longevity coupled with major economic upheaval has only widened existing inequalities as we look to the future.

In this report, we work to better understand what we observed in our bird's eye view of American financial security by focusing in on what might predict financial security at different life stages. While there were many possibilities for investigation, we selectively identified the most compelling Sightlines findings on financial security that closely aligned with topics we see in the headlines. In the end, we zoomed in on four areas: generational shifts in U.S. home ownership, prognosis of Americans' retirement contributions, Baby Boomer savings and debt, and women's financial decision making. Based on the Sightlines framework, we analyze data across the adult life span using the latest nationally representative surveys from multiple sources including *Survey of Consumer Finance*, *National Longitudinal Survey of Youth*, *Rand American Life Panel,* and the *Health and Retirement Study*.

In addition to these focal areas, we preview a sampling of cross-disciplinary and cross-sector research conducted by the Stanford Center on Longevity that aligns with Sightlines Project goals, including food hardship in King County, Fraud vulnerability, California teacher retirement preferences, and Latino financial literacy. The Sightlines Project website also continues to be a rich source of information, now updated with findings from this report and updated analyses of many financial security metrics using the most current data from 2016. All findings are segmented by age group and prevalent sociodemographic factors including education, income, marital status, and ethnicity. Throughout 2018, we will also use the website to foster interactive dialogue in response to our findings by inviting commentaries and interviews among experts in the field. In line with the Stanford Center on Longevity mission, dialogues will represent both academic and industry perspectives.

This is intended to stimulate conversation and shape the decisions and practices of scholars, industry leaders, policymakers, journalists, and individuals with the common goal of living longer and living better.

HOMEOWNERSHIP

Executive Summary

Owning a home is not only a cultural touchstone, it is closely linked to how Americans plan for their financial futures. Surveys show that across generations Americans of every generation continue to feel strongly about the desirability of homeownership, regardless of whether they have achieved it. Nevertheless, by 2016, the rate of homeownership fell to a 50-year low, partly due to financial shocks starting in the mid-2000s.

A recent study by the Stanford Center on Longevity investigates generational differences in homeownership trends. Because members of earlier-born generations are more likely to own homes, we assessed the likelihood of homeownership by age 30 across multiple generations. Our analysis utilized both the *Stanford Center on Longevity Milestones Survey* data and the information from the *National Longitudinal Survey of Youth* (NLSY).

Key Findings

- Compared to those born around 1960, people born in the early 1980s are less likely to own a home by age 30, and those who do, face a higher mortgage debt burden than the previous generation.
- Across generations, the percentage of whites purchasing a home by age 30 is significantly greater than that of Hispanics and nearly double that of blacks. Differences were similar among those born near 1960 and those born after 1980, demonstrating robust ethnic disparities over historical time.
- Not surprisingly, education affects the likelihood of owning a home by age 30, but how much so varies by generation. Among those with no high school education, people born in the 1980s are less than half as likely to own a home versus those born near 1960; among high school-educated people, homeownership fell by about one-third between generations.
- Across generations, the average age of marriage precedes the average age of home buying. As Americans are now getting married later, so, too, are they buying homes later.
- The amount of debt per student has reached record levels. As a result, for those born in the early 1980s, their average net worth was less than $10,000 when turning age 30, severely restricting their ability to afford a down payment on a home.

- The impact of achieving major life and financial milestones by age 30 on buying a home by age 30 has shifted across five generations.

  - Factors like ethnicity, marriage, education, and income all continue to play prominent roles in whether or not people buy homes by age 30.
  - Marriage was the strongest predictor of owning a home by age 30 for older generations born before 1960. For younger generations, however, marriage alone was less predictive of homeownership than the combination of marriage and parenthood.
  - Among younger generations born after 1970, two additional key predictors of homeownership by age 30 were starting to save for retirement and not having student loans. Among older generations, however, reaching financial milestones by age 30 did not consistently relate to homeownership.

Cultural shifts in lifestyles and financial decisions are reshaping how young people enter into homeownership. Marriage was once sufficient to become a home owner. Young generations today, however, report getting married, having children, starting to save for retirement, and successfully managing student debt, all before buying a home. As such, buying a home is being delayed until multiple milestones are achieved. Moreover, most of these milestones are being put off, further compounding the delay in homeownership. This exponential delay is stretching out life trajectories of young families and ultimately slowing their rate of growing lifetime wealth through building home equity.

Rather than pointing toward a homeownership crisis, however, these findings illustrate promising opportunities for financial advisors, employers, and policymakers to intervene with precision among young, prospective home buyers. In the following report, we identify not only which groups are most in need of support, but which decisions should be addressed and when. For example, despite regulatory reform in lending, have experienced the largest growth in mortgage debt. Through refined policies and practices, organizations and institutions can identify prospective borrowers who open a retirement savings account, pay off student loans, plan to get married, or start a family. They can also target borrowers that lack education to ensure the amount of their home loans is manageable and designed to maximize equity as early as possible.

GENERATIONAL SHIFTS IN LIFE COURSE TRAJECTORIES: IMPLICATIONS FOR HOMEOWNERSHIP BY AGE 30

Jialu Streeter, Tamara Sims, Martha Deevy

Overview

Owning a home is an essential part of the American Dream, and over time, it has become an increasingly important asset to fund retirement. After World War II, when federal policies created a more favorable environment for obtaining a mortgage, homeownership became possible for more households. Notably, the rate of homeownership increased slowly but steadily between 1965 and 1980. During the recessionary period that followed, however, rates began falling. By 1986, the number of people who owned homes had decreased to 63.5 percent, a percentage similar to the figure from two decades prior.

Then, beginning in 1994, homeownership rates rose rapidly, marking the start of an extended and volatile boom-bust cycle for the housing market, finally peaking at an all-time high of 69 percent by the end of 2005 during the height of subprime lending. As subprime lending practices came into question and financial markets began to falter, however, the homeownership rate declined in a series of shocks until it reached a 50-year low of 62.9 percent in 2016.

1. **At age 30, 48.3% of Baby Boomers (born 1957-64) owned homes versus 35.8% of Early Millennials (born 1980-84)**

Older cohort at age 30   Younger cohort at age 30
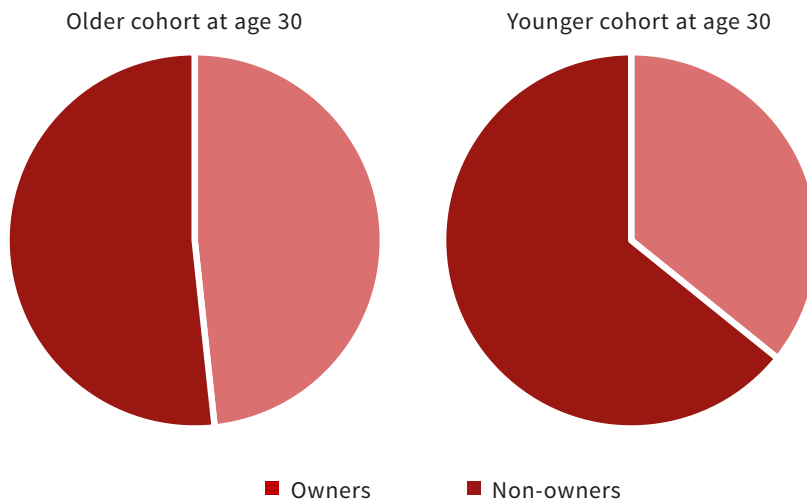
■ Owners   ■ Non-owners

Figure 1.1: Homeownership rate at age 30. NLSY data.

Although these generational declines in homeownership are significant and undeniable, what remains unclear is whether these shifts are part of a predictable cycling of economic events that will eventually right themselves or whether these declines reflect more permanent shifts in American life trajectories. In this report, we examine whether age trajectories of homeownership are changing in line with shifts observed in other significant decisions with financial implications (e.g., acquiring student debt, getting married, etc.). We also examine whether rates are likely to bounce back in line with real estate trends of the past. Two data sources were used: the *National Longitudinal Survey of Youth* (NLSY) and the *Stanford Center on Longevity Milestones Survey* from 2017.

Compared to those born around 1960, people born in the early 1980s were less likely to own a home by age 30, and when they did, they faced a higher debt burden from home mortgages.

The goals of this study are threefold:

1. To **evaluate** the extent to which home purchase by age 30 differed across two distinct age cohorts: individuals born in the 1960s and those born in the early 1980s. More importantly, we examine how these trends vary as a function of socioeconomic-demographic characteristics, including ethnicity, education, and income level.

2. To **explore** how emerging age group differences in the timing of life events, such as getting married and taking on student loans, may correspond with generational shifts in homeownership rates.

3. To **examine** the relationships among significant life milestones with financial implications that could affect the likelihood of owning a home by age 30. These milestones include marriage, starting a family, retirement planning, and taking on and repaying student loans.

Key Findings

- The cohort born in the early 1980s are less likely to own a home by age 30 than the cohort born around 1960, regardless of ethnicity, educational attainment, and income level. Moreover, some groups—such as those without a college education—exhibit larger generational gaps than others.
- Between the older and younger cohorts at age 30, we observe rising loan-to-income ratios, corresponding with declining homeownership rates.
- Across generations, most individuals get married prior to buying a home. The median age of marriage has risen significantly among young cohorts, which may have delayed the age at which this group buys a home.
- Getting married, having children, saving for retirement, and paying off student loans are strong predictors of whether individuals will own a home by age 30. In addition, the combination of marriage and starting a family appear to precipitate homeownership among younger generations. As younger people postpone these events, the prospect of home buying is set to be even further delayed.

A Closer Look
Generational Shifts in Homeownership

The homeownership rate has fallen significantly for the entire American population, but it's declining most steeply among the young and, likely, first-time home buyers. Our goal was to better understand just how steep this decline was through a comparative analysis of two distinct age cohorts. We compared the older and younger cohorts at similar ages in order to exclude the possibility that age cohort differences could be attributed to older generations having more time to acquire a home.

To do so, we employed the NLSY data, which compares two cohorts—an older cohort born between 1957 and 1964, and a younger cohort born between 1980 and 1984. We calculated the percentage of individuals who reported owning their own home at age 30. For homeowners only, we also calculated the mortgage-to-income ratio, defined as the total outstanding amount of the home loan divided by annual income. We used this calculation to gauge the debt burden attributed to home mortgages.

Compared to the older cohort, we observe a lower homeownership rate at age 30 among the younger cohort (see Figure 1.1, Figures 1.2-1.4, top panels). In direct complement to declining homeownership trends, we also observed a rising mortgage-to-income ratio (Figures 1.2-1.4, bottom panels) among homeowners. Notably, generation gaps in homeownership persist across ethnicity, educational attainment, and income level, but some gaps are more pronounced among some subgroups of the U.S. population:

Ethnicity: All American ethnic groups experienced drops in homeownership. Historically, older generations of non-Hispanic whites have had the highest homeownership rate, yet this group has since experienced the largest drop (-13 percentage points). Younger black, Hispanic, and Asians also had a lower homeownership rate than their older counterparts, though to a lesser degree. Across age groups, Asian Americans suffered the least decline of any American ethnic group.

Education: Those without any college education experienced the largest drop in homeownership – 18 percentage points. In comparison, the college-educated group had a 9 percentage-point decrease, and those with graduate degrees had only a 5 percentage-point decrease.

Income: Because those with higher income levels in older generations were much more likely to own homes, that income group showed the largest cross-generational drop (third and fourth quartiles: -13 percentage points) compared to those with income below the median. Despite having higher absolute rates of homeownership, the younger cohorts with the highest income have lost the most ground compared to the previous generation.

Millennials are less likely to own homes. When they do, they have higher mortgage-income ratio across ethnicity, education, and income levels (Figures 1.2-1.4)
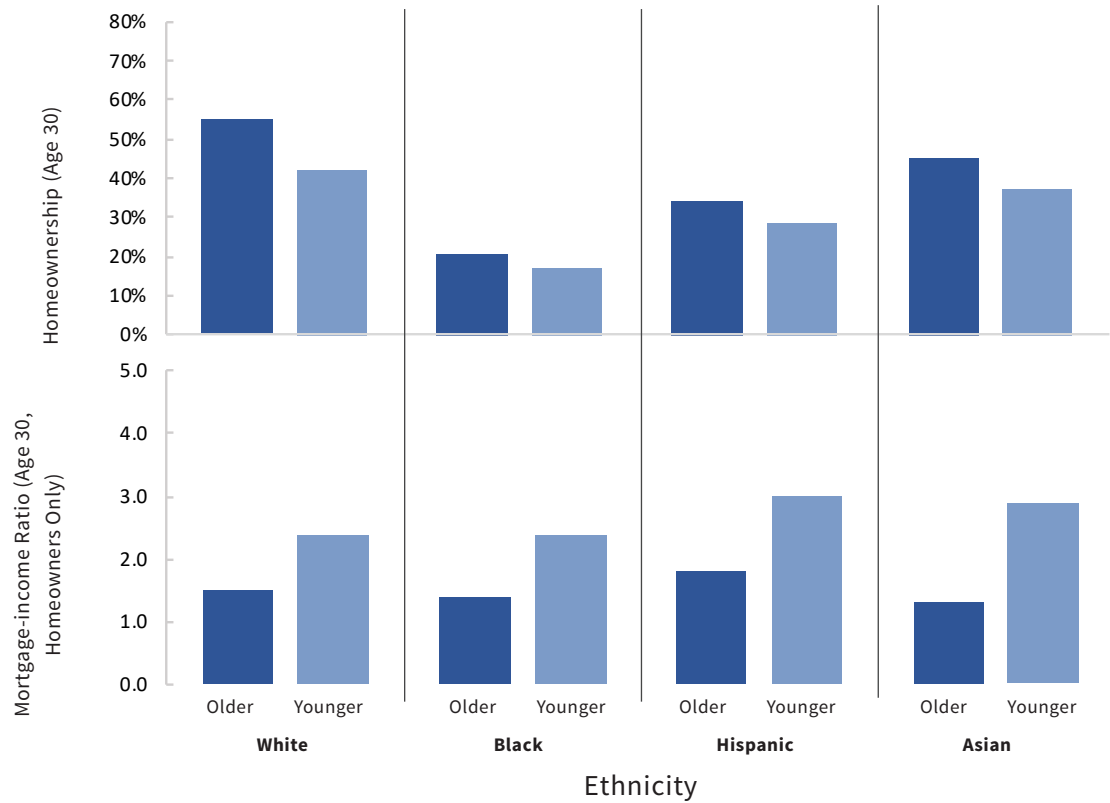

Figure 1.2: Homeownership and debt burden at age 30 by education. Note: The older cohort was born between 1957-64, and the younger cohort was born between 1980-84. NLSY data
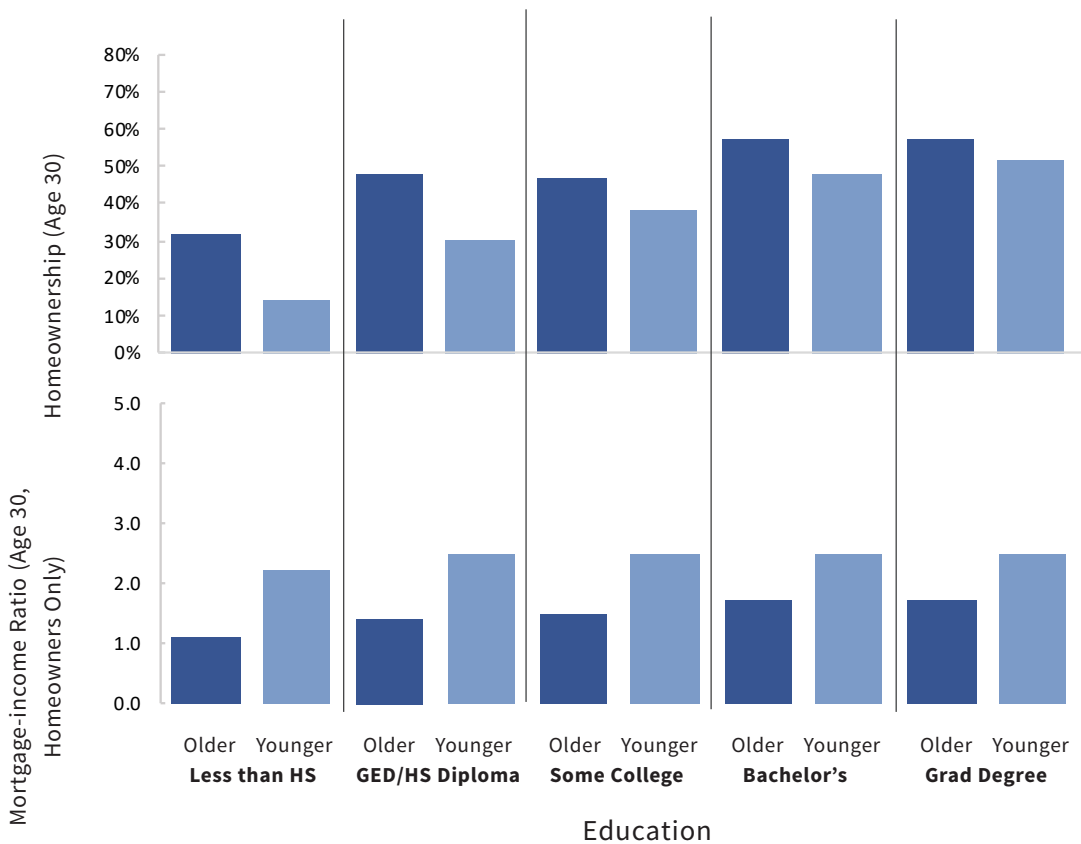

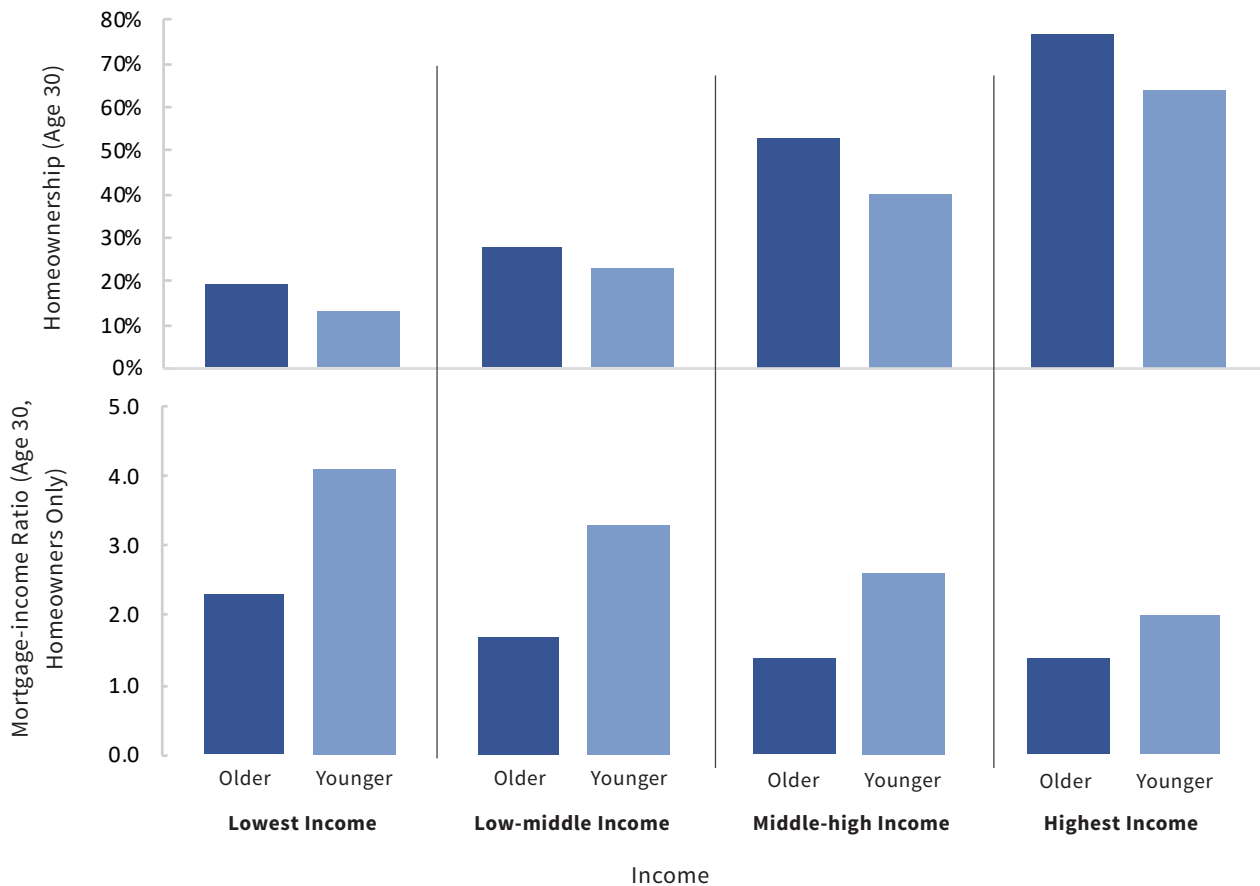*Figure 1.3: homeownership and debt burden, by education. NLSY data*

Figure 1.4: homeownership and debt burden, by income level. NLSY data

When examining debt burden related to homeownership, we observed similar patterns across demographic factors. In particular, the greatest increases in the mortgage-to-income ratio were observed among Hispanic individuals (from 1.8 to 3.0), among those with less education (from 1.06 to 2.24), and among the lowest quartile income group (from 2.3 to 4.1). The decrease in the latter group is particularly worrisome because this group is generally viewed as more vulnerable to unforeseen financial shocks. These are individuals for whom a hike in debt burden may have a severe negative impact not only on their ability to own a home but also on their overall standard of living.

