

Authors: Susan Long, Craig Johnson,
Stephen M. Salisbury, Kristofer
Kerchner, Ryan Murray, Oleg
Gamzalev, Victoria Correll

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1. Introduction: Millennials in a Changing World

The Millennials, also known as Generation Y, are the group of people who were born between the early 1980s and the early 2000s. Swelled by a resurgent fertility rate amongst Baby Boomers and Generation X, Millennials number 83.1 million and represent more than one quarter of the nation's population (U.S. Census Bureau, 2015). They are regarded as the "next great generation" (Howe and Strauss, 2000, p. 3). According to the National Chamber Foundation (2012), Millennials are the most racially and ethnically diverse generation, with 47% of Millennials classified as a minority (DeVaney, 2015). Being characterized in a number of different ways regarding their lifestyle preferences, career perspectives, and expectations, they are likely the most studied generation to date.

Millennials have come of age in a challenging economy. Today, they enter the workforce facing a multitude of obstacles to their long-term career outcomes and financial stability. The company-led employment landscape of previous generations is breaking down and a new, individual oriented paradigm is emerging. College graduates amongst Baby Boomers and Generation X were able to attain elevated career starts, vertical career mobility commensurate with experience and tenure, and company sponsored benefits such as health insurance and retirement savings. In contrast, Millennials face a so-called "gig economy," in which individuals are independent contractors freelancing for multiple organizations while managing their own healthcare and retirement savings (Cutter, Litan, and Stangler, 2016). Even those Millennials who begin work as company employees find mostly entry level positions (regardless of education), few opportunities for upward mobility, and stagnant wage growth (apRoberts, 2009).

Income levels have fallen for the last decade (Polivka, 2012). Wages face constant downward pressure from the slashed labor costs of developing economies. Global competition for jobs is fierce as technology allows for a more diversified and diffused workforce. Domestic competition is rising as labor force participation rates increase in the United States. The Baby Boomers were expected to leave the workforce, but as they reached

retirement age the Great Recession left many with shortfalls in savings and real estate equity. They are living longer, healthier, more active lives, and the ability to work in jobs that require education, as opposed to physical labor, leaves them ready and able to compete with Millennials (apRoberts, 2009).

2. The Current State of Millennials' Retirement Savings

In addition to challenging career starts, the retirement savings landscape in the United States is shifting and it leaves Millennials exposed to an uncertain future that hefts a burdensome share of retirement planning and saving onto their shoulders. Occupational pension plans that once provided defined benefits for 40% of workers now barely cover 20%, almost half of which are public pensions representing only 17% of the workforce. Workers with high wages receive defined benefit pensions more frequently, with higher benefits on average, than those with low wages (apRoberts, 2009). Given a climate of stringent regulation for pensions and an era which is post unionization, employers have moved toward less expensive and less commitment-oriented plans, and today's private employee is offered options like a simple IRA or 401(k) plan to fund from their own earnings instead. According to the TransAmerica Center for Retirement Studies (TCRS), 66% of Millennials expect to self-fund their retirement through savings and retirement accounts (Collinson, 2014).

Many Millennials are unaware of the long-term implications of the current financial straits that they face, several of which are out of control. Their combination of low growth incomes with massive debt obligations is placing downward pressure on their ability to adequately save for retirement. Moody's Analytics reports that savings for this group has dropped to negative 2% (Bennett, 2015). As a generation they are consistently spending more than they earn by utilizing debt to finance their future. The Center for Retirement Research projects that more than 43% of current workers will have inadequate retirement incomes which fall below a 90% replacement rate (apRoberts, 2009). Another study by the Employee Benefits and Retirement Institute (EBRI) found that retirees, as a whole, have \$45 to \$50 billion less in income than they need to cover basic requirements and any costs arising from a nursing home or home health care (Polivka, 2012). A third study from the New School's Schwartz Center for Economic Policy Analysis reports that more than 50% of middle class Americans will be downwardly mobile in retirement, and 30% face being poor or near poor, with an income less than twenty-thousand dollars per year (Clark, 2015). According to the U.S. Census Bureau, in 2015 nearly 15% of seniors lived in poverty (Casillas et al., 2015). Is it possible for that number to double or triple for Millennials?

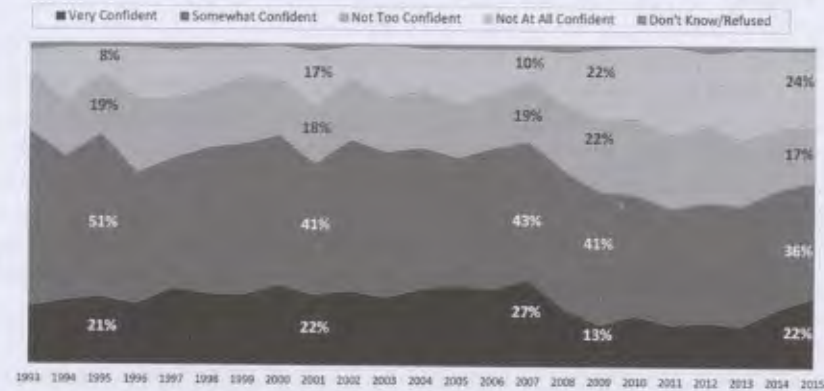
3. Millennials' Confidence in Their Ability to Retire Comfortably

According to the EBRI, workers' confidence in their ability to afford a comfortable retirement is on the rebound from recessionary lows, with 22% currently feeling "very confident" and 36% feeling "somewhat confident." However, 41% of the American work-

force is still concerned about their retirement savings levels. Figure 1 illustrates these findings. According to this study, the number of people who are categorized as “not at all confident” about their retirement savings is much larger than historical averages.

Figure 1. Workers Confidence in Having Enough Money to Live Comfortably Throughout Retirement

Overall, how confident are you that you (and your spouse) will have enough money to live comfortably throughout your retirement years?



Source: Employee Benefit Research Institute and Greenwald & Associates, 1993–2015 Retirement Confidence Surveys.

