

The TIAA Institute-GFLEC Personal Finance Index: A New Measure of Financial Literacy

Annamaria Lusardi, The George Washington University School of Business and Global Financial Literacy Excellence Center (GFLEC)

Noemi Oggero, Global Financial Literacy Excellence Center (GFLEC)

Paul J. Yakoboski, TIAA Institute



Executive Summary

The *TIAA Institute-GFLEC Personal Finance Index (P-Fin Index)* measures knowledge and understanding which enable sound financial decision-making and effective management of personal finances. It is unique in its capacity to examine financial literacy across eight areas of personal finance in which individuals routinely function, as well as providing a robust indicator of overall personal finance knowledge and understanding.

U.S. adults are split 50/50 between those who could and those who could not answer over one-half of the *P-Fin Index* questions correctly. Sixteen percent of Americans demonstrated a relatively high level of personal finance knowledge and understanding, i.e., they answered over 75% of the index questions correctly. Twenty percent have a relatively low level of knowledge and understanding, answering 25% or less of the questions correctly.

Personal finance knowledge is lowest in the area of comprehending risk; on average, 39% of these questions were answered correctly. This is troubling given that uncertainty is a common feature of financial decision-making. Future conditions are simply unknown, thus, comprehending risk and its implications is integral to making appropriate decisions.

Basic personal finance behavior and habits often become established early in adulthood. Young adults also confront a range of financial decisions with ramifications for their financial well-being decades into the future, as well as the present. Yet they are working from a limited base of personal finance knowledge. While 10% of young adults (under age 45) have a relatively high level of financial literacy, 30% have a relatively low level. Comprehending risk and insuring are areas where young adult knowledge appears lowest.

The *P-Fin Index* correlates with financial actions and outcomes in the expected manner, i.e., individuals with greater personal finance knowledge are more likely to have positive personal finance experiences, such as planning and saving for retirement and for other reasons.

Overall, *P-Fin Index* data highlight the gap between current personal finance knowledge levels and the level needed for sound financial decision-making in the normal course of life. This, in turn, highlights the need for a renewed focus on efforts to improve financial literacy, particularly among the young who face many significant financial decisions early in their working lives.

Introduction

The gamut of financial decisions—simple and complex—faced in the course of life is somewhat astounding. There are routine, everyday decisions, such as:

- Where to shop and what to buy?
- Cook dinner or eat out?

Decisions made that are rarely revisited:

- Choosing the deductible on car insurance, on homeowner's insurance.
- Choosing a bank.

Decisions made on a regular, periodic basis:

- Vacation or staycation?
- Health insurance annual enrollment.

Decisions inevitably revisited with time:

- Where to live? Rent or own? Fixed or adjustable rate mortgage? Refinance?
- Lease or purchase a new car? Get a used car? How much to spend?

Decisions with both short- and long-term consequences:

- Go to college? Which college? How to pay?
- Relocate and change jobs?
- How quickly to pay down debt?
- Using credit and credit cards.
- Carry life insurance? What kind and how much?
- When and how to save for various needs, such as a child's education?
- Contribute to retirement plan? How much? How to invest?
- Retire or work a few more years? When to collect Social Security?
- Drawing income from savings during retirement.

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It's clear that individuals must make a myriad of financial decisions across a range of functional areas in the context of personal finance, such as consuming, saving, investing, borrowing and insuring. Nonetheless, all financial decisions are inherently interrelated and inevitably involve trade-offs. In addition, risk and uncertainty further complicate most financial decision-making.

How well individuals navigate life's financial decisions is dependent, at least in part, on their knowledge and understanding of personal finances, often referred to as financial literacy. Decisions made and outcomes experienced matter not only at the household level, but also for the economy as a whole—an extreme example being the subprime mortgage crisis which devastated household finances and triggered the last recession. Therefore, understanding the level of personal finance knowledge among Americans, how it varies across different areas of financial decision-making and among demographic segments of the population, and how it evolves over time matters greatly at the individual level and for society as well.

To this end, the *TIAA Institute-GFLEC Personal Finance Index (P-Fin Index)*, for short) measures knowledge and understanding which enable sound financial decision-making and effective management of personal finances. The *P-Fin Index* is unique in the breadth of questions it asks and the topics it covers to measure financial literacy.

The *P-Fin Index*

The *P-Fin Index* relates to common financial situations that individuals encounter and, in that sense, can be viewed as a gauge of “working knowledge.” The index builds from the existing academic research on financial literacy and capability. But it is the capacity to produce a nuanced examination of financial literacy across different areas of personal finance in which individuals inherently function that distinguishes the *P-Fin Index*. In contrast, previous studies were constrained to use a smaller set of questions that focus on fundamental concepts, such as numeracy, inflation and risk diversification.¹

The P-Fin Index is based on responses to 28 questions;² with three or four questions devoted to each of the following functional areas:³

1. Earning—determinants of wages and take-home pay
2. Consuming—budgets and managing spending

1. A standard set of three questions addressing the concepts of numeracy, inflation and risk diversification was developed by Lusardi and Mitchell (2008, 2011a) and has now been incorporated into multiple surveys to evaluate the level of financial literacy, both in the U.S. and abroad. (Note: These concepts are covered by questions in the *P-Fin Index* survey.) Subsequently, some surveys (e.g., the National Financial Capability Study) have added other questions addressing more sophisticated concepts—assets pricing and mortgage payments (Lusardi, 2011), and, more recently, knowledge of interest compounding. Others have addressed specific topics, such as debt and risk literacy. For a more complete discussion, see Lusardi and Mitchell (2014).

2. Each question is multiple choice with four response options: the correct answer, two incorrect answers and “don't know.”

3. These areas correspond to the National Standards for Financial Literacy outlined by the Council for Economic Education. See <http://councilforeconed.org/resource/national-standards-for-financial-literacy/>.

3. Saving—factors that maximize accumulations
4. Investing—investment types, risk and return
5. Borrowing/managing debt—relationship between loan features and repayments
6. Insuring—types of coverage and how insurance works
7. Comprehending risk—understanding uncertain financial outcomes
8. Go-to information sources—recognizing appropriate sources and advice

This depth and breadth in survey design produces a robust measure of overall personal finance knowledge and enables refined analysis of this knowledge across functional areas.

P-Fin Index results are available for demographic groups defined by age, gender, race and ethnicity, education level, employment status, household income and exposure to financial education. In addition, the *P-Fin Index* survey collects information about household finances and financial behaviors; this enables examination of the relationship between knowledge and outcomes.

The *P-Fin Index* was developed by the TIAA Institute and the Global Financial Literacy Excellence Center (GFLEC), in consultation with Greenwald & Associates. The initial wave of the survey was fielded online in September 2016 with a nationally representative sample of U.S. adults, ages 18 and older.⁴ The survey was completed by 1,043 individuals. This report is an abridged version of the analysis performed on these data; detail about the empirical work will be available in a longer research paper.

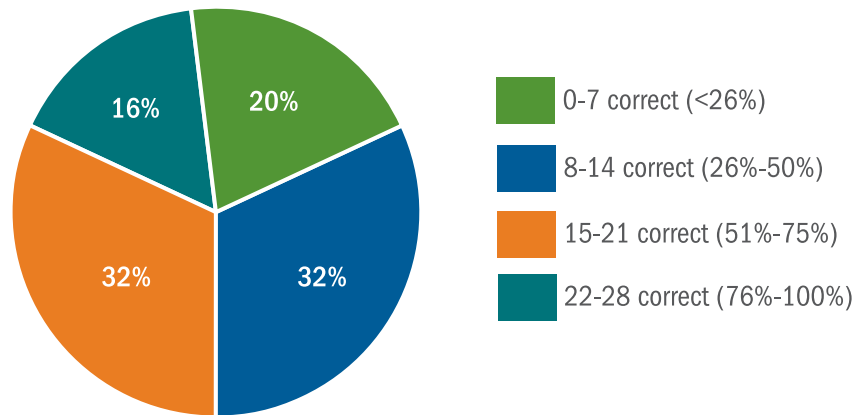
The *P-Fin Index* will be an annual study. Future waves will enable trend analysis of overall personal finance knowledge, as well as knowledge in the different functional areas and across demographic groups.