Major Contributing Factors Affecting Homeownership in the United States

In light of declines in homeownership rates across generations and the disparities across population subgroups, we next focused on exploring select reasons for the homeownership decline across generations. The decision and ability to buy a home is a function of many factors, including wealth, income stability, marital status, family composition, debt, participation in retirement plans, and urban sprawl [1-7]. Using the *Sightlines* project framework, we focused on behavioral indicators that have the potential to be changed at multiple levels of intervention, including by individuals and institutions. We highlight findings from these analyses below.

Delaying Marriage

Americans aren't giving up on marriage and children but are merely delaying them (Figure 1.5). In 1995, the majority of women (59 percent) were married by age 25, but 15 years later, in 2010, that number had fallen to 44 percent. However, the number of women married by age 40 has remained steady -- at around 85 percent -- for both groups [8]. As shown in in Figure 1.6, the median age at which Americans first marry preceded when they bought their first home. The gap between these two life events ranges from six years for earlier cohorts to four years for recent cohorts, indicating that marriage continues to be an important life milestone that consistently occurs before buying a home.

Most Americans get married before buying a home.

Median age of marriage steadily rising since 1960s
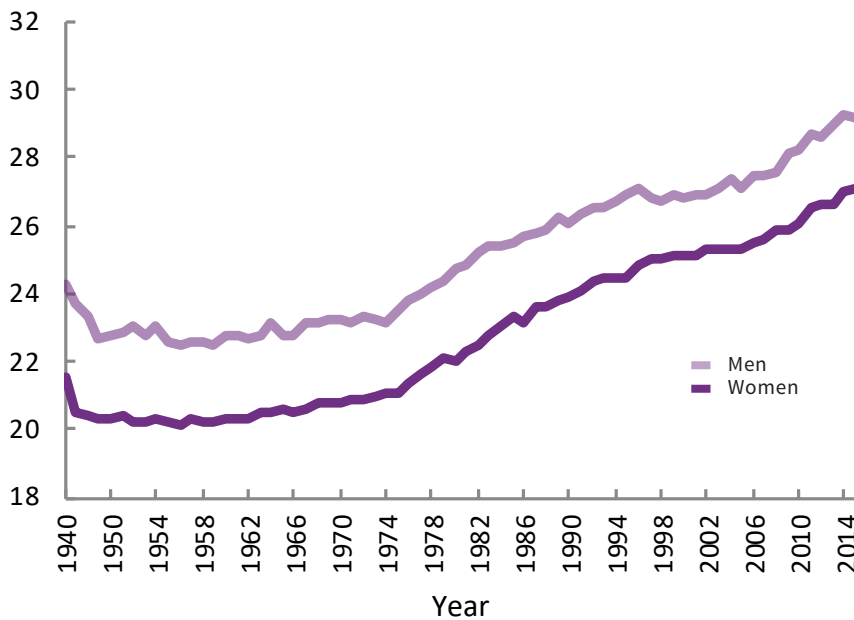

Figure 1.5: Median age of first marriage in the U.S., 1940-2014

Age of marriage consistently predates age of buying a home
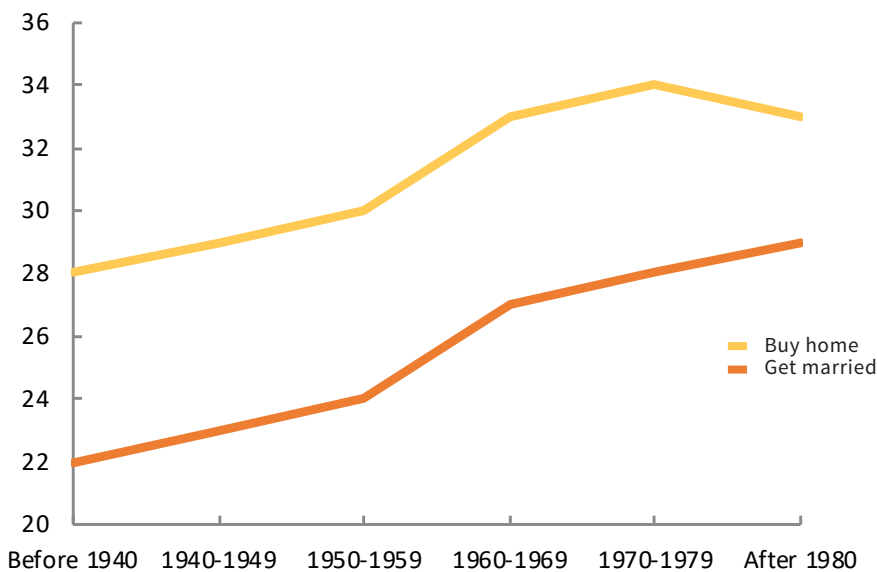

Figure 1.6: The timing of marriage and homeownership by birth cohort, SCL Milestones Survey, 2017

Increasing Debt

Our analysis of the data provided some further detail on the financial lives of the younger age group (Figure 1.7). On the positive side, they were able to grow their non-housing assets between age 25 and 30, including savings and retirement accounts. However, they also accumulated a significant amount of debt, with student loans being the primary source. This resulted in slower growth in personal net worth. For those born in the early 1980s, their average net worth was less than $10,000 when turning age 30, which severely restricted their ability to afford a down payment on a home in most housing markets in the U.S.

Millennials successfully accumulated financial assets between ages 25 and 30, but they also incurred significant debt in the same time frame
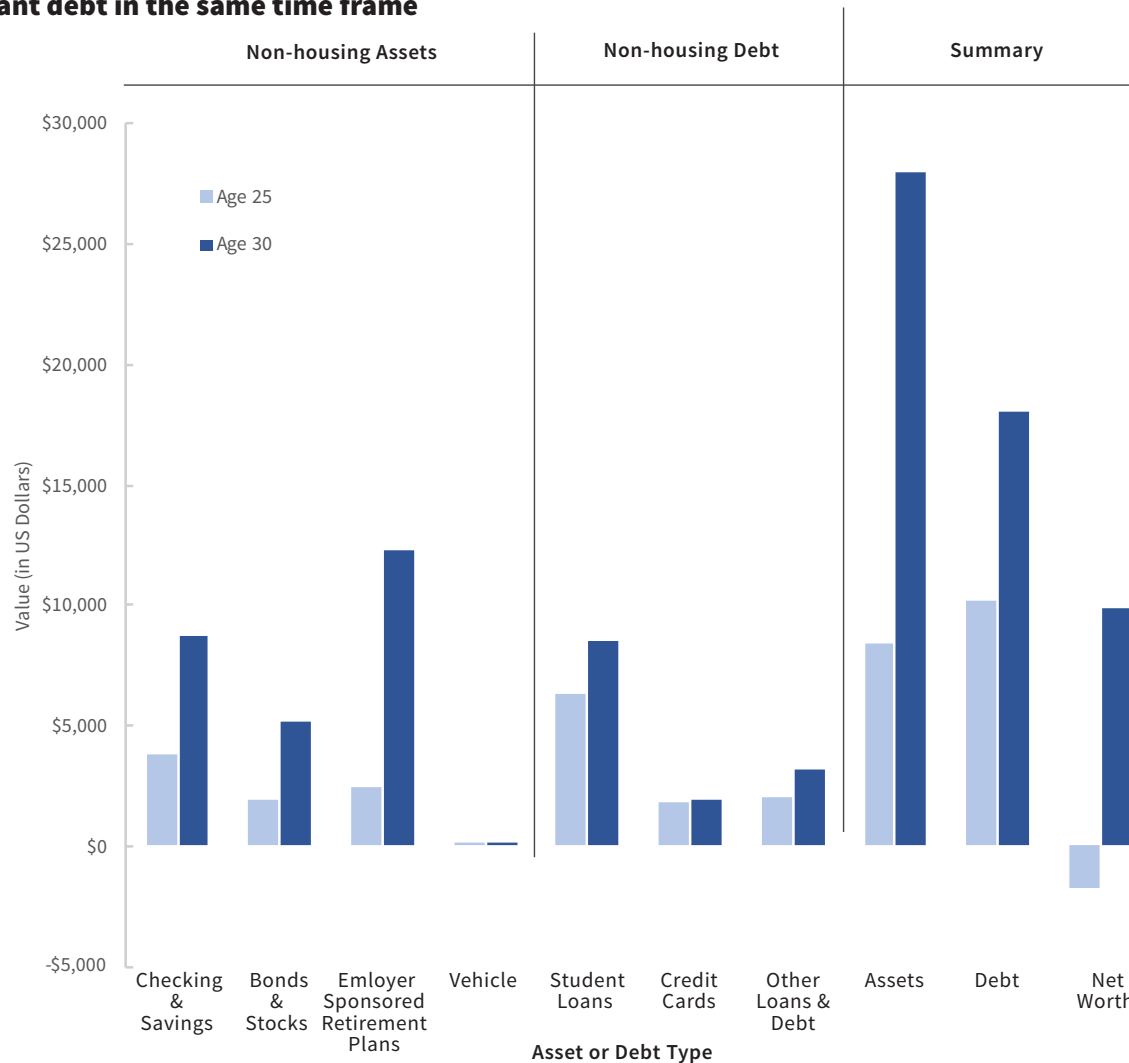

Figure 1.7: Non-housing asset and debt burden for the younger cohort (born 1980-84), NLSY data

Student loans are commonly viewed as a double-edged sword. On the one hand, young people are able to afford higher education with the help of student loans; however, more education does not always translate to more income after graduation. Instead, the earnings of college graduates are more closely tied to college quality factors, such as curriculum value and STEM orientation [9]. The debt burden of student loans may restrict graduates' ability to borrow and mobilize financial resources, and may also reduce their chances of affording a home (Figure 1.8). Though such comparison doesn't imply causality, it clearly shows that high levels of student loans are correlated with a reduced likelihood of homeownership.

Young people with more student loans appear to be less likely to buy homes.

At age 25, the two groups of millennials had similar levels of student loans. At age 30, non-homeowners had significantly more student loans than homeowners (Figure 1.8)
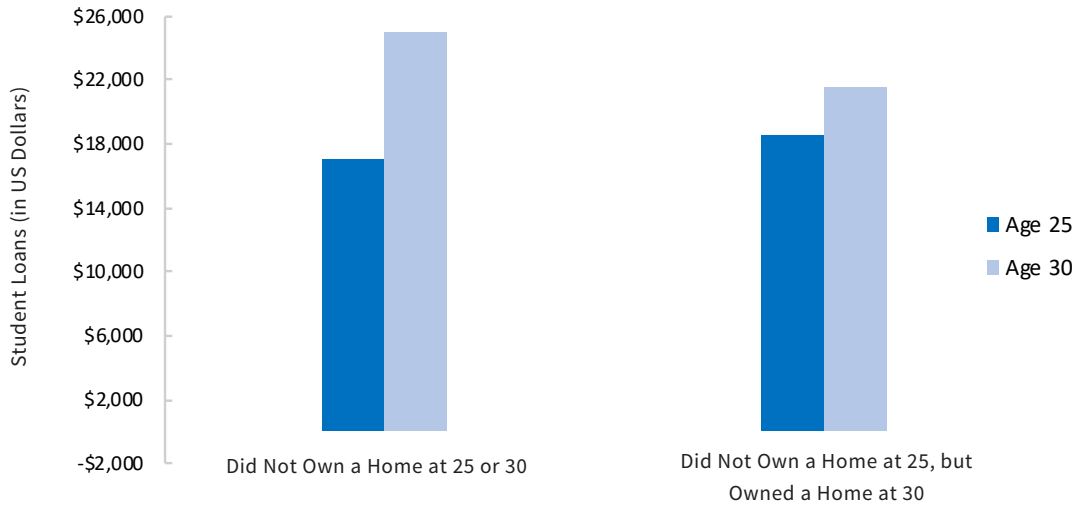

Figure 1.8: The accumulation of student loans and homeownership status change.

Comparative Analysis of Behavioral Predictors of Homeownership

To better understand potential precursors to homeownership across generations and how they may have changed, we developed an original survey module via the RAND American Life Panel (henceforth referred to as the SCL Milestones Survey). The SCL Milestones Survey includes self-reported information on sociodemographics and the age at which people accomplished important life milestones, such as getting married, buying a home, and paying off student loans. We estimated the impact, or magnitude, of the association between accomplishing these life milestones by age 30 and buying a home by age 30.

Life Milestones

Life milestones, such as marriage and starting a family, are strongly associated with homeownership. When considering marriage alone, the probability of owning a home by age 30 increases by 17.2 percentage points for those already married by age 30 versus those who aren't married. Being married and having children by age 30 increases the probability of owning a home even more (by 28 percentage points). However, these effects vary significantly by age cohort. As shown in Figure 1.9, for the older cohort, marriage alone is associated with a higher likelihood of owning a home by cohorts born before 1970. But for later cohorts, being married and having children becomes the most prominent factors predicting homeownership. Thus, younger people today are especially likely to delay homeownership not just until after they're married but until after they also have children.

Getting married was the largest singular predictor of homeownership for older generations, whereas for younger generations, the combination of marriage and children is a key predictor of homeownership (Figure 1.9)
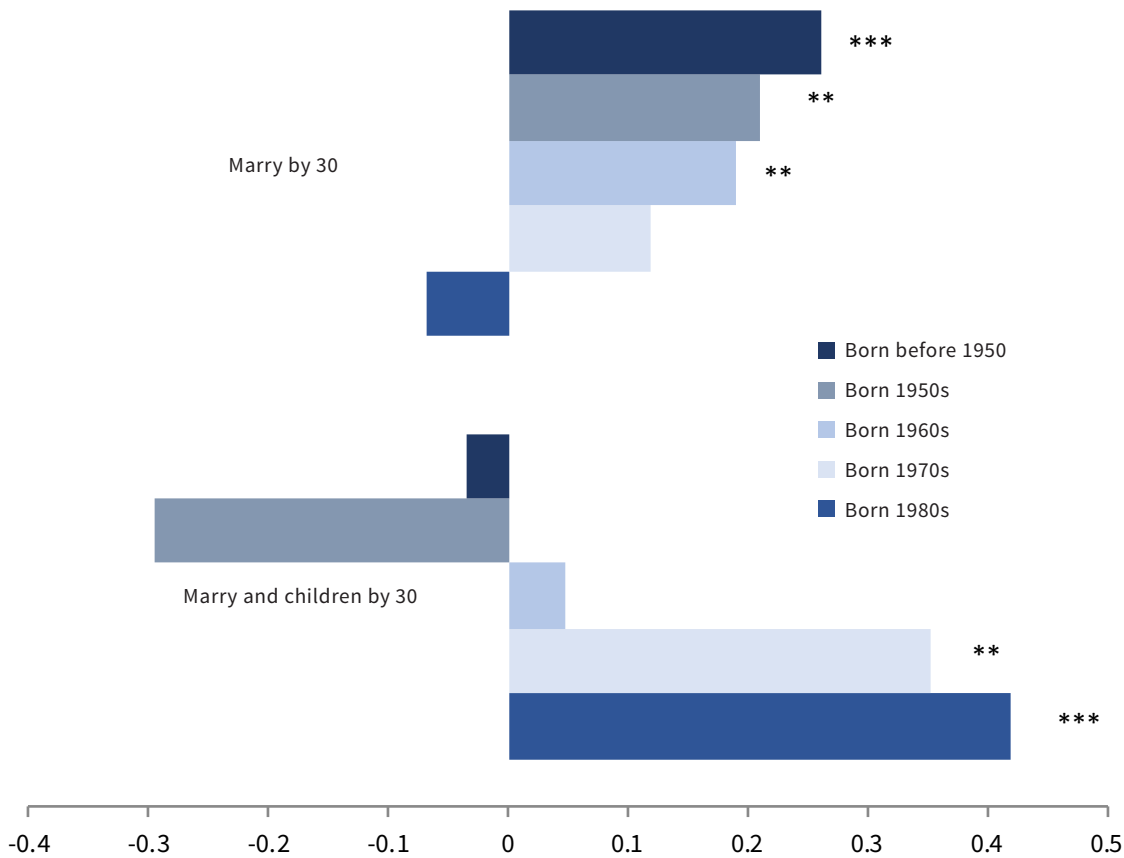

Figure 1.9: Association between achieving life milestones at age 30 and buying a home at age 30 by age group. Note. SCL Milestones Survey data 2017. Significant associations are marked by asteriks (*).

Financial Milestones

Achieving certain financial milestones by age 30 is closely associated with the likelihood of also buying a home by age 30. For instance, those who started saving for retirement by age 30 are significantly more likely to have bought a home by age 30 than those who had not started saving for retirement. However, the impact of saving for retirement on homeownership is primarily driven by younger cohorts.

And while accumulating financial assets by age 30 positively predicts homeownership by age 30, taking out student loans by age 30 negatively predicts buying a home by age 30. Compared to those who never took out a student loan, those who borrowed and are still repaying those loans at age 30 were less likely – by 32 percentage points – to own a home by age 30. Interestingly, there was no significant difference between those who never took out a student loan and those who borrowed and repaid it by age 30, so being free from student debt appears to have a major positive impact on the ability of people to purchase a home, regardless of borrowing in the first place. Thus, education debt can have either a positive or a negative effect on financial security and homeownership. For instance, for borrowers capable of paying off their loan obligations quickly after graduation, those loans can bring them the benefit of acquiring an academic degree that puts them on track for a better career, not to mention building a strong credit record. In contrast, college students who may have taken out loans that were disproportionally large compared to their future income saddle themselves with a heavy debt burden for many years post-graduation and risk of default, posing significant barriers to purchasing a home.

Conclusion

The declining trend in homeownership among younger people has been discouraging, particularly given the importance of the home as a lifetime asset. Specifically, when looking at generational differences in buying a home by age 30, we found that fewer young people today are homeowners. Contributing factors affecting homeownership have also changed between younger and older groups. Whereas marriage was the top predictor of owning a home by age 30 for older generations, being married with children, starting retirement planning, and either paying off or not having student loans at all were predictors for younger generations.

These findings suggest that there are several additional milestones members of younger generations are seeking to accomplish before buying a home. This further increases delays in homeownership and, ultimately, incurs losses in home equity over time. On a positive note, these results indicate multiple points at which financial advisers or employers can intervene to educate and facilitate a home purchase among young prospective buyers, including the point at which they marry, start a family, begin saving for retirement, and take out or pay off their student debt.

Key Takeaways

- Younger generations (those born in the early 1980s) are less likely to own a home by age 30 than their older predecessors (those born in the early 1960s), and when they do, they face a higher debt burden when financing their homes.
- Generational gaps in homeownership and mortgage debt burdens were observed across different sub-populations. Economically vulnerable groups exhibited the greatest changes over time. In spite of stricter lending regulations, the least-educated and the low-income groups experienced the largest hike in their debt burdens. While further tightening of lending regulations may make homeownership out of reach for some, it should be balanced with insuring that home loans are appropriate and manageable for borrowers. Educational interventions should also help borrowers understand and appreciate the far-reaching impacts of their loan obligation.
- For older generations, marriage alone was the consistent predictor of homeownership. In contrast, for younger generations, it's not only marriage, but having children, saving for retirement, and managing student loans altogether that predicted homeownership.
- The importance of homeownership in wealth accumulation is well documented [10-13]. By not owning a home, younger Americans today may forego the opportunity to grow their household wealth, and, in conjunction with inadequate household savings from alternative sources, future financial security across the life course may be adversely affected. Refining strategies to address the declining homeownership rates among young people remains an important policy issue.
- The ability to repay student loans is an important predictor of homeownership for younger generations. However, more students than ever are struggling to pay off student debt. Nearly 40 percent of borrowers entering college in 2004 are expected to default on their student loans by 2023 [14]. Universities, financial institutions, and policymakers must recognize the growing strain of student debt. More efforts are needed to help students understand the financial constraints decisions related to both the size of loans relative to expected future earnings potential and how to manage repayment without forgoing or delaying accumulation of financial assets.

imposed by student loans on future financial decisions such as home buying. Both universities and lending institutions are especially poised to assist students in managing loans and optimizing decisions related to both the size of loans relative to expected future earnings potential and how to manage repayment without forgoing or delaying accumulation of financial assets.