Retirement savings and confidence levels are correlated with key factors such as retirement plan participation and debt levels. Workers who take the opportunity to invest in a plan like an IRA, 401(k), or pension are more than twice as likely to be “very confident” in their ability to live comfortably through retirement. Figure 2 below shows that in 2015, 71% of those with a retirement plan expressed confidence. While of those who did not have a plan, only 33% expressed any level of confidence (Copeland et al., 2015). It is critical, therefore, that Millennials have access to some type of retirement account

Figure 2. Retirement Confidence Among Workers, by Retirement Plan Ownership, 2013-2015

Overall, how confident are you that you (and your spouse) will have enough money to live comfortably throughout your retirement years?



* Have Retirement Plan defined as respondent or spouse having at least one of the following: IRA, defined contribution plan, or defined benefit plan.

Source: Employee Benefit Research Institute and Greenwald & Associates, 2013–2015 Retirement Confidence Survey.

to boost their savings and confidence levels. According to the American Benefits Council (2014), nearly 80% of full-time workers have access to retirement plans through their employer (“401(k) Fast Facts”, 2014). However, there are 6.1 million part-time workers in America who lack direct access to an employer-sponsored plan (“The Employment Situation”, 2016).

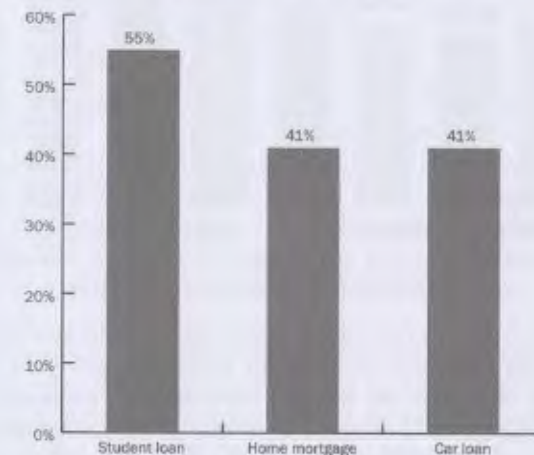
Millennials’ work expectations and attitudes are different from those of prior generations. They are ambitious and proactive in securing their employability by taking initiatives to accumulate new information and develop new skills which can keep them competitive in the labor market. Hence, they are likely to change jobs when career advancement opportunities are present (Smola & Sutton, 2002). In 2014, the median job tenure for Millennials was three years (“Employee Tenure in 2014”, 2014). Traditional employer-sponsored plans are not highly portable and require time consuming bureaucratic processes when moving from one employer to the next. In addition, freelance and contract laborers are left out of these plans entirely. Therefore, a shift to a more portable and more widely available retirement plan system is desirable to improve long-term investment outcomes for Millennials.

4. Millennials’ Debt Crisis

Debt also plays a major role in retirement confidence and savings levels (Copeland et al., 2015). Millennials are strapped with long and short-term debt. Whether it is in the form of student loans, mortgages, or credit cards, the magnitude of their debt is directly related with their potential for a lifetime of financial hardship.

Figure 3. Sources of Long-Term Debt Among Generation Y

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Note: Percentages are calculated over the total sample of 2,124 observations.

Source: Lusardi et al., 2014

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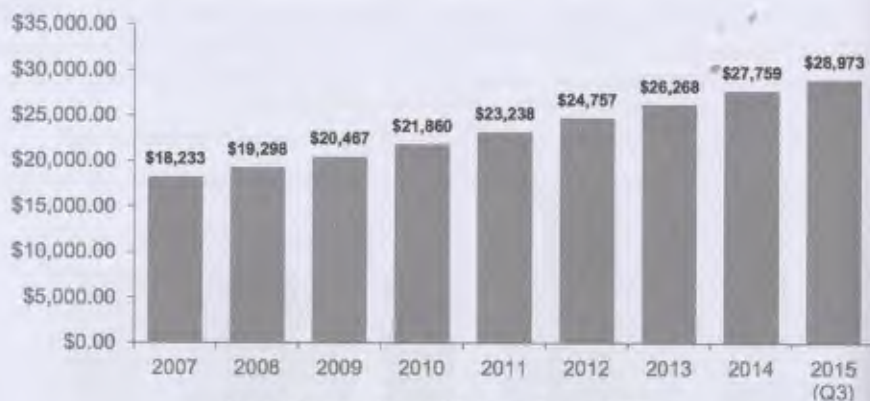
In the long-term, Millennials face payments for college loans, home mortgages, and auto loans. According to a study by the Global Financial Literacy Excellence Center (GFLEC) which focused on the assets, debt, and financial literacy of a cohort of college-educated Millennials, 81% have at least one form of long-term debt and 44% have multiple forms (Lusardi et al., 2014). Student loans are by and large the most onerous and crippling form of debt for this generation. As seen in Figure 3, 55% of college-educated Millennials carry some student loan debt. It leads home mortgages and car loans by 14% respectively as the primary source of long-term debt.

4.1 Student Loans

In 2014, the College Board estimated that the average student loan debt was \$27,300 (Cho, Kiss, & Yu, 2015). According to the Consumer Financial Protection Bureau (CFPB), outstanding student loan debt has risen from \$516 billion in 2007 to more than \$1.2 trillion in 2015. These figures are restricted to federal loans and do not take into account those obtained via private means. Data provided by the CFPB also states that while the number of loan borrowers has increased by roughly 45%, the average debt burden per individual has also increased by almost 60%. The increase per individual is not simply subject to extreme values as the median has kept pace with the rise, having grown by over 50% during this same period ("Student Loan Servicing", 2015).

