September 2018

# Pathways to financial well-being: The role of financial capability

Research brief

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# Executive summary

Since 2012, the Bureau of Consumer Financial Protection (the Bureau) has undertaken foundational research to understand what contributes to people's financial well-being. In the first stage of this work, the Bureau developed a consumer-derived definition of financial well-being and a way to measure it.[1] Using input from consumers and experts in financial education, the Bureau also formulated hypotheses about the association between financial well-being and financial capability factors such as financial knowledge, skills, and attitudes. The Bureau then fielded a national survey to test these hypotheses and conducted a study based on the survey results through Abt Associates.[2] This brief summarizes findings from Abt's technical report, "Understanding the Pathways to Financial Well-Being," and examines the implications for the role of financial education in improving peoples' financial well-being.

In summary, the study found that:

- An individual's sense of financial well-being reflects the objective facts of their financial situation.
- While economic opportunity is strongly related to financial situation, the decisions and actions that an individual takes or does not take to secure their financial future matter for their financial situation too.[3] This is true even after controlling for income and other factors.
- "Financial skill" – knowing how to find, process, and act on information, and "financial self-efficacy" – having confidence in one's ability to reach financial goals, are both strongly associated with financial behavior.

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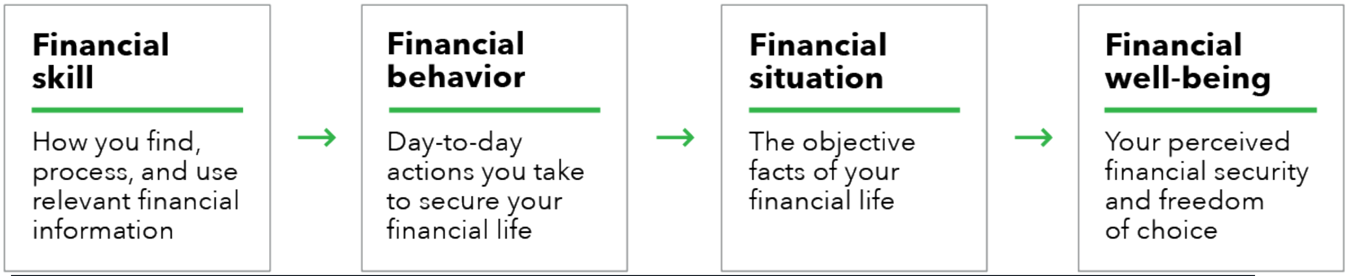
[1] The Bureau defines financial well-being as "a state of being wherein a person can fully meet current and ongoing financial obligations, can feel secure in their financial future, and is able to make choices that allow enjoyment of life." For more information on this definition, see the Bureau's (2015) publication, *Financial Well-Being: The Goal of Financial Education*, www.consumerfinance.gov/data-research/research-reports/financial-well-being/.

[2] This survey and study were conducted by Abt Associates under contract with the Bureau after selection through a competitive solicitation (contract number TPDCFPBPA130014).

[3] These actions are captured in the study as "financial behavior." The study's measure of financial behavior is based on a combination of self-reported day-to-day money management, financial planning, and saving habits. The money management dimension included survey items related to both managing money and following through on financial commitments.

**FIGURE 1:** MODEL OF FINANCIAL CAPABILITY FACTORS AND FINANCIAL WELL-BEING




Controls included in the model are income, retirement status, financial self-efficacy, frugality, perceived economic mobility, and self-control. Financial self-efficacy had a strong association with financial behavior.

While these findings may seem intuitive, the Bureau's 2016 National Financial Well-Being Survey data enabled the researchers to test the prior hypotheses using quantitative methods.

The implication of these findings is that financial education can be effective when it supports consumers in taking actions that improve their financial situations. A growing body of research shows that financial education can influence peoples' actions.[4] The study results suggest that financial education can accomplish this through development of financial skill. To advance the development and study of strategies that enhance financial skill, the Bureau is offering the Financial Skill Scale.[5]

An individual's economic opportunities affect that person's financial outcomes. The study results suggest that financial education can nonetheless help to improve consumers' financial security and freedom of choice, the hallmarks of financial well-being, by helping them to build financial skill and confidence.