Food for Thought

- How do ethnicity, education and income levels work together to affect the rate of homeownership? While each factor independently predicts the likelihood that someone will own a home by age 30, can increasing income, for example, offset the lower rates of homeownership among those with less than a college education? Moreover, how do each of these factors play out in different regions of the United States that vary markedly in housing affordability?
- As marriage trends have shifted drastically in the U.S., what is the role of cohabitation and being unmarried in young and later adulthood (e.g., being divorced, widowed) in homeownership? Relatedly, as people live longer and family structures begin to change, how might being part of a multigenerational household affect the rate of homeownership in the future?
- How are declines in homeownership reshaping traditional trajectories of establishing financial security? For example, how might the growing co-housing trend affect the trajectory of homeownership at all? Or, to what degree and how exactly might people be turning to alternative investment options, other than homeownership, to build wealth across the life course.
- If marriage and children are a major impetus to homeownership among younger generations, are there distinct predictors or consequences among non-traditional families that are becoming increasingly prevalent, such as single parents, people not having children, middle-aged adults caring for aging relatives or young adult children returning home?
- How might societal-level factors, such as shifting policies in home lending and student loan management, alter the impact of individual characteristics, like marital status and ethnicity, on homeownership rates? Are they equally effective across groups in improving people's ability to buy a home and reducing disparities in home equity?

References

[1] Federal Reserve Economic Data (2018). Homeownership rate for the United States. *St Louis Fed Economic Research.*

[2] Bostic, R.W., and Surette, B. (2001). Have the Doors Opened Wider? Trends in Homeownership Rates by Race and Income. *Journal of Real Estate Finance and Economics* 23: 411-434.

[3] Haurin, D. R., Herbert, C. E., and Rosenthal, S. (2007). Homeownership Gaps Among Low-Income and Minority Households. *Cityscape, Vol. 9, No. 2, Issue on Low-Income and Minority Homeownership*, pp. 5-51.

[4] Rutledge, M. S., Sanzenbacher, G. T., and Vitaglinao, F. M. (2016). How Does Student Debt Affect Early-Career Retirement Saving? *CRR WP 2016-9. Center for Retirement Research at Boston College*.

[5] Houle, J. N. and Berger, L (2015). Is Student Loan Debt Discouraging Homeownership among Young Adults? *Social Service Review, Vol. 89, No. 4. The University of Chicago Press Journals*.

[6] Kahn, M. (2001). Does Sprawl Reduce the Black/White Housing Consumption Gap. *Housing Policy Debate* 12 (1). 77-86.

[7] Dawkins, C. J. (2009). Urban Sprawl and the Transition to First-Time Homeownership. *Cityscape, Vol. 11, No. 2, Regulatory Innovation and Affordable Housing,* pp. 83-100.

[8] Vespa, J. (2017). The Changing Economics and Demographics of Young Adulthood: 1975-2016, Population Characteristics. *Current Population Reports*, pp. 20-579. U.S. Census Bureau.

[9] Rothwell, J. (2015). Using earnings data to rank colleges: a value-added approach updated with college scorecard data. *Brookings Report*.

[10] Krumm, R., and Kelly, A. (1989). Effects of homeownership on household savings. *Journal of Urban Economics*, 26, pp. 281-294.

[11] Boehm, T. and Schlottmann, A. (2004). Wealth Accumulation and Homeownership: Evidence for Low-Income Households. *Research report, Office of Policy Development and Research, U.S. Department of Housing and Urban Development.*

[12] Herbert, C. E., McCue, D. T., Sanchez-Moyano, R. (2013). Is Homeownership Still an Effective Means of Building Wealth for Low-income and Minority Households? (Was it Ever?). *Harvard University, Joint Center for Housing Studies, HBTL-06 Retrieved from* http://www.jchs.harvard.edu/sites/default/files/hbtl-06.pdf

[13] Reid, C. K. (2005). Achieving the American Dream? A Longitudinal Analysis of the Homeownership Experiences of Low-Income Households. CSDE Working Paper No. 04-04. *Center for Studies in Demography and Ecology. University of Washington.*

[14] Scott-Clayton, J. (2018). The looming student loan default crisis is worse than we thought. *Evidence Speaks Reports, Vol 2, No. 34. Economic Studies at Brookings.*

Declines in Food Affordability among King County Young Adults

It can be a challenge to understand the relevance of the findings from national datasets used in the Sightlines Project for specific geographic regions, yet data are often unavailable for communities. Yet the greatest potential for impact will likely come from regional interventions. To this end, we have begun conversations with policy leaders in King County, Washington with the common goal of enhancing long life at all stages of life. Unprecedented shifts in King County's ecosystem present a unique preview into what we may see occur across many other counties around the U.S. For instance, as illustrated in William Frey's recent book, "Diversity Explosion," like many major metropolitan areas, King County's younger population is increasingly more ethnically diverse relative to older groups. This is particularly important in the wake of other drastic economic and technological changes, much like changes occurring in California's Silicon Valley over the past decade.
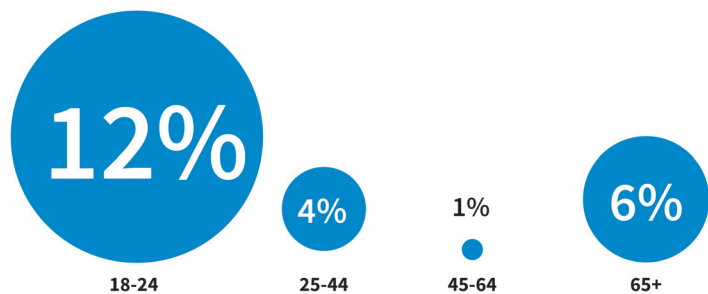
Increasing divergence in the characteristics among differently aged populations highlights the importance of comparative analyses in understanding future trends and needs. Increasing ethnic diversity of younger groups could indicate a growing divide in public interests and goals for living well. Our collaboration positions us to develop a more refined, updated understanding of individual communities undergoing such change, as well as providing us with previously unexamined, yet highly relevant metrics of financial security. For example, through

Percent increase in those struggling to buy food in King County from 2010 to 2013

12%	4%	1%	6%
18-24	25-44	45-64	65+

their public use website, Communities Count, we can focus in on food hardship, the ability to have regular and reliable access to food, which intersects two Sightlines domains: Financial Security and Healthy Living.

Despite other signs of economic recovery in King county, in just over a four-year span, the share of young adults ages 18-24 struggling to buy food showed a 12 percent increase. Middle aged groups, comprising many families with school-aged children (and thus perhaps more access to school-based meal programs), remained stable in food affordability over time. Adults 45+ are least likely to struggle as of 2013 (10 percent) and those 65+ did increase in food hardship by 6 percent in this time span.

By collaborating with King County, we can leverage the Sightlines Project to have a direct, near-term impact on communities through 1) using county level data to gain deeper insights into Sightlines outcomes and 2) focusing on outcomes especially relevant to the citizens of King County, such as food hardship. Insights from this joint work will more readily shape policy and programs aimed at improving lives for county populations in this new era of longevity.

SAVING FOR RETIREMENT

Executive Summary

Are American workers saving enough for a comfortable and secure retirements? We evaluated the adequacy of retirement savings for American families age 25-64 by examining their retirement plan contribution levels, using the most recent *Survey of Consumer Finances* data (from 2016) from the Federal Reserve.

Estimating "adequate" retirement contributions requires making several critical assumptions for many decades in the future, including the age at which a person starts saving for retirement; the age at which a person plans to retire; expected rates of return on investments, inflation, and salary increases; life expectancy in retirement; the amount of Social Security benefits a person expects to receive; and the desired standard of living in retirement. Reasonable differences in these assumptions can produce significantly different conclusions about retirement savings targets. We compared our results to previously proposed savings targets under both optimistic and pessimistic assumptions.

Key Findings

- Roughly half of American workers are participating in a retirement plan at work.
- Of the workers who save in a work-based plan, most members of each age cohort aren't meeting targeted retirement savings goals even under the most optimistic assumptions, which considers both employee and employer contributions.
- Younger generations – the millennial and generation X cohorts – are lagging behind their targeted goals more than older generations.
- Within each age group, retirement contribution rates are higher among those with higher levels of educational attainment and income.
- Within each age group, African Americans and Hispanics have lower contribution rates than non-Hispanic whites.

As Americans live longer, there is much debate in policy, financial, and academic circles about how best to prepare for retirement at all stages of life. Our findings illustrate that the majority of American workers from all backgrounds aren't on a path to retire full time at age 65 under their pre-retirement standard of living. As a result, it's likely they'll need to consider alternative models of retirement, such as working beyond traditional retirement age, changing one's standard of living in retirement, strategies for deploying retirement savings, or some combination of these models. New models of late life that include phased retirement and working longer offer new opportunities for people to accumulate financial resources as they age. Whether these new models are viewed as desirable and are successfully adopted by individuals, employers, and institutions remains to be seen.

ARE AMERICANS SAVING ENOUGH FOR AN ADEQUATE RETIREMENT?

Steve Vernon, Amal Harrati, Jialu Streeter

Overview

Does America have a retirement savings crisis? There's been a lot of heated debate around this question, particularly as members of the baby boom generation enter their retirement years. But the concern extends to younger generations as well. For American working families, what percentage of their income do they need to save for retirement? In the following report, we evaluated the adequacy of retirement savings for American families age 25-64 by examining their retirement plan contribution levels, using the most recent Survey of Consumer Finances data.

We first reviewed the annual retirement savings goals suggested by various financial institutions, based on:

    (a) the age at which a person starts saving for retirement;
    (b) the age at which a person plans to retire in the future; and
    (c) the assumed standard of living in retirement.

Next, using the Survey of Consumer Finances, we analyzed:

    (a) the percentage of American families eligible for work-based retirement plans;
    (b) the percentage of eligible families making active retirement contributions;
    (c) the employee, employer, and total contributions as a share of income; and
    (d) how the contributions vary across sociodemographic groups.

Key Takeaways

- Even under the most optimistic assumptions, most workers are not meeting the targeted retirement savings goals at this point in time.
- Younger generations – the millennial and generation X cohorts – are lagging behind their targeted goals more than older generations.
- Within each age group, retirement contribution rates are higher among those with higher levels of educational attainment and income.
- Within each age group, African Americans and Hispanics have lower contribution rates than non-Hispanic Whites.

A Closer Look

Target Retirement Savings Goals

Any calculation of a retirement savings goal makes a handful of critical assumptions about the future [1]. Table 2.1 compares two projections of annual retirement savings goals based on the age at which an individual starts to save for retirement and the age at which they plan to retire. These two projections are based on different assumptions, as discussed below.

Researchers at the Boston College Center for Retirement Research calculated the savings rate required for a medium-income earner to attain a 70 percent salary replacement rate and found that individuals who start saving at age 25 and plan to retire at age 65 need to contribute 10 percent of their income to retirement plans every year [2]. For those who start saving at 35 or 45, their target contribution rates should be even higher – 15 percent and 27 percent, respectively. The projections given by Aon Hewitt [3] suggest that individuals need to contribute 17 percent of their income to retirement plans if they plan to retire at age 65. Note that these target contribution rates assume workers continuously contribute to retirement each year between the starting age and their retirement age, with no break due to career disruptions.

Table 2.1. Suggested retirement contributions as a percentage of current income, including employee and employer contributions.

Projection by Munnell, et al. [2]			
Retire at:	Start Saving at Age 25	Start Saving at Age 35	Start Saving at Age 45
62	15%	24%	44%
65	**10%**	**15%**	**27%**
67	7%	12%	20%
70	4%	6%	10%

Projection by Aon Hewitt [3]			
Retire at:	Start Saving at Age 25	Start Saving at Age 35	Start Saving at Age 45
65	**17%**	**20%**	**25%**
67	14%	16%	20%
70	10%	12%	14%

The following assumptions need to be made to calculate an accurate retirement savings target:

- Rate of return on savings
- Inflation rate
- Salary growth rate
- Retirement age
- Life expectancy at retirement
- Whether retiree continues working part time for a period of years after retirement from full-time work
- Household structure: single, married, presence of dependent children or parents
- Amount of expected Social Security benefits
- Amount of existing savings in retirement and non-retirement accounts
- Existence of traditional pension benefits
- Whether the retiree will tap home equity to help fund their retirement
- Expected living expenses at retirement, the largest of which will most likely be housing costs and medical costs
- Income tax rates at retirement

Reasonable differences in these assumptions can produce significantly different conclusions about adequate retirement savings targets. And the farther away that future retirement is, the more likely it is that the assumptions will diverge from reality over time.

Participation Rate in Work-Based Retirement Plans

Taking into account these parameters for retirement savings goals, we next examined whether American families are saving above or below the ideal levels, using the 2016 data from the *Survey of Consumer Finances* (SCF) by the Federal Reserve.

In the context of the present analysis, a family is considered *eligible* to participate in a work-based retirement plan if either spouse/partner is included in any pension or retirement plan or any tax-deferred savings plan connected with their current job. This data was evaluated at the family level, in line with the convention established by the SCF. (Note: We will discuss the implications of using family versus individual as an analysis unit on the results in later sections.)

Roughly half of all households are offered work-based retirement plans at their current jobs (Table 2.2: column 1), and of those households, the vast majority are choosing to make contributions (Table 2.2: columns 2-3).

Table 2.2. Eligibility and participation in work-based retirement plans

Age Group	(1) Eligible to participate in work-based retirement plan	(2) Positive contribution in work-based retirement plan	(3) Participation percentage: (2)/(1)
25-34	46.5%	42.3%	91%
35-44	51.9%	47.3%	91%
45-54	53.7%	49.3%	92%
55-64	45.3%	40.1%	89%

Note: Age group is determined by the older spouse/partner's age.

Table 2.3 shows the median contribution percentages for employee, employer, and total contributions in work-based retirement plans by households headed by members of various age groups. Note that these statistics are only for families who are eligible for employer-sponsored retirement accounts. Employee-contribution percentages were calculated by summing the total contributions made by all members of the household, divided by the sum of the pre-tax income earned by all members of the household.

Table 2.3. Median contribution as a percent of income in work-based retirement plans, for eligible families

Age Group	(1) Median Employee Contribution	(2) Median Employer Contribution	(3) Median Total Contribution
25-34	4.00% of income	2.00% of income	6.21% of income
35-44	4.04%	2.36%	7.22%
45-54	4.84%	2.88%	8.14%
55-64	4.86%	2.08%	7.54%

Next, to assess retirement savings adequacy, we calculated total retirement contributions as a share of family income and then looked to see how many families' contributions actually met three important thresholds: 5 percent, 10 percent, and 15 percent of income (Table 2.4). Compared to younger families, older families were more likely to meet the criteria. At the highest threshold of 15 percent or more of income, 10.2 percent of families age 25-34 contributed at that level, whereas 18.3 percent of families age 55-64 do the same.

Table 2.4. Percentages of families whose total contribution as a percentage of income equals or exceeds thresholds, for eligible families

Age Group	(1) Total Contribution Equals or Exceeds 5% of Income	(2) Total Contribution Equals or Exceeds 10% of Income	(3) Total Contribution Equals or Exceeds 15% of Income
25-34	60.3%	29.3%	10.2%
35-44	64.0%	30.8%	12.3%
45-54	70.2%	38.0%	15.8%
55-64	63.9%	36.8%	18.3%

Retirement Contribution Variations Across Demographics

The median total contribution increased with the highest educational attainment of a family (Table 2.5). Again, the statistics only included families eligible for work-based retirement plans. For the 45-54 age group, the families whose head of household received a high school education contributed approximately 7 percent of income to retirement, whereas those with a college degree or more contributed 9 percent.

Table 2.5. Median total contribution by educational attainment as a percentage of pay in work-based retirement plans, for eligible families

Age Group	High School Diploma/GED	Some College	College Degree or More
25-34	N/A	5.66% of income	6.55% of income
35-44	N/A	6.59%	7.58%
45-54	7.03%	6.88%	9.00%
55-64	6.29%	6.07%	8.31%

Note: N/A = insufficient data. The highest education attainment of two spouses/partners was used to represent a family's education level.

Not surprisingly, income levels strongly correlated with retirement contributions (Table 2.6). Within an age group, the contribution rate increased with income level. For instance, in the 25-34 age group, the low-middle income families (the 2nd quartile) contributed about 5.66 percent of income to retirement, whereas the highest-income families (the 4th quartile) contributed more than 8 percent.

The annual income quartile values for household income in the SCF survey are as follows:

- 1st quartile: Under $26,000
- 2nd quartile: $26,000 to $50,000
- 3rd quartile: $50,000 to $95,000
- 4th quartile: Over $95,000

Table 2.6. Median total contribution by income quartile as a percentage of pay in work-based retirement plans, for eligible families

Age Group	2nd Quartile	3rd Quartile	4th Quartile
25-34	5.66% of income	6.25% of income	8.08% of income
35-44	5.89%	7.27%	7.84%
45-54	6.15%	7.50%	9.17%
55-64	6.81%	6.94%	8.46%

Note: There was insufficient data to calculate contributions among the 1st income quartile. Although we calculated retirement contributions as a percentage of current income (2016), families were sorted into income quartiles based on their previous year's income (2015), as reported in tax returns.

To the extent that post-retirement income expectations are a function of pre-retirement income, the perceived need to save for retirement may vary by income level. However, Social Security payments may not provide sufficient replacement value for all households, and in particular, higher income groups.

The median total contribution was higher for whites compared to blacks and Hispanics (Table 2.7). Ethnic differences appear to be larger for the older age groups than for the younger ones. For families age 55-64, whites contribute toward retirement at nearly double the rate of blacks (8 percent vs. 4.13 percent). In comparison, the difference for families age 25-34 is much smaller (6.65 percent vs. 4.83 percent).

Table 2.7. Median total contribution by ethnicity as a percentage of pay in work-based retirement plans, for eligible employees

Age Group	Non-Hispanic Whites	Non-Hispanic Blacks	Hispanics
25-34	6.65%	4.83%	N/A
35-44	7.66%	5.93%	5.86%
45-54	8.41%	6.62%	6.25%
55-64	8.00%	4.13%	N/A

Note: N/A = insufficient data. The SCF only reports the race and ethnicity information of the survey respondent in a family, which is used here.

Can Contributions to IRAs Make Up Any Shortfalls?

One possibility that could explain insufficient employer-sponsored retirement savings by families is that they might be utilizing other methods to prepare for retirement. As such, we examined ownership rates in and account values of both Individual Retirement Accounts (IRAs) and Keogh accounts (Table 2.8).

Table 2.8: Ownership of IRA/Keogh accounts

Age Group	% of Families with IRA/Keogh Accounts	Median Account Value, Only for Families with IRA/Keogh accounts
25-34	17.7%	$10,000
35-44	26.9%	$26,000
45-54	30.1%	$48,000
55-64	36.4%	$76,000

These statistics show that the shortfalls in employer-sponsored plans won't likely be made up by contributions to IRAs or Keogh accounts, for a few reasons:

- Many of the IRAs are rollovers from work-based plans at previous employers, particularly for those in older age groups. In this case, people are unlikely to be actively currently contributing to these accounts.
- Table 2.2 shows that more than half of all households aren't currently contributing to work-based retirement savings plans, a much higher rate than the IRA/Keogh ownership rates shown in Table 2.8.
- The limits on annual contributions are lower for IRAs ($5,500 in 2018 for people under age 50; $6,500 for those age 50 and older) than the limits on contributions to work-based retirement plans ($18,500 for people under age 50; $24,500 for people age 50 and older).
- Most employers don't contribute to IRAs.

How Do Our Results Compare to Other Studies on Retirement Savings Levels?

Below, we summarize recent studies by leading financial services companies who report level of Americans' retirement contributions. This summary allows us to determine whether findings presented above are similar to analyses of large workforces. In contrast to SCF data, findings below are based on percent of pay contributed to an employer-sponsored retirement account by individuals, not households.

- Fidelity Investments' *Retirement Savings Assessment 2018* [4] reported the following median total savings rates (including employer match) as follows:

    - Millennials: 7.5 percent of pay
    - Gen X: 8.6 percent of pay
    - Boomers: 9.9 percent of pay

- The *18th Annual Transamerica Retirement Survey of Workers* [5] reported the following median employee contribution levels:

    - Millennials: 10 percent of pay
    - Gen X: 8 percent of pay
    - Boomers: 10 percent of pay
      Transamerica also reported that contributions higher than 5 percent of pay were reported by 69 percent of millennials, 68 percent of gen Xers, and 76 percent of boomers. Contributions higher than 10 percent of pay were reported by 35 percent of millennials, 39 percent of gen Xers, and 36 percent of boomers.

      Note that these amounts do not include *employer* contributions.

- Vanguard's How America Saves 2017 [6] reported contribution levels prevalent in defined contribution plans in 2016, as follows:

    - Median employee contribution: 5 percent of pay
    - Median total contribution: 10 percent of pay

    - Average employee contribution: 6.9 percent of pay
    - Average total contribution: 10.9 percent of pay

The median contribution levels reported in our analyses above are generally lower than these survey results. Discrepancies may be due to at least two reasons:

- We analyzed data at the family level, but the analyses from many related surveys and reports are based on contributions by individuals. Table (2.9) demonstrates that for a family with two income-earning spouses, where only one is eligible for a work-based retirement plan, the individual-based approach will result in a higher retirement contribution rate than the family-based approach.