Figure 4. Average Balances per Borrower (Federal Student Loans)

FIGURE 1: AVERAGE BALANCE PER BORROWER (FEDERAL STUDENT LOANS)⁷

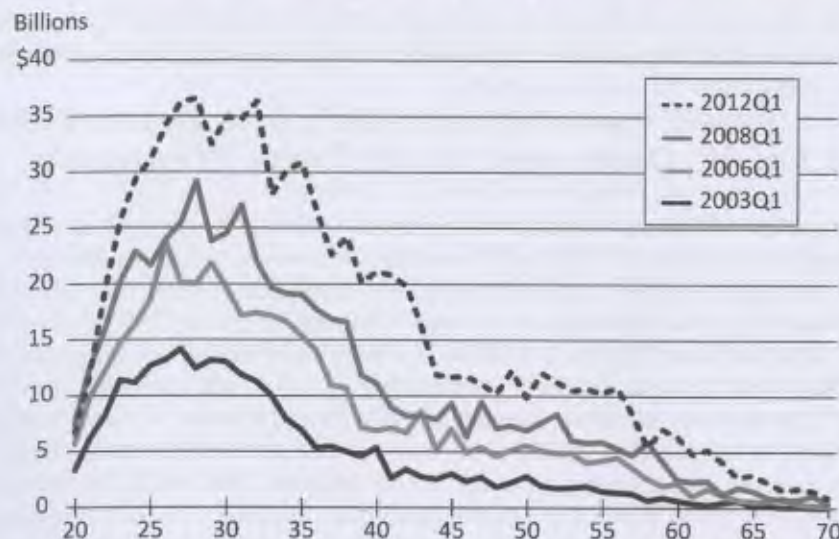


Source: Consumer Financial Protection Bureau (CFPB)

Research from the Philadelphia Federal Reserve illustrates the spread of student loan debt among age groups over a period of several years. In Figure 5, the balances for people under the age of 30 have increased by approximately 2.5 times that of those obtaining loans a decade prior. However, this phenomenon is not endemic strictly to Millennials as the balances have consistently risen each year in every age range. Additional information presented by the Fed's research affirms the danger of these loans in portraying the dollar amounts of past due balances. The debt which Millennials possess is nearly five times that of people within their age group ten years earlier. Operating

Figure 5. Student Loan Balances by Age of Borrowers

Student Loan Balances by Age of Borrowers



Source: Federal Reserve Bank of New York/Equifax Consumer Credit Panel

within these trends of rapid increases in both balances and actual debt, it is likely that these values will continue to climb (Li, 2013).

Student debt, whether it is education debt or personal consumer-driven debt, has a profound impact on Millennials and their ability to invest for retirement. In a study done at the University of Kansas, researchers set out to determine the effects that student-loan debt had on long-term retirement savings. They delivered three key findings. First, "Having outstanding student loan debt is associated with having less retirement savings." Next, "Having higher amounts of student loan debt may not result in greater retirement savings losses, which suggests that amount might not matter, just having any debt might reduce retirement savings." Finally, "Households with median retirement savings, a four-year college graduate, and outstanding student loan debt have 52% less savings than a similar household with a four-year college graduate and no outstanding student loan debt" (Elliot et al., 2013).

Student loans prove to be a major factor in the generation's long-term decision-making and budgetary behaviors. As the group comes of age, they face an inevitable tradeoff between pursuing an education with incumbent liability or entering the labor force debt-free, but lacking the credentials necessary to enter many industries and positions.

4.2 Mortgages

Home mortgages and car loans are additional sources of long-term debt that are dragging on the Millennials' ability to save for retirement. Although home ownership is usually an asset, the crash of the housing market in 2008 resulted in many Millennials losing the equity in their homes. In the GFLEC study, one third reported having mortgages that were under water (Lusardi et al., 2014).

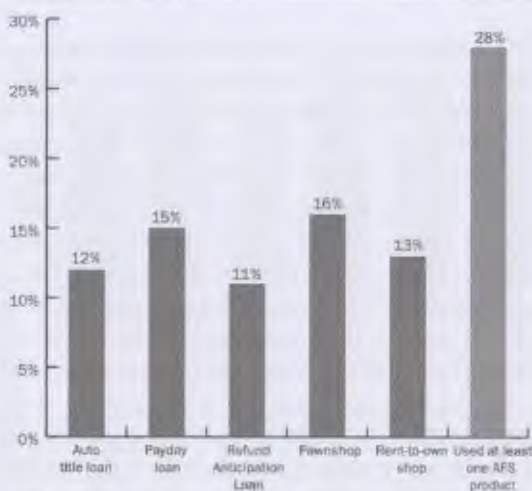
4.3 Credit Cards and Short-Term Financing

In lieu of cash, Millennials rely on credit cards as a significant source of short-term debt financing. The study by GFLEC found a correlation between long-term debt and credit cards; 53% with long-term debt have credit card balances, while 46% use some form of short-term high cost alternative. Of college educated Millennials, 87% have one credit card; 24% have more than four. One third of them made the minimum payment some months in the previous year; 18% incurred late penalties, 10% exceeded their credit limit, 13% used the cash advance option, and 47% carried a balance for which they were charged interest. Additionally, 28% used one or more forms of high interest short term debt: auto title loans, payday loans, tax refund advances, pawn shops, or rent to own (Lusardi et al., 2014). Figure 6 shows that pawn shops and payday loans are the most frequented type of alternative financial service, although they are all within five percentage points of the others.

Figure 6. Generation Y Use of Alternative Financial Services

Figure 4

Generation Y Use of Alternative Financial Services



Note: Percentages are calculated over the total sample of 2,124 observations. The survey questions all respondents whether they have used these products in the five years prior to the survey.

Source: Lusardi et al., 2014

This generation is feeling the weight of their debt obligations having entered the workforce during a deeply recessionary period that began with the financial crisis of 2008, and they are struggling to balance financial demands with their incomes. Twenty percent have been late with one or more mortgage payments in the last two years and 22% have unpaid medical bills. Among those with long-term debt, 25% have overdrawn their checking accounts and 21% have borrowed from their retirement savings (Lusardi et al., 2014).

5. Millennials and Financial Literacy Skills

Millennials are struggling to manage their debts within their given allocation of resources. According to GFLEC, the situation is partially attributable to poor financial literacy skills. They find that while 85% of the cohort believe themselves to be competent in most general daily financial operations, when presented with a simple test only 37% got the first three basic financial literacy questions correct. Additionally, only 14% correctly answered all five questions which represents a high level of financial literacy (Lusardi et al., 2014). TCRS finds that 52% of Millennials are guessing at their retirement savings needs, with only 10% having used a retirement calculator (Collinson, 2014). According to the Wells Fargo Millennial Study (2014), one quarter of those who are saving for retirement are unsure of how their funds are invested.

