FINRA Investor Education FOUNDATION

Insights: Financial Capability

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What's inside

Why Is Measured Financial Literacy Declining and What Does It Mean? Maybe We Just "Don't Know."

Summary

This research brief examines trends in financial knowledge among U.S. adults across a 12-year period, from 2009 to 2021, using the FINRA Investor Education Foundation's National Financial Capability Study. We focus on changes in overall financial literacy, specific areas of financial knowledge, and people's likelihood to report they "don't know" as a response option in lieu of selecting an answer. Our findings indicate steady declines in people's financial literacy, with comparable increases in their likelihood of reporting they did not know the correct answer. We observed the largest declines in correct responses for questions about inflation and risk diversification, while the largest increases in "don't know" responses were in those pertaining to interest rates and mortgages. While we observed declines in correct responses across demographic groups, there were some group differences. Younger adults (ages 18 – 39), women and Black/African American respondents experienced greater financial literacy drops than their respective older, male and white counterparts. During the same period, respondents 30 – 54 years old and male respondents experienced greater increases in "don't know" selection than did other age groups and women.

In addition to financial literacy, this brief examines trends in several other subjective and objective indicators of financial capability. The results show that adults' financial satisfaction, availability of emergency savings, likelihood to pay credit card balances in full and ability to comfortably cover bills and expenses increased over the same 12-year period.

Introduction

The U.S. financial landscape is increasingly complex. New financial products and services are flooding the markets, complicating people's decision-making process. At the same time, making sound choices is more important than ever, as the onus of responsibility for key decisions has shifted away from

institutions and towards the individual. Having the knowledge and skills needed to process financial information and make informed decisions is crucial. Indeed, research suggests that people with higher financial literacy levels are more likely to save for retirement, withstand financial shocks and report financial satisfaction than those with low levels of literacy.[1] Yet, despite its important role, financial literacy has been steadily decreasing over the past decade.[2] In this research, we use five waves of the FINRA Foundation's National Financial Capability Study (NFCS), spanning 12 years (2009 – 2021), to gain insight into the nuances of falling financial literacy rates: How has knowledge in specific areas changed, which populations are most affected, and what might explain these trends?

The NFCS has assessed Americans' financial literacy across all its waves through a set of five questions.[3] The questions are brief and capable of differentiating distinct levels of financial knowledge. The questions test several fundamental economic concepts and are widely used in financial capability research. Below are the questions included in the measure and their corresponding topic and goal. The correct responses are bolded.

Table 1.

1. **The Interest Question** gauges an understanding of and ability to calculate simple interest.

Suppose you had $100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?	
More than $102	Exactly $102
Less than $102	Do not know
Prefer not to say	

2. **The Inflation Question** gauges an understanding of how inflation impacts purchasing power.

Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?	
More than today	Exactly the same
Less than today	Do not know
Prefer not to say	

3. **The Bond Question** gauges an understanding of how bond pricing is related to interest rates.

If interest rates rise, what will typically happen to bond prices?	
They will rise	**They will fall**
They will stay the same	There is no relationship between bond price and interest rate
Don't Know	Prefer not to say

4. **The Mortgage Question** gauges an understanding of the relationship between the duration of a mortgage and the total amount of interest the borrower pays.

A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage, but the total interest paid over the life of the loan will be less.	
True	False
Don't Know	Prefer not to say

5. **The Risk Question** gauges an understanding of diversification and requires that the respondent know what a stock and stock mutual fund are. It also requires respondents to understand the concept of investment return.

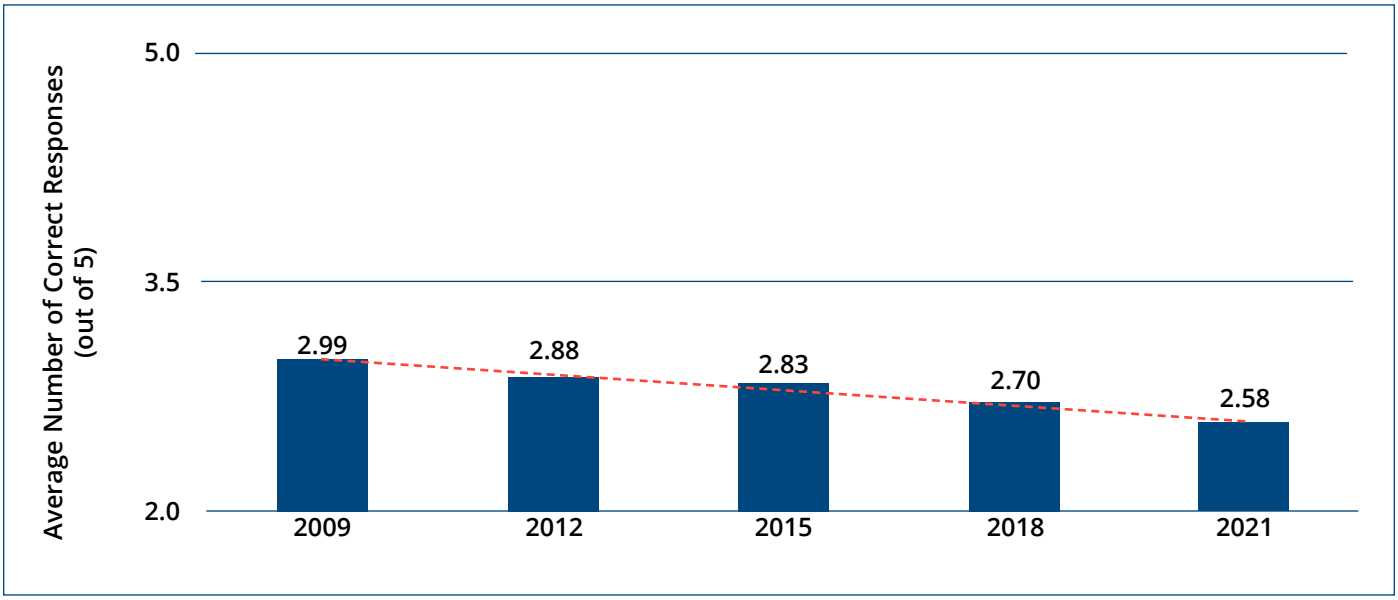
Please tell me whether this statement is true or false. "Buying a single company's stock usually provides a safer return than a stock mutual fund."	
True	**False**
Don't Know	Prefer not to say