Table 2.9: Individual-based Approach vs. Family-based Approach

	Individual-based Approach	Family-based Approach
Pay: Spouse 1: $30,000 Spouse 2: $20,000	Only spouse 1 is eligible for retirement contribution.	The family is eligible for retirement contribution.
Retirement contribution: Spouse 1: $1,200 Spouse 2: not eligible	Contribution rate = $1,200/$30,000 =4%	Contribution rate = $1,200/($30,000+$20,000) = 2.4%

- Our analysis calculated retirement savings as a percentage of total family income, which includes both regular income and income from other sources.
- The SCF database is a broader demographic representation of Americans than the repondents of the Fidelity, Transamerica, and Vanguard surveys.

Do Americans Meet Retirement Savings Goals?

Having calculated American families' retirement contributions, we next compared the results with the goals previously reviewed. Americans planning to retire at age 65 need to put aside 10 to 17 percent of their income for retirement preparation, even if they start saving as early as age 25 (Table 2.1). If they don't start saving until age 35 but still wish to retire at 65, then they need to contribute 15 to 20 percent of their income to their retirement accounts. Based on our estimation, families age 25-64 are currently only saving a median of about 6 to 8 percent of income toward retirement (Table 2.3). Even among individual employees surveyed by financial services companies, millennials and genXers are only saving 7 to 10 percent of income toward retirement, and boomers are saving 9 to 10 percent [3, 4]. Thus, even if we assume that people start saving at age 25 – an optimistic assumption – their actual contribution rates are well below the target contribution goals (6-10% versus 10-17 %).

Across different age cohorts, millennials seem to fall short of the targeted retirement savings goals the most. Compared with older cohorts, millennials may face a higher risk of receiving less from Social Security [7,9], and thus they should be aiming for a higher contribution rate to their retirement savings. For example, one institution suggests contributions as high as 22 percent of pay should be the new retirement savings goal for millennials, based on the assumption that they receive nothing from Social Security. Such a pessimistic assumption sets their current contribution drastically lower than the target contribution goals [8].

Based on our analysis of retirement savings from every source we examined, the vast majority of American workers of any age will be unable to replicate and maintain their standard of living if they retire fully from working at age 65. This may be a crisis for those households that are unprepared for a significant drop in family income or aren't prepared to work beyond age 65. It's likely many Americans will need to adjust their spending but can nevertheless experience a comfortable retirement. In contrast, many others will likely face a financial crisis at some point during their retirement. Our results suggest that, at the very least, making any increase retirement contributions is progress in the right direction.

Implications

Policymakers may want to look for ways to increase access to work-based retirement plans, since roughly half of workers don't currently have access to these plans. One possible solution is multiple-employer plans that are open to all types of employers. Multiple-employer plans allow small employers to pool assets to achieve efficiencies of scale and are currently only allowed for unionized workforces. Another possible solution would be state-run retirement savings plans that target smaller employers that are unable to implement their own retirement savings plans.

Employers and retirement plan sponsors are continually looking for ways to increase their employees' total contributions to retirement plans, with a special focus on vulnerable groups that are contributing well below guidelines. Auto-enrollment and auto-escalation features have been successful at increasing contributions and could offer significant benefit to those working for employers who have not yet adopted these features. Employers could also educate employees by providing statements to plan participants that estimate the amount of retirement income their savings might generate. They can also prepare customized assessments of their employees' progress towards accepted retirement goals, given how much each employee has saved so far and the specific features of the employer's retirement program.

Even if these kinds of steps are adopted, many workers might still fall short of saving amounts deemed to be sufficient by the studies noted here. In this case, future workers will need to adopt one or more of the following actions:

- Work beyond age 65
- Reduce their standard of living in retirement
- Make every dollar of savings count by making conscious investment choices and adopting strategies to deploy savings in retirement

Working longer can have a powerful influence on improving retirement security, as noted by examining the target savings rates in Table 2.1. Let's look at the first set of target savings rates for workers who start saving at age 35: If they want to retire at age 62, they need to save 24 percent of their pay. The target saving level drops to 15 percent of pay for retirement at age 65, 12 percent for retirement at age 67, and 6 percent for retirement at age 70. Delaying retirement beyond age 65 might make retirement feasible for more workers, based on the contribution rates shown in Table 2.4.

Of course, there are challenges that come with working longer for both individuals and their employers [10]. Nevertheless, working longer may be one of the most realistic solutions for addressing shortfalls in retirement savings. Employers can help by offering alternative career paths and flexible work options for future workers to enable them to delay or redesign retirement.

Key Takeaways

- Roughly half of American workers are participating in work-based retirement savings plans.
- Most American workers aren't saving at levels that will allow them to retire fully at age 65 at their current standard of living.
- Policymakers can help improve retirement security for working Americans by expanding retirement plan coverage.
- Employers can help improve the retirement security of their employees by adopting auto-enrollment and auto-escalation features, and by providing employees with estimates of their retirement income from savings and Social Security.
- Employers can consider alternative career paths for older workers as part of their overall retirement program.
- To address retirement savings shortfalls, American workers will need to adopt some combination of working longer, saving more, spending less, and making every dollar count by adopting efficient investment and retirement income strategies.

Food for Thought

- One often suggested potential solution to ensure adequate retirement savings is to extend working life. If they choose to adopt that strategy, what steps should older workers take to enable them to continue working? What types of work will be satisfactory to older workers? How can employers restructure jobs to accommodate older workers?
- Working longer has implications on life satisfaction, and the labor-leisure trade-off. Can older Americans work into their late 60s and 70s and still be satisfied with life? If retirees need to reduce their standard of living, will they still be satisfied with life?
- How much can retirees reduce their standard of living? Is there a minimum level, below which they experience detrimental effects on their health, longevity, and life satisfaction?
- What are strategies older workers and retirees can use to optimize their modest retirement savings? Are there strategies they can use for minimizing or changing consumption patterns that might help stretch their saved retirement dollars?
- What are some effective methods that will encourage workers to increase their retirement savings? Numerous methods have been tried with mixed success, so what are the common traits to the most successful methods? What aspects of saving behavior do they capitalize on?
- Citizens of developed countries now enjoy many additional years, even decades, of life compared to prior generations. But simply adding these extra years on to the retirement period is very expensive and may require unattainable savings levels. Many older Americans are healthy, vital, and still productive [11]. How do older Americans feel about the need to possibly work during some of the additional years of life they have gained, compared to their parents and grandparents?
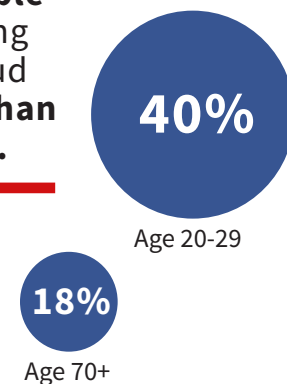
References

[1] Bajtelsmit, V. and Rappaport, A. (2018). Retirement Adequacy in the United States: Should We Be Concerned?" by Vickie Bajtelsmit and Anna Rappaport. Society of Actuaries.

[2] Munnell, A., Webb, A., and Hou, W. (2014). How Much Should People Save. Boston College Center for Retirement Research, July, Number 14-11.

[3] Aon Hewitt. (2016). The Real Deal: 2015 Retirement Income Adequacy at Large Companies.

[4] Fidelity Investment. (2018). Retirement Savings Assessment 2018.

[5] Collinson, C. (2017). 18th Annual Transamerica Retirement Survey of Workers. Transamerica Center for Retirement Studies.

[6] Vanguard (2017). How America Saves 2017.

[7] Goss, S.C. (2010). The Future Financial Status of the Social Security Program. Social Security Bulletin, Vol. 70, No. 3.

[8] Todd, J. (2016). Millennials May Have to Save 22% of Yearly Income for Retirement if Market Returns Drop.

[9] Social Security Administration (2017). The 2017 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Fund.

[10] Stanford Center on Longevity (2018). Working Longer and Retirement: Applying Research to Help Manage an Aging Workforce.

Fraud Vulnerability among Younger and Older Americans

Millions of Americans fall victim to fraud each year, costing upward of $50 billion annually. Nearly everyone is targeted by a scam at some point in their life and many ultimately deceived. Yet, most assume fraud affects only the elderly and see they themselves as invulnerable to being duped. In fact, the Federal Trade Commission finds that adults ages 20-29 experience the highest rates of fraud, whereas those ages 75 and older were victimized the least. This misconception that only the elderly are susceptible to fraud can prevent Americans from taking the necessary precautions to avoid falling victim to financial scams. [1]

One tactic that scam artists use to manipulate their targets is inducing them into a state of emotional arousal. Emotional appeals are especially effective at increasing reliance on "gut reactions" rather than on careful, deliberative thinking typically needed for complex decisions. Stanford Center on Longevity research scientist, Marti DeLiema, and her colleagues performed an experiment to test the effects of feeling excited or angry versus feeling emotionally neutral on responses to false advertising. They administered this task to both older adults (ages 65 to 85) and younger adults (ages 30 to 40). Compared to the neutral group, individuals in a state

Younger people reported losing money to fraud **more often than older people.**

40%
Age 20-29

18%
Age 70+

of emotional arousal were significantly more likely to report wanting to make a purchase, regardless of whether or not they perceived the advertisements as credible. Notably, feeling either excited or angry versus neutral increased the likelihood that both young and older adults alike would make a fraudulent purchase. These findings indicate that younger adults may be just as vulnerable as older adults to scams when in a state of high emotional arousal. [2]

While older and younger adults are both targeted by financial predators, older people do stand to suffer more serious financial consequences if victimized. Millennials report being involved in more scams, but older adults report greater losses per scam—2017 median losses were $400 for younger adults versus $1,092 for those age 80+. [3] A persuasive scammer can effectively wipe out an older person's entire retirement savings. This is a major concern for retirees living on fixed incomes who are unable to make up for lost financial ground once they're out of the workforce. Common scams that target older adults include investment fraud, bogus sweepstakes, charity scams, and imposter scams.

Avoid falling victim to fraud by:

- *Teach consumers common tactics and messages delivered by fraudsters.*
- *Sign up for paperless delivery to avoid mail being intercepted.*
- *Register to receive fraud alerts for unusual financial activity.*
- *Engage family/friends in financial decision support similar to healthcare proxies.otect against fraud and poor financial decisions, and to maintain independence as they age.*

[1,2,3] http://longevity.stanford.edu/financial-security-report-2018

RETIREMENT PREPAREDNESS

BABY BOOMERS VERSUS SILENT GENERATION

Executive Summary

I n the past 50 years, life expectancy in the U.S. has changed drastically, from close to 70 years old in 1960 to nearly 79 years old in 2015. By contrast, society's approach to retirement hasn't changed much at all. Other than economic policy shifts to adequately fund longer retirement years, retirees aren't seeing new solutions to a longer retirement and are having to simply stretch their personal means even further. Living longer also has a unique set of financial implications for each generation, who, despite entering retirement at similar ages, vary considerably in the type and magnitude of challenges they face. Understanding generational differences in retirement adequacy can not only help current retirees be financially prepared for a longer life but also assist future generations who may encounter similar challenges.

In this study, we provide a nuanced assessment of the financial security of Americans age 55+ during the period of 1992-2014, using the Health and Retirement Study (HRS) data. We distinguish between early and later born members of the baby boom generation and compare them to early and later born members of the Silent Generation.

Key Findings

- Overall, baby boomers are in a financially weaker position than earlier generations of retirees.
    - In 2014, mid-boomers had less home-equity, financial wealth, and total household wealth than retirees who were 10 years older.
    - Holding age fixed, mid-boomers age around 55-60 years old had saved less than previous generations at the same age.

- Boomers have less money in retirement funds.
    - Approximately 30 percent of baby boomers had no money saved in retirement plans in 2014. Mid-boomers had the lowest level of retirement plan balances across all cohorts.
    - Holding age fixed, a 50-year old mid-boomer had saved less in any retirement plans, including workplace plans and Individual Retirement Account plans, than a 50-year old from prior generations.

- Boomers have high levels of debt.
    - About two-thirds of baby boomers had debt in 2014, compared to only 20 percent and 40 percent of those born before the early 1940s. Among households with non-zero debt, mid-boomers' average debt reached $120,000, much higher than that of prior generations.
    - Holding age fixed, boomers age 55-60 had a higher debt burden than prior generations at the same age, evidenced in a higher debt-to-net worth ratio, a lower liquid-asset to all asset ratio, and a higher loan-to-value ratio.

- One reason for these generational differences is a change in housing market conditions. Earlier cohorts enjoyed a long and steady growth in home equity, helping them to withstand the burst of the housing bubble in the late 2000s. Boomers in their mid to late 50s were hit relatively hard by the housing market crash, with greater loss in equity. However, this economic downturn alone doesn't explain it all. Some troubling signs, including less savings and higher debt, were already emerging among baby boomers, especially the younger boomers, prior to the financial crisis.

Compared to older generations, baby boomers have accrued less savings and more debt, putting them in an especially vulnerable financial position as they move through retirement. Considering the vast size of the boomer population, increased life expectancy, and the rate at which today's boomers are retiring, being ill-prepared for retirement has profound implications for the overall well-being of individuals, families, and society today and for generations to come.

DISENTANGLING DIFFERENCES IN RETIREMENT PREPAREDNESS BETWEEN BABY BOOMERS AND SILENT GENERATION

Jialu Streeter, Amal Harrati

Overview

Relative to the working population, U.S. retirees have fewer sources of ongoing income to utilize for their financial needs. They rely primarily on Social Security, employer-sponsored retirement accounts, Individual Retirement Accounts (IRAs), and, to some extent, their homes. The opportunities to further accrue income-generating assets, such as stocks and bonds, diminish for most people post-retirement. Corresponding to the declining income are growing health costs, which are expected to continue rising to a degree that could be potentially prohibitive for many retirees. In 2013, average out-of-pocket health care spending by Medicare beneficiaries was 41 percent of average per capita Social Security income [1]. Life expectancy in the U.S. has also increased, from 69.7 years in 1960 to 78.7 years in 2015 [2]. However, the standard retirement age hasn't changed accordingly [3], which means that, absent other means, funds have to be stretched across a longer lifespan.

Whether or not older Americans are well prepared for retirement and longevity has profound implications in many arenas, including at the individual, family, and societal level. A lack of retirement preparation is associated with increased depressive symptoms in the elderly [4,5]. On the other hand, retirement planning is significantly and positively associated with life satisfaction and psychological well-being [6,7].

This section assesses the financial security of older Americans, with a special focus on the baby boom generation. As the first generation of Americans born after World War II, baby boomers have always had an outsize presence compared with other groups, including the Silent Generation, GenX, and millennials. As of 2012, boomers accounted for a quarter of the U.S. population. But there's no consensus among researchers about whether older adults in general – and baby boomers in particular – are financially prepared for their retirement and longevity [8-22]. Researchers with a positive view believe the real income of older adults will continue to rise and the so-called retirement crisis will likely not happen. In contrast, researchers in the pessimistic camp argue that the retirement outlook of older individuals, especially baby boomers, is bleak due to a longer life expectancy, rising health costs, falling interest rates, and less generous Social Security benefits.

Using the *Health and Retirement Study* (HRS) data collected during the period 1992-2014, we examined the financial well-being of older households, starting with heads of households in their 50s and tracking them well into the last years of their life. We provide both a snapshot of the situation in 2014, where the year is fixed, as well as a multi-cohort analysis, where the age is fixed. Baby boomers, with less savings and more debt, were found to be financially vulnerable and may be less adequately prepared for their retirement than were prior generations.

Key Findings

- Overall, baby boomers are in a financially weaker position than earlier generations of retirees, in terms of home equity accumulation, financial wealth, and total wealth.

    - In 2014, boomers had less home-equity, financial wealth, and total household wealth than retirees who were 10 years older.
    - One-third of baby boomers had no money saved in retirement plans in 2014, when they were age 58, on average, leaving them with little time to start saving for retirement. Even for those with positive balances, the median was only about $200,000.

- To make consistent comparisons, we compared different birth cohorts when they were in their 50s.

    - Mid-boomers had the least amount of net worth and home equity.
    - Mid-boomers also had the lowest level of retirement funds.
    - Boomers overall had accumulated the most debt, both in absolute terms and as a share of their wealth, compared to prior generations. Such heavy debt burden renders boomers more financially vulnerable and prone to economic downturns than prior generation.

- The 2008 financial crisis worsened baby boomers' retirement resources.

    - Boomers were inadequately prepared for retirement, even prior to the Great Recession.
    - Highly leveraged in debt, many boomers were hit hard during the financial crisis and suffered a slower recovery post-recession.
    - The housing market crash coincided with the beginning of many baby boomers' retirement, which deprived them of home equity growth opportunities.

A Closer Look

The following analysis is composed primarily of two parts. First, we take a snapshot of 2014, where we examine the financial state of older Americans of different age groups, holding the time fixed. Second, in a multi-cohort comparison where age is fixed, we study the wealth and debt of different cohorts when they reached similar stages in life. All monetary values have been converted to real 2014 dollars.

We focused primarily on the following birth cohorts:

	Cohort Name	Birth Year
The Silent Generation	Older Silent Generation	Before 1942
	War Babies (WB)	1942-1947
The Boomer Generation	Early Boomers (EBB)	1948-1953
	Mid-Boomers (MBB)	1954-1959

Boomers' Wealth Declining vs. Prior Generations

As shown in Figure 3.1, comparing household wealth[1] in 2014 by age cohorts highlighted baby boomers' inadequate savings. As older cohorts have been drawing down their savings for more years than boomers, one might be inclined to think that boomers should have more in savings than their older counterparts -- they do not. Mid-boomers had less total wealth, whether we measured wealth by mean or median.

Compared to earlier cohorts, boomers had less household wealth in 2014
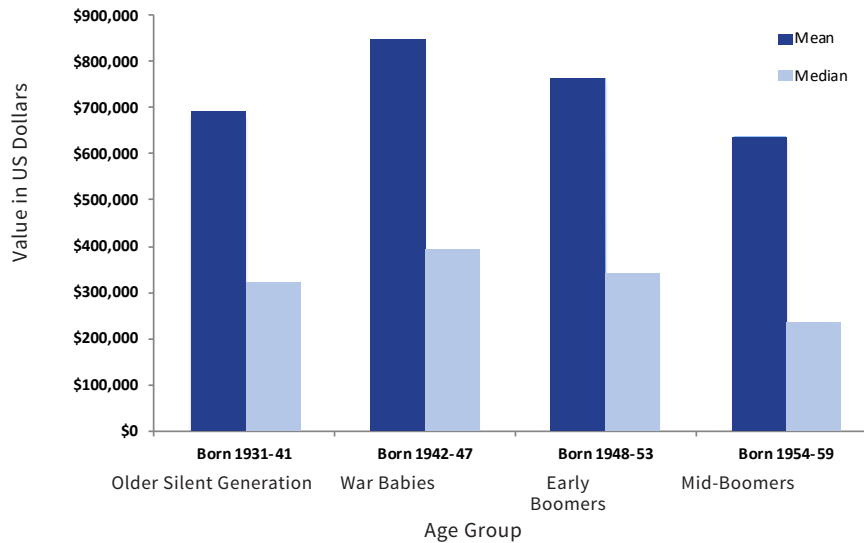
Figure 3.1: The mean and median of household wealth, 2014.

Compared to war babies, mid-boomers had lower wealth in all categories in 2014, including home equity, workplace retirement accounts,[2] IRAs, and other financial wealth, such as stocks, bonds, and savings account balances. This is rather surprising, given the fact that war babies are more than 10 years older than mid-boomers and have been withdrawing from their retirement funds for a longer period of time. Since age is a confounding factor when comparing different birth cohorts in the same year, in the second part of the analysis, we compared various cohorts when they reached the same age to eliminate any potential age effects.

Compared to war babies, mid-boomers had saved less in almost every wealth categories in 2014
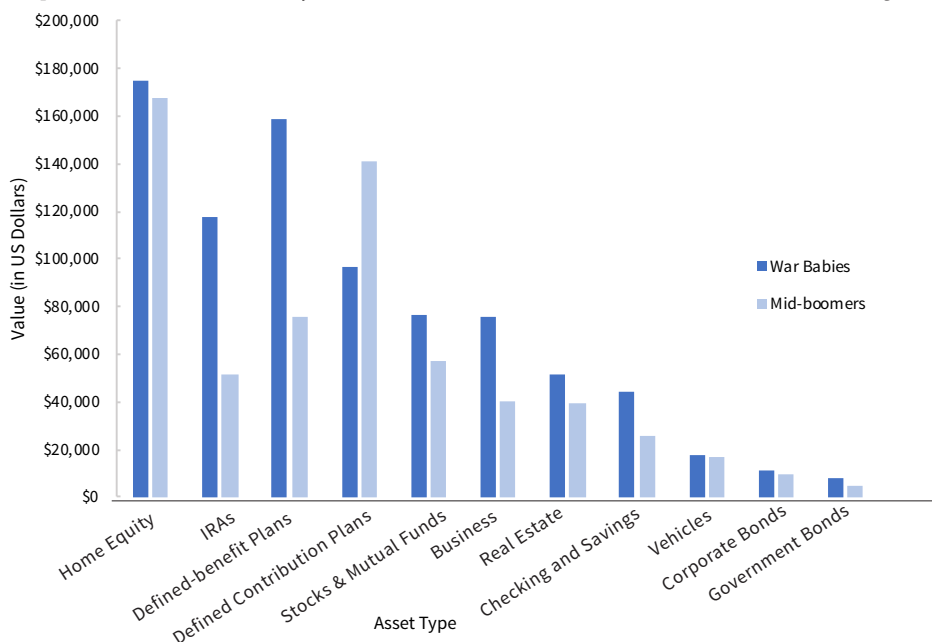
Figure 3.2: Household wealth comparison of two generations, 2014

Compared to previous generations of retirees, baby boomers had accumulated less in all wealth categories, including home equity, retirement accounts, and financial wealth.

