Chapter 1

The Outlook for Financial Literacy

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As financial markets grow more complex and integrated, individuals and their families are increasingly faced with making highly sophisticated and all-too-often irreversible economic decisions. Nowhere is this more evident than with regard to retirement decision-making: a half-century ago, traditional defined benefit (DB) pension schemes were the norm in the United States, Japan, Australia, and much of Europe, but these have now been largely replaced with defined contribution (DC) pensions. In the process, employer and government judgment regarding how much to save and where to invest has been replaced by individuals having to make these choices on their own (perhaps assisted by advisers they also select on their own). Additionally, participants in DC plans must also decide how to spend down their pension assets and determine whether to annuitize or take their benefits in a single lump sum. The trend toward increased individual responsibility and greater financial complexity extends into other realms of life as well, for example regarding decisions over credit cards, adjustable rate mortgages, and when to claim retirement benefits (Campbell, 2006; Ferguson Jr, 2010). Moreover, given the demographic forces at work and the structure of the labor markets, where workers change jobs and employers many times before retiring, the increase in individual responsibility with regard to financial security after retirement will continue to be a feature of many economies around the world.

A larger array of sophisticated financial instruments does offer new opportunities for more tailored financial plans than available in the past, but these can also make poor decision-making more costly to the ill-informed investors. Indeed, recent events surrounding the global crisis that began in 2008 show that, when people and institutions make grievous financial errors, poor financial decision-making can have substantial costs, not only for individuals but also for society at large.[1] This volume focuses on key lessons for financial decision-making in the wake of that crisis, exploring how financial literacy can enhance peoples' skills and abilities to make more informed economic choices. The chapters that follow draw on cutting-edge research by prominent researchers and practitioners engaged in examining how financial knowledge can shape cost-effective financial planning and behavior. The research reported in the volume suggests several main findings. First, financial literacy determines how well people make and execute financial decisions, including saving, investing, borrowing from one's retirement account, and planning for retirement. Second, new evidence is reported on the extent of financial knowledge (or lack thereof), drawing from several surveys; financial literacy's effects on financial decision-making extend above and beyond the effects of education, sex, race, income, and other factors previously found to be associated with gaps in financial knowledge. Third, researchers acknowledge and address directly the all-important causal question, namely, whether financial literacy drives saving and wealth accumulation, or whether the causal mechanism is the reverse, from wealth to financial literacy. For instance, people might invest in financial knowledge, so they then learn about complex assets, in which case the positive association of literacy and wealth would not imply that knowledge causes investing. But conversely, lack of knowledge might prevent people from investing, or alternatively those with no money may fail to learn about financial markets. Accordingly, several of the researchers represented in this volume develop controlled settings in which they try to disentangle these causal links. And this work shows, we believe quite convincingly, that financial education programs do indeed enhance financial decision-making and asset accumulation.

The work presented in this volume will be of interest not only to researchers and teachers, but also to policymakers from all over the world engaged in financial reforms in the wake of the financial crisis, as well as providers of financial advice and financial services. Global awareness is growing on the need to improve retirement security via increasing financial literacy. For instance, the US President's Advisory Council on Financial Literacy (PACFL, 2008) noted that: 'While the crisis has many causes, it is undeniable that financial illiteracy is one of the root causes . . . Sadly, far too many Americans do not have the basic financial skills necessary to develop and maintain a budget, to understand credit, to understand investment vehicles, or to take advantage of our banking system. It is essential to provide basic financial education that allows people to better navigate an economic crisis such as this one.' Many other groups concur, including the Organisation for Economic Co-operation and Development in Europe, a leader in recognizing the importance of financial literacy, which recently announced a major initiative to 'identify individuals who are most in need of financial education and the best ways to improve that education' (OECD, 2010); the Reserve Bank of India, which launched an initiative to establish financial counseling centers throughout the country; and the Russian Federation, which is implementing, with the World Bank, a major initiative to build consumer financial sophistication (The Financial, 2010). Countries covered in this volume, such as New Zealand, had also undertaken major initiatives to address the problem of financial illiteracy. These initiatives, developed after collecting thorough information on the financial capability of the individuals in those countries, offer important suggestions to other countries as well.