TCRS also points out that 73% of Millennials who are offered a retirement plan would like more education and advice on how to reach their retirement goals. However, according to GFLEC, Millennials are not actively seeking out professional financial advice because they think it is too expensive and lack trust in the financial industry (Lusardi, 2014). According to the Pew Research Center (2014), only 19% of Millennials say most people can be trusted, which is a drop of 50% from the trust levels of their parents' generations. In light of this information, it is critical that any plan which seeks to improve Millennials' retirement futures is designed with oversight and accountability features that bolster their feelings of trust.

The National Bureau of Economic Research (NBER) examined the effect that a simple flier, about the importance of saving and compounding interest, had on a large financial institution's employee participation rate in their 401(k) program. They found that providing this low-cost flier resulted in a significant increase in the participation rate of employees between the ages of 18 and 24, therein showing that even simple methods of educating Millennials can successfully alter their behavior (Clark et al., 2014).

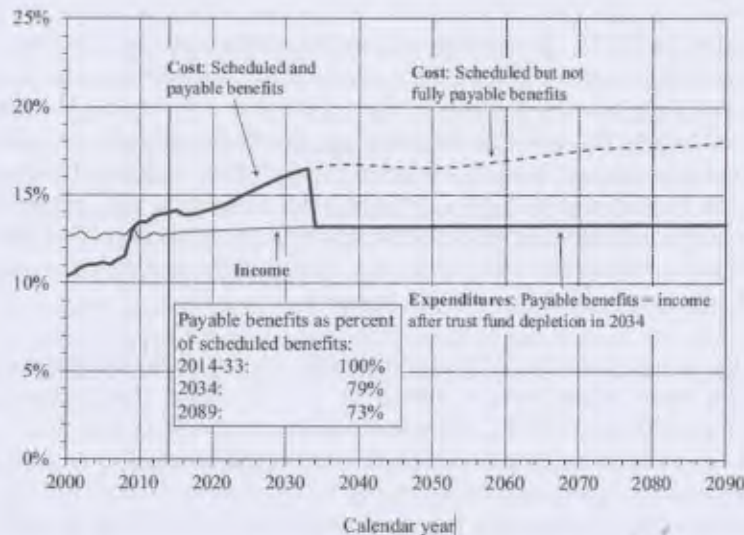
6. What about Social Security?

6.1 Social Security Outlook

Social Security is the largest source of retirement income in the United States, providing 89% of income for the bottom two fifths of wage earners and 75% for the middle fifth. According to the Social Security Administration, the trust fund will be depleted in 2034, assuming current trends, and thereafter only pay out 79% of scheduled benefits (Figure 7). The Baby Boomers will shock the system with their massive numbers of new benefi-

ciaries much faster than a new, low birth rate generation of workers can replace them. Hence, the beneficiary to worker ratio will decline and reserves will be exhausted. This reserve crisis is inevitable. In order to mitigate the magnitude of the impact, the Social Security Administration recommends raising payroll taxes by a relative 21% and lowering benefits by 20% for those eligible in 2015 or later (apRoberts, 2009). Millennials are to pay more, knowing that they will receive fewer economic opportunities in the short run and less retirement security in the long run.

Figure 7. OASDI Income, Cost, and Expenditures as Percentages of Taxable Payroll



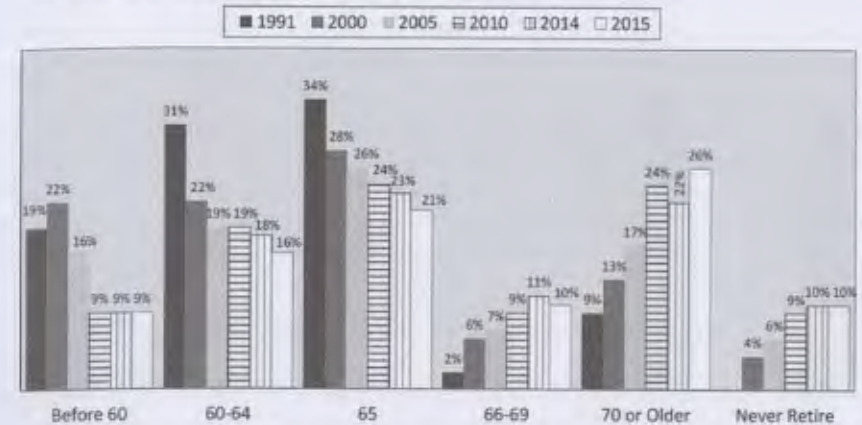
Source: apRoberts, 2009

6.2 Millennials Plan to Compensate for Social Security Shortfalls by Working Longer

While unexpected numbers of Millennials have been proactive in early private retirement savings, the majority are relying on a strategy of working longer to supplement their retirement incomes. According to TCRS, 62% of Millennial workers plan for a phased transition into retirement (Collinson, 2014). The current retirement age for Millennials to receive full benefits is 67. Working until age 70 will net them 7% to 8% more per year protected from inflation, every year that they wait. Yet, statistics have shown that people often think they are going to work longer than they actually can or do. Some people are forced into retirement for health reasons or the need to care for a loved one (apRoberts, 2009), others face layoffs or age discrimination, while some cite changes in skills as the reason (Clark, 2015). According to the EBRI, 50% of retirees left the workforce earlier than planned in 2015 (Figure 8). They find that a considerable gap exists between expectations and reality when it comes to the retirement experience. On average, 9% of workers expect to retire before age 60, while 36% actually do; and 16% plan to retire between the ages of 60 to 64, with 29% actually retiring. In total, 26% plan to wait but only 6% actually do (Figure 9).

Figure 8. Trend in Workers' Expected Retirement age

Realistically, at what age do you expect to retire?