Boomers Have High Levels of Debt

A high debt level relative to wealth renders families financially vulnerable, especially in economic hard times. A growing number of older Americans are suffering under the weight of mortgage loans, student loans, and credit card loans, jeopardizing their retirement security. For example, the proportion of homeowners over age 65 who haven't paid off their housing debt rose to 35 percent in 2012 from 23.9 percent in 1998, and the median amount they owed doubled from $44,000 to $82,000 [23]. The number of people age 60+ with student loans quadrupled from about 700,000 to 2.8 million between 2005 and 2015 [24]. Between 1989 and 2010, the percentage of families with credit card debt decreased for those under age 55 but showed a sharp increase for those age 55 and older [25].

Compared to previous cohorts, boomers are more likely to borrow, and when they do, they carry a higher debt balance (Figure 3.3).

- About 70 percent of mid-boomers had some debt in 2014, compared to only 20 percent of those born before 1930 and 40 percent of those born in the 1930s.
- Among households with debt, baby boomers had an average debt level over $110,000, which was more than 50 percent higher than that of people born in the 1930s.

Compared to earlier cohorts, boomers are more likely to carry debt and have greater debt balances

Figure 3.3: Percentage of families with debt and average debt balances, 2014

In addition to the absolute level of debt, it's also important to examine the relative debt burden, which represents how large the debt balances are as a share of household income or wealth. Relative debt burden measures provide an indication of a household's financial vulnerability [15]. Our results show that mid-boomers had a median debt-to-wealth ratio of 16 percent, the highest across the board (Figure 3.4). We also analyzed the proportion of households with extremely high debt-to-wealth ratios. Three thresholds were used: 50 percent, 80 percent, and 100 percent. Again, more boomers crossed the dangerous thresholds. In particular, 15 percent of mid-boomers had debt exceeding 50 percent of their wealth, 11 percent had debt exceeding 80 percent of their wealth, and 8 percent had debt exceeding 100% of their wealth.

Compared to earlier cohorts, boomers have the highest debt-to-wealth ratio
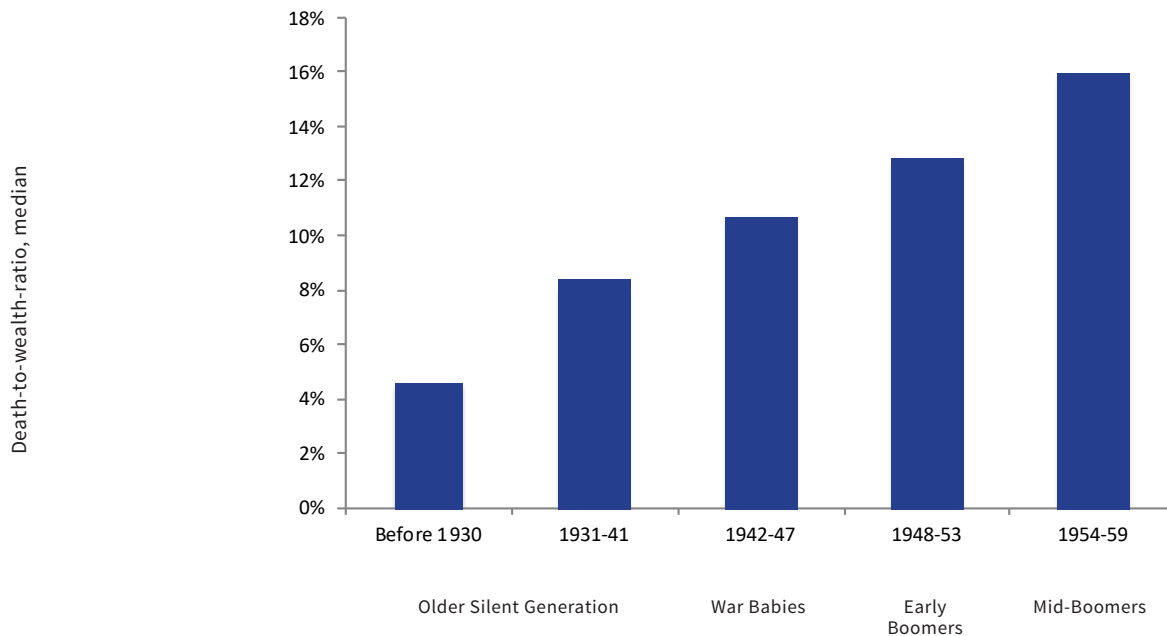
Figure 3.4: Median debt-to-wealth ratios by birth cohorts, 2014.

Boomers Have the Lowest Balances in Retirement Plans

We would expect boomers to have more on average in their retirement plans than their older counterparts, since boomers had been in retirement in 2014 for less time than older generations; however, data shows inadequacy in boomers' retirement plan levels.

- About 30 percent of mid-boomers had zero balances in retirement accounts
- Among those with positive balances, their average retirement plan balances showed signs of inadequacy.

Table 3.1: Holding of retirement plans, and balances in 2014

| Birth Year | Average Age in 2014 | Workplace Retirement Plans + IRAs | |
		Percent with Positive Balance	Median Balance, if Balance is Positive
1931-41	77	67.9%	$178,266
1942-47 (War Babies)	69	74.5%	$280,053
1948-53 (Early Boomers)	63	70.6%	$290,000
1954-59 (Mid-Boomers)	58	71.7%	$209,246

It is alarming to see that nearly 30 percent of baby boomers have a zero balance in their retirement accounts (workplace retirement plans and IRAs together). Even among those with positive balances, the median was only $209,000 for mid-boomers, less than the balances for war babies ($280,000) and early boomers ($290,000). On average, mid-boomers were 58 years old in 2014, leaving them with another 20 to 30 years or more to live. Given these low balances, it will be challenging for them to retire full time at age 65 and try to maintain their pre-retirement standard of living.

The analysis above provides a snapshot of debt for older households in 2014. Though useful in its own way, it underestimates the savings inadequacy for the baby boomer generation as the age effect is not fully accounted for. The differences in wealth and debt in 2014 may be attributable to age and how long an individual has been in retirement. But to complement the cross-sectional analysis, we next used a multi-cohort comparison to examine the financial state of different cohorts when they were at the same stages in life.

Net Worth, Income, and Debt

Figure 3.5 shows the distinctions in net worth, income and debt, and housing equity across four cohorts, when each of the cohort members were around age 55-60.

We noticed several notable distinctions across cohorts:

- Different initial levels of assets and debts
    - At age 55, mid-boomers had lower levels of net worth than earlier generations at the same age.
    - Between age 55-60, boomers had higher levels of debt than earlier generations at the same age.
- Different growth trajectories
    - Prior cohorts had significant growth in net worth after age 55.
    - Early boomers had negative growth in net worth between age 55-60, possibly attributable to the Great Recession.
- Home equity
    - Earlier cohorts enjoyed a long and steady growth in home equity, helping them to withstand the burst of the housing bubble in the late 2000s.
    - Boomers in their mid to late 50s were hit relatively hard by the housing market crash, with a greater loss in equity. We do, however, observe some signs of them recovering from the crash.
- Debt
    - At age 55, early boomers and mid-boomers had accumulated more than $30,000 in debt, an amount that's much higher than that of the earliest cohort ($15,000) at the same age.
    - Early boomers showed some progress in reducing their debt between age 55 and 65; however, they still had more outstanding loans than earlier cohorts in their mid-60s.
    - Mid-boomers reduced their debt at a slower rate than early boomers between age 55 and 60. More data is needed to reveal whether mid-boomers are keeping up their effort in paying off their loans, as the latest HRS data for mid-boomers stops at age 60.

At age 55, boomers had less wealth, home equity, and income but more debt than previous generations measured at the same age

Figure 3.5: Multi-cohort comparison of net worth, debt, and income.
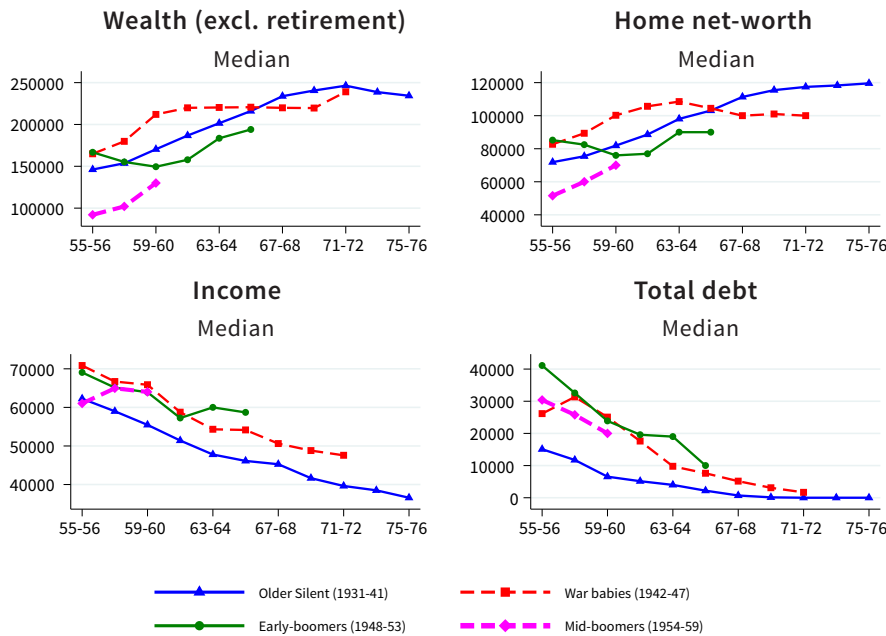
> *Compared to previous cohorts, mid-boomers had accumulated less in family net worth as well as in home equity at age 55, though that's partly attributable to the Great Recession.*

Debt Indicators

We follow Lusardi, et al. [15] and consider a family to be financial vulnerable if they have high levels of debt. The following key indicators were calculated:

- Debt-to-net worth ratio
- Liquid-asset to all-asset ratio
- Loan-to-value ratio

Table 3.2: Debt burden at age 55-60 (median)

Birth Year	Debt-to-Net Worth Ratio	Liquid-Asset to All-Asset Ratio	Loan-to-Value Ratio
1931-41	8.28%	9.27%	15.41%
1942-47 (War Babies)	14.15%	9.18%	23.02%
1948-53 (Early Boomers)	20.32%	6.83%	28.28%
1954-59 (Mid-Boomers)	25.01%	6.90%	33.75%

Note: The standard errors and confidence intervals are reported in the white paper [43], but omitted here to conserve space.

---

[3] The life expectancy for Americans at age 60 was an additional 23 years in 2015, according to Global Age Watch Index (2015).
[4] Household net worth is the sum of checking and savings accounts, stocks, bonds, mutual funds, home equity, business value, and non-residential real estate value, net of any debt, but does not include Social Security wealth or employer-sponsored retirement plan balances. We explore those elements in the full-length research paper [42].

The results in Table 3.2 show that, at around age 55-60, early and mid-boomers have significantly heavier debt burdens than earlier generations at the same age. For mid-boomers in particular, debt levels exceed one-quarter of their net worth and are close to half of their annual income. The loan-to-value ratio was calculated as outstanding home loans divided by the market value of main residences. From the earliest Silent Generation to the latest mid-boomers, the loan-to-value ratio continued to increase. Compared to prior generations, boomers appear to be more likely to carry mortgage debt into retirement and to carry a higher level of debt compared to their assets.

According to the Federal Reserve Bank of St Louis, the household debt-to-GDP ratio in the United States rose from less than 20 percent in 1947 to its peak level of nearly 100 percent in 2008. As of 2016, household debt remained at 80% of GDP, much higher than that of many other OECD countries, such as Germany (53 percent), France (55 percent), Italy (57 percent), and Spain (77 percent). Our analysis above, which focuses on the older households in America, provides further evidence that each generation of retirees faces heavier debt burdens than do previous generations. Whether and how we can manage debt obligations at the household level, as well as at the national level, will have a deep impact on the economy and future living standard in the U.S.

Retirement Plans at Age 51

Retirement plan balances are dynamic, dependent upon both age and how long a person has been in retirement. To eliminate the age effect, we compared the retirement plans, including workplace retirement plans and IRAs, of four birth cohorts, all at age 51. We chose to examine the retirement preparedness at age 51, because by this age, most people have worked several decades but not many have begun to withdraw money from their retirement accounts yet.

Table 3.3: Holding of retirement plans, and balances at age 51

	Workplace Retirement Plans + IRAs	
Birth Year	Percent with Positive Balance	Median Balance, if Balance is Positive
1931-41	73.5%	$115,104
1942-47 (War Babies)	75.7%	$157,871
1948-53 (Early Boomers)	74.3%	$129,512
1954-59 (Mid-Boomers)	68.9%	$108,099

As shown in Table 3.3, the percentage of households of those age 50 with positive balances in any retirement plans – considering both workplace retirement plans and IRAs – has declined from more than 75 percent for war babies to 68.9 percent for mid-boomers. Among those with any balances in their retirement plans, mid-boomers had saved about $108,000 at age 51 compared to more than $157,000 for war babies when they were at the same age. Most baby boomers reached age 51 before the Great Recession, and therefore, their lower levels of retirement plan ownership and balances cannot be solely explained by the unfavorable economic conditions of the late 2000s.

Conclusion

We analyzed the retirement preparedness of older American households by examining their net worth, income, and debt, and discussed a number of alarming signs regarding baby boomers' retirement security outlook. It is critical for researchers and policymakers to acknowledge the fact that as they approach retirement, baby boomers are financially vulnerable in distinct ways from their older counterparts. Moreover, it is necessary to consider not only variation among baby boomers but also to consider both current savings and debt burdens to get a complete picture of retirement preparedness among these diverse generations.

Key Takeaways

- Given the current level of assets and debt among boomers, it's highly likely that they will either need to reduce their spending in retirement, work into their late 60s and 70s, or do some combination of the two.
- One potential remedy would be to reduce spending in retirement, but doing so can be easier said than done. In fact, after their children leave home, many households spend much of their extra income, rather than saving it, [26]. In addition, the number of older adults with heavy credit card debt is on the rise [27].
- Baby boomers may also need to consider the option of working longer, either part or full time, to expand their opportunities to accumulate financial resources, pay down debt, and allow existing resources to grow. A handful of papers examine the financial case for working longer [28-30]. In theory, working longer may seem reasonable, as boomers are expected to live longer than prior generations, and many are sufficiently healthy to work [31]. However, in practice, as of 2015, more than half of all Americans still retire between ages 61 and 65, and the retirement age among males in 2015 is even slightly below that in 1962 [3, 30].
- Notably, working longer may not be an option for some older workers. Many retirees state that they had retired before they had planned, due to health care or economic shocks, as revealed in retirement surveys by EBRI [32], Transamerica [33], and the Society of Actuaries [34].
- Among the bright spots, however, is that entrepreneurship among boomers appears strong when compared to younger age groups [35]. This invites discussions on how policymakers can help boomers enter and sustain successful business ventures [36].
- For recent retirees and those getting ready to soon stop working, it will be essential to optimizechoices that ensure financial security for the next 20 to 30 years or even more. Researchers have emphasized the benefits of delaying Social Security retirement income, optimal strategies for drawing down retirement assets, and additional strategies that can help retirees manage existing housing and non-housing assets [37-41]. As much effort is needed to support strategies for addressing debt burden, particularly among those approaching retirement.

Food for Thought

- Have there been fundamental shifts in the consumption and savings behaviors between different generations? Controlling for age, has the Silent Generation had a higher household saving rate, and/or a lower consumption rate, than later generations?
- How can older workers position themselves to work longer compared to prior generations, and how can employers best accommodate these older workers? With more people successfully managing chronic illnesses, for instance, designing flexible work options might help make working longer more of a reality today than even just a few years ago.
- What are some best-case and worst-case scenarios for retirement security? What kinds of economic and policy shocks are poised to exacerbate or mitigate the current retirement situation? And what can we do to prepare for that? For example, what is the role of young adult children returning to live with parents facing retirement and how might we reposition this potential threat to retirement security into an opportunity?
- What are some realistic strategies for alleviating the threat of increased costs for medical care and long-term care? How do rising and unpredictable health care costs affect implementation of promising strategies? Relatedly, what strategies are being developed and show the most promise for addressing the threat of long-term care expenses? How might any of these approaches vary as a function of generation (i.e., boomers vs. silent) and life stage (i.e., early vs. late old age)
- What lessons can we learn from other countries and cultural contexts more broadly in promoting retirement security? What lessons have been learned across these contexts? Or does retirement security hold distinct meanings and values that cannot be compared across such contexts? In this case, can these lessons ever be comparably applied to other contexts?

References

[1] Cubanski, J., Neuman, T., Damico, A., and Smith, K. (2018). Medicare beneficiaries' out-of-pocket care spending as a share of income now and projections for the future. Kaiser Family Foundation. Retrieved from https://www.kff.org/report-section/medicare-beneficiaries-out-of-pocket-health-care-spending-as-a-share-of-income-now-and-projections-for-the-future-report/

[2] World Bank (2017). Life expectancy at birth, total (years). Retrieved from http://data.worldbank.org/indicator/SP.DYN.LE00.IN?locations=US

[3] Munnell, A. (2017). Why the average retirement age is rising. Market Watch. October 15, 2017. https://www.marketwatch.com/story/why-the-average-retirement-age-is-rising-2017-10-09

[4] Albert L.C. (2006). A three-part study on the relationship between retirement planning and health. http://scholarcommons.usf.edu/cgi/viewcontent.cgi?article=3436&context=etd.

[5] Ju, Y.J., Kim, W., Lee, S.A, Lee, J.E., Yoon, H., and Park, Eun-Cheol. (2017). Lack of retirement preparation is associated with increased depressive symptoms in the elderly: findings from the Korean retirement and income panel study. Journal of Korean Medical Science, 32(9): pp. 1516-1521. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5546973/

[6] Taylor M. A. & Doverspike D. (2003). Retirement planning and preparation. In G.A. Adams & T.A. Beehr (Eds.) Retirement: reasons, processes and results (pp. 53-82). New York: Springer Publishing.

[7] Noone J.H, Stephens C., and Alpass, F.M. (2009). Preretirement planning and well-being in later life: a prospective study. Research on Aging. 2009, 31:295–317.

[8] Scholz, J.K., Seshadri, A,, and Khitatrakun, S. (2006). Are Americans Saving Optimally for Retirement? Journal of Political Economy. August, 607-643.

[9] Scholz, J.K. and Seshadri, A. (2008). Are All Americans Saving Optimally for Retirement? University of Michigan Retirement Research Center, working paper, 2008-189.

[10] Biggs, A. and Schieber, S. (2014). Retirees aren't headed for the poor house. American Enterprise Institute. January 24, 2014.

[11] Biggs, A. (2017). New research confirms: no crisis for today's retirees. Forbes. August 1, 2017. Opinion section. Retrieved from https://www.forbes.com/sites/andrewbiggs/2017/08/01/new-research-confirms-no-crisis-for-todays-retirees/#560562203ac1

[12] Munnell, A.H., Webb, A., and Golub-Sass, F. (2007). Is There Really A Retirement Saving Crisis - An NRRI Analysis. An Issue in Brief. Center for Retirement Research at Boston College, August, No. 7-11.

[13] Poterba, J. (2014). Retirement Security in an Aging Population. American Economic Review: Papers & Proceedings, 104(5).

[14] Munnell, A., Hou, W, and Sanzenbacher, G. (2018). National Retirement Risk Index Shows Modest Improvement in 2016. Center for Retirement Research, Boston College. Retrieved from http://crr.bc.edu/briefs/national-retirement-risk-index-shows-modest-improvement-in-2016/

[15] Lusardi, A., Mitchell, O., and Oggero, N. (2017). Debt and Financial Vulnerability on the Verge of Retirement. Global Financial Literacy Excellence Center, working paper series, WP 2017-1. Retrieved from http://gflec.org/wp-content/uploads/2017/06/WP-2017-1-Debt-and-Financial-Vulnerability-on-the-Verge-of-Retirement.pdf?x87657

[16] Lusardi, A. and Mitchell, O. (2007). Baby Boomer Retirement Security: The Roles of Planning, Financial Literacy and Housing Wealth. Journal of Monetary Economics, 54(1), 205-224.

[17] Lusardi, A. and Mitchell, O. (2011). Financial Literacy and Retirement Planning in the United States. Journal of Pension Economics and Finance, 10(4), 509-525.

[18] Lusardi, A., Mitchell, O., and Oggero, N. (2018). The Changing Face of Debt and Financial Fragility at Older Ages. AEA Papers and Proceedings, 108: 407–411.