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[4] More information on this body of research is available in the Bureau's report, *Effective financial education: Five principles and how to use them*, www.consumerfinance.gov/data-research/research-reports/effective-financial-education-five-principles-and-how-use-them/.

[5] For more information about the Financial Skill Scale, see Appendix B and the user guide, *Measuring financial skill: A guide to using the Bureau of Consumer Financial Protection Financial Skill Scale*, www.consumerfinance.gov/financial-skill-scale.

# 1 Introduction

Researchers, financial educators, and policymakers have long been interested in understanding how people's knowledge, skills, attitudes, behaviors, and economic opportunities influence their financial outcomes and sense of financial well-being. The Bureau's work to define, measure, and study the drivers of financial well-being is a key part of the Bureau's strategy for improving consumers' financial capability.[6] As part of this work, the Bureau previously conducted a qualitative investigation into financial well-being, developed a consumer-derived definition of financial well-being,[7] and released a reliable and validated scale for measuring it.[8]

The Bureau then measured financial well-being and a range of other factors in its 2016 National Financial Well-Being Survey.[9] The 2016 National Financial Well-Being Survey is a nationally representative survey of adults ages 18 and older in the United States. The survey questions covered a wide range of topics hypothesized to influence a person's level of financial well-being. These topics included financial knowledge, skills, attitudes, and behaviors; individual characteristics; household and family characteristics; income and employment characteristics; savings; safety nets; and financial experiences. The data allowed the research team to study the association between financial well-being and these topics.

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[6] *See generally* 12 U.S.C. 5493(d). Financial capability is the capacity, based on knowledge, skills, and access, to manage financial resources prudently and effectively. Financial Literacy and Education Commission, *National Strategy for Financial Literacy, 2016 Update* at p.7 n.21.

[7] The Bureau defines financial well-being as "a state of being wherein a person can fully meet current and ongoing financial obligations, can feel secure in their financial future, and is able to make choices that allow enjoyment of life." For more information on this definition, see the Bureau's (2015) publication, *Financial Well-Being: The Goal of Financial Education*, www.consumerfinance.gov/data-research/research-reports/financial-well-being/.

[8] Bureau of Consumer Financial Protection, *CFPB Financial Well-Being Scale: Scale development technical report* (2017), www.consumerfinance.gov/data-research/research-reports/financial-well-being-technical-report/.

[9] Bureau of Consumer Financial Protection, *Financial well-being in America* (2017), www.consumerfinance.gov/data-research/research-reports/financial-well-being-america/. A de-identified public use data file and related documentation are available at www.consumerfinance.gov/data-research/financial-well-being-survey-data/, allowing for additional research on the associations between these factors. The data used in the study are from a restricted access file (also de-identified) that is not available to the public.

To that end, the Bureau procured a study to analyze the associations between financial capability factors (i.e., financial knowledge, skill, and behavior), financial situation, and financial well-being.[10] An individual's economic opportunity of course shapes their financial situation. But the Bureau sought to determine whether financial capability factors, which financial education can address, also make a difference in an individual's financial well-being.

The results of the study provide evidence of a pathway to financial well-being. In that pathway a person's financial skill contributes to financial behavior, financial behavior contributes to financial situation, and financial situation contributes to sense of financial well-being. This applies when controlling for income and other relevant factors outside the domain of financial education. The results suggest that one's confidence in one's ability to achieve financial goals (financial self-efficacy) contributes to financial behavior as well. The results point to a strong potential role for financial education in improving individuals' financial well-being.

# 2 About the study

The study used structural equation model estimation to test hypotheses about the associations between financial well-being and four key factors.[11] The four key factors are: financial skill, financial knowledge, financial behavior, and financial situation. The analyses controlled for a number of variables outside the scope of financial education, such as income.

This section describes the measurement approaches for financial well-being, the four key factors, and the control variables used in the study. Appendices show the variables included in the factors for financial skill (Appendix B), financial situation (Appendix C) and financial behavior (Appendix D).[12]

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[10] This study was conducted by Abt Associates under contract with the Bureau after selection through a competitive solicitation (contract number TPDCFPBPA130014).