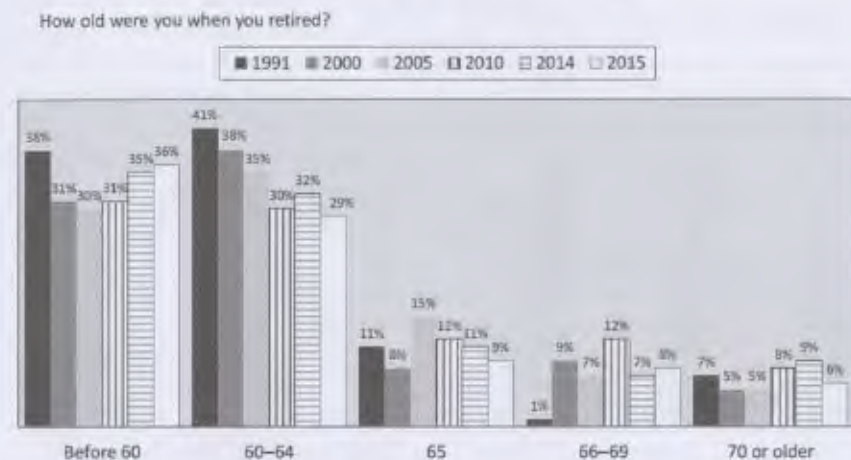
Source: Employee Benefit Research Institute and Greenwald & Associates, 1991-2015 Retirement Confidence Surveys.

7. The Proposal: InvestUS.gov

The goal of this proposal is to overcome the many obstacles in the way of a financially secure retirement for Millennials by reshaping the traditional employer based investment paradigm into an **individual based, easily managed, portable, and convenient** system. That goal is achieved in part by creating a centralized digital marketplace where personal investment accounts are untethered from employer-based programs to become person specific, incentive driven, customizable plans that follow an individual throughout their lifetime. This marketplace makes investment accounts universally available and transmutable through all types of employment. It provides debt management tools and investment resources to help people set and achieve their short and long term financial goals. It effectively modifies consumer behavior by reducing the costs of bureaucratic processes and information gathering.

The second part of this plan's investment overhaul concerns the standards, practices, and incentives for allocating retirement savings funds. All companies will be required to make retirement account payroll deductions available to their employees. Enrollment will be automatic and the contribution set at a standardized percentage, but the individual will be allowed the opportunity to opt-out or change contribution amounts. Matching employer contributions will still be incentivized via 401(k) standards in traditional settings, while federal student loan deferments and other potential tax advantages will incentivize participation by low income individuals and the self-employed. These standards will improve long term investment outcomes by increasing participation rates and overall balances, and reducing reliance on Social Security as a primary source of retirement income.

Figure 9. Trend in Retirees' Actual Retirement Age



Source: Employee Benefit Research Institute and Greenwald & Associates, 1991–2015 Retirement Confidence Surveys

As part of this plan, a new branch under the Consumer Financial Protection Bureau (CFPB) will be established to develop, maintain, and regulate an online marketplace called InvestUS.gov. At InvestUS.gov, individual consumers will have the opportunity to invest in private retirement plans such as 401(k)s and IRAs. To further encourage Millennials' involvement, a mobile app will be available from the website which will offer immediate access to their account(s).

7.1 Trust and Oversight

These plans will be designed and managed by private firms, but the CFPB will set the rules and standards across the marketplace for things such as risk levels. The CFPB and other regulatory agencies under the purview of the Employee Retirement Income Security Act of 1974 (ERISA) will also be responsible for oversight; ensuring responsible investment behavior among the participating private investment firms to protect consumers from fraudulent activities and mishandled funds, and bolster Millennials' feelings of trust. Currently, ERISA covers the regulation of these types of private investment accounts. ERISA sets minimum standards for participation, vesting, benefit accrual and funding; provides fiduciary responsibilities for those who manage and control plan assets; requires plans to establish a grievance and appeals process for participants to get benefits from their plans; gives participants the right to sue for benefits and breaches of fiduciary duty; and provides requirements for the disclosure of plan information ("ERISA", n.d.). ERISA does not generally cover retirement plans established or maintained by a government entity, but since these proposed retirement plans are set up and maintained privately, its rules and regulations will still apply. ERISA allows for fiduciaries to be held personally liable in a court for a breach of their duties. This allows Millennials to be confident that their retirement savings are being responsibly managed.

7.2 Individual Based

InvestUS.gov will create a one-stop lifetime investment hub for consumers. Every person with a Social Security number will be eligible to enroll in a customizable investment account. The individual will choose a firm to handle their funds based on preference of investment packages offered and fee structure. Options will range from a simple, risk identified bundle of steady growth funds, to specific funds at any level of risk. Individuals will have the option of investing in one portfolio, or diversifying between several portfolios depending on their investment goals. This method offers low risk and easily understood options for individuals with hands-off investment preferences, while allowing greater flexibility and choice of risk for hands-on investors.

Easily Managed with Financial Literacy Tools

InvestUS.gov is geared toward creating holistic, easy to use financial literacy tools that will empower Millennials to understand their current and future financial needs, then implement a financial plan and track their progress. The website will provide a peer reviewed informational section which includes blogs, news, and educational tutorials designed to suit all levels of investment knowledge. The goal is to meet people at their current level of understanding without intimidation, provide easily accessible information which will enable them to become more savvy investors, and allow for improved behavior and choices as their investment IQ increases.

An additional section of the website will provide financial planning tools such as debt and retirement calculators, and budgeting software. This section will assist the individual consumer in evaluating each facet of their lifetime financial needs, investigating alternative debt payoff to investment savings ratios and schedules, setting goals, tracking progress, and making informed changes as needs and goals evolve.

Portability and Convenience

To achieve the goal of portability and convenience, all of the website's features will be made accessible through a mobile app for a phone or tablet. Millennials are known as the first digital natives. They have had unlimited access to communications technology while growing up in a digital, media-saturated world (Prensky, 2001). According to the U.S. Chamber of Commerce Foundation, the Millennial generation is capable of heavy media multitasking. They rely on the internet for news, social networking, shopping, education, and more. Eighty percent report sleeping with their cell phones next to the bed ("The Millennial Generation", n.d.). From within their environment of rapid technological change, Millennials' unique preferences demand a shift to mobile-digital solutions. The InvestUS.gov web-based design and mobile app will satisfy Millennials' preferences for immediacy via technology. It will display details such as total individual/employer contributions, total assets, interest earned, and information graphics to provide a visual illustration of the individual's progress toward their financial goals. It will provide suggestions, reminders, and alerts if the individual deviates from their financial course, or if an alternative course of action

toward a more highly desired outcome becomes available based on their pre-selected goals.