[19] Munnel, A.H., Hou, W., Webb, A., and Li, Y. (2016). "Pension participation, wealth, and income: 1992-2010". Center for Retirement Research, Boston College. Retrieved from http://crr.bc.edu/working-papers/pension-participation-wealth-and-income-1992-2010/

[20] Fang, C., Brown, C., and Weir, D. (2016). "Cohort changes in Social Security and pension wealth." Michigan Retirement Research Center, working paper, 2016-350. Retrieved from http://projects.isr.umich.edu/mrrc-archive/publications/papers/pdf/wp350.pdf

[21] Fellowes, M. and Plews, L. (2016). "The state of retirees – how longer lives have changed retirement." United Income. Retrieved from https://unitedincome.com/documents/papers/UnitedIncomeStateOfRetirees.pdf

[22] Love, D., Palumbo, M., and Smith, P. (2008). "The trajectory of wealth in retirement." Federal Reserve Board, working paper, 2008-13. Retrieved from https://www.federalreserve.gov/Pubs/feds/2008/200813/200813pap.pdf

[23] Butrica, B. and Mudrazija, S. (2016). Home equity patterns among older American households. Urban Institute. https://www.urban.org/sites/default/files/publication/85326/home-equity-patterns-among-older-american-households_0.pdf

[24] Consumer Financial Protection Bureau (CFPB) (2017). Snapshot of older consumers and student loan debt. https://files.consumerfinance.gov/f/documents/201701_cfpb_OA-Student-Loan-Snapshot.pdf

[25] Traub, A. (2013). In the red: older Americans and credit card debt. AARP Middle Class Security Project. https://www.aarp.org/content/dam/aarp/research/public_policy_institute/security/2013/older-americans-and-credit-card-debt-AARP-ppi-sec.pdf

[26] Dushi, I., Munnell, A.H., Sanzenbacher, G.T., Webband, A., and Chen, A. (2016). Do Households Save More When the Kids Leave Home? Center for Retirement Research at Boston College, Brief, IB 16-8.

[27] Pham, S. (2011). Retirements Swallowed by Debt. New York Times, January 26, 2011. Retrieved from https://newoldage.blogs.nytimes.com/2011/01/26/retirements-swallowed-by-debt/

[28] Clark, R., Hammond, R., Morrill, M., and Pathak, A. (2015). Work after retiring: work-life transitions of public employees in North Carolina. 2015 SIEPR Conference on Working Longer and Retirement. Stanford University. Working paper.

[29] Goldin, C. and Katz, L.F. (2018). Women Working Longer, Increased Employment at Older Ages. The University of Chicago Press.

[30] LIMRA Secure Retirement Institute (2015). Retirement Income Reference Book. Presentation to Federal Advisory Committee on Insurance.

[31] Lowsky, D.J, Olshansky, S.J, Bhattacharya, J., and Goldman, D.P. (2014). Heterogeneity in healthy aging. Journal of Gerontology. Series A, Biological Sciences and Medical Sciences, Jun, 69(6):640-9.

[32] Retirement Confidence Survey (2018). Employee Benefit Research Institute. https://www.ebri.org/surveys/rcs/2018/

[33] Transamerica (2017). 18th Annual Transamerica Retirement Survey. https://www.transamericacenter.org/retirement-research/18th-annual-retirement-survey

[34] Society of Actuaries (2017). 2017 Risks and Process of Retirement Survey. https://www.soa.org/research-reports/2018/retirement-risk-survey/

[35] Ozkal, D. (2016) Millennials Can't Keep up With Boomer Entrepreneurs. Kauffman Foundation. Retrieved from https://www.kauffman.org/blogs/currents/2016/07/age-and-entrepreneurship

[36] Lusardi, A., Christelis, D, and Scheresberg, C. (2016). Entrepreneurship among Baby Boomers: Recent evidence from the Health and Retirement Study. Global Financial Literacy Excellence Center, Policy Brief.

[37] Ramnath, S., Shoven, J., and Slavov, S. (2017). Pathways to retirement and the self-employed. Stanford Institute for Economic Policy Research, discussion paper No. 17-002.

[38] Nyce, S., Schieber, S., Shoven, J., Slavov, S, and Wise, D. (2015). Survey results for DB retirees: lump-sum vs. annuities and social security claiming behavior. 2015 SIEPR Conference on Working Longer and Retirement. Stanford University.

[39] Bronshtein, G., Scott, J., Shoven, J., and Slavov, S. (2016). Leaving big money on the table: arbitrage opportunities in delaying social security. NBER, working paper no. 22853.

[40] Pfau, W., Tomlinson, J., and Vernon, S. (2017). Optimizing Retirement Income by Integrating Retirement Plans, IRAs, and Home Equity - A framework for evaluating retirement income decisions. Stanford Center on Longevity, working paper. Retrieved from http://longevity.stanford.edu/wp-content/uploads/2017/11/Optimizing-Retirement-Income-Solutions-November-2017-SCL-Version.pdf

[41] Armour, P. and Hung, A. (2017). Drawing down retirement wealth: interactions between social security wealth and private retirement savings. RAND, working paper 1165.

[42] Streeter, J.L. (2018). Savings and debt of older Americans: alarming signs for baby boomers. Stanford Center on Longevity, research report.

Retirement Attitudes among Educators with Pensions

In collaboration with the California State Teachers' Retirement System (CalSTRS), the Sightlines project from the Stanford Center on Longevity investigated how public school teachers in California are preparing for longevity. Teachers reported on their career and retirement preferences, as well as their financial, physical, and social well-being.
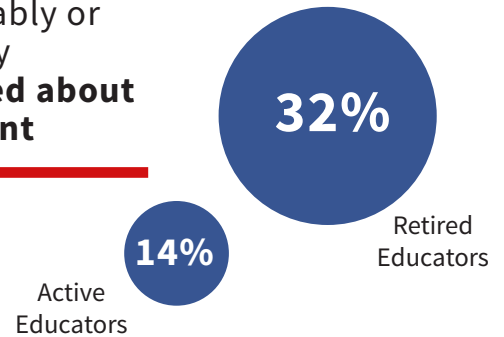
Although educators report sitting for longer periods of time more than the general U.S. population, they are also more likely to meet recommendations for fruit and vegetable intake and sleep. California teachers are also more likely to volunteer.

In collaboration with the California State Teachers' Retirement System (CalSTRS), the Sightlines project from the Stanford Center on Longevity investigated how public school educators in California are preparing for longevity. Teachers reported on their career and retirement preferences, as well as their financial, physical, and social well-being.

Percentage of educators who report to be either considerably or extremely **concerned about retirement**

32%
Retired Educators

14%
Active Educators

Social support is key to how teachers feel about retirement. Educators with more support from friends feel more excited and happier about retirement than those with less support. Teachers with the least amount of social support feel sadder when thinking about retirement. Compared to male educators, female teachers feel more concerned about retirement. Compared to active educators, educatorss who are already retired feel more excited and happier, and less concerned and sad when thinking about retirement.

We also found that educators prefer retirement to several hypothetical options including part-time work early or later in their career, career transition training, sabbaticals, and greater work flexibility. CalSTRS offers defined-benefit plans based on salary and years of experience, rather than on employee savings towards retirement. This may explain why most educators in our sample, especially those older than age 45, expressed a strong preference not to work beyond their expected retirement age. Using Sightlines as a framework, we are able to assess how California educators with pensions are preparing for long life and decipher where support is most needed.

GENDER INEQUALITIES

IN FINANCIAL SECURITY

Executive Summary

Many people consider financial knowledge key to achieving financial well-being throughout their entire life. But an open question remains regarding exactly how people, particularly women, successfully acquire and apply financial knowledge to achieve that goal. Understanding this process is especially critical for women because they perform substantially worse than men on assessments of financial literacy. Relatedly, women face significantly greater challenges to maintaining financial security in later life compared to men. For instance, among Americans age 50 years and older, men accumulate more wealth than women, with a gap that's upward of $100,000.

The goal of the current study is to investigate gender wealth inequalities as a way of illuminating underlying psychological processes that can be translated to interventions that aim to enhance financial security for Americans' longer lives. To do so, we examine the intersections among financial literacy, financial confidence, and financial decision-making involvement among both single and married men and women using a nationally representative sample of Americans age 20 to 94 through the RAND American Life Panel. We also explore how being financially literate and financially confident can affect the steps a person takes toward financial planning, such as starting a long-term career.

Key Findings

- Across all age cohorts, women scored lower than men on a financial literacy quiz. Gender disparities in financial literacy weren't explained by age, marital status, or education.
- Women showed less financial confidence than men in both financial literacy and decision making. Gender differences in financial confidence were specific to higher-stake decisions like investing versus routine decisions like budgeting for groceries.
- Women's lower financial confidence partly explains why women underperform men in tests of financial literacy. While the association between financial confidence and financial literacy is likely reciprocal, targeting financial confidence will likely enhance financial education programs.
- Increased financial confidence and involvement in financial decisions both correlate to higher financial literacy among single women, whereas involvement didn't affect literacy for married women. These findings suggest that for married women, "practice doesn't make perfect" when it comes to financial decision making and that increasing financial confidence versus financial involvement is a more promising path to financial literacy and security.
- There was a higher likelihood that women who felt financially confident would start a long-term career in early adulthood. Ensuring financial confidence early in life can help vulnerable groups start off on a stronger path to financial security.

The current findings are consistent with previous work done by leaders in the field of financial decision making, thus demonstrating the pervasiveness of gender inequalities in financial outcomes. Although these inequalities are robust across generations, modest declines in gender differences lend some credence to the possibility that progress in education and shifts in life course trajectories might help bridge the gender divide in financial security. Yet these changes don't reflect the whole story, as gender differences in the extent of involvement in making financial decisions and in starting career planning are significant even among younger and more educated groups. A great deal of existing research focuses on gender differences in longer-range decisions that are typically relevant to late mid-life and old age, such as those made regarding retirement, but we find these gaps across multiple stages of life and contexts. For instance, because women felt less financially confident, they also were less likely to start planning a long-term career in early adulthood. This may be one reason why women later reported lower salaries and pensions compared to men. While many programs focus on promoting financial literacy to bridge such gaps, these efforts may be futile without first addressing financial confidence. By targeting confidence first, women may be more open and able to learn financial information and might feel more capable of making major financial decisions. Thus, as financial confidence grows, financial education programs for women may be increasingly effective in boosting financial literacy, ultimately optimizing financial security throughout a long life.

# INVESTIGATING GENDER INEQUALITIES TO IDENTIFY PROMISING PATHWAYS TO FINANCIAL SECURITY

Hsiao-Wen Liao, Tamara Sims

Overview

Many people consider financial knowledge to be essential to achieving financial well-being throughout their entire life. Yet, compared to men, women show consistently lower levels of both financial knowledge and financial literacy. Women are similarly at a disadvantage when it comes to achieving financial security. For instance, when examining the cumulative wealth of Americans age 50 years and older [1], older men were shown to have accumulated more wealth than women of the same age by $100,000 or more. Analysis done in the Health and Retirement Study also shows that older women earn significantly less than men of the same age in terms of both salary and pensions (Figure 4.1).

On average, older women earn lower salaries and pensions than men
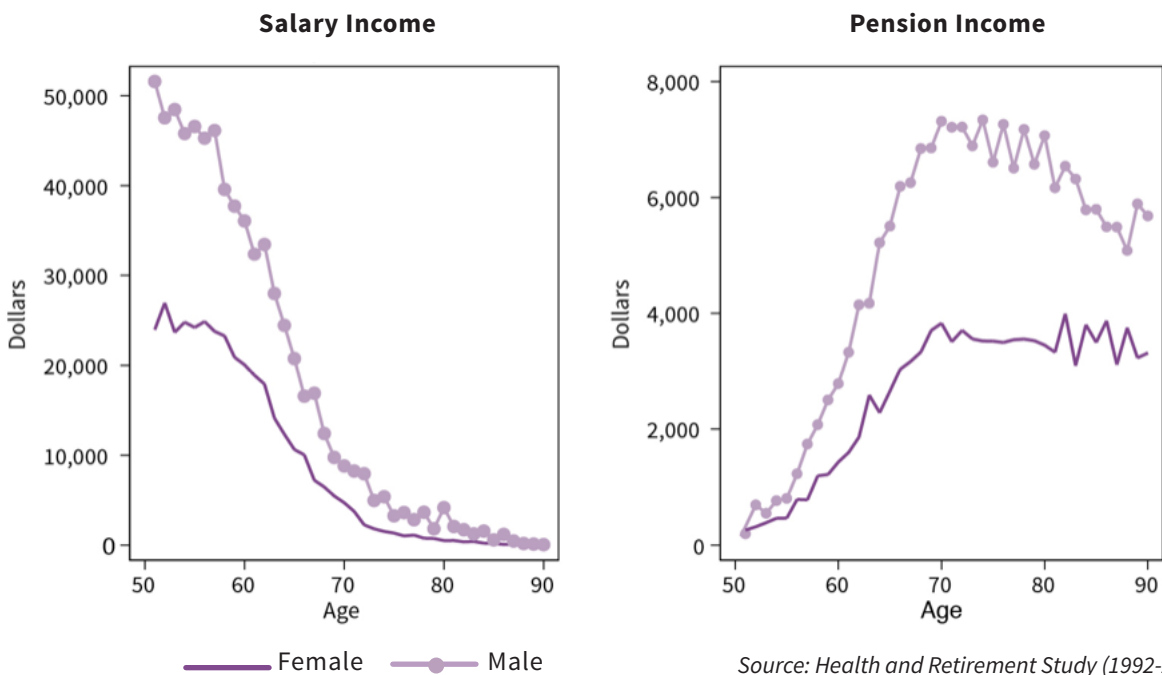
Source: Health and Retirement Study (1992-2014)

Figure 4.1: Gender gaps in salary and pension incomes. Inflation adjusted to 2014 U.S. dollars.

The observed inequality in the second half of life is especially concerning because women are living longer than men [2] and will require more financial resources to support themselves independently. To adequately sustain future generations of women facing this situation, it's going to be critical to address the issue of financial preparedness for women of all ages. Gender differences have often been cited as the reason for women's lack of financial literacy, leading some experts to suggest that financial education would be an effective strategy for reducing the inequalities between men and women.

Yet mixed evidence of the success of such efforts suggests other barriers may be at play, such as a lack of confidence or involvement in financial decision making. A lack of clarity about the effects of these strategies and how these factors relate to one another has hindered practitioners from identifying when and for whom to intervene most effectively to optimize women's financial futures.

Key Findings

- Regardless of age, women report being less confident than men both in terms of being unsure about answers on a financial literacy test and about their feelings regarding making key financial decisions, such as preparing taxes, taking out a home loan, and investing.
- Financial confidence predicts financial literacy for both men and women.
- Gender differences in the level of involvement in financial decisions depends on marital status.
    - Among single people, men and women managed financial decisions to a similar degree across all age groups.
    - Among married people, gender differences emerge across age groups:
        - Married men are more involved in major financial decisions (e.g., investing).
        - Married women are more involved in minor financial decisions (e.g., grocery budget).
    - Among single women, involvement in making financial decisions predicts higher financial literacy. Among single men, involvement in making financial decisions does not predict financial literacy, possibly because single men's financial literacy scores and involvement in financial decisions are relatively high to begin with.
    - Married people's involvement in making financial decisions is unrelated to their financial literacy, so there is no connection for married women between how financially literate they are and how involved they are in making financial decisions.
- Women's lower financial confidence not only explains lower financial literacy compared to men but also explains gender gaps in the age at which people start a long-term career.

According to a recent analysis of the *National Capability Financial Survey* [3], approximately 20 percent fewer married women than married men consider themselves to be the most financially knowledgeable person in their household across all generations. More younger women than older women claim to be the most knowledgeable, however, with a 7 percent uptick for married millennial women (53 percent) versus married boomer women (40 percent). One thing to note is that gender gaps in financial literacy among younger generations, such as for millennials, might be on the decline. For example, relative to men in previous generations:

1. Younger women are more likely to be recruited for jobs and educational opportunities in math and thus may have attained higher levels of financial literacy. Research shows that girls perform as well as boys in standardized scores in math throughout high school [4]. Research also shows that more women are joining the workforce in some STEM fields, specifically physical and life sciences: The percentage of female workers in these fields rose from 36 percent in 2000 to 40 percent in 2009 and 43 percent in 2015 [5-6].
2. Younger women are more likely to be college-educated than older women and thus may feel more confident in their ability to make financial decisions. In 2005, the number of women (32.3 percent) who had attained a four-year college degree was equivalent to the number of men who had done the same (32.7 percent) [7]. A recent report released by the Stanford Center on Poverty and Inequality indicates that more women than men are now attending college, offering more women the financial protection that a college degree offers [8].
3. Younger women are more likely to be single longer and thus may be more likely to make their own financial decisions. The percentage of unmarried women between the ages of 25 and 29 increased from 26.9 percent in 1986 to 46.8 percent in 2009 [9]. One could extrapolate that younger women who marry later than their peers may be more confident in and feel more responsible for making major financial decisions than women from any previous generation.

Given the advancements described above, it's reasonable to expect the gender gap in financial knowledge to be narrowing in younger generations. Nevertheless, multiple studies consistently show that men still outperform women in tests of financial literacy [10-12].

One reason for gender disparities in financial literacy may be due to women's relative lack of confidence in making financial decisions [23]. Less well-known is how this relates to becoming involved in making different types of financial decisions (daily household duties vs. higher stakes, long-range planning, for instance). To investigate the potential intersecting roles of financial literacy, financial confidence, and financial decision-making involvement, we surveyed a nationally representative sample of Americans age 20 to 94 (N = 1734) through the RAND American Life Panel. Our goal was to better understand the importance of women's financial literacy, financial confidence, and financial decision-making involvement relevant to achieving and maintaining financial security at all stages of adult life.

Financial literacy is a robust indicator of financial well-being, which has been linked to higher rates of financial security in later life [13]. Despite the changes in women's life trajectories related to education and marriage, however, as well as the advocacy and implementation of financial education programs, the financial literacy gap among men and women still persists. In a 2018 report based on the National Financial Capability Study by FINRA, young millennial women showed lower financial literacy than both millennial men and all older male generations [3]. Notably, sociodemographic factors (e.g., age, race, education, income, marital status [11-12]) did little to explain gender disparities.

Using the same survey as in the study above, we assessed financial literacy with five multiple choice questions. (For the complete quiz, see endnote 19.) In our study, we targeted a sample stratified uniformly by gender, age group, and education status so that we could break down gender effects by each of these subgroups.

Consistent with other research, we found that age and gender affected financial literacy scores. Overall, the two younger groups scored lower on financial literacy than the two older groups. Additionally, women answered fewer questions correctly than men. Notably, millennial women (i.e., the youngest group ages < 35) scored the lowest on the financial literacy survey compared to both men and older women (Figure 4.2A).

Given generational shifts in the percentage of women graduating college and delaying marriage, we expected that gender differences in financial literacy would be less pronounced among younger, college-educated, and unmarried individuals. Yet women underperformed men across all age groups regardless of age, education, and marital status. We also found that, on average, married persons scored higher than single persons, and individuals with a bachelor's degree scored higher than those without a bachelor's degree. Statistically, gender gaps were robustly significant and didn't differ between younger and older people, college-educated and non-college-educated people, and married and unmarried people (Figure 4.2B).