The research presented in this volume can also be helpful to those seeking ways to help individuals and their families as they embark gingerly into the modern financial system, sometimes after substantial missteps. In what follows, we briefly outline themes and highlight salient lessons.

Financial literacy and financial decision-making

In our own prior work (Lusardi and Mitchell, 2007*a*, 2007*b*, 2007*c*, 2008, 2009), as well as in this volume (Lusardi and Mitchell, 2011), we examine how many different groups understand basic financial concepts and plan for retirement. Our chapter in this volume explores how older Americans make financial plans, collect the information needed to make these plans, and implement the plans. Moreover, we show how financial literacy affects retirement planning.

We show that financial illiteracy is widespread, particularly when it comes to understanding calculations related to interest rates and the effects of inflation, along with the more nuanced concept of risk diversification. Only half of all respondents in the survey can correctly answer two simple questions regarding interest rates and inflation, and only one-third correctly answer these two questions plus a question on risk diversification. Financial illiteracy is widespread among older Americans, but shortfalls are particularly concentrated among women, minorities, and the least educated. Furthermore, the financially savvy are more likely to plan and to succeed in their planning, and they tend to rely on formal methods such as retirement calculators, retirement seminars, and financial experts, instead of family/relatives or coworkers. We argue that targeted financial education efforts are likely to be most effective in filling these knowledge gaps.

The workplace is an important source of financial education, particularly as workers approach retirement. In a study by Robert L. Clark et al. (2011), the authors investigate the role of employer-sponsored retirement planning sessions in shaping retirement planning. Drawing on case studies, they examine seminars offered to individuals with mandatory DB plans and voluntary DC plans. In these seminars, employees learn about retirement planning, as well as details of their own benefits and pension distribution rules. To see how the seminars work, participants are asked about their retirement intentions *prior to* and *after* the sessions, to determine whether the seminar is associated with any change in retirement intentions and plans.

The authors conclude that a third of those who originally indicated they would probably take the DB lump-sum payment before the seminar decided afterwards not to take that option. Of those who originally planned not to take the lump sum, almost half changed their minds post-seminar. As for annuitizing DC plans, almost half changed their plans and decided not to annuitize following the information session, compared to one-fifth who decided to annuitize after learning more about their retirement options. Those who indicated they would take the lump sum tend to have more knowledge about retirement-related finance. In this sense, many people who indicated that they would not take the lump-sum distribution actually did not know they had that option, prior to the seminar. The survey also reflects only stated intentions rather than actual behavior, but when it comes time to actually make a final decision, the authors show that some two-thirds of employees do opt for the lump-sum distribution. Overall, this research shows that workers are not well informed about their pensions, and also that the provision of information and knowledge can shape workers' behavior.

Another way in which pension accruals are utilized includes plan loans, particularly in the US 401(k) environment. Steve Utkus and Jean Young (2011) explore how borrowing from one's DC plan is linked to financial literacy and report that almost one-fifth of 401(k) participants had loans outstanding at any given time, with the loans averaging 16 percent of plan balances. The authors also find that lower levels of financial literacy are linked to pension borrowing; that is, those with lower literacy test scores are also more likely to take the loans. A surprising result of the study is that higher-income people are also more likely to borrow from their 401(k) accounts. In sum, financial literacy is related to pension borrowing, but this behavior should not be viewed in isolation from the household's overall balance sheet.

Financial literacy also plays a key role in influencing decision-making regarding stock market investment, as demonstrated in Joanne Yoong's study (2011) linking lack of understanding about equity markets and investment in stocks. She employs the American Life Panel (ALP), an internet survey, to study stock market behavior. She first shows that avoiding stock investments is not associated with mistaken financial beliefs or other important variables, such as risk aversion and income. She further shows that people tend to shy away from the stock market, primarily because they do not understand it. Thus, even if employers design pension plans to 'default' people into portfolios containing equity investments, investors would still benefit from learning about how financial markets work in order to make sensible investment choices.