[11] The 2016 National Financial Well-Being Survey is a cross-sectional survey, meaning that it captures data from one point in time. Therefore, the data reveal associations between different factors, but do not support conclusions about causal relationships between them. Thus, one cannot conclude from these data that one factor causes another, or be sure how the relationships might develop over time (e.g., whether one factor influences another, or vice versa).

[12] For more detail on these measurement approaches, control variables, and construct development, see *Understanding the Pathways to Financial Well-Being* at www.abtassociates.com/financialpathways.

## Financial well-being

The ultimate outcome for the study is financial well-being. The study measures financial well-being using the Bureau's validated 10-item Financial Well-Being Scale. This set of self-reported questions measures an individual's perception of their present and future financial security and financial freedom of choice. A financial well-being score reflects an individual's ability to meet current and ongoing financial obligations, feel secure in their financial future, and make choices that allow enjoyment of life.[13]

## Financial situation

Financial situation refers to the objective facts of a person's financial situation. The study measures financial situation using self-reported survey items that are typical markers used in research and practice. These markers are: (1) financial resources (e.g., liquid savings, financial products owned); (2) ability to make ends meet; (3) presence (or absence) of material hardship; and (4) self-reported credit standing.

## Financial behavior

The study defines financial behavior as actions an individual does or does not take to secure their financial future.[14] The researchers measure financial behavior using a combination of self-reported day-to-day money management behaviors (both managing money and following through on financial commitments), financial planning, and saving habits.

## Financial knowledge

The study defines financial knowledge as one's command of general financial facts and concepts (e.g., risk diversification). The researchers measure financial knowledge using the 10-item version of the Knoll-Houts Financial Knowledge Scale.[15]

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[13] More information about the Financial Well-Being Scale can be found at www.consumerfinance.gov/data-research/research-reports/financial-well-being-technical-report/.

[14] Earlier research conducted by the Bureau pointed to the value of conceptualizing financial behavior as a set of activities, such as day-to-day money management tasks or planning to meet financial goals, rather than domain-based, such as investing. To learn more about this finding, see Section 4.1 of *Financial well-being: The goal of financial education*, www.consumerfinance.gov/data-research/research-reports/financial-well-being/.

[15] The Financial Knowledge Scale: An Application of Item Response Theory to the Assessment of Financial Literacy, http://onlinelibrary.wiley.com/doi/10.1111/j.1745-6606.2012.01241.x/abstract.

## Financial skill

The study defines financial skill as the ability to find reliable financial information, process that information, act on it, and adapt as needed to stay on track to achieving goals. The study measures financial skill using the 10-item Financial Skill Scale.[16] The Bureau developed this scale using methods similar to those used to create the Financial Well-Being Scale.

## Controls

To isolate the role of factors that consumers or educators have the potential to affect (such as a consumer's financial actions), the research team sought to control for factors beyond the scope of financial education that might shape a person's financial well-being. These factors include economic environment, available opportunities, and financially-relevant attitudes and personality traits.[17] The selected control variables are household income, retirement status, perceived economic mobility, financial self-efficacy, frugality, and self-control.[18]

# 3 Findings

The study found that while economic opportunity is important, financial behavior and skill are also strongly associated with an individual's financial situation, and through financial situation, with their financial well-being. Furthermore, the findings suggest that financial skill and financial self-efficacy are strongly associated with financial behavior.

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[16] For further information on the questions that make up the Financial Skill Scale, see Appendix B and the user guide, *Measuring financial skill: A guide to using the Bureau of Consumer Financial Protection Financial Skill Scale* at www.consumerfinance.gov/data-research/research-reports/measuring-financial-skill/.

[17] Figure 2 of the Bureau's report *Financial Well-Being: the Goal of Financial Education* shows the framework of factors previously hypothesized by the Bureau to contribute to financial well-being.