***P-Fin Index* results**

Personal finance knowledge among U.S. adults is modest. There is essentially a 50/50 split between those who could and those who could not answer one-half of the *P-Fin Index* questions correctly (Figure 1). On average, U.S. adults answered 49% of the index questions correctly. Sixteen percent demonstrated a relatively high level of personal finance knowledge and understanding, i.e., they answered over 75% of the index questions correctly, while 20% showed a relatively low level, i.e., they answered 25% or less of the questions correctly. It is concerning that so many Americans appear to lack knowledge that enables sound financial decision-making.

4. The sample was drawn from GfK's KnowledgePanel, which is a large-scale probability-based online panel. Previously called Knowledge Networks, it was the first online panel to recruit households by randomly selecting residential addresses rather than relying on traditional random-digit dialing. The entire panel is now based on address-based sampling. GfK provides online access to panel members where necessary, but panelists are unable to participate using mobile devices.

Figure 1. *The Personal Finance (P-Fin) Index*: Distribution of correct answers to index questions among U.S. adults

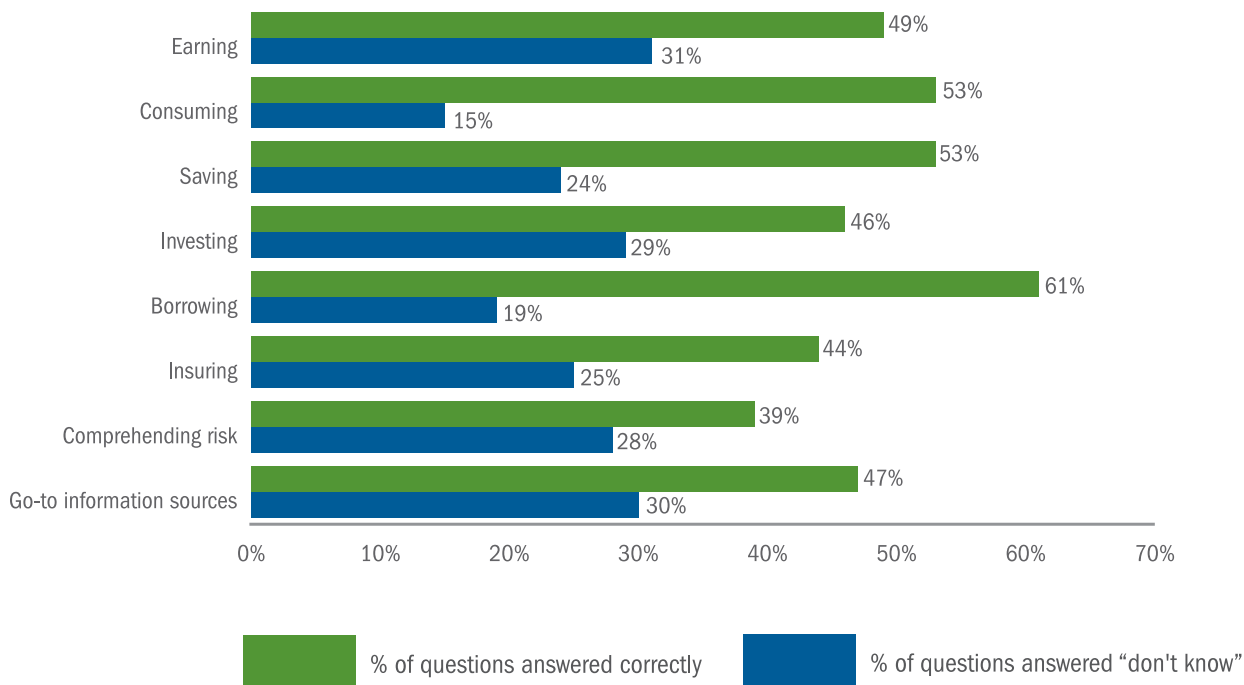


Source: *The TIAA Institute-GFLEC Personal Finance Index* (2017).

Figure 2 shows the percentage of questions answered correctly and the percentage answered with a “don’t know” (DNK) response for the eight functional areas of personal finance outlined above. Analysis of DNK responses is valuable as previous research has demonstrated that a DNK response provides additional information; specifically, it indicates lack of confidence by the respondent in his or her knowledge, in addition to a lack of knowledge and understanding.⁵

5. See Lusardi and Mitchell (2014).

Figure 2. *The Personal Finance (P-Fin) Index: Knowledge across functional areas*



Source: *The TIAA Institute-GFLEC Personal Finance Index (2017)*.

Among the functional areas comprising the *P-Fin Index*, comprehending risk is the one where Americans tend to have the lowest level of knowledge. On average, survey participants answered 39% of these questions correctly, while responding DNK to 28% of them. This finding is consistent with previous research identifying risk-related concepts as the most difficult for individuals to grasp.⁶ This finding is particularly troubling given that risk and uncertainty are common features of financial decision-making. Future conditions are simply unknown—employment status and earnings, family status, health status, interest rates, asset returns, relative prices and inflation. Accidents often have financial consequences. Uncertainty regarding how long one will live involves financial consequences resulting from either unexpectedly early death or living to an unexpectedly advanced age. Comprehending risk and its implications is integral to making appropriate financial decisions.

Insuring, investing and go-to information sources are the other functional areas where personal finance knowledge is below average—falling below the average of 49% correct answers for all survey questions.

6. See Coppola et al. (2017).

Personal finance knowledge is highest in the area of borrowing and debt management. On average, 61% of the borrowing questions were answered correctly, while 19% received DNK responses. Debt tends to be a feature of personal finance common across the life cycle for many individuals; knowledge and understanding may emerge from confronting accumulated debt, often from early on in the life cycle.

Consuming and saving are other areas where personal finance knowledge is above average—exceeding the average of 49% correct answers for all survey questions.

Cluster analysis reveals a strong correlation of personal finance knowledge and understanding across four areas: saving, investing, borrowing and insuring. Individuals who answer all or most questions correctly in one of these areas tend to answer all or most correctly in the other three areas as well. In contrast, there is little correlation between knowledge in the areas of earning, consuming, comprehending risk and go-to information sources and knowledge in any other functional area.

Comprehending risk

Personal finance knowledge is lowest in the area of comprehending risk. The following is one of the questions in the *P-Fin Index* survey related to this topic. The findings from this question highlight that risk is a difficult concept for most (approximately 60%) adults to grasp.

There's a 50/50 chance that Malik's car will need engine repairs within the next six months which would cost \$1,000. At the same time there is a 10% chance that he will need to replace the air conditioning unit in his house, which would cost \$4,000. Which poses the greater financial risk for Malik?