Note: Bolded answer choices indicate a correct response.

Trends in Overall Financial Literacy from 2009 to 2021

Since the start of the NFCS, financial literacy rates have been steadily decreasing. In 2009, the average NFCS respondent could answer 3.0 out of 5 questions correctly. By 2021, this number had fallen to 2.6, a 14 percent drop in the average number of correct responses (*see* Figure 1).

Figure 1. Declines in Financial Literacy from 2009 to 2021

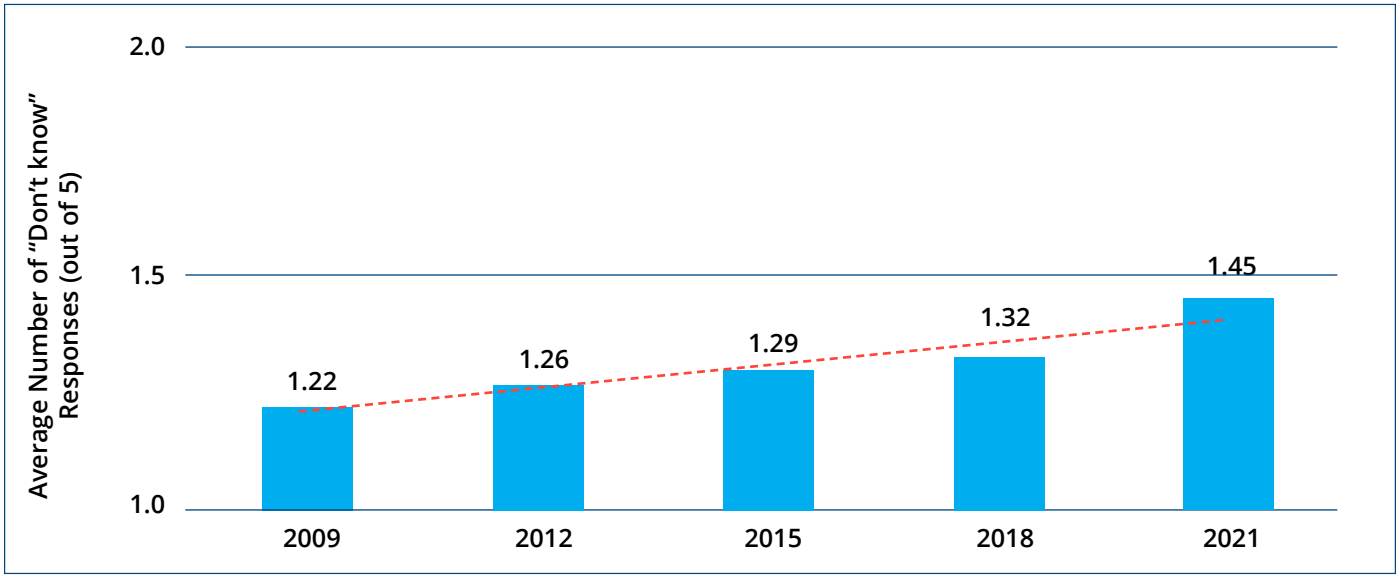


Note: The figure shows the average number of correct financial literacy questions from 2009 to 2021. The scores can range from 0 to 5.

Declines in financial literacy stem from two sources: (1) an increase in the number of incorrect responses the respondents chose; and (2) an increase in the selection of "don't know" as a response option, which is traditionally marked as an incorrect response in this field. While the option to select "prefer not to say" is also marked as an incorrect response, very few people choose it.

Since the start of the NFCS, the selection of "don't know" has been steadily increasing for the financial literacy questions. In 2009, the average respondent answered "don't know" to 1.1 out of 5 questions. By 2021, this had grown to 1.4 questions (*see* Figure 2), a 21 percent increase. In fact, much of the downward trend in financial literacy can be traced back to respondents increasingly selecting "don't know" as their response option to the underlying questions. The rise in "don't know" responses accounts for 75 percent of the drop in financial knowledge from 2009 to 2021. While it is unclear why the rise in "don't know" has occurred, it may indicate a decrease in people's proclivity to guess, and may suggest partial knowledge, since it shows that people are aware of where their knowledge gaps lie. However, when recoding incorrect responses so that these do not include "don't know" as an incorrect response, we still found that the average number of incorrect responses rose from 0.94 in 2009 to 1.3 in 2021. This suggests that financial literacy rates are declining, even among respondents who attempt to answer the underlying questions.

Figure 2. Increases in "Don't Know" Responses from 2009 to 2021



Note: The figure shows the average number of "don't know" response options chosen across the financial literacy questions from 2009 to 2021. The scores can range from 0 to 5.