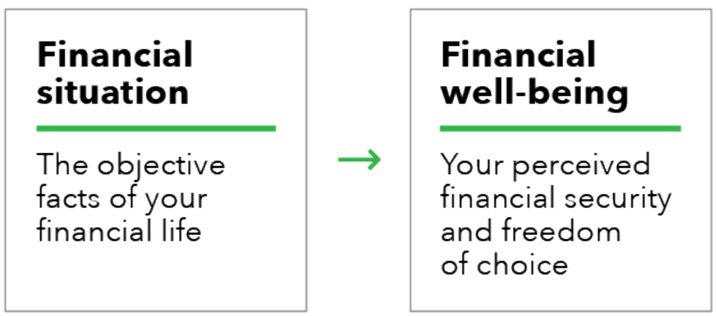
[18] Researchers measured the control variables as shown in parentheses: Household income (self-reported annual income), retirement status (employment status is retired), perceived economic mobility (level of agreement with the statement "everyone has a fair chance at moving up the economic ladder"), financial self-efficacy (level of confidence in one's ability to meet personal financial goals), frugality (sense of thriftiness as measured by likelihood of re-using an item versus buying something new), and self-control (respondents' self reported ratings on three areas – impulsiveness, ability to resist temptation, and ability to work toward long term goals). All measures are self-reported. See Abt technical report for full details at www.abtassociates.com/financialpathways.

This section first presents findings regarding the association between financial behavior, financial situation, and financial well-being. Next, it describes the association between financial knowledge and financial skill on the one hand, and financial behavior on the other. Then it presents the full model combining all the factors and control variables. Appendices A and B of this report present a summary of the full model. The Abt technical report presents full technical details on the analyses and findings.[19]

# 3.1 Role of financial behavior in financial well-being

The study found a strong association between a respondent's objective or "real-world" financial situation and their sense of financial well-being. This means that a change in financial situation is associated with a similar change in financial well-being.[20]

**FIGURE 2:** FINANCIAL SITUATION AND FINANCIAL WELL-BEING




Controls included in this model are income, retirement status, financial self-efficacy, frugality, perceived economic mobility, and self-control.

The strong association between financial situation and financial well-being suggests that a key way to improve an individual's financial well-being is through improving the individual's financial situation. Financial situation here includes the ability to meet regular expenses, amount of savings, and credit

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[19] *Understanding the Pathways to Financial Well-Being*, Abt Associates (2018), available at www.abtassociates.com/financialpathways.

[20] The size of the regression coefficient on financial situation suggests that an individual's subjective sense of their financial well-being is closely aligned with the facts of their financial situation as measured in this study. However, almost 30 percent of the variance in financial well-being is *not* accounted for by this model. This indicates that the two concepts, financial well-being and financial situation, while strongly related, are not identical, and that subjective insight into a person's financial well-being can add value beyond the details of their financial situation.

standing. The question for financial educators then becomes: What explains differences in financial situation, when controlling for income and other variables outside the scope of financial education? In other words, how can financial education contribute to improved financial situation and financial well-being?

The study finds that financial behavior is strongly associated with financial situation, which in turn is associated with people's sense of financial well-being. In this way, financial behavior is indirectly associated with financial well-being. Figure 3 depicts this segment of the model.

**FIGURE 3:** FINANCIAL BEHAVIOR INDIRECTLY CONTRIBUTES TO FINANCIAL WELL-BEING

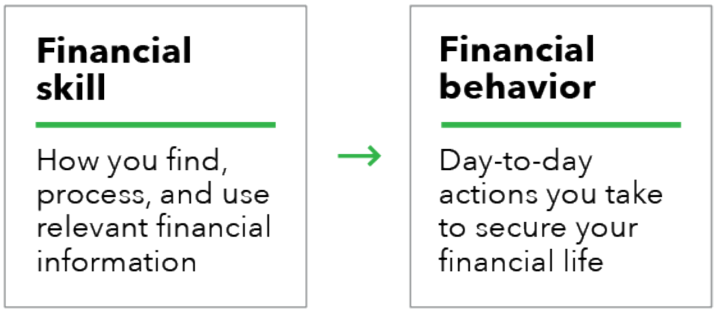

Controls included in this model are income, retirement status, financial self-efficacy, frugality, perceived economic mobility, and self-control.