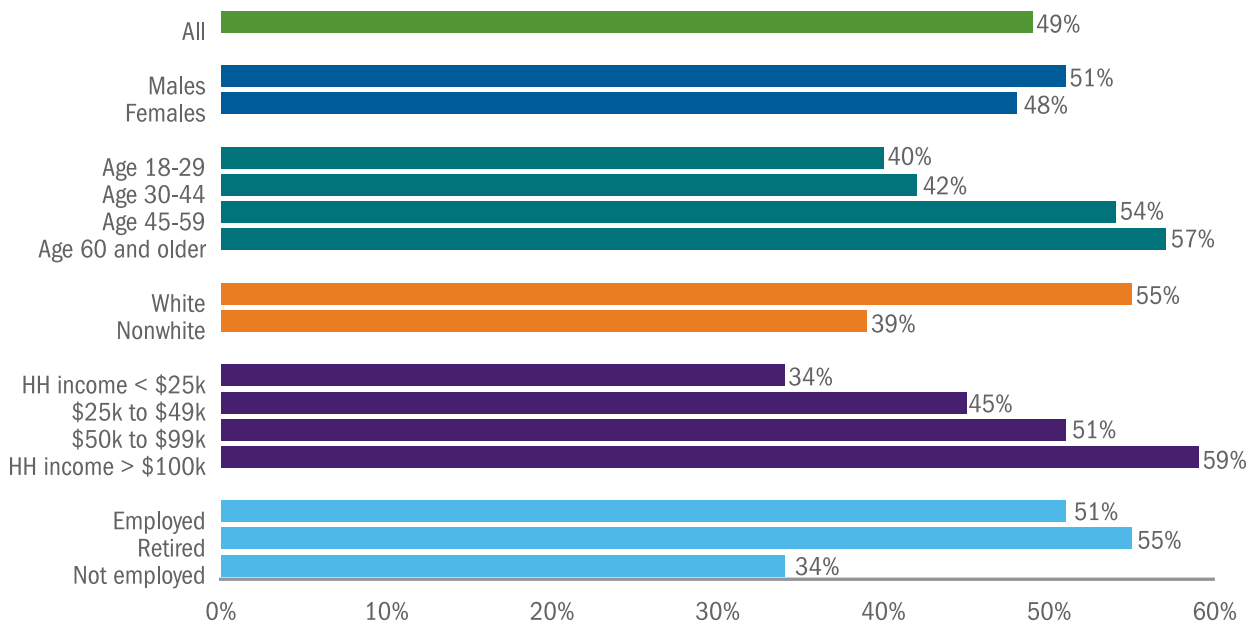
- **The car repair (correct answer; chosen by 41% of respondents)**
- *The air conditioning replacement (chosen by 19% of respondents)*
- *There is no way to tell in advance (chosen by 19% of respondents)*
- *Don't know (chosen by 20% of respondents)*

Comprehending risk involves understanding that the expected financial outcome in a given scenario depends on the range of possible outcomes in the scenario, the financial implication associated with each outcome, and the likelihood of each outcome occurring. Proper financial decision-making should not ignore low probability outcomes based on the premise that they are not likely to happen. An outcome with a small likelihood of happening can still matter if its financial implication is very large. Likewise, outcomes with extremely large financial implications should not be overemphasized if they are very unlikely.

Demographic variations

Personal finance knowledge varies across individuals with their demographic characteristics. *P-Fin Index* findings are generally consistent with financial literacy patterns identified by previous studies, with some minor differences. Figure 3 shows the average percentage of *P-Fin Index* questions answered correctly across demographic groups, while Figure 4 presents the distribution of correct answers within each group.

Figure 3. The Personal Finance (P-Fin) Index: Percent of index questions answered correctly

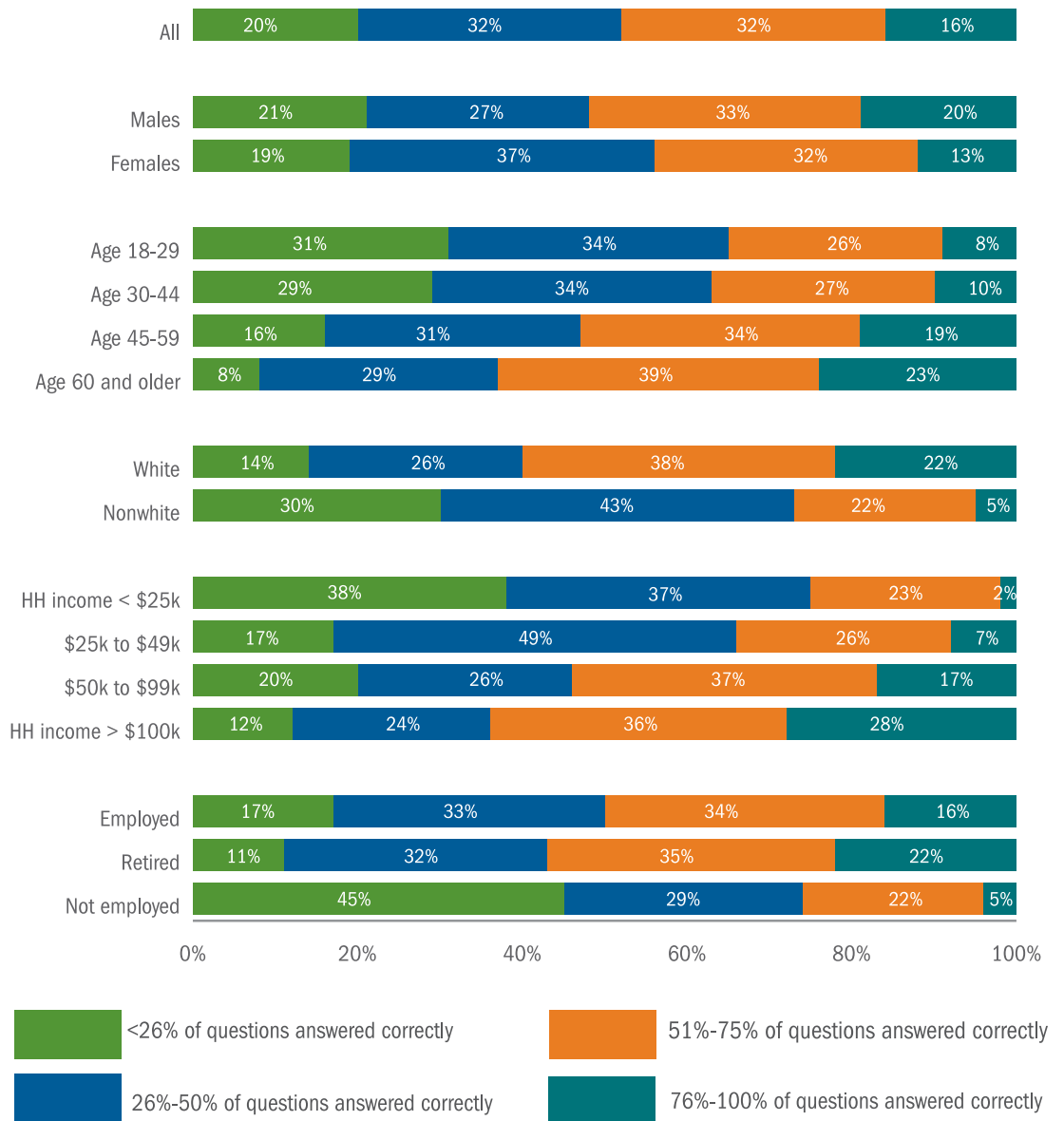


Source: The TIAA Institute-GFLEC Personal Finance Index (2017).

While previous research has found that financial literacy among men exceeds that among women by a sizeable amount,⁷ gender findings in the *P-Fin Index* are more nuanced. The difference in the average number of questions answered correctly is not significant, but there is a significant difference in the share of men and women demonstrating a relatively high level of personal finance knowledge (i.e., answering over 75% of *P-Fin Index* questions correctly.)

7. See Lusardi, Mitchell and Curto (2010), Lusardi and Mitchell (2009, 2014), Lusardi and Tufano (2009, 2015).

Figure 4. The Personal Finance (P-Fin) Index: Distribution of correct answers to index questions



Source: The TIAA Institute-GFLEC Personal Finance Index (2017).