Women scored lower on a financial literacy quiz regardless of age group, marital status, and education level
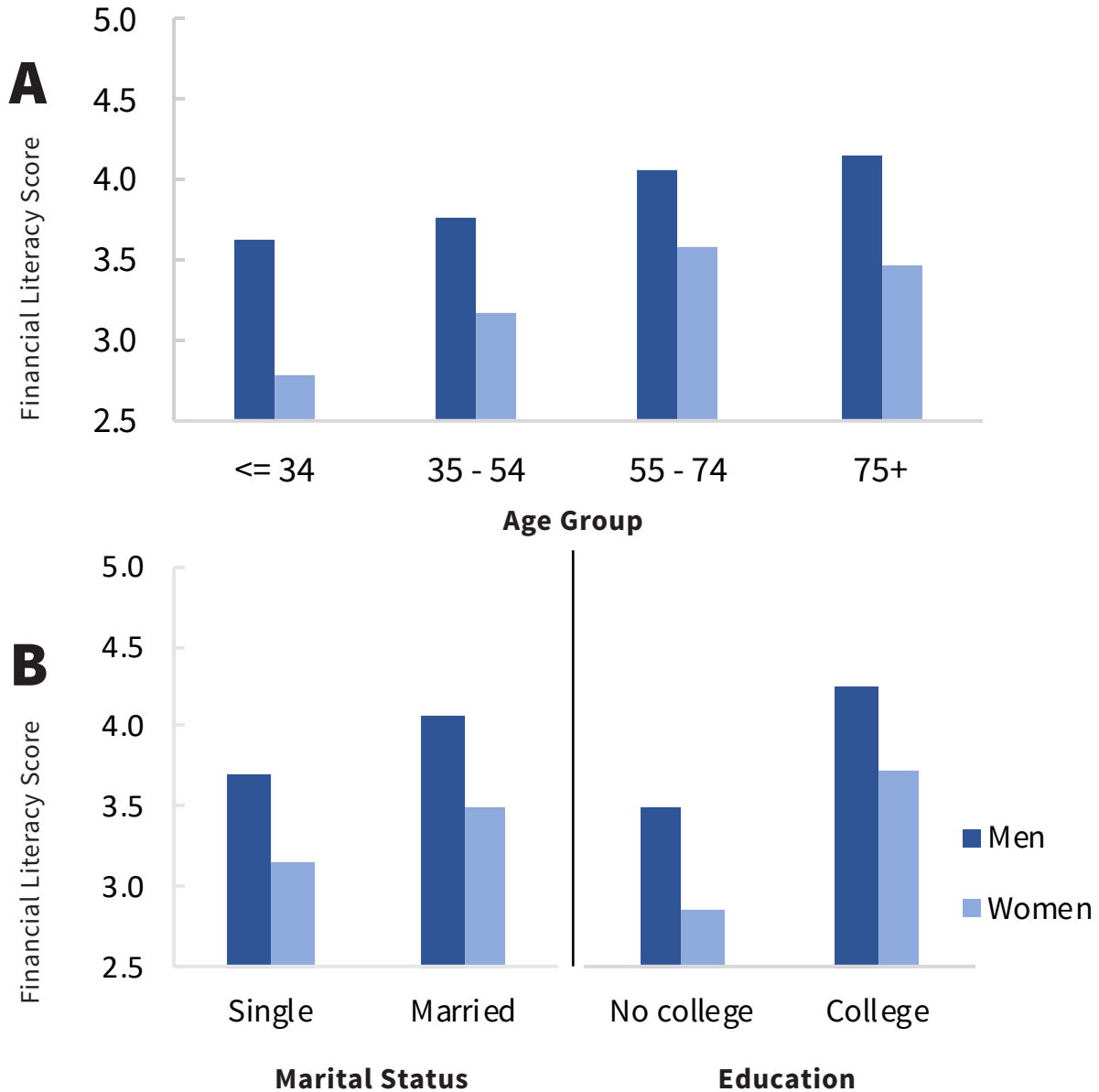

Figure 4.2 Financial literacy scores by gender, according to age group (4.2A), marital status (4.2B left), and education (4.2B right).

We found that gender disparities in finance are ubiquitous and persist irrespective of generational shifts in education and life trajectories. Yet how these gaps are produced and reinforced is still unclear. In the next analysis, we examined whether financial confidence and involvement in making financial decisions were pathways through which financial literacy could be changed. In contrast to previous research, we investigated financial confidence and involvement in financial decisions as determinants of financial literacy rather than as consequences of financial literacy.

Investigating Paths to Financial Literacy

Financial education is considered to be one of the most promising approaches to improving women's financial security, but despite far-reaching educational efforts, gender gaps in financial literacy remain. It may be that the gender gap isn't a reflection of lack of knowledge but rather of psychological beliefs and behavioral patterns that undermine women's learning and performance on tests of financial knowledge. Drawing from research on gender and STEM education, we focused on financial self-efficacy, or confidence, and experience, or involvement in making financial decisions. A common assumption of financial education efforts is that increasing literacy will increase financial confidence and involvement in making financial decisions rather than the other way around. If financial confidence and involvement in making financial decisions are precursors to financial literacy, however, then addressing one or both of these factors first will be necessary for financial education programs to be effective.

Confidence in Making Financial Decisions

In daily life, women report lower confidence than men across many situations. Not only are gender differences in self-confidence ubiquitous, it tends to emerge early in life [15]. Our first goal was to examine whether a lack of confidence in financial decision making across adult life stages explains gender differences in financial literacy.

It has long been documented that women have lower self-esteem, generally speaking, than men [14]. Girls start to show a greater lack of confidence than boys in their ability to excel at tasks that require "being smart" as young as age six [15]. Women also repeatedly report feeling less capable at mastering mathematics [16], a skill that's likely essential to acquiring financial literacy. More directly, American college-educated women report lower confidence in their ability to achieve financial goals compared to their male counterparts [17]. Women's confidence has also been shown to explain a difference in financial behavioral outcomes, such as investing [17, 18]. Thus, confidence appears to be strongly tied to financial literacy, though a causal relationship between the two has been difficult to establish.

Involvement in Financial Decision Making

Research also points to the importance of "learning by doing," which may explain gender gaps in financial literacy because women are less likely to practice making financial decisions, such as those involving wealth management [19]. To compound the issue, men are more likely than women to be responsible for financial decisions requiring higher levels of financial literacy as it is traditionally assessed [11]. For instance, in one study, about half of all men considered themselves to be the primary person responsible for filing taxes, tracking investments, and buying insurance versus about one-third of women. On the other hand, more women than men consider themselves to be the primary person in charge of daily household financial decisions, such as paying bills (women: 51.2 percent; men: 36.9 percent) and making short-term spending decisions (women: 43.2 percent; men: 24.6 percent). Notably, these types of decisions typically don't require having the type of knowledge assessed in standard financial literacy tests.

Involvement in making major financial decisions has also been found to be associated with higher financial literacy among married couples, although this association is primarily driven by married men [11]. That is, married men who were highly involved in making various types of financial decisions, such as paying bills, preparing taxes, making spending plans, and tracking investments, scored higher on financial literacy tests than did uninvolved married men. Among married women, however, as involvement in making financial decisions increased, increases in financial literacy were minimal and only found among people making two types of decisions: preparing taxes and making long-term spending plans. It may be that married women, in particular, aren't attributing their experiences in financial decision making to an inherent or learned knowledge of financial matters. Regardless, based on these findings, we also explored how marital status and gender interact to shape the associations between financial literacy, financial confidence and involvement in financial decision making.

In the current report, we examined whether gender differences in financial decision making emerge sequentially, beginning with gender differences in financial confidence and/or involvement in making financial decisions and subsequently leading to gender differences in financial literacy test scores. To do so, we tested a set of hypotheses to investigate the relationships among gender, financial decision making, and financial literacy as outlined below.

Path A: Confidence in Financial Decision Making
1. Women will be less confident than men in making financial decisions.
2. Distinct from involvement in major financial decisions, financial confidence will predict higher financial literacy and account for gender differences.

Path B: Involvement in Financial Decision Making
3. Women will be less involved than men in making major financial decisions.
4. Distinct from financial confidence, involvement in major financial decisions will predict higher financial literacy and account for gender differences.

A Closer Look

Financial Confidence, Involvement in Financial Decisions, and Financial Literacy Assessments

We measured financial confidence both in terms of the number of times a respondent indicated "Don't know" on a quiz assessing financial literacy as well as in their self-reports of confidence in making various financial decisions [20, 22].

We assessed both confidence and involvement in financial decisions across what we termed "Routine" and "Major" decisions (Table 4.1). In addition to count of the traditional "Don't know" answers described above, we also explicitly asked respondents to indicate how confident they felt when making each of these decisions using a five-point scale (1 = not at all confident; 5 = extremely confident). Additionally, we asked respondents to indicate on a five-point scale how involved they were in each of the decisions shown below, with higher scores indicating a higher degree of involvement (1 = I am the sole decision maker; 3 = I make these decisions with someone else; 5 = Someone else is the sole decision maker).

Table 4.1 Routine and Major Financial Decisions

ROUTINE	MAJOR	
	Periodic	**Long Range**
Making utility bill payment	Auto loans	Retirement plan
Managing household budget	Auto insurance	Investing
Buying home appliance	Car purchase	Home loans
Shopping for groceries	Health insurance	
	Tax preparation	
	Home search	

Note. Periodic and long-range major financial decisions were grouped together as non-household decisions in our analyses because they showed similar patterns of gender differences.

Path A: Confidence in Financial Decision Making

1. Women will be less confident than men in making financial decisions.

Consistent with our hypothesis, when examining financial confidence as represented by the number of "Don't know" responses on a financial literacy quiz, we found that, in line with other surveys, women answered "Don't know" almost twice as often as men (19.4 percent vs. 10 percent). Women also reported less confidence than men in making major financial decisions, such as tax preparation and home loans. Contrary to our first hypothesis, however, we found no gender differences in confidence when making routine decisions, such as making utility bill payments. Compared to men, women reported lower confidence in making major financial decisions but not routine financial decisions, indicating that gender differences in confidence depends on the types of financial decisions being made.

We also found that women reported less confidence than men in making major financial decisions regardless of age group, marital status, and educational attainment. Across gender, the youngest groups were less confident in making major financial decisions than all three older groups. Notably, millennial women (ages < 35) were the least confident of all groups by gender and age (Figures 4.3). And while single women were more confident than married women in making major financial decisions, this pattern was not found in men; both single and married men reported relatively high levels of confidence versus women.

Women feel less confident making major financial decisions than men regardless of marital status and age group
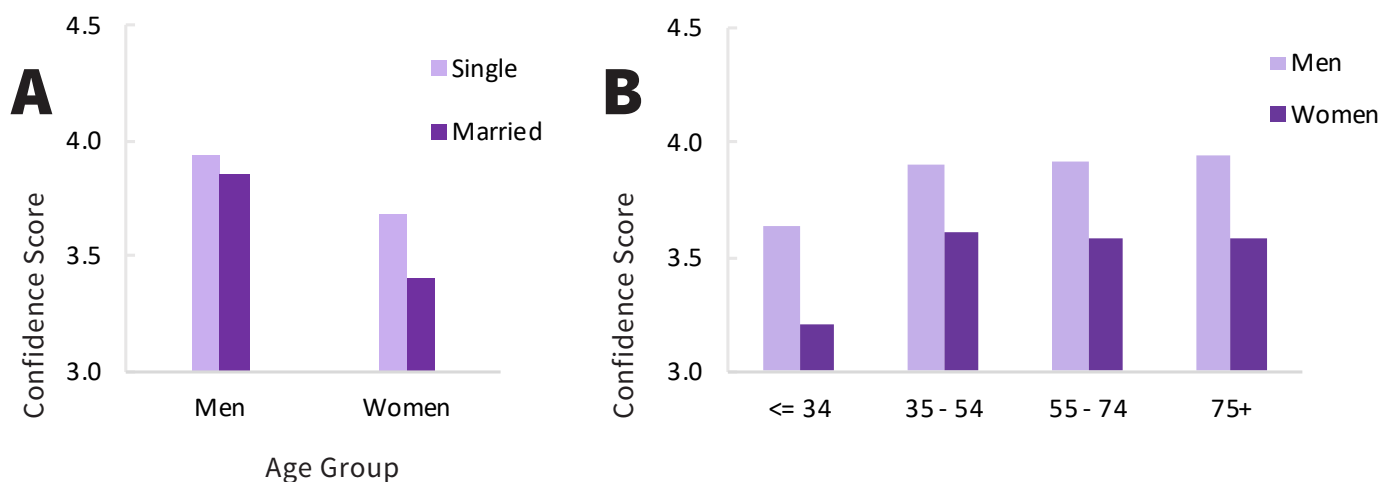
Figure 4.3A Confidence in making major financial decisions by gender and marital status. Note. Covariates: education and age.
Figure 4.3B Confidence in making major financial decisions by gender and age group. Note. Covariates: marital status and education.

2. Distinct from involvement in making major financial decisions, financial confidence will predict higher financial literacy and account for gender differences.

In support of our second hypothesis, women's lower financial literacy scores were explained in part by their lower confidence in making major financial decisions. This finding holds, controlling for the effect of marital status and age on financial confidence. The same pattern was found when assessing financial confidence in terms of the total number of "Don't know" responses on the financial literacy quiz. These findings suggest that women's performance on financial literacy tests likely reflects confidence more than competence. Thus, enhancing financial confidence in making major financial decisions may reduce observed gender gaps in financial literacy assessments and may also optimize financial decision making later in life.

Path B: Involvement in Financial Decision Making

3. Women will be less involved than men in making major financial decisions.

In support of our third hypothesis, we observed gender differences in the level of involvement in financial decision making, which varied as a function of marital status and type of financial decision being made. Not surprisingly, single people indicated that they were the primary decision-maker for most financial decisions regardless of age and gender. Married women, however, were more involved in routine financial decisions than married men across all age groups. In contrast, married men were more involved than married women in major financial decisions (Figure 4.4). As with financial confidence, women's lower involvement in making major financial decisions versus men was consistent across age groups. Albeit gender differences appear to decline from older to younger age groups in Figure 4.4, this decline was not statistically significant, indicating gender difference to be robust across age groups.

Furthermore, both single millennial men and women (< 35 years) were the least likely of all age groups to be the sole financial decision maker for routine (68 percent vs. 90 percent) and major (70 percent vs. 84 percent) financial decisions. This may be due to a lack of interest or a lack of motivation, but it may also suggest that single millennials are more likely to seek help from others when making any financial decision.

Married women are less involved in making major financial decisions than married men across all age groups
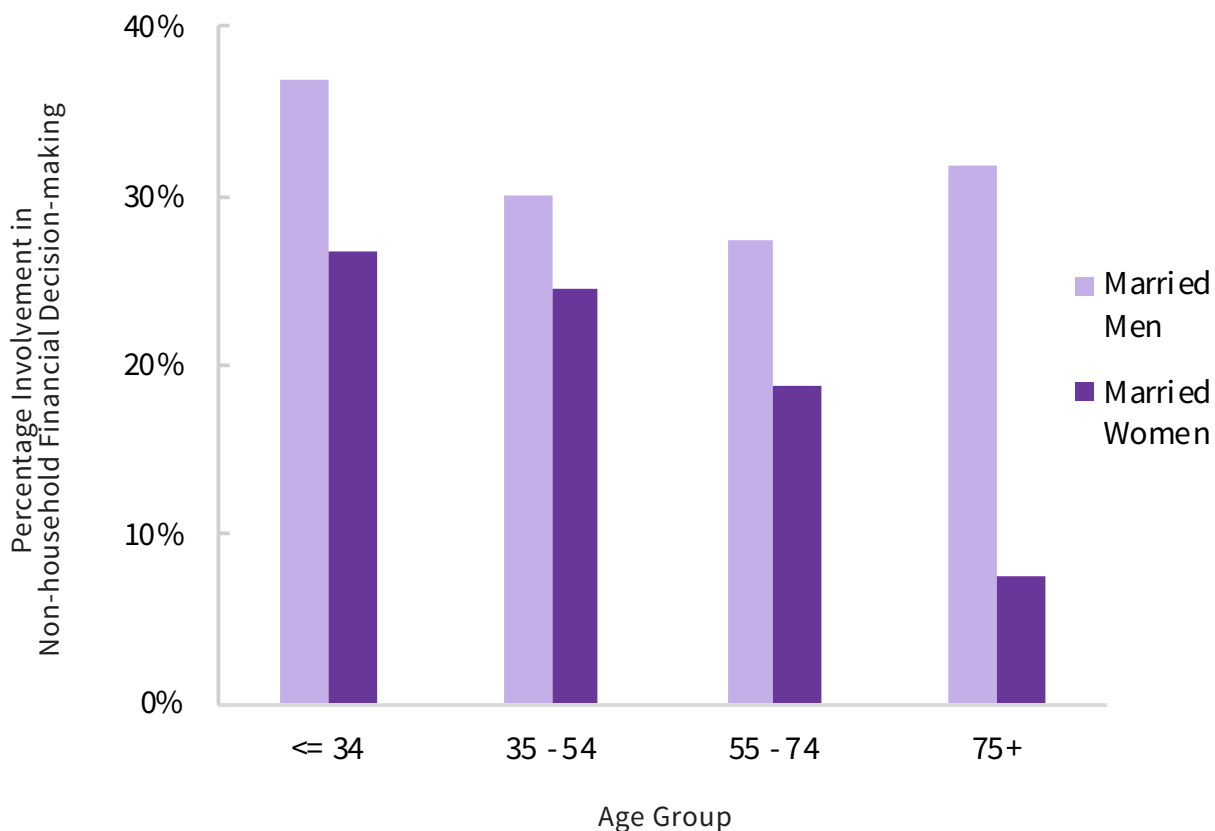
Figure 4.4. Gender differences in involvement in making major financial decisions among married individuals.

4. Distinct from confidence, involvement in major financial decisions will predict higher financial literacy and account for gender differences.

We found partial support for our fourth hypothesis: Involvement in major financial decisions was positively associated with financial literacy in single persons, but not in married people. Moreover, we only found this effect to be significant among single women. Thus, for single women, greater involvement in making major financial decisions predicted higher financial literacy (see Figure 4.5). This may be because, in contrast to married women, single women are more likely to delegate or attribute financial decision outcomes to themselves as opposed to other people. There was no significant effect of involvement in major financial decisions on financial literacy for single men, indicating that men are relatively more financially literate than women regardless of degree of involvement in major financial decision making. That is, no effect was seen among single men primarily because "uninvolved" men performed as well as "involved" men on the financial literacy test.

Involvement in making major financial decisions predicts higher levels of financial literacy among single women, although they still underperform in financial literacy tests as compared to American men as a whole

Figure 4.5. Gender differences in involvement in making major financial decisions by marital status.

Single women who were highly involved in making major financial decisions still scored significantly lower on financial literacy tests than their highly involved single male counterparts. Yet because involvement in making major financial decisions was associated with higher financial literacy among single women, increasing involvement in major financial decisions may offer an additional route for single women to more effectively learn about finances. If so, women who were not involved in or lack responsibility for making major financial decisions may not benefit as much from financial education as those with real-life experience, whether single or married.

In sum, having confidence in making major financial decisions, instead of in making routine, relatively mundane ones, appears to be especially critical for women to acquire and secure financial knowledge. These findings also show that marital status plays a significant, but distinct role for women versus men in how financial confidence, involvement in making major financial decisions, and financial literacy relate to one another.

Implications for Starting a Long-Term Career

When it comes to making real-world financial decisions, does it actually matter how confident someone is? Many financial decisions made later in life, such as retirement, working, caregiving, and health care, vary by gender. Yet the stage for gender differences in financial decisions is set much sooner in adult life. For instance, career planning can have a significant, lasting impact on financial security throughout someone's entire life [24, 25]. As people embark on long-term careers in young adulthood, for example, many employers offer sponsored financial benefits, such as health insurance and retirement plan contributions. These benefits typically grow exponentially in value, signifying the importance of starting a long-term career trajectory early in adulthood. The age at which a person starts their career is especially key in light of increased life expectancy, because employer-driven financial decisions can also serve as a catalyst for engagement in other financial decisions outside of the workplace, such as investing and debt management.

As a follow-up study, we explored possible gender differences in when people start a long-term career and whether financial confidence accounts for these differences. In the same survey as above, participants had indicated whether they had "started a long-term career" and if so, at what age. This measure was part of the Stanford Center on Longevity Milestones survey that measures the ideal and actual ages of achieving various life milestones across the life course. For our study, we assessed the percentage of people who began a long-term career by age 30. We did not specify the length or type of career so that respondents were free to visualize any sort of career they wanted. We included financial literacy, age, education, and marital status as covariates in our analyses.

Although gender gaps appear to be diminishing across generations, women over 35 years of age are less likely to have started a long-term career by age 30 compared to men
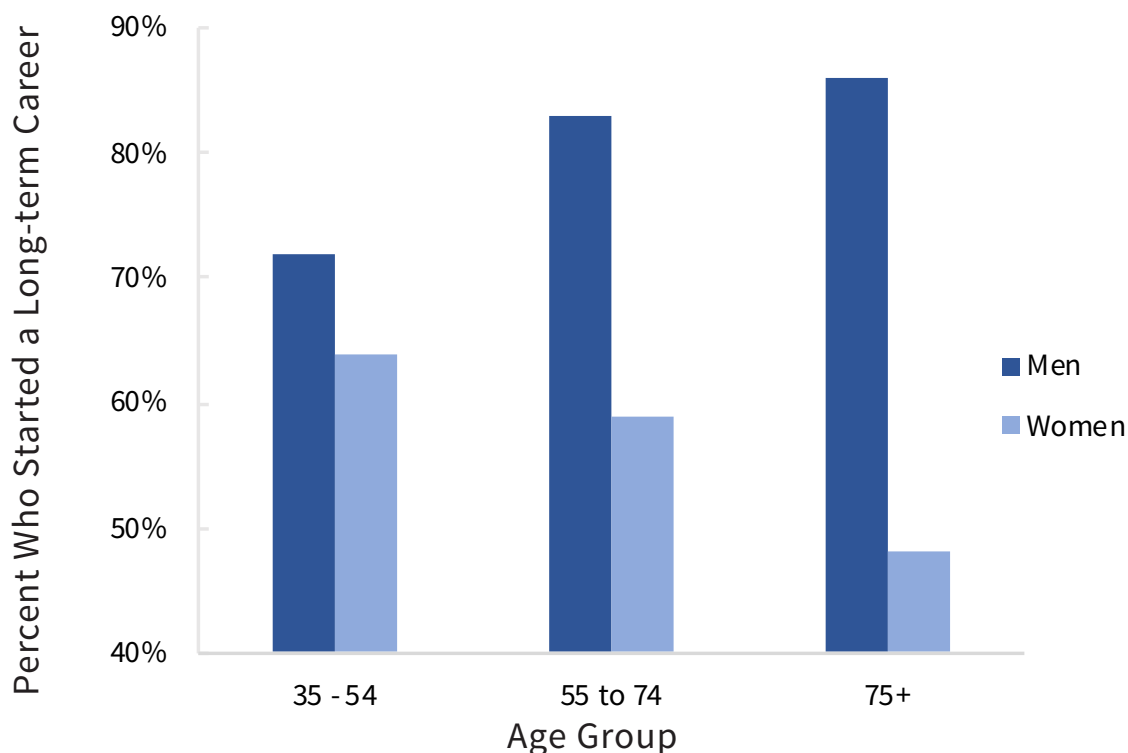
Figure 4.6. Percentage of individuals who started a long-term career by age 30 by gender and age group.