Out of the six control variables used in this model, income had by far the largest association with financial situation. Overall, income and behavior had the strongest associations with financial situation. This finding is consistent with the idea that while economic opportunity matters, what one does also matters for financial outcomes. These results suggest that changes in financial behavior could increase financial well-being – but only to the extent that behavior improves an individual's financial situation.

## 3.2 Role of skill and knowledge in financial behavior

The study also examined the association between financial behavior on the one hand, and financial skill and financial knowledge on the other. The study found that financial skill was strongly associated with financial behavior, more strongly than financial knowledge and financial behavior were associated.[21]

**FIGURE 4:** FINANCIAL SKILL AND FINANCIAL BEHAVIOR




Controls included in this model are income, retirement status, financial self-efficacy, frugality, perceived economic mobility, and self-control

In the Bureau's prior qualitative research into what influences financial well-being, both consumers and practitioners were far more likely to mention the importance of knowing *how* to do things than knowledge of particular financial facts. In particular, participants highlighted the importance of knowing when they need information, where to find it, and how to use it.[22] The findings of the present study support the idea that building financial skill, as so defined, can lead to positive financial behavior and ultimately, increase financial well-being across many types of financial decisions.

The field of financial education has increasingly moved toward providing specific relevant, actionable information at the time that consumers need to apply it to a particular financial decision. The study did

[21] The coefficient for financial knowledge is .038, while for financial skill it is .445. This means that a one standard deviation increase in financial skill is associated with a 45 percent of a standard deviation increase in financial behavior, whereas a one standard deviation increase in financial knowledge is associated with only a 4 percent of a standard deviation increase in financial behavior. Furthermore, the model estimating financial behavior provided just as much explanatory power when financial knowledge was excluded. For more details, see Abt technical report at www.abtassociates.com/financialpathways.

[22] This finding is described in section 4.2 of *Financial well-being: The goal of financial education*, www.consumerfinance.gov/data-research/research-reports/financial-well-being/.

not measure the potential role of this type of financial knowledge. However, the study suggests that the skills needed to find, process, and act on such information may be quite valuable.

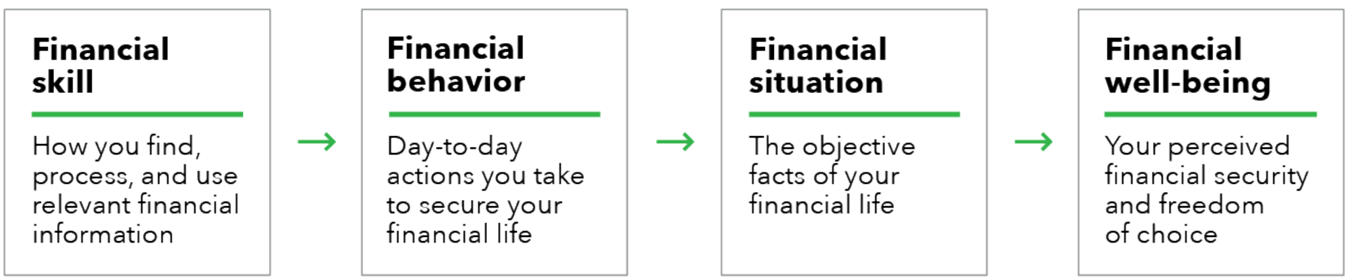
Among the six control variables used in the model, financial self-efficacy (confidence in one's ability to achieve personal financial goals) was also strongly associated with financial behavior.

Together, these results indicate that knowing how to execute a financial decision and having confidence in one's ability to achieve a goal are both potential avenues for financial educators and financial capability practitioners to help individuals improve their financial well-being.

## 3.3 Full model of financial capability

Figure 5 shows the full set of associations found between financial well-being and the key factors examined in the study. The associations depicted in this model are statistically significant, and also meaningful in terms of their explanatory power. This full model explains more than two-thirds of the variation in the three simultaneously-estimated dependent variables: financial behavior, financial situation, and financial well-being.

**FIGURE 5:** FULL MODEL OF FINANCIAL CAPABILITY




Controls included in this model are income, retirement status, financial self-efficacy, frugality, perceived economic mobility, and self-control.