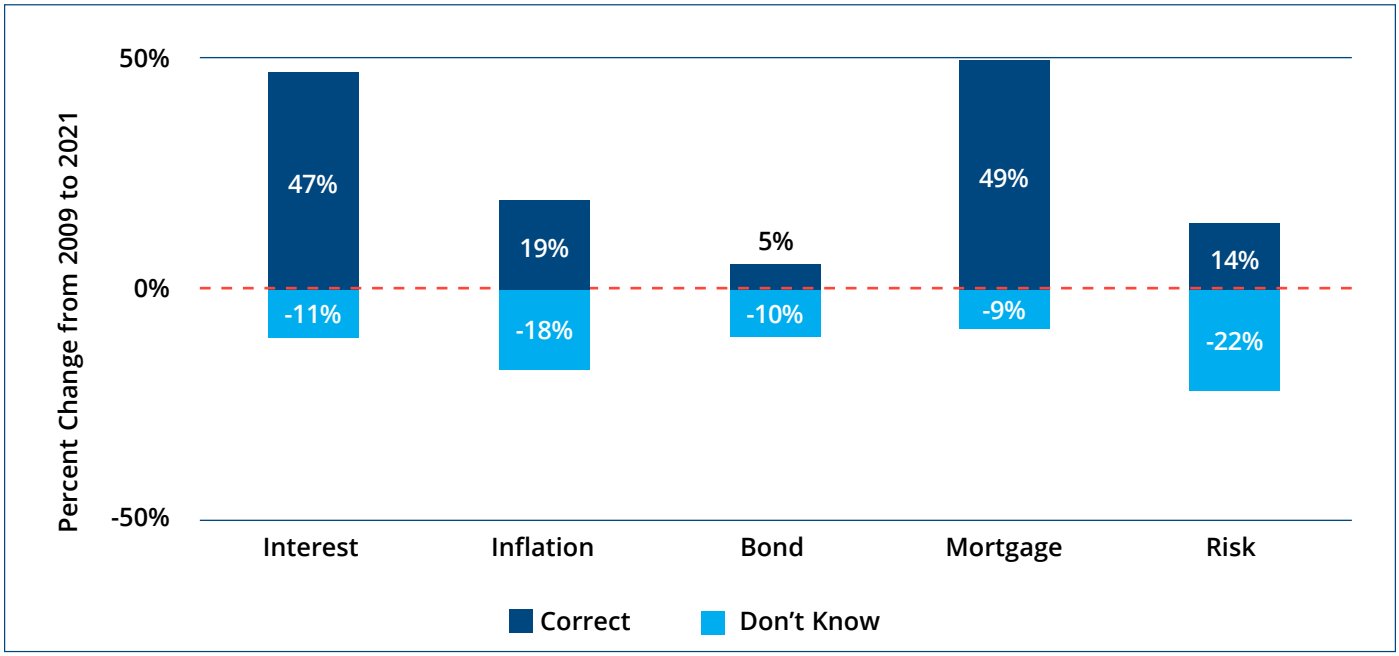
Question-Specific Trends in Measured Financial Literacy From 2009 to 2021

Financial literacy appears to have declined largely because people select "don't know" at increasingly higher rates when responding to the underlying questions. Examining how these changes have unfolded question-by-question can shed light on the financial concepts with which people increasingly struggle. To do this, we determined which of the NFCS questions experienced the greatest declines in correct responses, and which experienced the greatest increases in "don't know" responses. As noted in Table 1, each question covers a specific fundamental financial concept. We refer to the individual questions by the concept each assesses: Interest Question (Q1); Inflation Question (Q2); Bond Question (Q3); Mortgage Question (Q4); and Risk Question (Q5).

Correct responses became less likely for all five financial literacy questions across the 12-year period. We observed the largest knowledge decreases in the Inflation Question and the Risk Question (*see* Figure 3), with an 11 and 18 percent drop, respectively. At the same time, the fraction of individuals responding "don't know" increased across all questions, with the Mortgage Question and Risk Question experiencing the largest increase in "don't know" responses. This finding suggests that respondents are experiencing increasing difficulty or disengagement with all questions. It is also possible that they may be more aware of their own lack of understanding, particularly surrounding mortgage contracts. One possible explanation is that a poorer understanding of mortgages is centered around those without a purchased home. However, we found that the use of "don't know" for the Mortgage Question increased for both homeowners and renters. Similarly, we observed an increased prevalence of responding "don't know" to the Risk Question—an item that directly concerns investment choices—among those with and without taxable investments.

By contrast, the smallest declines in correct responses and smallest increases in "don't know" responses were observed in the Interest Question and Bond Question. These smaller changes may be due to respondents struggling with both questions since the start of the NFCS in 2009. Each had the lowest rate of correct answers (30 percent), and the highest rate of answering "don't know" (37 percent) in 2009. Since baseline scores in these questions were already so low in 2009, there was little room for performance to decline.

Figure 3. Changes in Financial Literacy and "Don't Know" Responses by Question From 2009 to 2021