Personal finance knowledge is greater among those ages 45 and older than those under age 45. A larger percentage of *P-Fin Index* questions are answered correctly by those in the 45 and older group, and they are more likely to have a relatively high level of knowledge and understanding. These results are consistent with previous research which found that financial literacy tends to increase with age.⁸ It is important to note that many consequential financial decisions are made well before age 45 while financial knowledge is often very low—in fact, those under age 45 were much more likely to have a relatively low level of personal finance knowledge (i.e., answering 25% or less of *P-Fin Index* questions correctly.)

Financial literacy is higher among whites than nonwhites in the *P-Fin Index* results, a finding consistent with previous research.⁹ (Hispanics were oversampled in the first wave of the *P-Fin Index*. A report focused on their financial knowledge and understanding will be subsequently published.)

Personal finance knowledge tends to increase as household income increases—the share of index questions answered correctly is successively greater for higher income levels. This result is consistent with previous research.¹⁰ Those with household incomes of \$100,000 or more are most likely to have a relatively high knowledge level; those with less than \$25,000 in household income are most likely to have a relatively low knowledge level.

Personal finance knowledge varies significantly with employment status in the adult population. Individuals who are not employed¹¹ have markedly less personal finance knowledge than those employed¹² and those retired. The percentage of index questions that not employed respondents answered correctly is dramatically lower and they are much more likely to have a relatively low level of knowledge and understanding. Moreover, retirees answered a greater share of *P-Fin Index* questions correctly compared to those employed.

Demographic variations in knowledge and understanding in the personal finance functional areas are presented in the Appendix.

8. See Lusardi and Mitchell (2011a, 2011c, 2014).

9. See Lusardi and Mitchell (2007a, 2007b, 2009, 2011b, 2014).

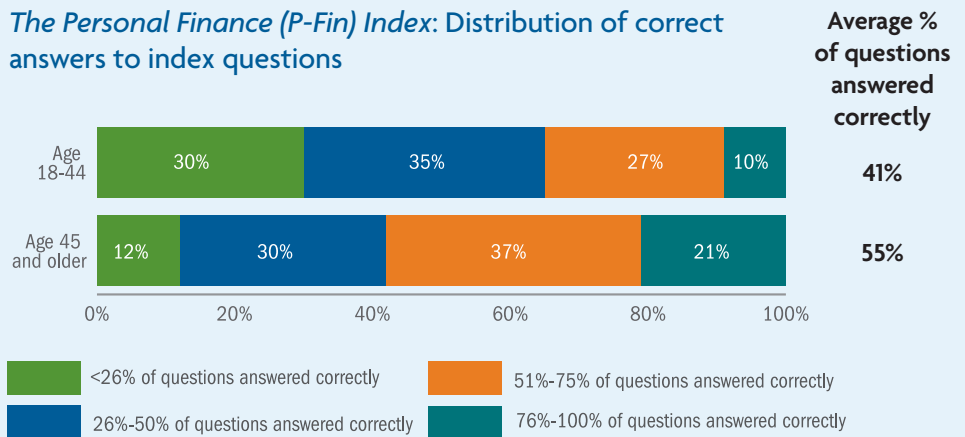
10. See Lusardi and Tufano (2015), Lusardi and Mitchell (2011c, 2014).

11. Includes students, homemakers, those unemployed or on temporary lay-off, and those disabled and unable to work.

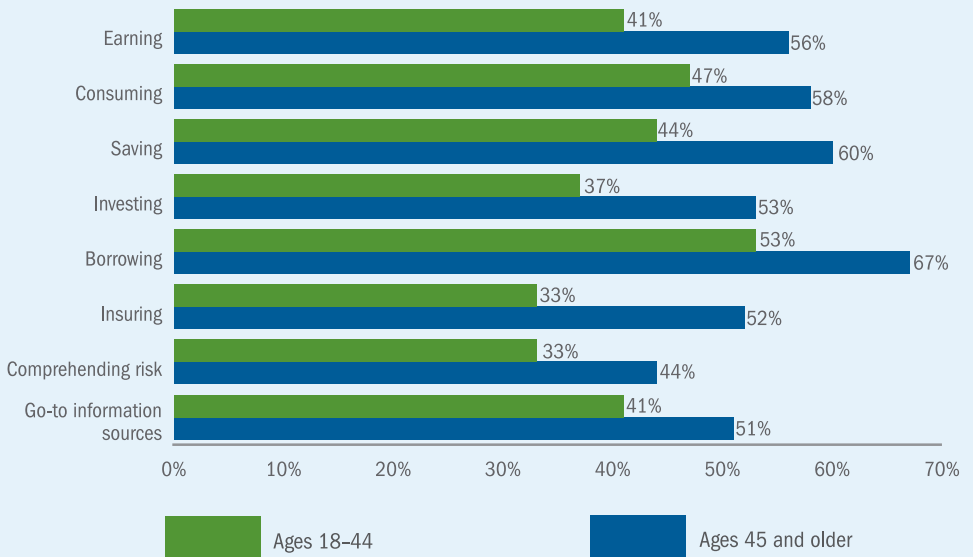
12. Includes those employed full-time, part-time, and self-employed.

Young adult personal finance knowledge

The Personal Finance (P-Fin) Index: Distribution of correct answers to index questions



Percent of index questions answered correctly



Source: The TIAA Institute-GFLEC Personal Finance Index (2017).

Consistent with previous studies, the *P-Fin Index* finds that young adults tend to have lower levels of financial literacy than their older peers. On average, respondents under age 45 answered 41% of the *P-Fin Index* questions correctly, compared with 55% among those ages 45 and older. Among young adults, the percentage with a relatively low level of personal finance knowledge (30%) is triple the percentage with a relatively high level (10%.)

Furthermore, an age gap in personal finance knowledge exists across all functional areas, ranging from 10 percentage points for go-to information sources to 19 percentage points for insuring. Even though individuals need to take responsibility for saving and investing early in life, these areas have knowledge age gaps of 16 percentage points each. Comprehending risk and insuring are the areas where young adult financial literacy appears lowest with one-third of the questions in each answered correctly.

The low level of personal finance knowledge among young adults is particularly problematic given that many consequential financial decisions are faced early in life, such as:

- Whether to attend college and how to finance it?
- When to start saving for retirement? Then, how much to save and how to invest?
- Whether to buy a home, and how much home to buy?

In addition, basic personal finance behavior and habits, such as budgeting and tracking spending, often become established early in adulthood, as do general lifestyle decisions. In short, young adults are making a myriad of decisions with ramifications for their financial well-being from a limited base of knowledge and understanding.

Results from a specific question in the *P-Fin Index* survey highlight the challenge. Young adults are endowed with time, and time is a valuable resource in the context of saving for retirement given the impact of compounding returns. But as illustrated by responses to the following question, many young adults do not grasp the magnitude of that impact:

Anna saves \$500 each year for 10 years and then stops saving additional money. At the same time, Charlie saves nothing for 10 years but then receives a \$5,000 gift, which he decides to save. If both Anna and Charlie earn a 5% return each year, who will have more money in savings after 20 years?