As mentioned above, the study used data collected at a single point in time. Therefore the data do not support causal interpretations. The results nonetheless provide evidence that financial skill and financial behavior play a key role in the path to financial well-being.

This pathway is consistent with prior research, including causal findings from a randomized controlled trial on financial coaching. That research found that financial coaching led to positive financial outcomes through behavior change.[23] Notably, the people who improved their money-management behaviors did so without changing their general knowledge of general financial information as measured in that study. That result provides further support for the present study's finding that financial skill may be a stronger driver of financial behavior than general financial knowledge.

# 4 Implications for financial education practice

The study provides evidence that the pathway for financial education to improve people's financial well-being is through supporting them in taking actions that improve their financial situations. The financial behaviors that the study found to be associated with financial well-being were simple, day-to-day types of actions. These actions included paying bills on time, checking account statements for errors, setting financial goals, putting money into savings, and consulting a budget.[24]

These findings, combined with the Bureau's previous research,[25] suggest specific ways in which financial education can support effective financial behavior. These approaches involve developing a person's skill, knowledge, and confidence:

- **Build financial skill:** Financial education should focus on building consumers' skill to: recognize when information is needed, find trusted sources, use what they learn to make financial decisions and plans to achieve their goals, and implement those decisions and plans. Once consumers learn these skills, consumers can apply them across a range of financial decisions. In the process, financial self-efficacy can also grow. For example, as people develop and apply financial skill, they may become more confident of their ability to make financial decisions and achieve financial goals in the future. The Financial Skill Scale is a new way to measure financial skill that financial educators and researchers can use to track an individual's progress.

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[23] The report on that study, *Financial Coaching: a Strategy to Improve Financial Well-Being*, can be found at www.consumerfinance.gov/data-research/research-reports/financial-coaching-strategy-improve-financial-well-being/.

[24] Appendix D provides the list of behaviors examined in this study.

[25] More information on the previous research findings can be found at www.consumerfinance.gov/data-research/research-reports/effective-financial-education-five-principles-and-how-use-them/.

- **Provide financial information at "teachable moments" to support development of financial skill *and* financial knowledge:** Many financial educators provide decision tools and information about products, services, or topics tailored to specific financial decisions and circumstances. These types of tools and information go hand-in-hand with the financial skills of seeking the right information from trusted sources, and making and implementing plans. As people apply situation-specific information, they also build general understanding of financial concepts and facts. In this way, people develop financial competence in a way that is more likely to stick.

- **Don't overlook the skill of implementing and sticking to a plan:** Once a person makes a financial decision or plan, they may need support in implementing their intentions. Helping people stay on a path for successful action can help them achieve their financial goals. This is especially so if success requires ongoing efforts or adapting to challenges.

- **Provide opportunities to practice:** Building financial capability takes practice. It does not happen by learning about best practices; it happens by *practicing* best practices. Not only does financial capability improve when skills are put into action, but people's confidence in their own abilities increases the more they practice financial skill.

The Bureau's 2017 report, *Effective financial education: Five principles and how to use them*, identifies financial education practices that support the factors that this study found to be strongly associated with financial well-being.[26]

The five principles are: (1) Know the individuals and families to be served, (2) Provide actionable, relevant, and timely information, (3) Improve key financial skills, (4) Build on motivation, and (5) Make it easy to make good decisions and to follow through on them. Thus, the *Principles* report is a resource for those looking to design financial education programs to effectively implement the findings of the current study, and support consumers in taking action toward their financial goals.

[26] The report can be found at www.consumerfinance.gov/data-research/research-reports/effective-financial-education-five-principles-and-how-use-them/.

# 5 Conclusion

The research presented in this brief makes four contributions. First, it is the first study using the Bureau's 2016 National Financial Well-Being Survey to statistically model how various factors relate to a person's financial well-being, controlling for an array of personal financial and demographic characteristics.