Evaluating financial literacy interventions

It is not surprising that uneducated consumers fail to make good choices when faced with complex decisions, risk, and lengthy time horizons, and there is at least the chance that financial literacy can help inform the decision process. Accordingly, the volume next covers various methods of assessing how to improve financial literacy. The chapter by Justine Hastings et al. (2011) explores how to present fees and charges in pension choice, focusing on the national mandatory DC scheme in Chile, where workers elect which of five pension funds they invest their mandatory contributions in. Using a nationally representative individual-level survey, the researchers examine respondents' financial literacy and link it to how they select from among five fund managers available to handle their retirement investments. People respond that the top three factors they use in choosing a fund are recommendations from a friend, fund profitability, and to help a salesman (perhaps because the salesman would, in turn, do a favor for, or provide some sort of gift to, the participant). The empirical analysis shows that better-educated and higher-income respondents are more likely to select fund managers generating highest returns. This group is also more likely than others to turn to their employers for recommendations on fund managers. Lower-income respondents rely more on advertising and recommendations from friends. This suggests that the less educated are more susceptible to how information is framed, implying that it may be important to monitor information and plan design as a protective measure for the least literate.

To the extent that people can hire advisers, they may not need to have financial information themselves; nevertheless, many are confused about where to find it and whom to trust to deliver it. This is the topic of the chapter by Angela Hung et al. (2011), who study investor knowledge and experience with advisers and broker-dealers. In the United States, broker-dealers and investment advisors have distinctly different roles: brokers conduct security transactions, dealers buy and sell securities for others, investment advisors provide financial planning services and advice regarding securities, and consultants simply provide advice. However, in practice, the lines may blur, so to gain a better sense of how well consumers understand these distinctions, the researchers surveyed members of the ALP and, in addition, conducted focus groups. They show that many people seem to understand how broker-dealers and investment advisors differ, but few can distinguish between financial advisors and financial consultants. Furthermore, people who have worked with financial professionals tend to have long-term relationships with them involving trust. Nevertheless, many respondents believe they cannot use these services due to insufficient assets. A key challenge for the financial industry is to find ways to provide unbiased, experienced, and high-quality investment advice for low cost, and to serve people with widely varying financial situations and needs.

A more detailed examination of how individuals with limited assets use the financial system is the subject of the study by Susan Carter et al. (2011). In some subpopulations, alternative financial providers play a key role, including payday loan offices and pawn shops offering much-needed cash but often at a heavy price. Those who use these financing sources take out small and short-term loans, typically about $300 for a term of two weeks, carrying very high rates. To better understand payday loans, the authors compare credit union members having an electronic debit charge to a payday lender versus other credit union members. Unexpectedly, those taking out payday loans had higher credit scores, higher inferred income, and smaller loan amounts than did their counterparts. Also these borrowers had higher initial account balances, relative to others, and half could have used their checking or saving accounts, or cheaper lines of credit, instead of the more expensive payday loans. These findings show that it is important to examine all the financial pathways that influence long-term financial security.

Another risk to which consumers are exposed is the possibility that they may outlive their retirement wealth, and this too may be related to financial literacy. The study by Julie Agnew and Lisa Szykman (2011) explores why many workers seem reluctant to annuitize their retirement wealth, even when relatively low-cost annuities provide much-needed protection against longevity risk. In an experimental setting, the researchers first administer a short test to participants to assess their financial literacy levels. Next, participants play a game simulating investment versus annuitization decisions that might unfold for someone leading up to and through retirement. The experiment is structured to make the annuity choice simple, permitting the comparison of participant financial literacy to self-reported levels of cognitive and emotional overload, confidence, and satisfaction. The analysts find that individuals with higher levels of financial literacy are more likely to pick the investment option, while those reporting emotional overload tend to select the annuity. One implication is that plan sponsors would do well to simplify decisions about retirement plans if they are concerned about helping to protect against retirement insecurity. As in the case of Chile, it is important to evaluate how a retirement scheme might unwittingly drive participants into a 'path of least resistance' that is contrary to their best interests, particularly in the case of the less financially literate.