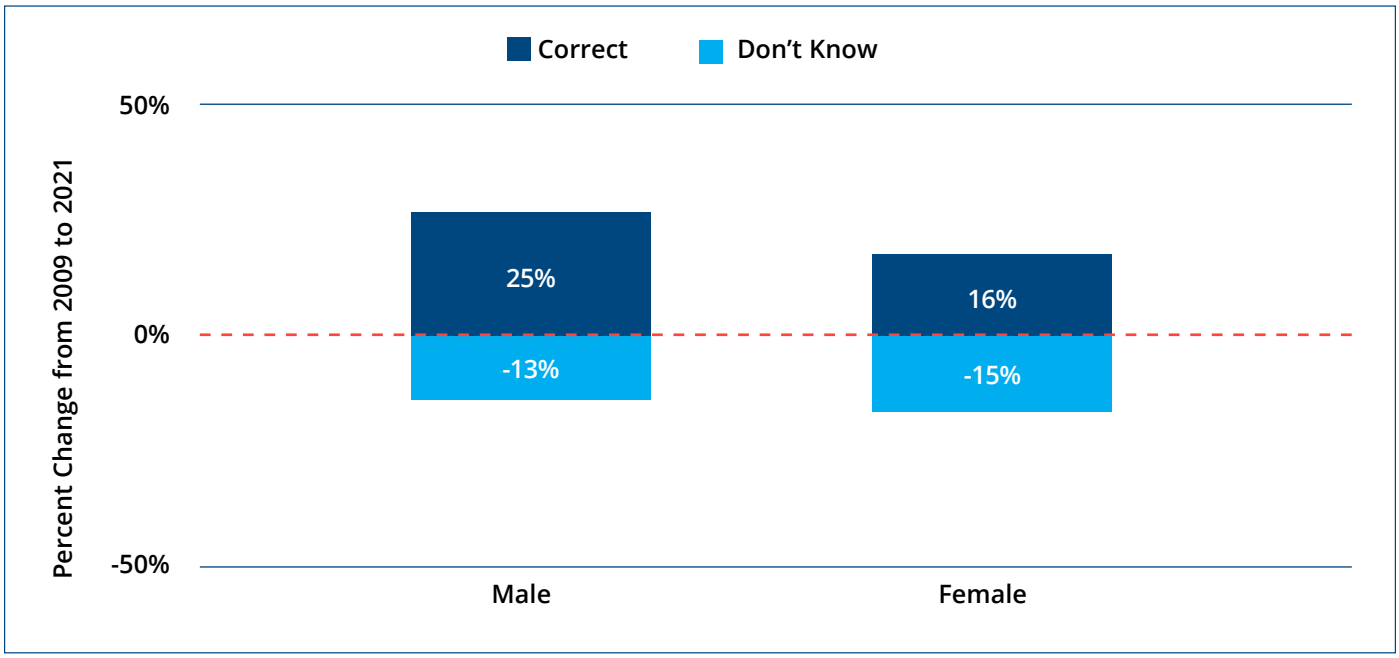
Note: The extent to which the rate of correct responses for each question decreased from 2009 to 2021 is shown in light blue. The extent to which the rate of "don't know" responses for each question increased from 2009 to 2021 is shown in dark blue. Each bar shows the percent decrease and increase in correct responses or "don't know" responses.

Demographic Differences

While declines in financial literacy and increases in "don't know" responses were widespread across demographic groups, some populations saw more drastic changes than others. In Figures 4–6, we show how the average number of correct financial literacy responses and selection of "don't know" as a response choice have changed across different genders, age groups and races/ethnicities from 2009 to 2021. *See* the Appendix (Figures A1–A3) for more information on how the average number of total correct responses varies by gender, age and race/ethnicity over time. Notably, for all but two demographic groups (those aged 18 to 29 and Black/African American respondents), the increase in "don't know" responses exceeded the decrease in correct responses.

Financial literacy declined at higher rates for women compared to men. The average number of correct responses for women fell 15 percent from 2009 to 2021, compared to 13 percent for men. Changes in "don't know" followed a different pattern: Men's selection of "don't know" increased by 25 percent; for women, the increase was 16 percent (*see* Figure 4).

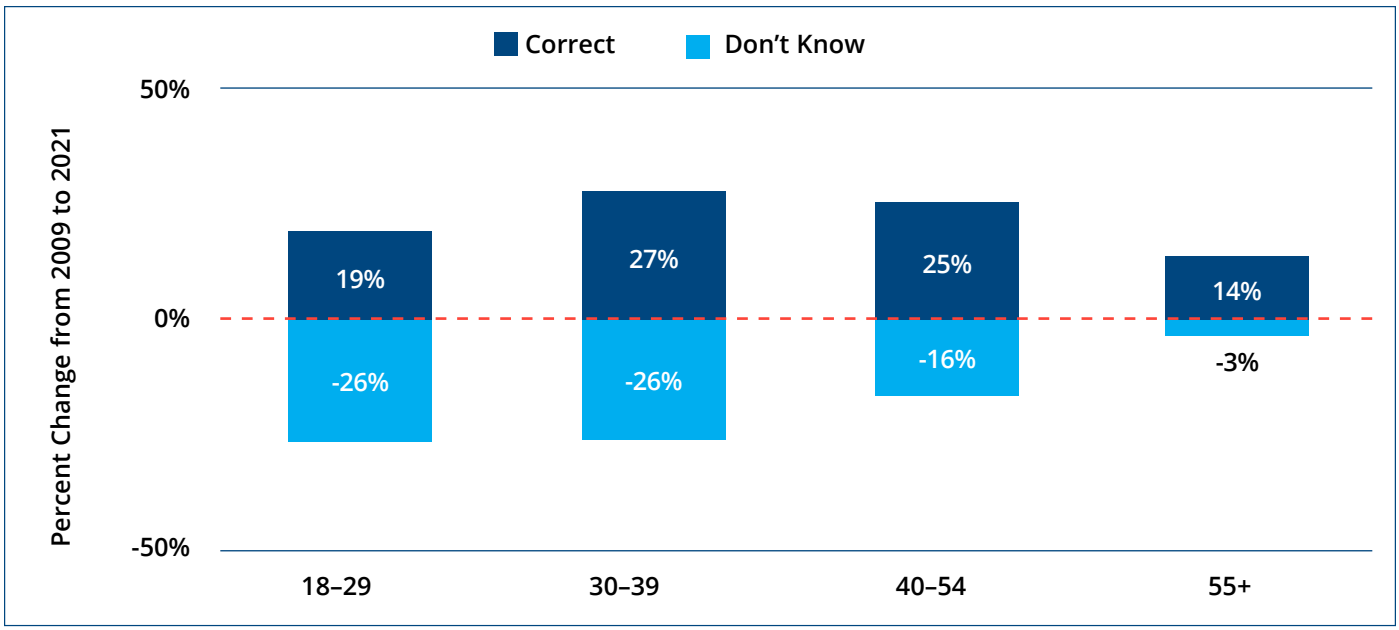
Figure 4. Changes in Average Number of Correct and "Don't Know" Responses From 2009 to 2021, by Gender