Since this retirement account is a personalized plan that is untied from the employer provision platform it becomes highly portable and changeable throughout an individual's lifetime, and is adaptable to all types of work arrangements. If a person becomes dissatisfied with their investment strategy, they can switch to another. If they wish to change the funds in which they invest or branch out into more complex investments, it can be done online at any time. This plan eliminates almost all of the switching costs to the consumer.

7.5 Improving Investor Behavior

There is a behavioral layer of process improvement embedded in this technology-based solution. Chile has a retirement system very similar to this proposal, and is seen as one of the world leaders in private retirement investment. Their retirement system is praised for its efficacy by global pension experts. A study by Luco (2013) of Chile's retirement system finds that significant inertia exists in retirement-investment choices. This inertia is attributed to the costs of switching investment plans, divided into two categories: decision costs, defined as the cost of analyzing financial information, and enrollment costs, defined as the cost of enduring time-consuming bureaucratic processes. Decision costs are about two times as large as that of enrollment and their elimination results in an 8% increase in consumer welfare. Inertia is mostly explained by decision costs, which account for between 70 – 80% of the total on average. In the Chilean retirement system, Luco (2013) found that because of passive behavior induced by switching costs, 55% of enrollees never switched pension plans when economic circumstances dictated that they should, resulting in an overpayment of 0.5% of their income. By creating a centralized web-based marketplace and corresponding app with services geared toward financial literacy and planning, our proposal will significantly reduce decision costs to the consumer. Enrollment costs will also plummet since switching plans or investment firms will be accessible by the click of a button. The resulting increase in consumer welfare will be manifested in higher rates of retirement savings, lower fees, and overall greater financial literacy.

7.6 Firms in the Marketplace

Multiple private firms will compete in the marketplace with portfolios of investment to meet various needs and risk preferences of people through different stages of their life. Investment plans will be sorted by a clearly labeled risk level, as determined by the CFPB. The standardized portfolios, geared toward the non-savvy investor, will clearly identify the type of associated investments, their return history and prospectus, the type of financial goals for which the portfolio is appropriate, and the fee structure with an estimate of the yearly cost for the average investor. The CFPB will also provide a ranking structure for the investment firms based on criteria such as financial soundness, long-term returns to the investor, adherence to business ethics and legal standards, and investor feedback. The firms will make money on fees charged on the investment, rather than commissions on trades, and the competitive centralized marketplace will drive down costs to the consumer.

7.7 Individuals in the Marketplace

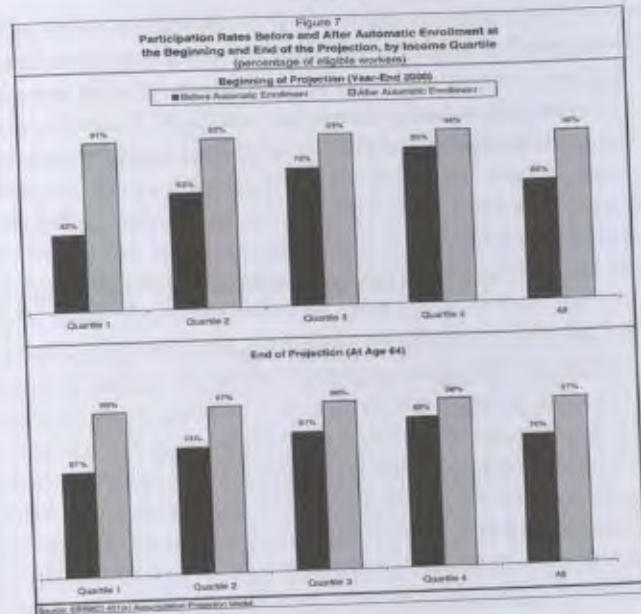
Every person with a Social Security number will be eligible to enroll in an investment account via InvestUS.gov. The first step for individual enrollment is to select a portfolio or a ratio of portfolios. Once selected, the private firm(s) offering the portfolio(s) will issue a routing and account number to direct the individual's funds. The type of account the individual chooses will depend on their employment status and eligibility. Persons employed in traditional work settings, whereby they are a company employee, will be eligible to enroll in a 401(k) account as well as other options like an IRA. Employers will have the ability to contribute to their employees' personal retirement plans, and will receive tax incentives to do so, just as they receive tax incentives for contributing to retirement today. This will likely have the effect of shifting employer funds from 401(k) and pension investment, which is more closely tied to the employer, into these new personal retirement plans, which seamlessly follow the individual throughout their lifetime. Employers will now have the option of eliminating the costs associated with managing their own 401(k) accounts or pension funds while employees will gain portability and simplicity. This plan will also institute a tax credit which rewards low-income and self-employed individuals with a match of up to \$2,000 a year by the government on investments into one of these retirement accounts to incentivize participation. As an incentive for Millennials burdened by student loan debt, contributions over and above \$2,000 each year will be matched with federal student loan forgiveness of up to 1% of annual income.

7.8 Automatic Enrollment

When an individual begins a job, regardless of work arrangement, they will be automatically enrolled by the employer for a payroll deduction which will be deposited into their pre-selected account using their personalized routing number. Once the investment funds are deducted from an individual's pay they will be deposited by the employer into the personalized account. If the employee chooses not to participate, they are required to opt-out of the program. An additional pre-hire form asking for authorization to deduct funds and the individual's personal routing number is all that is required of the employer.