- **Anna (correct answer; chosen by 44% of young adults)**
- Anna and Charlie will have the same amount (chosen by 22% of young adults)
- Charlie (chosen by 6% of young adults)
- Don't know (chosen by 27% of young adults)

The share of respondents answering correctly increased steadily from 42% among those ages 18–29 to 59% among those ages 60 and older. Many individuals would likely make different (and better) decisions at younger ages if their personal finance knowledge and understanding were greater.¹³

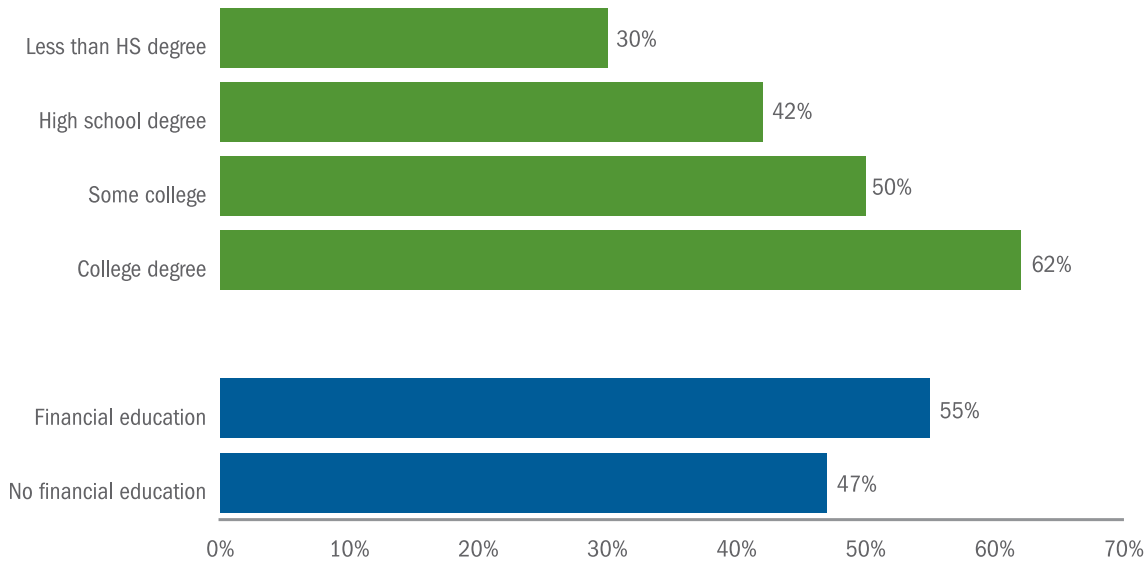
Variations by education

Personal finance knowledge is positively correlated with both general education and financial education in the *P-Fin Index*, a finding consistent with previous research.¹⁴ Figure 5 shows the percentage of index questions answered correctly across general education levels, and by the receipt/non-receipt of financial education. Figure 6 presents the distribution of correct answers across the same groups.

¹³. See Lusardi and Mitchell (2014).

¹⁴. See Lusardi and Mitchell (2007a, 2011c, 2014).

Figure 5. *The Personal Finance (P-Fin) Index*: Percent of index questions answered correctly



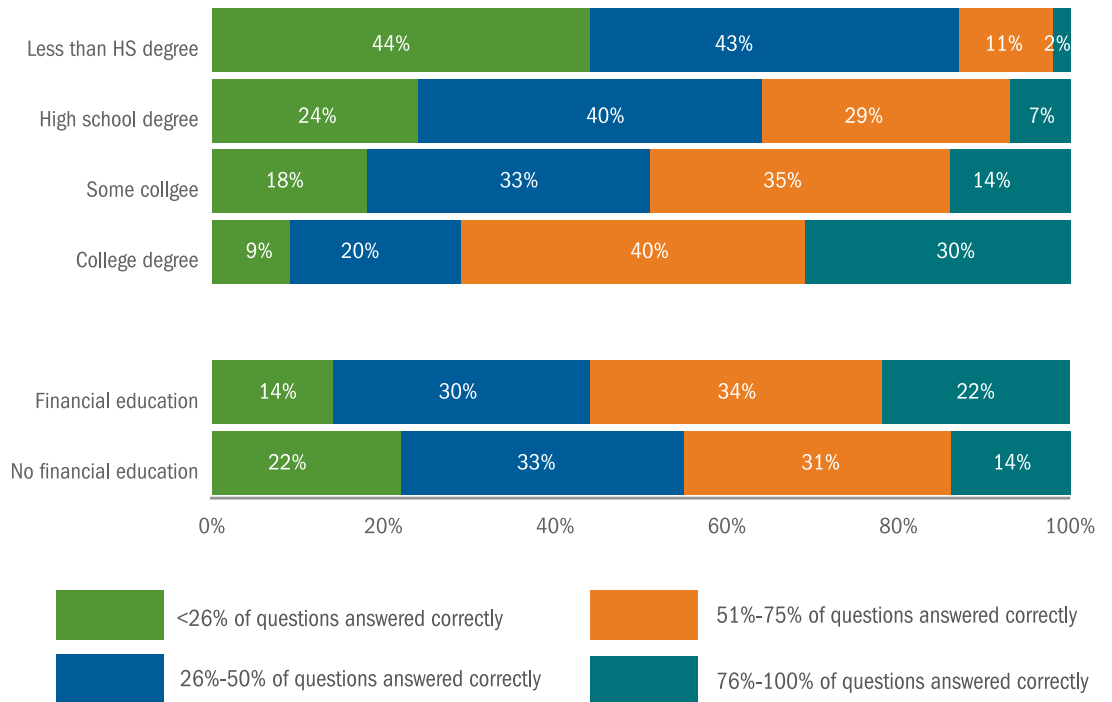
Source: *The TIAA Institute-GFLEC Personal Finance Index* (2017).

The share of *P-Fin Index* questions answered correctly is successively greater for higher levels of education. Those with a college degree are most likely to have a relatively high level of personal finance knowledge and understanding; those with less than a high school degree are most likely to have a relatively low level.

Individuals who have participated in a financial education class or program—provided in high school or college, in the workplace, or by a community organization—answered more questions correctly than those who have not received financial education. They are more likely to have a relatively high level of personal finance knowledge and less likely to have a relatively low level.¹⁵

15. See Lusardi and Mitchell (2014) for a discussion of existing research regarding the relationship between financial education programs and financial literacy levels, as well as the challenges inherent in empirically establishing causality and effectiveness.

Figure 6. The Personal Finance (P-Fin) Index: Distribution of correct answers to index questions