Financial illiteracy can be costly not only to individuals but also to society, which suggests that programs could be designed to help consumers and plan providers better achieve retirement security goals. This topic is taken up by Sumit Agarwal et al. (2011), in their exploration of how counseling can influence mortgage demand patterns. The authors examine two programs: a mandatory two-hour review of mortgage offers in Chicago, and a voluntary two-year counseling program in Indiana. In the former case, the State of Illinois required borrowers in ten zip codes to submit mortgage offers for review by HUD (Department of Housing and Urban Development)-certified counselors, over a four-month period. Borrowers electing risky mortgage products or who had a low credit score were required to attend counseling. The researchers show that, to avoid counseling, small lenders with loose lending criteria and consumers with low borrowing capability dropped out of the market; other potential borrowers chose less risky products so as to avoid the counseling requirement. In other words, it appears that the program may have achieved its goals without actually providing the counseling. Under the latter voluntary program, participants could learn about credit and budgeting, develop a financial plan, and meet with counselors one-on-one each month. If they remained on track with their financial plan, they were entitled to receive loans from partner lenders. In this second case, the evidence suggests that loans made to program graduates performed much better than those of a control group. Nevertheless, there remain questions of causality about the second example, as those who participated may have also been more likely to be particularly motivated to succeed in the program.

Shaping the financial literacy environment

Understanding retirement saving shortfalls may also be due, in part, to problems with time perception, as discussed by Gal Zauberman and B. Kyu Kim (2011). Their work suggests that people often tend to weigh the present more heavily than the future, even when they know their short-term decisions will interfere with important long-term goals, such as saving for retirement. The authors characterize this psychological pattern with the term 'resource slack', defined as the notion that one's preference for something today versus sometime in the future depends on the amount of resources available now versus later. The researchers point out that time is often viewed in economic models as a limited resource, but in experimental settings people claim they will have more time in the future than they actually do, which helps explain why they put off tasks, such as retirement saving, today. A related finding, playing into the apparent disconnect in the ability to save now for future benefits, is a lack of understanding about time itself. The authors argue that people perceive time as being expansive in the present, but it is telescoped in the future. Thus, if retirement is twenty, thirty, or forty years away, it all seems equally far away, as the future is compressed. In addition to believing that they have more time to save in the future than they actually do, people think they will have more money in the future than they do now, which further prompts them to put off saving for retirement. More generally, much psychological research shows that people often fail to grasp the linear nature of time and hence develop hyperbolic rates of future discounting.

One way to reduce the effect of time misperception on retirement saving is to design programs based on precommitment. Accordingly, some have tried to tie retirement saving to the annual tax filing process, so as to make saving automatic. This, in turn, prompts discussion of whether it is better to use behavioral approaches to encourage saving, for example by defaulting workers into pensions, or whether it is preferable to construct mandates that require people to adequately fund their own retirement. This is a theme which runs throughout the volume, emerging in several of the chapters.

An intriguing prize-based model designed to encourage retirement saving is the focus of work by Melissa Kearney et al. (2011), who illustrate how a lottery-like system can harness the popularity of low-probability, high-reward schemes to build retirement saving. The approach has been demonstrated to appeal to those favoring low odds to 'win big', including on their retirement saving, while preserving initial capital. For instance, the so-called Million Adventure bonds were sold in the United Kingdom to finance war debt in the 1690s, with exactly this structure. Again after World War II, the United Kingdom launched prize-based Premium Bonds with the slogan 'Savings with a Thrill!'. This program today has more than 20 million bondholders. Similarly, in South Africa, a privately run plan, sponsored by the First National Bank and called the 'Million a Month Account' plan, enjoyed a take-up rate higher than any other bank product.

The authors helped initiate a prize-based saving program operated by a US credit union, called the 'Save to Win'. This program attracted many participants before it was closed down by authorities, who viewed it as competition to the state lottery. Nevertheless, this initiative provides insight about how to engage certain segments of the population who are hard to reach by traditional saving programs.

We also seek to expand understanding about financial literacy efforts underway around the world. In the case of New Zealand, Diana Crossan (2011) described the work the Retirement Commission has done to design a national strategy for financial literacy, along with numerous private-sector and nongovernment partnerships. Specifically, the national strategy to improve retirement readiness involved working with banks and other organizations to help assess needs and develop programs to improve financial literacy and retirement saving adequacy. A key role is assigned to a well-designed and informative website for all citizens, young and old; to date over one-third of the country's population has consulted and used calculators on the national website. In addition, the author highlights how the government integrated financial education in schools and in tertiary educational institutions.