When we broke age down into four distinct groups: 18 – 29, 30 – 39, 40 – 54, and 55 and over, we saw that declines in the average number of correct responses were most pronounced among 18 – 29-year-olds and 30 – 39-year-olds. Both groups experienced a 26 percent drop from 2009 to 2021. By comparison, those 55 and over only experienced a 3 percent drop in the same 12-year period (*see* Figure 5).

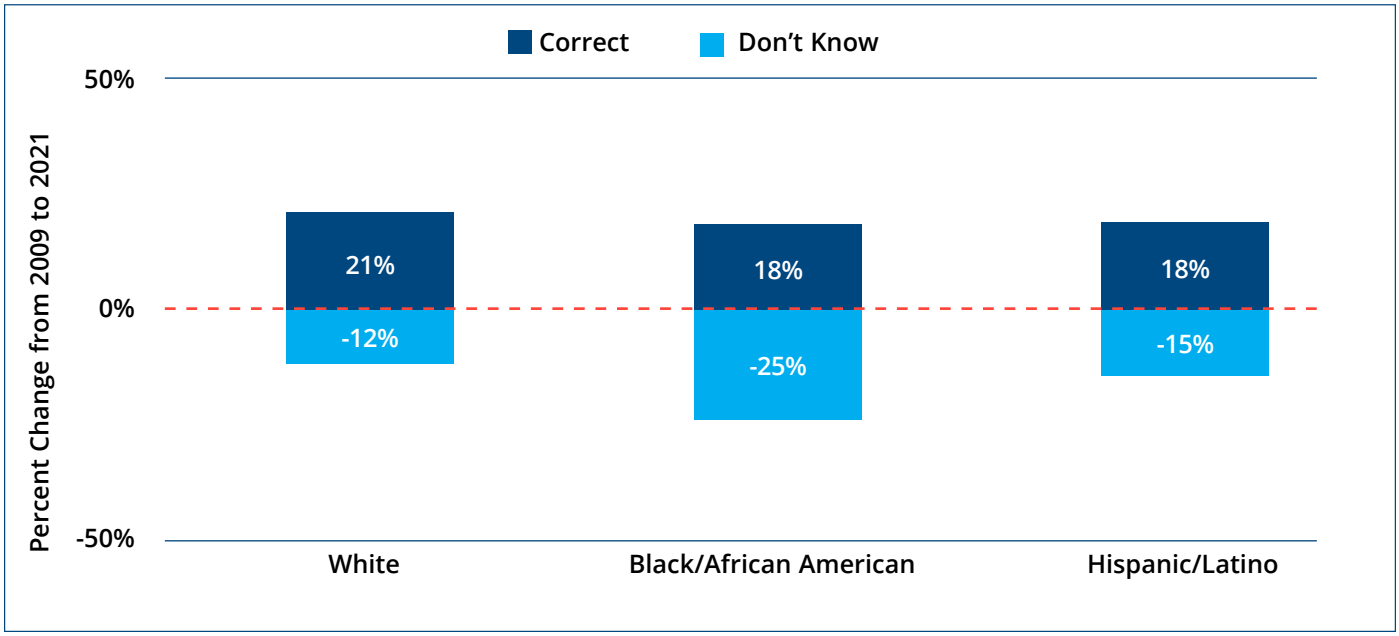
Over time, increases in "don't know" selection also differed across age groups, with those ages 30 – 39 and 40 – 54 experiencing the greatest increase from 2009 to 2021, up 27 and 25 percent, respectively.

Figure 5. Changes in Correct and "Don't Know" Responses From 2009 to 2021, by Age



Looking at race and ethnicity, we found that Black/African American adults experienced the greatest decline in the average number of correct responses from 2009 to 2021, a 26 percent drop. By comparison, white and Hispanic/Latino adults experienced a 12 and 15 percent drop, respectively. Increases in "don't know" rates did not differ by race or ethnicity (*see* Figure 6).