Key Findings

- On average, men were significantly more likely than women to have started a long-term career by age 30. Gender differences were significant across all age groups but were most pronounced among older generations (Figure 4.6).
- Married and college-educated individuals were more likely to have started a long-term career by age 30.
- The lower likelihood that women would have started a long-term career by age 30 was partly explained by the fact that they had lower confidence in making major financial decisions relative to their male counterparts (Figure 4.7).

Gender → Financial Confidence → Start Long-term Career Before Age 30

Here, we demonstrate the importance of financial confidence in achieving long-term positive financial outcomes. While much of the research on gender differences typically focuses in on longer-range decisions relevant to those in mid to late life, these gaps can emerge at all stages of life across multiple contexts. In the context of career planning, for instance, women over the age of 35 who are less financially confident get started in their careers later than men. We also explored gender differences in planning for retirement by age 30 and found that, in this context, women age 55 and older were less likely to do so compared to men. Yet, women age 35-54 did not differ from men when it came to planning for retirement. This may be because retirement plan decisions are becoming increasingly shaped by organizational policies, helping to reduce some gender inequalities among younger workers.

For many financial outcomes, however, it may be difficult to close gender gaps without first addressing financial confidence. By targeting and raising confidence first, women may feel more capable of making major financial decisions, be more open to learning about financial topics, and be more likely to retain financial information. And as financial confidence grows, financial education programs may be increasingly effective in boosting financial literacy, ultimately helping to optimize financial decisions and financial security throughout the course of an entire life.

Key Takeaways

- Women are much less confident than men when taking a financial literacy assessment and when evaluating how they feel about making major financial decisions, such as investing. These types of major financial decisions are commonly tied to and enhanced by being financially literate.
- or both men and women, higher financial confidence predicts higher financial literacy. The association between these two is likely reciprocal; yet, if financial confidence is indeed a precursor to financial literacy, then issues surrounding financial confidence should be addressed before any benefit can be expected from financial education programs. Increasing financial confidence is of critical importance for women, who are still lagging far behind men regardless of age.

- We should also consider the role of marital status when looking at gender differences in managing financial decisions and the possible impact on promoting financial literacy. Whereas single men and women are equally involved in making financial decisions, we observed a traditional division of labor among married people, with men assuming more responsibility for making major financial decisions and women assuming more responsibility for making routine financial decisions. This division is evident even among young generations. A crucial time to intervene for managing finances may be before women marry and adopt traditional, gendered roles.

- While managing finances appears to be critical for single women's financial literacy, it doesn't have the same effect among married women, suggesting that married women are particularly vulnerable and in need of intervention to enhance financial decision making. Yet these findings also suggest that simply encouraging women to get more involved in financial decisions and educating them about finances is insufficient to close the gender gaps in financial security.

- Gender differences emerged throughout the financial decision-making process -- from feeling confident about making decisions to being knowledgeable about finances. These differences can affect life choices with important financial consequences. For instance, women who feel less financially confident are more likely to fall behind in starting a long-term career. Intervening early on may be especially impactful in securing a long, financially secure future for women.

Food for Thought

- How does financial confidence benefit financial decisions and outcomes through financial literacy? What interventions could improve financial confidence? What could be the role of 401(k) plan sponsors, employers, and financial institutions to improve financial confidence?

- Is there such a thing as too much financial confidence? Is there a "sweet spot" for how much financial confidence should promoted in order to help people make the best decisions and avoid falling prey to bad investments and other faulty strategies?

- What personal characteristics (e.g., ethnicity, personality) matter most when developing financial confidence? And under which contexts (e.g., being in a resource rich environment, losing a partner) might financial confidence have the most impact on financial decisions? For example, among those with lower income levels, does financial confidence or access to resources matter more? What are the ramifications for becoming single later in life? Should interventions specifically target older women who divorce or become widowed and face financial decisions alone for the first time in their lives?

- In married couples, what factors undermine or enhance women's financial confidence and literacy? How might relationship dynamics such as balance of power, gender roles, and division of household labor interfere or bolster women's financial decisions?

- Among married women, are there specific circumstances under which getting more involved in financial decisions could be helpful? Are there strategies married women can use to manage financial decisions that would also signal their capability and boost their confidence?

- Might we be able to leverage women's higher confidence and involvement in routine financial decisions to enhance confidence and involvement in major decisions? Might reframing routine financial behaviors as decisions that also require financial knowledge/literacy lead women to feel more confident enough to engage more fully in major financial decisions?

- How can we leverage our understanding of motivational processes to modify existing financial literacy programs? How might program modules be formulated and sequenced accordingly? For example, would a program first targeting financial confidence and then financial literacy result in better decisions or would such a program work as well or better the other way around?

References

[1] Ruel, E. & Hauser, R. M. (2013). Explaining the gender wealth gap. Demography. 50(4): 1155–1176. doi:10.1007/s13524-012-0182-0.

[2] CDC (November 2017). Deaths: Final data for 2015. National Vital Statistics Reports, 66, 6. Retrieved from https://www.cdc.gov/nchs/data/nvsr/nvsr66/nvsr66_06.pdf

[3] Mottola, G. (2018). Gender, generation and financial knowledge: A six-year perspective. FINRA Investor Education Foundation. Retrieved from http://www.usfinancialcapability.org/downloads/Issue-Brief-Gender-Generation-and-Financial-Knowledge-A-Six-Year-Perspective.pdf

[4] Hyde, J. S., Lindberg, S. M., Linn, M. C., Ellis, A. B., & Williams, C. C. (2008). DIVERSITY: Gender similarities characterize math performance. Science, 321, 494–495. doi:10.1126/science.1160364

[5] U.S. Census Bureau (2011a). Women in STEM: A gender gap to innovation. U.S. Department of Commerce, Washington, DC. Retrieved from http://www.esa.doc.gov/sites/default/files/womeninstemagaptoinnovation8311.pdf

[6] U.S. Department of Commerce (2017). Women in STEM: 2017 update. Retrieved from http://www.esa.doc.gov/sites/default/files/women-in-stem-2017-update.pdf

[7] U.S. Census Bureau (2016). Educational attainment in the United States: 2015. Current Population Reports. U.S. Department of Commerce, Washington, DC. Retrieved from https://www.census.gov/content/dam/Census/library/publications/2016/demo/p20-578.pdf

[8] Shaefer, H. L., Mattingly, M., & Edin, K. (2018). Poverty. A Magazine on Poverty, Inequality, and Social Policy, Special Issue on Gender, 23-25. Stanford Center on Poverty and Inequality. Stanford University. Retrieved from https://inequality.stanford.edu/sites/default/files/Pathways_SOTU_2018.pdf

[9] U.S. Census Bureau (2011b). Number, timing, and duration of marriages and divorces: 2009. Current Population Reports. Washington, DC. Retrieved from https://www.census.gov/prod/2011pubs/p70-125.pdf

[10] Bucher-Koenen, T., Lusardi, A., Alessie, R. J. M., & van Rooij, M. C. J. (2016). How financially literate are women? An overview and new insights. Global Financial Literacy Excellence Center, The George Washington University School of Business. Retrieved from http://gflec.org/wp-content/uploads/2016/02/WP-2016-1-How-Financially-Literate-Are-Women.pdf

[11] Fonseca, R, Mullen, K., Zamarro, G., & Zissimopoulos, J. (2012). What explains the gender gap in financial literacy? The role of household decision making. Journal of Consumer Affairs, 46(1), 90–106. doi:10.1111/j.1745-6606.2011.01221.x.

[12] Hasler A. & Lusardi, A. (2017). The gender gap in financial literacy: A global perspective. Global Financial Literacy Excellence Center, The George Washington University School of Business. Retrieved from http://gflec.org/wp-content/uploads/2017/07/The-Gender-Gap-in-Financial-Literacy-A-Global-Perspective-Report.pdf?x87657

[13] Lusardi, A. & Mitchell, O. S. (2008). Planning and financial literacy: How do women fare? American Economic Review: Papers & Proceedings, 98, 413-417.

[14] Kling, K. C., Hyde, J., S., Showers, C. J., & Buswell, B. N. (1999). Gender differences in self-esteem: A meta-analysis, Psychological Bulletin, 125, 470-500.

[15] Bian, L., Leslie, S-J. & Cimpian, A. (2017). Gender stereotypes about intellectual ability emerge early and influence children's interests. Science, 355, 389-391.

[16] Huang, C. (2013). Gender differences in academic self-efficacy: A meta-analysis. European Journal of Psychological Education, 28, 1–35.

[17] Montford, W. & Goldsmith R. E. (2011). How gender and financial self-efficacy influence investment risk taking. International journal of consumer studies, 40, 101-106. doi: 10.1111/ijcs.12219

[18] Farrell, L., Fry, T. R. L., & Risse , L.(2016) The significance of financial self-efficacy in explaining women's personal finance behaviour. Journal of Economic Psychology, 85–99.

[19] Rosplock, K. (2010). Gender matters: Men and women's perceptions of wealth are mostly aligned. The Journal of Wealth Management, 15-30.

[20] Financial literacy quizzes. FINRA Investor Education Foundation. Retrieved from http://www.usfinancialcapability.org/quiz.php

[22] Bartley, S. J., Blanton, P. W., & Gilliard, J. L. (2005). Husbands and wives in dual-earner marriages: Decision-making, gender role attitudes. Division of Household Labor, and Equity, Marriage & Family Review, 37, 69-94, DOI: 10.1300/J002v37n04_05

[23] Lusardi, A. & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. Journal of economic literature, 52(1), 5-44.

[24] Remund, D. (2010). Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. The Journal of Consumer Affairs, 44, 276-295.

[25] U.S. Census Bureau (2011a). Women in STEM: A gender gap to innovation. U.S. Department of Commerce, Washington, DC. Retrieved from http://www.esa.doc.gov/sites/default/files/womeninstemagaptoinnovation8311.pdf

[26] U.S. Department of Commerce (2017). Women in STEM: 2017 update. Retrieved from http://www.esa.doc.gov/sites/default/files/women-in-stem-2017-update.pdf

Financial Literacy Among Latino Americans

In 2016, the Stanford Center on Longevity (SCL) Sightlines project uncovered a large decrease in financial security among Latino American middle-aged adults, with 12 percent fewer being financially secure in 2014 versus in 2001— the largest decline of any other U.S. ethnic group. As discussed in a recent Wall Street Journal post by SCL advisory council member Sol Trujillo, addressing Latino financial security is critical to American longevity as Latinos are poised to comprise a large share of America's future work force and are living longer than any other U.S. ethnic group.

Financial literacy lower for Latinos vs. the American population as a whole
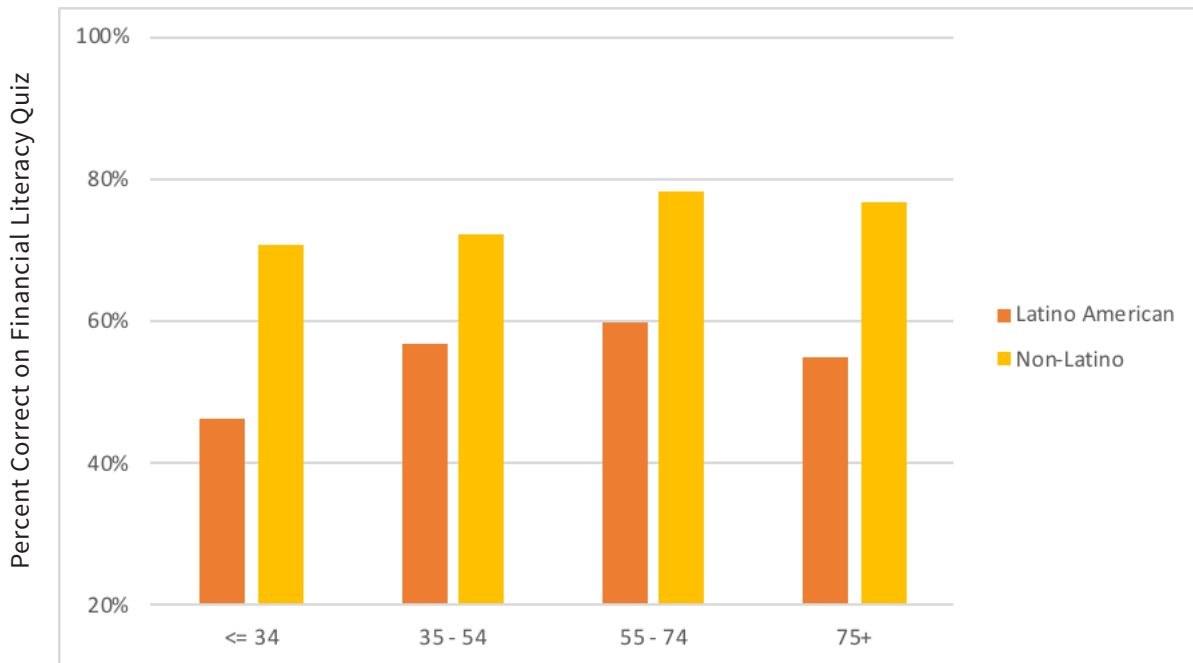
A similar pattern emerged for in the number of times respondents indicated "Don't know" in response to each question, an answer that has been associated with lower levels of financial confidence. This is key because it may not be that Latino Americans are less knowledgeable, but rather that they are less comfortable answering these questions because they feel less financially confident. Because the association between "Don't know" and financial confidence does not exactly overlap, other possible reasons, such as feeling threatened or anxious in a test-taking context or finding the topics of the questions to be irrelevant to their daily life, may be at play. In the future, we plan to delve deeper into these and other potential explanations for the lower financial literacy among Latino Americans. In doing so, we can better determine viable strategies for intervention among Latinos as they make a variety of financial decisions at all stages of life.

Concluding Remarks

The current report was designed to focus on some of the most compelling findings observed in our original analysis, including more comprehensive descriptions of differences in financial security outcomes for different segments of the American population, further investigation of factors associated with financial security using a generational lens, and a focus on the most prominent topics in the U.S. affecting Americans today, including home ownership and retirement preparedness. By synthesizing this research, we hope this report will be used to help influencers better understand national patterns of financial outcomes and guide informed conversations, policies, and practices around optimizing long lives across the U.S. population.

Looking ahead, we are working to unpack select findings in the other key Sightlines domains: Social Engagement and Healthy Living. In 2019, we will publish a report on explanatory factors and consequences of social connection at various stages of life. One of the most striking findings in this domain was that fewer Baby Boomers reported being socially engaged in 2012 compared to their same-aged counterparts nearly 20 years prior. Several key factors have since emerged as potentially playing a role in this divide, including changing family structures and obligations, social technology, working longer and the gig economy, and shifts in health care. The Sightlines special report on social engagement will offer deeper insights into such explanations. In 2020, we will produce a special report on healthy living to a similar end. Specifically, we will zoom in on what a healthy diet is and how to maintain it, the interplay among physical activity and sedentary behavior, and the implications of wearable technology for measurement and behavior change. Finally, in 2021, we plan to re-integrate all three domains to evaluate any progress or setbacks since the first instantiation of Sightlines and to move the project forward by assessing the inter-relationships among the domains.

Our project vision rests on the idea that longevity at its finest is wholly comprised of financial security, social engagement, and healthy living. Going forward, each phase of the Sightlines Project is designed for the ultimate purpose of bridging these domains across all research endeavors with the expressed mission of promoting long life.

Methods

In 2016, the Stanford Center on Longevity released its inaugural Sightlines Project report, which identifies three domains—financial security, social engagement, and healthy living—as being impactful to Americans' longevity and well-being. In the current and following years, the Sightlines project team, headed by Dr. Tamara Sims, is working on deeper, focused investigations into each of the three domains. The present report is the first of such outputs, focusing on financial security.

In our inaugural report, we compared the percentage of Americans who met certain thresholds in 2013-14 as well as prior years going back as far as 1995. In the current report, we first updated several key Sightlines metrics using newly available survey data. More importantly, we released research reports (both summary and full-length white papers) on several important and debatable topics, including generational shifts in homeownership, retirement preparedness, financial security for older American households, and women's financial decision making.

The empirical investigations were taken out using four major data sources:

- Surveys of Consumer Finances: 2001 and 2016 surveys
- Health and Retirement Studies: 1992-2014 waves
- National Longitudinal Survey of Youth: 1979 and 1997 cohorts
- Stanford Center on Longevity Milestone Survey: 2017

Obviously, the selected topics discussed in the present report do not cover all possible contributing factors to long life and well-being in the financial security domain, but it is in our hope that the report will contribute to some of the existing policy debates related to specific behaviors that are:

- supported by compelling scientific evidence of imporved longevity and wellbeing;
- tracked by nationally representative studies of Americans across the age spectrum; and
- malleable – that can be shaped at many levels from individuals to societies.
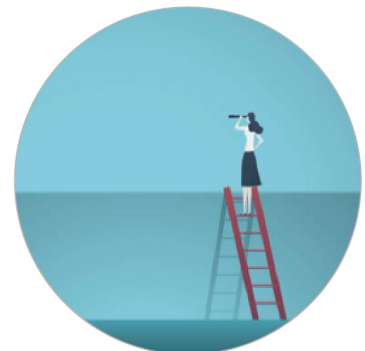
Data Sources

Data Source	Year, Survey, Cohort Used	Notes

Surveys of Consumer Finances (SCF)	2001, 2016	(1) Race/ethnicity: comes from the designated respondent in a surveyed family.
		(2) Age: the age of the older spouse/partner
		(3) Education: the highest education between a couple
		(4) Number of observations:
		   The 2016 SCF has 6,254 distinct families, representing 126 million American families.
		   The 2001 SCF has 4,449 distinct families, representing 106 million American families.
		(5) The data are not longitudinal.

Health and Retirement Studies (HRS)	1992-2014 waves	(1) Five birth cohorts are examined:
		   • CODA/AHEAD (born before 1930)
		   • HRS initial cohort (born 1931-41)
		   • War babies (born 1942-47)
		   • Early baby boomers (born 1948-53)
		   • Mid baby boomers (born 1954-59)
		(2) Total number of observations: 37,495 individuals
		(3) The data are longitudinal.

National Longitudinal Survey of Youth (NLSY)	NLSY79 and NLSY97 cohorts	(1) The NLSY79 cohort:
		   • 12,686 individuals ages 14-22 when first interviewed in 1979
		(2) The NLSY97 cohort:
		   • 8,984 individuals ages 12-17 when first interviewed in 1997.
		(3) The data are longitudinal.

Stanford Center on Longevity Milestones Survey	2017	(1) Nationally representative data set, collected by SCL through RAND's American Life panel. (2) Number of observations: 1,734 individuals, ages 20-94 in 2017.

Financial Security Updates - 2000 vs. 2016

A major aim of the Sightlines Project is to help all people live long and live well despite pervasive and growing inequalities in financial security between subgroups of the U.S. population. Focusing in on demographic variation in key financial security metrics allows us to identify points of need and promise, as opposed to simply describing highly generalized trends likely not applicable to many.

We look at several demographic markers for each of these indicators across a 15-year time span to see how different age cohorts of the American population have fared over time, as well as the extent to which some groups are more or less financially stable than others. Specifically, we compare data from 2001 to 2016 and focus on age as it intersects with ethnicity, education, and marital status. These findings illustrate the state of American households' finances using key indicators from the Sightlines project and the most recent survey data from the Survey of Consumer Finances (SCF).

The key indicators are:

Manageable Debt
Individuals whose non-collateralized household debt is < 20% of income

Emergency Funds
Percent of individuals in households with access to $3000 of emergency funds

Investments
Individuals in households with bonds, an IRA, stocks, life insurance, etc.

Retirement Savings
Households where the head or spouse has an IRA or workplace-based retirement

Home Ownership
Homes that are owner-occupied who are head of household or partner

Health Insurance
Percent of individuals with health insurance from any source

To learn more, visit: **http://longevity.stanford.edu/financial-security-updates-2000-vs-2016/**

In an addendum report, we also selectively describe notable findings of the metrics listed above. By doing so, we can reveal any patterns or changes that reflect concerning declines or promising trends in financial security that may or may not be specific to any one particular American demographic subgroup. As with the overarching Sightlines Project, the intent is to spur discussion around particular sets of financial indicators and U.S. subgroups that stand out, for better or for worse, in order to raise awareness about where change is most necessary and possible.

Acknowledgements

Laural L. Carstensen
Director

Thomas A. Rando
Deputy Director

SPONSORS

For more information about
the Sightlines Project,
visit:

sightlinesproject.stanford.edu

**STANFORD
CENTER ON
LONGEVITY**

longevity.stanford.edu