One of the main advantages of an automatic enrollment retirement plan, where an individual must opt-out of the program (rather than opt-in), is that it increases participation rates by a significant amount. Data from the EBRI which examined information from a health services company of approximately 30,000 employees provides the basis for a model looking at automatic enrollment's effects. As seen in Figure 10 below, participation in the company's 401(k) plan increased into the 90% range across all income quartiles after instatement. The most dramatic increase occurs in the group with the lowest income, increasing by roughly 50%. At the end of the projection the overall participation rate is 21% higher than the normally predicted figure for individuals reaching retirement age (Holden and VanDerhei 2005). With improved involvement in contribution plans designed to accumulate savings for retirement, it is assumed that people will have additional financial reserves, thereby abating the reliance on Social Security and avoiding common retirement struggles.

Figure 10. Participation Rates Before and After Automatic Enrollment at the Beginning and End of the Projection, by Income Quartile

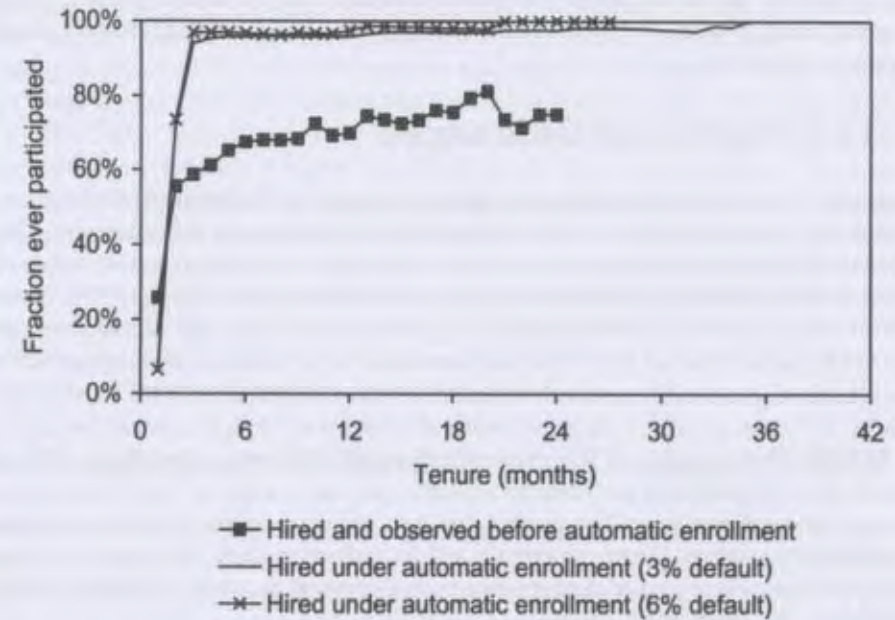


7.9 Default Contribution Rate

Contribution amounts will be standardized at 6% of wages and the individual will have the option of customizing this percentage. Justification for the establishment of a 6% default income contribution rate is based on a paper from the National Bureau of Economic Research (NBER). The research provides data on a U.S. chemical company's 401(k) program and the effect that default rates under automatic enrollment have on their employee participation rates (Beshears et al. 2009). This particular company instituted an automatic enrollment system in December of 2000. A default contribution rate of 3% was applied to new hires and existing employees who had not participated in the previous standard program, while also maintaining a match on contributions up to 6%. In October of the following year the company raised the default rate to 6%, which only applied to new employees.

Figure 11 shows that the participation in the retirement program was not only higher under the automatic enrollment system than the standard opt-in model, but that the overall percentage participating was virtually identical between the 3% default rate and the larger 6% rate. One major difference between the two, involves the fractions of employees within different contribution rates. With respect to the company's contribution match, 65% of participating employees were at or above that amount under the 3% default rate, compared to the 79% under the 6% rate. This illustrates how the use of default rates can directly affect the amount that an individual chooses to save towards their retirement.

Figure 11. Retirement Contributions Before and After Automatic Enrollment



Source: Beshears et al. 2009

7.10 Benefits of Early Investment and Experience

These personalized retirement accounts will be able to receive deposits from the day an individual is born. This will offer an opportunity for parents who wish to contribute funds to their child's account. Access to the funds will only be permitted when the individual reaches the age of majority. Parental investments will continue to receive the same tax benefits allowed under the current laws. Allowing guardians to invest in their minor's retirement account maximizes the benefits of compounding interest.

In retirement investment, time is a valuable commodity and determinant of overall returns. The outcomes for those who invest early have larger gains and, by association, also require less capital investment to reach similar ending amounts. Two main factors in the correlation between time and higher valued retirement savings are the increased number of compounding periods and the benefits associated with an individual's years of investing experience.

The effect of compounding interest is observed through an examination of two individuals of differing ages, investment amounts, and the number and period of years spent investing. The investor who begins at age 25 invests \$5,000 annually with an 8% rate of return for a period of 10 years. The second person begins at age 35 and contributes the same amount annually with the same rate of return for a period of 25 years. The individual who started earlier and invested for a shorter period of time receives an 86%

higher return on investment which is equivalent to \$259,000. Therefore, starting early results in returns nearly double those experienced by a person beginning 10 years later due to lower costs and a longer duration in which to collect annual interest ("Start Investing Today", 2009). Our plan creates the opportunity for early investment and its corresponding benefits.

7.11 Investment Guidelines

Investments in an InvestUS.gov portfolio are made with pre-tax dollars. This provision is intended to mitigate the cost of investment fees and incentivize a 6% contribution rate while the individual continues to contribute to Social Security. Annual contributions will be capped at \$35,000, including both employer and employee contributions. This contribution limit is significantly lower than the legal maximum of \$53,000 currently in place for 401(k) plans. However, only 1% of current savers, or 0.5% of the working population, contributes above the new proposed maximum. Almost all of those who do are in the top 5% of the income distribution, and many of them save exactly the maximum amount of \$53,000 (Friedman, 2015). The affected individuals will have a reduction in their tax benefit, but the additional tax revenue will offset the tax credits for low income investors and the self-employed. The investments into the account are not taxed, however the payments received during retirement will be subject to taxes. The taxes, rules, and regulations on the proposed retirement plan are identical to those of current 401(k)s and IRAs ("Tax Topic Index", 2016).