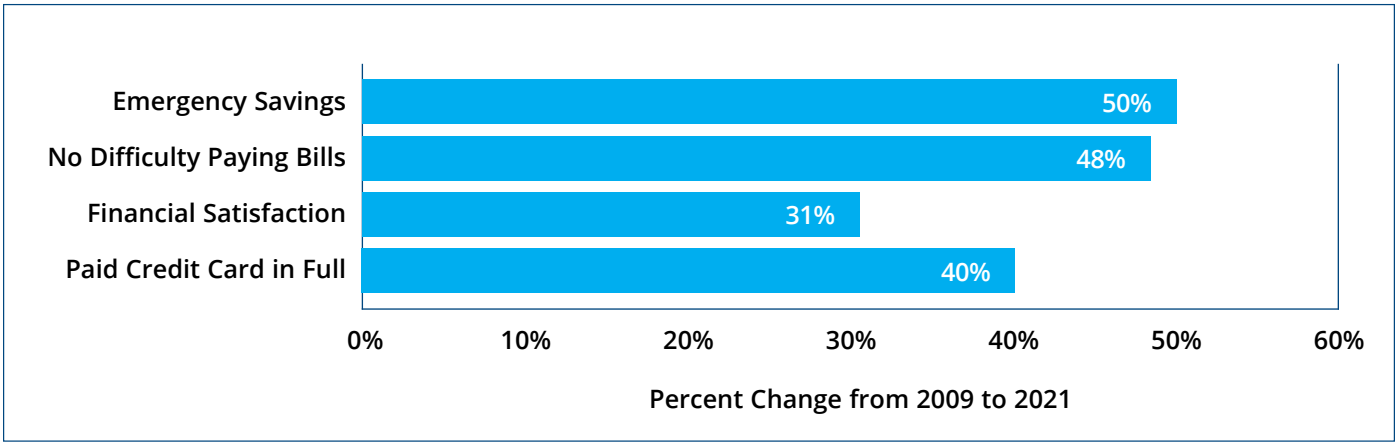
Figure 6. Changes in Correct and "Don't Know" Responses From 2009 to 2021, by Race/Ethnicity



What Do These Changes Mean for Financial Education?

Declines in financial literacy have coincided with an expansion of financial education in the United States. While only 15 states required high school graduates to complete financial education coursework prior to receiving their high school diploma in 2009, this had more than doubled to 32 states by 2021. The juxtaposition of increased financial education and declining financial literacy may seem contradictory at first; however, one explanation is that school-based financial education does not always address the questions the NFCS poses, and indeed, research shows that while state-mandated financial education in high school increases student loan literacy, it does not improve knowledge scores the NFCS quiz measures.[4] These courses directly impact behaviors, improving debt and credit outcomes.[5] To understand financial capability more broadly, researchers must look beyond financial literacy and take into consideration other indicators. To determine how financial capability has changed since 2009, we consider four measures that indicate one's overall financial situation, reflected in both self-perceptions and reported behaviors (*see* Figure 7).

Figure 7. Changes in Other Measures of Financial Capability From 2009 to 2021



To assess perceptions, we examined people's financial satisfaction. Specifically, respondents were asked to report the following on a scale from 1 (not at all satisfied) to 10 (extremely satisfied): "Overall, thinking of your assets, debts and savings, how satisfied are you with your current personal financial condition?" Trends in financial satisfaction show a pattern opposite to those of financial literacy. Since 2009, financial satisfaction has been steadily increasing in the United States. The average level of financial satisfaction was 4.5 in 2009 and jumped to 5.9 in 2021—an increase of 30.5 percent.

Second, we considered three objective measures to assess changes in actual behaviors. We examined people's likelihood to pay credit card balances in full (vs. carrying a balance), their difficulty paying bills and expenses, and whether they had three months of emergency savings available. The trends suggest substantial improvement in each of these financial outcomes. Compared to 2009, respondents in 2021 were 40 percent more likely to pay their credit card balances in full, 48 percent more likely to say that they have no difficulty covering bills or expenses, and 50 percent more likely to report having emergency savings. These changes, taken together, suggest an improvement in financial capability over the 12-year period: Households are better prepared for financial shocks.

Of course, improvements in financial capability may reflect the economic environment on a broader scale, which has steadily improved following the Great Recession[6], rather than people's individual behaviors, knowledge and attitudes. Thus, it is possible that the increases in satisfaction and objective behaviors are unrelated to changes in people's knowledge level or exposure to financial education.

Conclusion

This brief examined changes in adults' financial literacy from 2009 to 2021. Over the 12-year period, we found steady declines in financial literacy, largely attributable to people increasingly reporting that they "don't know" the answers to the underlying financial literacy questions. When broken down by specific question, we found the greatest declines in correct responses came from the questions on inflation and risk, while the largest increases in "don't know" responses occurred in items pertaining to interest rates and mortgages.

When splitting the sample by gender, age and race/ethnicity, the trends show a decline in the proportion of correct responses chosen and an increase in the selection of "don't know" responses for all groups over the 12-year period. Further, nearly all demographic groups we examined experienced an increase in "don't know" responses that exceeded their relative decrease in correct responses, with the exceptions being those aged 18 to 29 and Black/African American respondents. Demographic differences indicated that declines in correct responses were greater among younger adults (18 – 39), women and Black/African American respondents than among their respective older, male, white and Hispanic/Latino counterparts. Compared to other age groups and women, increases in "don't know" use were greater for those aged 30 – 54 and men. There were no racial/ethnic differences in increased use of "don't know" responses.

Though declines in financial literacy and increases in the uncertainty of one's financial knowledge may generate concern that some groups are falling behind, financial capability as a whole has not declined. We find that financial satisfaction has increased by 31 percent over the 12-year period. Likewise, there have been improvements in other financial behaviors. Compared to 2009, in 2021, more people had three months of emergency savings and felt comfortable covering their expenses, while fewer held credit card balances.

The specific factors that have led to an uptick in "don't know" responses to the NFCS financial literacy questions are unclear. It is possible that people are aware of our increasingly complex and uncertain financial world, leading them to approach these questions with more nuance and rationally report they "don't know" the correct answer. Saying "don't know" reflects a recognition of a financial knowledge gap, which may provide an open avenue for financial education.

Having a nuanced understanding of people's financial knowledge is necessary for gauging the educational needs of an increasingly diverse U.S. population and informing educational efforts to maximize their effectiveness.