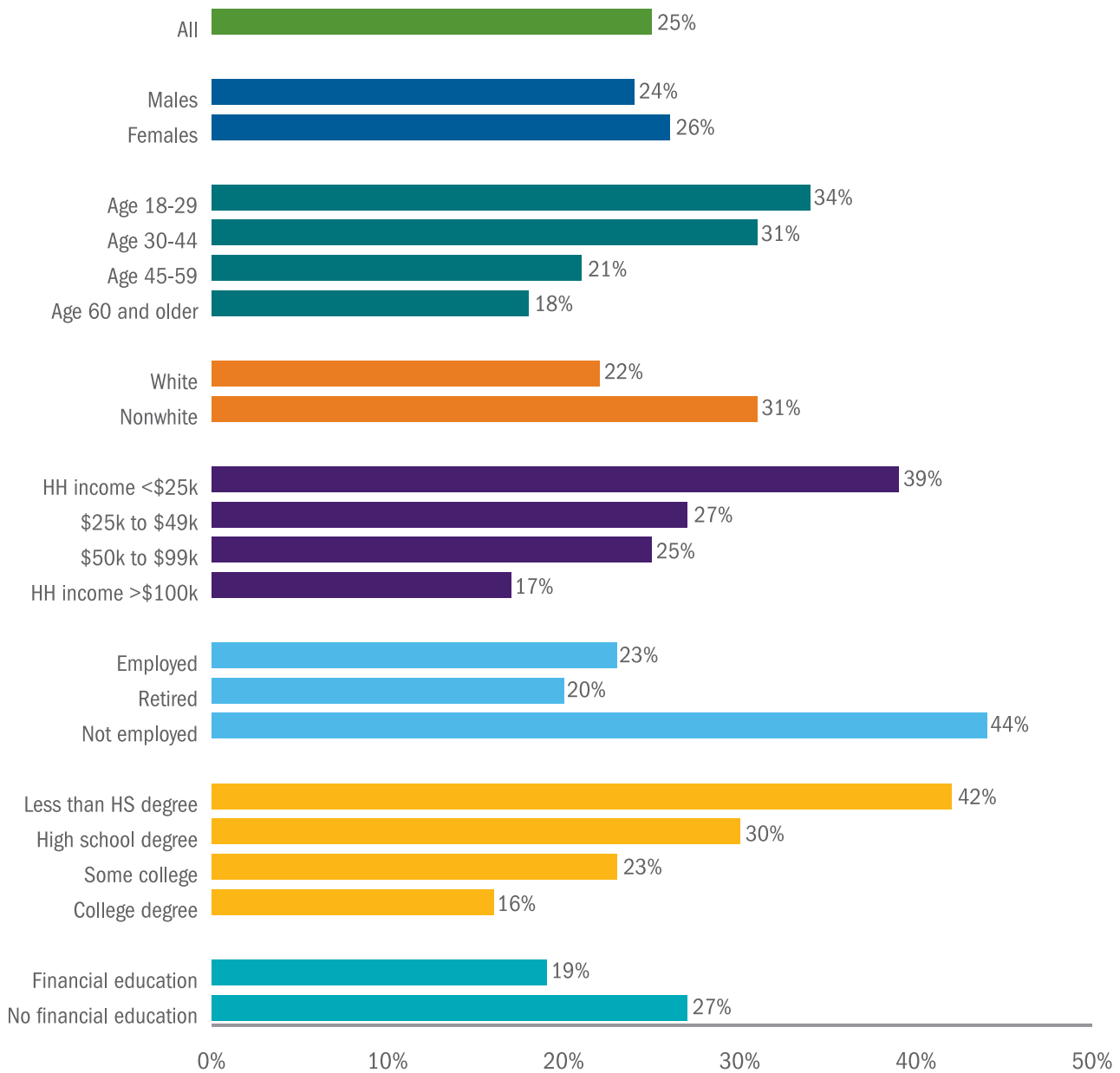
Source: The TIAA Institute-GFLEC Personal Finance Index (2017).

“Do not know” responses

Analysis of DNK responses is valuable, as previous research has demonstrated that a DNK response provides additional information. Figure 7 shows the percentage of DNK responses to the *P-Fin Index* questions across demographic groups, including general and financial education. This reveals patterns in personal finance knowledge analogous to those discussed above, specifically:

- There is only a marginal difference between men and women in the percentage of questions answered DNK.
- DNK responses are more common among young adults, i.e., those under age 45.
- The frequency of DNK responses decreases as household income levels rise.
- DNK responses are much more common among individuals who are not employed.
- The frequency of DNK responses decreases as educational attainment increases.
- DNK responses are more common among those who have not received financial education.

Figure 7. The Personal Finance (P-Fin) Index: Percent of index questions answered “don’t know”



Source: The TIAA Institute-GFLEC Personal Finance Index (2017).

A comparison with previous surveys

Several questions in the *P-Fin Index* can be compared with other surveys. One of the questions used by the *P-Fin Index* to assess knowledge with respect to borrowing tests understanding of interest compounding in the context of debt:

Jose owes \$1,000 on a loan that has an interest rate of 20% per year compounded annually. If he makes no payments on the loan, at this interest rate, how many years will it take for the amount he owes to double?

- **Less than 5 years (correct answer; chosen by 43% of respondents)**
- 5 to 10 years (chosen by 20% of respondents)
- More than 10 years (chosen by 8% of respondents)
- Don't know (chosen by 28% of respondents)

This question, like others in the *P-Fin Index*, shows that the data compare well with other surveys. Approximately two in five respondents answered this question correctly and, consistent with other studies, about thirty percent overestimated the time it takes for debt to double—for example, in the 2009 TNS Survey, 32 percent replied that it would take more than 5 years for a \$1,000 debt with a 20% annual interest rate to double.¹⁶ The DNK response rate here is also consistent with the 2015 National Financial Capability Study (NFCS) where 25% of survey participants responded that they did not know the answer.¹⁷ It's clear that many Americans do not understand the implications of compounding interest, despite the ramifications for debt payments, as well as savings accumulation.

The *P-Fin Index* and personal finance outcomes

Since the *P-Fin Index* measures knowledge and understanding which enable sound financial decision-making and effective management of personal finances, it should correlate with financial actions and outcomes. Consistent with previous findings, as well as academic research on financial literacy, this expectation holds—individuals with greater personal finance knowledge, as measured by the index, are more likely to have positive personal finance experiences.¹⁸

16. See Lusardi and Tufano (2009, 2015).

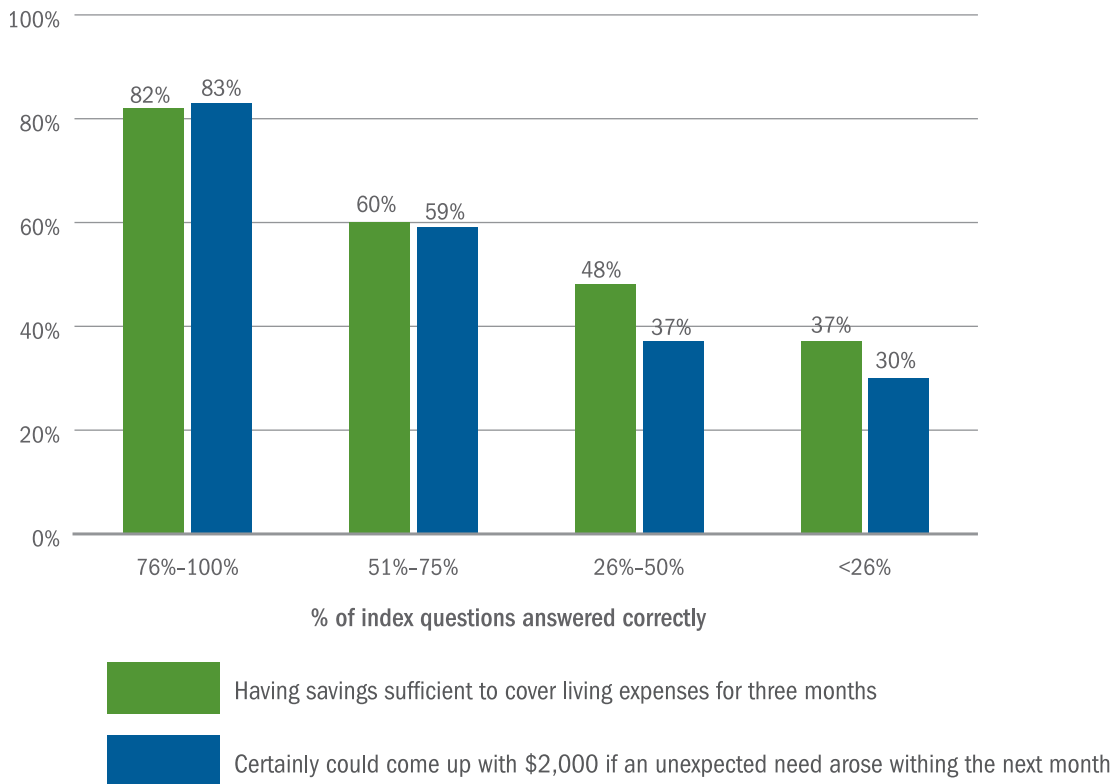
17. See Financial Capability in the United States 2016. <http://www.usfinancialcapability.org/>

18. See Lusardi and Mitchell (2014).

As the percentage of *P-Fin Index* questions answered correctly increases, individuals are:

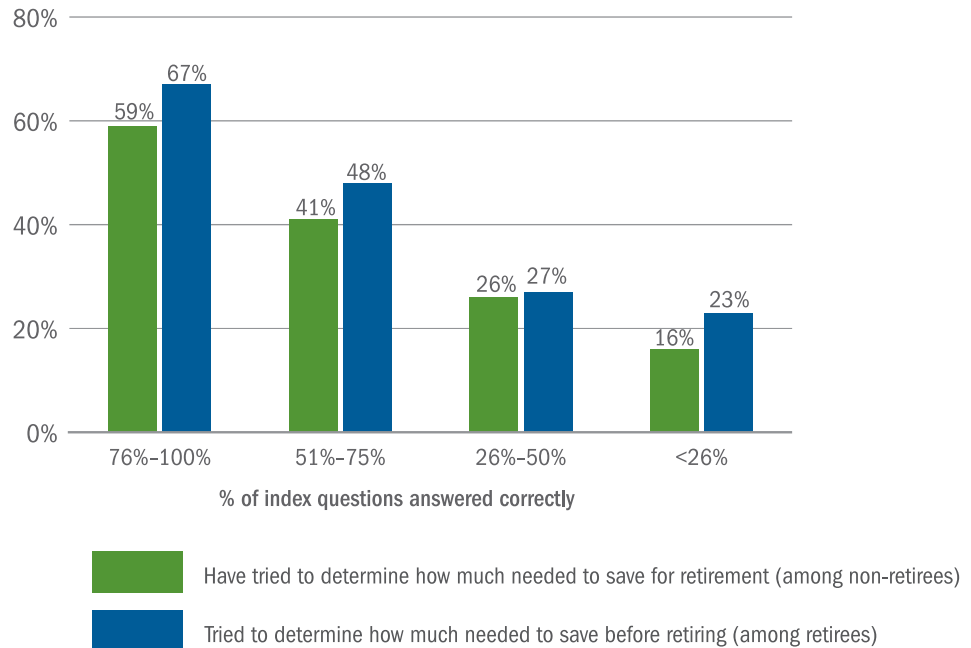
- Less likely to be financially fragile, i.e., they are more confident in their ability to raise \$2,000 in the near term to meet an unexpected need (Figure 8).
- More likely to have precautionary savings, specifically, savings sufficient to cover living expenses for three months in the case of job loss, sickness, disability or some other emergency (Figure 8).
- More likely to have planned for retirement (Figure 9).
- More likely to have financial investments, aside from retirement accounts (Figure 10).
- More likely to be current on credit card and loan payments (Figure 11).

Figure 8. The Personal Finance (P-Fin) Index and the ability to handle financial shocks



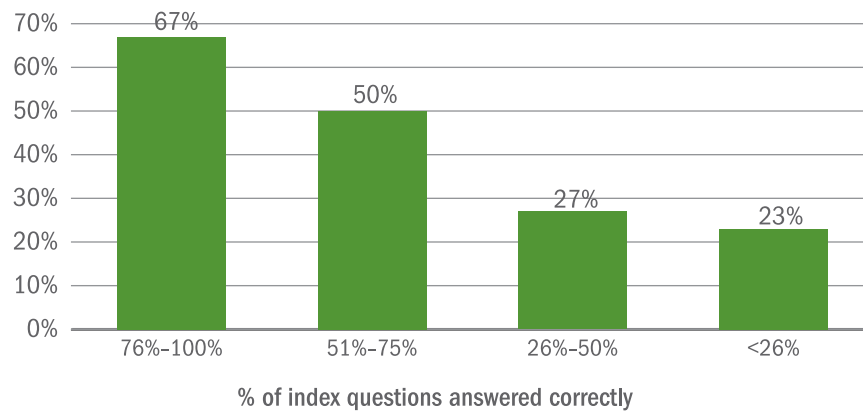
Source: *The TIAA Institute-GFLEC Personal Finance Index (2017)*.

Figure 9. The Personal Finance (P-Fin) Index and planning for retirement



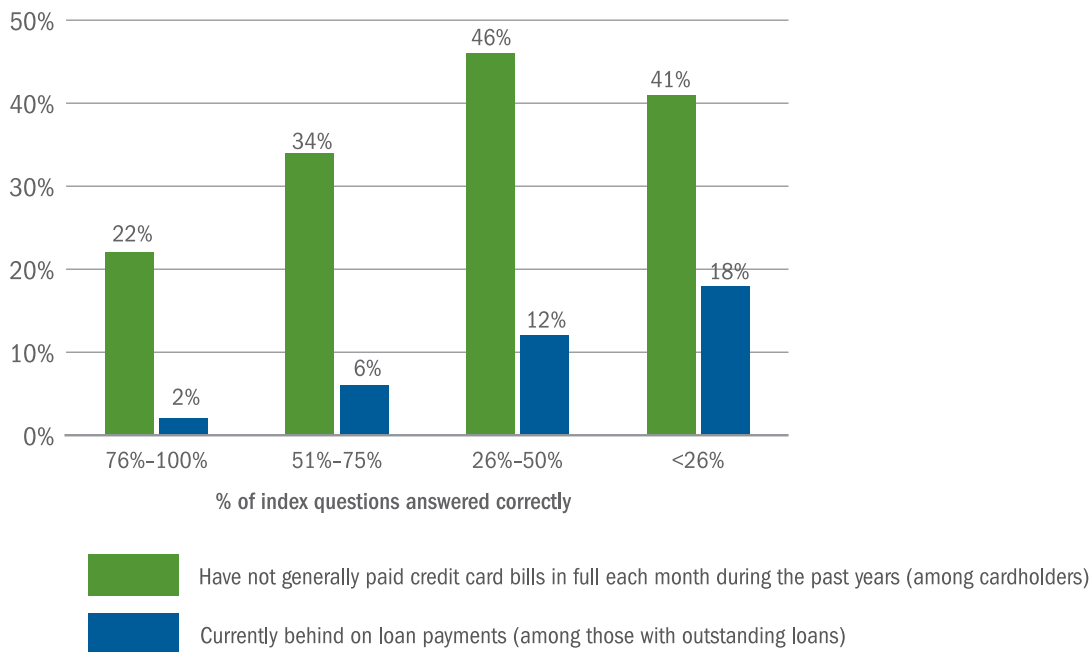
Source: The TIAA Institute-GFLEC Personal Finance Index (2017).

Figure 10. The Personal Finance (P-Fin) Index and having financial investments other than retirement accounts



Source: The TIAA Institute-GFLEC Personal Finance Index (2017).

Figure 11. *The Personal Finance (P-Fin) Index* and keeping current on credit card and loan payments



Source: *The TIAA Institute-GFLEC Personal Finance Index (2017)*.

Discussion

As Americans shoulder ever-greater direct responsibility for their financial well-being and security, they must make a myriad of personal finance decisions—both simple and complex—in the normal course of life. For example, in the realm of retirement, individuals must decide how much to save, how to invest their savings, and how to convert their savings to income during retirement. Moreover, as financial markets continue to evolve, individuals are faced with a wide variety of products, many of which are not easy to understand. How well individuals navigate life’s financial decisions is dependent, at least in part, on their knowledge and understanding of personal finances, often referred to as financial literacy.

The *P-Fin Index* is unique in its capacity to examine financial literacy across eight areas of personal finance in which individuals routinely function, as well as providing a robust indicator of overall personal finance knowledge and understanding. According to the index, personal finance knowledge is lowest in the area of comprehending risk. This is troubling given that risk and uncertainty are inherent in the context of making financial decisions. On the other hand, borrowing is the area where U.S. adults tend to have the highest level of knowledge. Debt tends to be a feature of personal finance common across the life cycle for many individuals; knowledge and understanding may emerge from confronting accumulated debt.