7.12 Withdrawal Guidelines

Until the age of 59 1/2, there is a penalty applied to funds withdrawn from the personal retirement plan, designed to discourage early withdrawal. Like current retirement plans, participants in our plan will be required to pay a 10% early withdrawal penalty. In addition, plan administrators will automatically withhold 20% of the participant's balance and send it directly to the IRS for tax purposes. In times of hardship, individuals will continue to have the option of making loans to themselves from their investment account and then repaying it with interest. Congruent with current standards, the individual may make a loan of up to 50% of their current retirement plan money on a tax-free basis. The loan is considered short-term and not to exceed one year for completed repayment. ("Retirement Topics", 2015).

Upon retirement, individuals will customize how they wish to receive their savings payout. The choices will include: taking out a lump-sum distribution, leaving the money in the account and continuing to make contributions, rolling over funds into an annuity, or taking periodic distributions from their personal investment account. Justification for a lump sum withdrawal are as follows: the plan participant's death, reaching age of 59 1/2, or becoming totally and permanently disabled ("Topic 412", 2016). These choices are consistent with the current rules established by the IRS for lump sum distributions with one exception, separation of service, since this plan creates fluidity in transferring funds from one investment firm or type of investment without the need for an employer-sponsored plan.

In our plan, rolling over a portion of the lump sum distribution into an annuity is the recommended method of payout and the possibility of tax incentives to promote this outcome should be considered. Annuities are an underutilized investment option that offer insurance against length-of-life uncertainty while stabilizing consumption levels. According to Brown (2007, p. 4), "life annuities can substantially increase individual welfare by eliminating the financial risks associated with uncertain lifetimes and provide consumers with a higher level of lifetime consumption." When compared with a non-annuitized asset, annuities also offer a higher rate of return or "mortality premium." Historically, annuities have been under purchased. Behavioral economists attribute this phenomenon to poor financial literacy, perceived loss aversion, misleading heuristics, and the illusion of control. Consumers are not behaving rationally, hence making poor choices in the annuity market, because they lack access to information and are averse to thinking about their own death. This plan seeks to deter irrational consumer behavior by increasing the availability of information while decreasing its complexity, leading to more informed decisions and improved long term retirement stability outcomes.

8. Conclusion: Millennials in a Changed World

With vast amounts of exponentially expanding debt, a distinct lack of financial literacy, and lower participation and trust in retirement plans and institutions, the Millennials face a grim financial future. Because these individuals represent over a quarter of the population, these challenges pose a significant threat to the overall economic stability of the nation and subsequent generations. Given their diversity and adaptability in the presence of technological advancements, along with their unprecedented access to information and data, this generation has the ability to correct their course if given the proper tools to accommodate the task.

We propose the creation of an investment vehicle that is centered on the individual rather than being linked to the employer and one's employment in a traditional work arrangement. The development of a competitive, collective digital marketplace, comprised of untethered personal investment accounts, established by financial institutions with oversight by the CFPB, incorporates the Millennials' technologic proclivities while also accommodating their need for convenience. The immediacy of access to information and the provision of instruments to tailor plans to one's needs will ultimately improve financial literacy resulting in better financial outcomes for this population. The increased visibility of spending and debt reliance will offer a catalyst to curb each individual's expenditures thereby gradually decreasing monetary obligations and averting the impending retirement savings crisis. InvestUS.gov will deliver the means for the Millennials to take hold of their financial futures through its **individual-based, easily managed, convenient and portable** retirement investment accounts.

Generation Y will either represent the generation that succumbs to the American acclimation to debt, or the people who pull America out of its reliance upon credit through their ingenuity. This group possesses the learning capabilities, overall diversity, and financial flexibility to prevent economic disaster and produce a radically improved future for America. Our proposal creates the mechanism which will provide the tools necessary to alter their course and achieve financial sustainability and security for this generation and beyond.

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Roleplay Gone Awry: Effects of Self-Fulfilling Prophecy in the Stanford Prison Experiment

Author: Kristina P. Partridge
Subject: Psychology/History

Abstract

Philip Zimbardo's Stanford prison experiment is a classic psychological experiment that has been the center of both heated debate and praise. In this experiment, college students were recruited to participate in a prison simulation in the basement of Stanford's psychology department. Students were then ascribed the role of either prisoner or guard. Remarkably, the participants rapidly began to act according to these ascribed roles. This experiment has been analyzed at many levels as a representation of numerous psychological phenomena. However, the following study explores Zimbardo's experiment anew through the lens of self-fulfilling prophecy. Supported by observing participants' behaviors and testimonies, this illustration of self-fulfilling prophecy based on participants' schema of "prisoner" and "guard" is examined.

Many social psychologists recognize the Stanford prison experiment as an invaluable experiment that also created an ethical controversy. Because of this experiment, an abundance of important questions and research about social norms, labeling, authority, role assimilation, and ethics have come to fruition. Philip Zimbardo, an American psychologist and professor at Stanford University, was the researcher who initiated the Stanford prison experiment in 1971 (Benson, 2014). Zimbardo wanted to understand how social norms develop and to investigate the effect of labels in a simulated prison environment. After he obtained funding, he recruited students to take part in a prison simulation at Stanford University. These participants were randomly assigned to take on the role of either prisoners or guards. As the students performed their ascribed roles, the guards became more abusive, the prisoners faced increased persecution, and the experiment ended eight days early because it became a danger to the participants' physical and emotional well-being (Bratman et al., 2015; Cochran, 2016; Duke, 2016; Zimbardo & White, n.d.). This experiment brings into question the role that self-fulfilling prophecy has on role assimilation. When someone is given a meaningful label, they often begin acting in the way that they understand a person with that label is supposed to act (Merton, 1948). The predisposition to understanding how a "type" of person acts is called a schema (Baron, Byrne, & Branscombe, 2007). This is likely the reason the guards and prisoners assimilated to their ascribed roles. Therefore, the Stanford prison experiment is an example of how labels influence one's view of self, which then influences people's behavior and establishes role assimilation. These are the fundamentals of self-fulfilling prophecy.

The Stanford prison experiment was designed by Philip Zimbardo and his colleagues, who went to great lengths to create a prison simulation that seemed authentic. Zimbar-