Methodology

This brief uses data from all five waves of the National Financial Capability Study (2009, 2012, 2015, 2018, and 2021). The NFCS is funded and led by the FINRA Investor Education Foundation. The bulk of this analysis compares 2009 and 2021 NFCS data. The sample size for each wave is as follows: 2009 (n=28,146); 2012 (n=25,509); 2015 (n=27,564); 2018 (n=27,091); 2021 (n=27,118). All data are representative of U.S. adults ages 18 and older, and of each state's population. Analyses reported in this brief include national sample weights, which are intended to be representative of the national population in terms of age, gender, ethnicity, education and Census Division (based on data from the American Community Survey (ACS) for the prior year).[7] However, our results are consistent when we do not use weights. Although subgroup analysis had smaller samples, cell sizes were sufficiently large for analysis. Our sample sizes for each subgroup in the format (2009; 2021) are as follows: Male (n=13,168; n=12,465); Female (n=14,978; n=14,653); 18–29 (n=5,652; n=5,059); 30–39 (n=5,121; n=5,010); 40–54 (n=8,753; n=6,817); 55+ (n=8,620; n=10,232); white (n=21,246; n=20,062); Black/African American (n=2,589; 2,716); Hispanic/Latino (n=2,268; n=2,174). While we were interested in studying financial literacy patterns in other race/ethnicities, such as Asian/Pacific Islander and American Indian populations, the wording of the question used to classify these populations changed between 2009 and 2021, precluding a direct comparison. For more information about the NFCS data, *see* FINRAFoundation.org.

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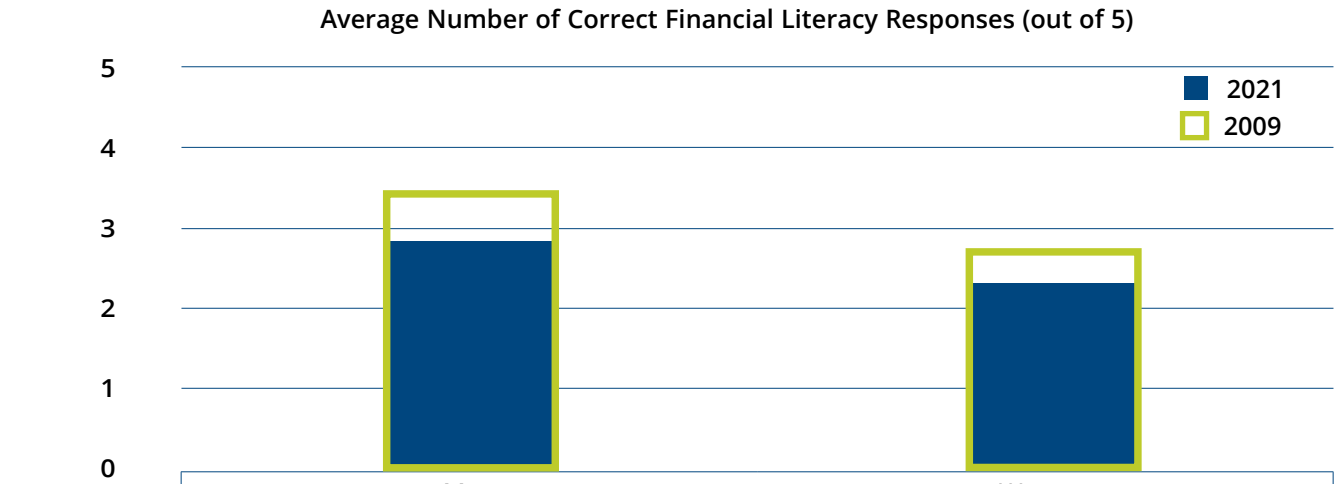
About FINRA and the FINRA Foundation

The Financial Industry Regulatory Authority (FINRA) is a not-for-profit organization dedicated to investor protection and market integrity. It regulates one critical part of the securities industry—brokerage firms doing business with the public in the United States. FINRA, overseen by the Securities and Exchange Commission, writes rules, examines for and enforces compliance with FINRA rules and federal securities laws, registers broker-dealer personnel and offers them education and training, and informs the investing public. In addition, FINRA provides surveillance and other regulatory services for equities and options markets, as well as trade reporting and other industry utilities. FINRA also administers a dispute resolution forum for investors and brokerage firms and their registered employees. For more information, visit www.FINRA.org.

The FINRA Investor Education Foundation supports innovative research and educational projects that give underserved Americans the knowledge, skills and tools to make sound financial decisions throughout life. For more information about FINRA Foundation initiatives, visit www.FINRAFoundation.org.