Many consequential financial decisions are faced early in life, decisions with ramifications for financial well-being decades into the future, as well as the present. In addition, basic financial behavior and habits, such as budgeting and tracking spending, often become established early in adulthood, as do general lifestyle decisions. Nonetheless, young adults are operating from a limited base of personal finance knowledge and understanding. Among young adults, the percentage with a relatively low level of financial literacy is triple that with a relatively high level. Comprehending risk and insuring are areas where young adult knowledge appears lowest.

It is clear that individuals would benefit greatly from increased financial literacy levels at the beginning of their careers, meaning that high school and college would be ideal venues for financial literacy programs. Decisions made and outcomes experienced matter not only at the household level, but also for the economy as a whole—an extreme example being the subprime mortgage crisis which devastated household finances and triggered the last recession.

Other strategies to improve financial behavior and decision-making are not substitutes for financial literacy. Strategies such as nudging through choice architecture (e.g., auto-enrollment in retirement savings plans) and guiding with professional investment advice are best viewed as complements to improved financial literacy. For example, auto-enrollment is an effective strategy for getting individuals to begin saving, but eventually they need to actively manage their plan participation (contribution level, asset allocation, and withdrawal strategies) so that it aligns with their individual-specific circumstances and goals. Financial advice is valuable, but ideally individuals would be proactive participants in their advice sessions since final decisions are ultimately up to them. In fact, previous research has shown that financial advice is a complement rather than a substitute for financial knowledge.¹⁹ Beyond that, receiving advice and nudges on every financial decision that individuals face is simply not realistic.

¹⁹. See Collins (2012).

About the Authors

Annamaria Lusardi is the Denit Trust Chair of Economics and Accountancy at the George Washington University School of Business. She previously taught at Dartmouth College, Princeton University, the University of Chicago Harris School of Public Policy and Booth School of Business, and Columbia Business School. She also was a visiting scholar at Harvard Business School. Lusardi has won numerous awards for her economic and financial literacy research, including a research fellowship from the University of Chicago Harris School of Public Policy, a faculty fellowship from the John M. Olin Foundation, and a junior and senior faculty fellowship from Dartmouth College. She earned her B.A. from Bocconi University in Milan and Ph.D. from Princeton University.



Annamaria Lusardi

Noemi Oggero is a Research Associate at the Global Financial Literacy Excellence Center (GFLEC) at the George Washington University School of Business. At the Center, she is responsible for the design, development, and delivery of research projects on financial capability and financial literacy. Prior to joining GFLEC, she collaborated on research projects with the Center for Research on Pensions and welfare Policies (CeRP). She holds two Masters in Economics from Collegio Carlo Alberto and University of Turin in Italy.



Noemi Oggero

Paul Yakoboski is a senior economist with the TIAA Institute where he is responsible for research on lifetime financial security, including topics related to defined contribution plan design, individual saving and investing, financial literacy and capability, and asset management during retirement, as well as research on workforce issues in the higher education and non-profit sectors. Prior to joining the TIAA Institute, Yakoboski held positions with the American Council of Life Insurers, the Employee Benefit Research Institute and the U.S. Government Accountability Office. Yakoboski earned his Ph.D. and M.A. in economics from the University of Rochester and his B.S. in economics from Virginia Tech.



Paul Yakoboski

References

- Collins, J. Michael. 2012. "Financial Advice: A Substitute for Financial Literacy?" *Financial Services Review* 21(4): 307–322.
- Coppola, Michela, Greg Langley, Mylene Sabatini, and Richard Wolf. 2017. "When Will the Penny Drop? Money, Financial Literacy and Risk in the Digital Age." Allianz International Pension Papers.
- Lusardi, Annamaria. 2011. "Americans' Financial Capability." National Bureau of Economic Research Working Paper 17103.
- Lusardi, Annamaria, and Olivia S. Mitchell. 2007a. "Baby Boomer Retirement Security: The Roles of Planning, Financial Literacy, and Housing Wealth." *Journal of Monetary Economics* 54 (1): 205–24.
- Lusardi, Annamaria, and Olivia S. Mitchell. 2007b. "Financial Literacy and Retirement Preparedness: Evidence and Implications for Financial Education." *Business Economics* 42 (1): 35–44.
- Lusardi, Annamaria, and Olivia S. Mitchell. 2008. "Planning and Financial Literacy: How Do Women Fare?" *American Economic Review* 98(2): 413–417.
- Lusardi, Annamaria, and Olivia S. Mitchell. 2009. "How Ordinary Consumers Make Complex Economic Decisions: Financial Literacy and Retirement Readiness." National Bureau of Economic Research Working Paper 15350.
- Lusardi, Annamaria, and Olivia S. Mitchell. 2011a. "Financial Literacy and Planning: Implications for Retirement Well-Being." In *Financial Literacy: Implications for Retirement Security and the Financial Marketplace*, edited by Olivia S. Mitchell and Annamaria Lusardi, 17–39. Oxford and New York: Oxford University Press.
- Lusardi, Annamaria, and Olivia S. Mitchell. 2011b. "Financial Literacy and Retirement Planning in the United States." *Journal of Pension Economics and Finance* 10 (4): 509–25.
- Lusardi, Annamaria, and Olivia S. Mitchell. 2011c. "Financial Literacy around the World: An Overview." *Journal of Pension Economics and Finance* 10 (4): 497–508.
- Lusardi, Annamaria, and Olivia S. Mitchell. 2014. "The Economic Importance of Financial Literacy: Theory and Evidence." *Journal of Economic Literature* 52 (1): 5–44.
- Lusardi, Annamaria, Olivia S. Mitchell, and Vilsa Curto. 2010. "Financial Literacy among the Young." *Journal of Consumer Affairs* 44 (2): 358–80.
- Lusardi, Annamaria, and Peter Tufano. 2009. "Teach Workers about the Perils of Debt." *Harvard Business Review* November: 22–24.
- Lusardi, Annamaria, and Peter Tufano. 2015. "Debt Literacy, Financial Experiences, and Overindebtedness." *Journal of Pension Economics and Finance* 14(4): 329–365.

Appendix

Figure A summarizes demographic variations in personal finance knowledge and understanding within the eight functional areas.

Figure A. <i>The Personal Finance (P-Fin) Index</i> Variations in functional area knowledge across demographic groups								
	Earning	Consuming	Saving	Investing	Borrowing	Insuring	Comprehending risk	Go-to info sources
Gender	Little, if any, difference in knowledge and understanding between males and females.			Males tend to have more knowledge.	Little, if any, difference in knowledge and understanding between males and females.			
Age	Those ages 45 and older tend to have more knowledge.	Little difference in knowledge by age.	Those ages 45 and older tend to have more knowledge and understanding.			Those ages 45 and older have more knowledge; those ages 60 and older have most.	Those ages 45 and older tend to have more knowledge and understanding.	
Race	Whites have higher levels of knowledge and understanding across functional areas.							
Household income	Individuals with higher levels of household income have higher levels of knowledge and understanding across functional areas.							
Employment status	Those not currently employed have less knowledge and understanding than those who are employed or retired.	Those not currently employed tend to have lowest knowledge level and retirees tend to have the highest.		Those not currently employed have less knowledge.	Those not currently employed have lowest knowledge; retirees have the highest.	Those not currently employed have less knowledge and understanding than those who are employed or retired.		
Education	Individuals with higher levels of general education generally have higher levels of knowledge and understanding across functional areas.							
Financial education	Individuals who have participated in a financial education class or program tend to have a higher level of knowledge and understanding across functional areas.							

Source: *The TIAA Institute-GFLEC Personal Finance Index (2017)*.



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