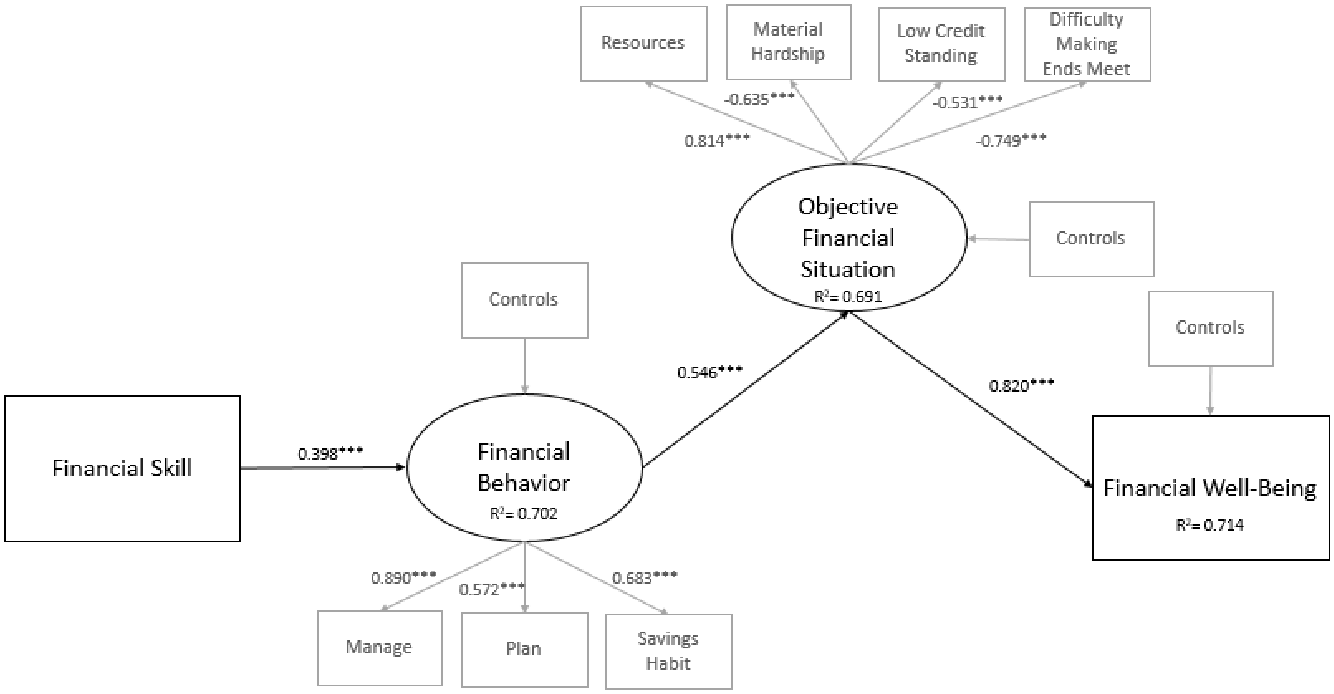
Second, it helps us understand the role of "what people know and do" for their financial well-being. This research suggests that the actions people take affect their financial outcomes, and that financial skill (and related financial self-efficacy) likely contribute more to financial decisions and actions than general knowledge of financial facts.

Third, the resulting model of inter-connected pathways points the way for financial education to improve financial well-being. The findings suggest that financial education can help consumers improve their financial situations and ultimately, financial well-being, by helping them to improve their financial skill and financial behavior. The study also suggests a need to innovate and research strategies for developing financial skill and with it, financial self-efficacy.

Finally, the study reinforces the value of common measures for success. A key implication of these findings is that the financial education field can measure success of different approaches in terms of changes in financial skill and behavior, as well as in financial situation and financial well-being. This theoretical framework, now grounded in evidence, can facilitate further program innovation and research. In support of such innovation and research, the Bureau offers reliable and validated scales to evaluate financial skill and financial well-being. Researchers and financial educators can use these scales to measure program outcomes and to assess needs at intake and progress over time.

As demonstrated in the Bureau's 2017 *Principles* report, financial education programs can apply a wide range of approaches to helping consumers take steps toward their financial goals. Varied programs can use the common framework from this report to chart paths to greater effectiveness.