In addition, nongovernmental organizations are also taking on an increasingly salient role around the world to improve financial literacy in poor populations. Robert Holzmann (2011) from the World Bank correctly advocates for programs to be tailored to meet the attributes of low- and middle-income countries, rather than exporting lessons from developed nations. For instance, many people in low-income countries lack access to basic financial services, and day-to-day needs become priorities, rather than long-term planning. The rural nature of poor countries is also an important factor inasmuch as, in these nations, assets are likely to be seeds or cattle, rather than homes or investment accounts. Moreover, poor countries have far greater numbers of people working in the informal economy, curtailing the reach of organized interventions to develop *financial capability*, a concept that not only encompasses financial knowledge but also looks at financial behavior. Finally, risk in the developing-country context may be more complex and more personal than in richer nations, further hampering incentives to develop long-term financial capability. Accordingly, the author proposes that policymakers do more to monitor and evaluate programs that work. Moreover, he favors direct approaches to change behavior, including social marketing approaches that have worked in other capacities, for instance in improving health outcomes (particularly for those with HIV/AIDS). These tactics could also be used to improve financial capability in low- and middle-income nations.

The role of nonprofit organizations in the United States is the focus of the chapter by J. Michael Collins (2011), who notes that nonprofit organizations may enjoy more public trust as these institutions are not designed to benefit other stakeholders. In addition, nonprofits are often viewed as a force for pluralism, because they are able to reach underserved populations. The author reviews tax filings of tax-exempt organizations using the terms 'credit counseling' or 'financial education', and he concludes that these organizations tend to be small and very diverse. Some are small, community-based organizations with volunteer educators, while others are large agencies with professional staff providing multiple services. He finds it noteworthy that few nonprofit organizations were specifically set up to deliver financial literacy programs; rather, many began to offer financial education programs as part of some other activity. For instance, the US HUD housing counseling program has financed over one thousand nonprofits geared to financial counseling related to housing. In addition, the US Treasury Community Development Financial Institutions Fund has launched a financial education and counseling pilot program to provide grants to nonprofits focusing on financial literacy. After examining what the nonprofit programs offer, the author concludes that low-income clients do receive basic help on goal-setting and budgeting. As the organizations increase in sophistication, they then tend to move into offering credit management, help with access to financial institutions, and provide assistance with income tax filing and saving strategies. Although some may believe that nonprofits are a less expensive source of financial education than private advisers, the author can detect little evidence that nonprofits are any more or less efficient in providing financial literacy services.

Conclusion

Widespread financial illiteracy makes it increasingly challenging for ordinary consumers and their families to cope in an ever-more complex economic environment. This is a problem not only for those who live in developed countries, where it might be surmised that people *should* have a minimal command over simple numeracy, inflation, and risk, but also in middle- and low-income nations, where financial challenges are perhaps more likely to bring hardship than in richer nations. Further, financial illiteracy undermines not only individual retirement security but, indeed, the stability of the global financial system more generally. Indeed, in a recent statement, US President Barack Obama argued that the 'economic crisis was the result of both irresponsible actions on Wall Street, and everyday choices on Main Street . . . [M]any Americans took out loans they could not afford or signed contracts without fully understanding the terms. Ensuring this crisis never happens again will require new rules to protect consumers and better information to empower them' (Alarkon, 2010).

For all of these reasons, boosting financial literacy skills is likely to be critically important for economic and social welfare—not only for this generation, but also for those to come. Finding out which sorts of programs and financial decision-making structures are most effective (as well as least costly) is a task of supreme importance. This task is best informed with carefully designed experiments and evidence-based research with solid evaluation efforts, many of which we report in this volume. Although much remains to be done to enhance financial literacy, we do know who is likely to be most positively affected; as described in several chapters in this volume, the least educated, those with low incomes, and women are more likely to display low financial literacy. Increased financial knowledge will help people make better lifetime financial decisions, thus better protecting them from financial hardship and an insecure old age.

Endnote

[1] For instance, Bergstresser and Beshears (2009), Gerardi et al. (2010), and Bucks and Pence (2008) show that the least financially literate are also most likely to fail to understand mortgage terms, take out complex mortgages, and fall behind on their housing payments. These mistakes can result in welfare transfers and other transfer payments that increase the public in addition to the private costs of financial illiteracy.

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