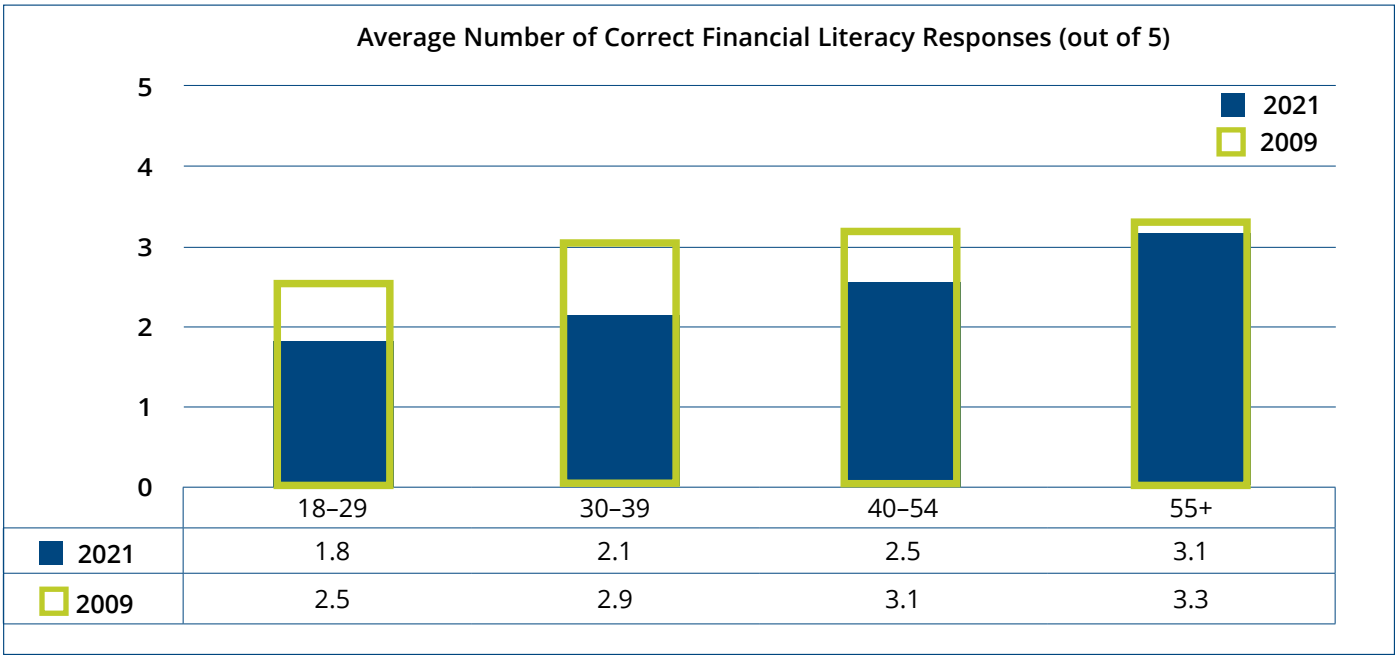
Appendix

Figure A1. Average Financial Literacy Rates in 2009 and 2021, by Gender



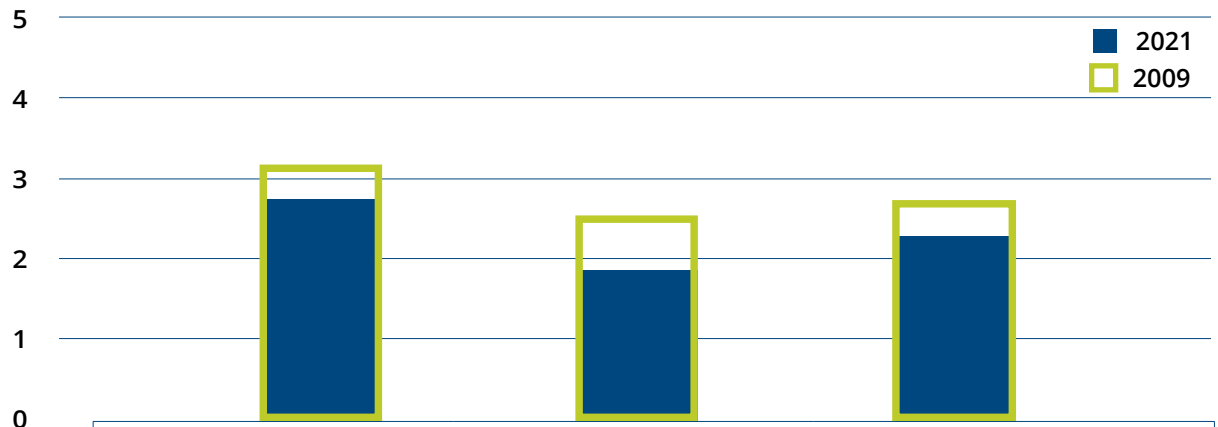
	Men	Women
2021	2.9	2.3
2009	3.3	2.7

Figure A2. Average Financial Literacy Rates in 2009 and 2021, by Age



	18–29	30–39	40–54	55+
2021	1.8	2.1	2.5	3.1
2009	2.5	2.9	3.1	3.3

Figure A3. Average Financial Literacy Rates in 2009 and 2021, by Race/Ethnicity



	White	Black/African American	Hispanic/ Latino
2021	2.7	1.9	2.3
2009	3.1	2.5	2.7

Endnotes

1 Angrisani, M., Burke, J., Lusardi, A., & Mottola, G. (in press). The evolution of financial literacy over time and its predictive power for financial outcomes: Evidence from longitudinal data. *Journal of Pension Economics and Finance*.

2 Kim, K. T., Lee, S. & Hanna, S. D. (in press). Has financial knowledge increased in the United States? *Journal of Financial Counseling and Planning*.

3 Lusardi, A. & Mitchell, O. S. (2011). Financial literacy around the world: An overview. *Journal of Pension Economics and Finance*, 10(4), 497-508. https://doi.org/10.1017/S1474747211000448.

4 Mangrum, D. (in press). Personal Finance Education Mandates and Student Loan Repayment. *Journal of Financial Economics*.

5 Consumer Financial Protection Bureau (2019). *Review of youth financial education: Effects and evidence*. https://www.consumerfinance.gov/data-research/research-reports/review-youth-financial-education-effects-and-evidence/

6 Bennett, J. & Kochhar, R. (2019). *Compare the two longest episodes in U.S. history with our interactive*. Pew Research Center. https://www.pewresearch.org/social-trends/2019/12/13/two-recessions-two-recoveries-2/

7 Given limitations of the 2020 ACS, the 2021 NFCS dataset relied on the 2019 ACS for creation of national weights.