# APPENDIX A: FULL STRUCTURAL EQUATION MODEL




CONTROLS: Income, retirement status, financial self-efficacy, frugality, perceived economic mobility, and self-control.

SOURCE: Abt Associates calculations based on 2016 National Financial Well-Being Survey data.

NOTE: N = 6,394. Standardized coefficients for the model of the associations among financial well-being, objective financial situation, financial behavior, and financial skill. Only significant paths shown. * $p < .05$. ** $p < .01$. *** $p < .001$. In the table below, [c] Indicates control variables.

MODEL FIT: $\chi^2$ (df) = 1666.253 (54); RMSEA = 0.068; CFI = 0.911, TLI = 0.862, SRMR = 0.045.

**TABLE 1:** COEFFICIENTS FOR THE MODEL ESTIMATING THE ASSOCIATIONS AMONG FINANCIAL SKILL, FINANCIAL BEHAVIOR, OBJECTIVE FINANCIAL SITUATION, AND FINANCIAL WELL-BEING

| Dependent Variable | Independent Variable | Coefficient | *p* Value Sig. | Standard Error |
|---|---|---|---|---|
| Financial well-being | Objective financial situation | 0.820 | *** | 0.018 |
| *Financial well-being* | Financial self-efficacy (goal confidence) [c] | 0.093 | *** | 0.014 |
| *Financial well-being* | Income [c] | -0.123 | *** | 0.016 |
| *Financial well-being* | Self-control [c] | 0.053 | *** | 0.013 |
| *Financial well-being* | Perceived economic mobility [c] | 0.048 | *** | 0.011 |
| *Financial well-being* | Retired [c] | 0.009 | | 0.012 |
| *Financial well-being* | Frugality [c] | -0.065 | *** | 0.011 |
| Objective financial situation | Financial behavior | 0.546 | *** | 0.027 |
| *Objective financial situation* | Financial self-efficacy (goal confidence) [c] | 0.114 | *** | 0.019 |
| *Objective financial situation* | Income [c] | 0.400 | *** | 0.016 |
| *Objective financial situation* | Self-control [c] | -0.049 | ** | 0.016 |
| *Objective financial situation* | Perceived economic mobility [c] | 0.035 | ** | 0.013 |
| *Objective financial situation* | Retired [c] | 0.194 | *** | 0.012 |
| *Objective financial situation* | Frugality | -0.085 | *** | 0.016 |
| Financial behavior | Financial skill | 0.398 | *** | 0.018 |
| *Financial behavior* | Financial self-efficacy (goal confidence) [c] | 0.324 | *** | 0.016 |
| *Financial behavior* | Income [c] | 0.083 | *** | 0.012 |
| *Financial behavior* | Self-control [c] | 0.139 | *** | 0.014 |
| *Financial behavior* | Perceived economic mobility [c] | 0.051 | *** | 0.012 |
| *Financial behavior* | Retired [c] | 0.130 | *** | 0.010 |
| *Financial behavior* | Frugality [c] | 0.166 | *** | 0.014 |

SOURCE: Abt Associates calculations based on 2016 National Financial Well-Being Survey data

# APPENDIX B: THE FINANCIAL SKILL SCALE

The study used the following Financial Skill Scale as the measure for financial skill.

| Questions | Response Options |
|---|---|
| **How well does this statement describe you or your situation?**<br>I know how to make complex financial decisions†<br>I am able to make good financial decisions that are new to me<br>I know how to get myself to follow through on my financial intentions†<br>I am able to recognize a good financial investment<br>I know how to keep myself from spending too much<br>I know how to make myself save†<br>I know where to find the advice I need to make decisions involving money | Describes me completely<br>Describes me very well<br>Describes me somewhat<br>Describes me very little<br>Does not describe me at all |
| **How often does this statement apply to you?**<br>I know when I do not have enough information to make a good decision involving my money†<br>I know when I need advice about my money<br>I struggle to understand financial information* † | Always<br>Often<br>Sometimes<br>Rarely<br>Never |

* Denotes questions for which the response options are "reverse coded."

† Denotes questions that are part of the abbreviated (5-question) scale.

The abbreviated version of the Financial Skill Scale (denoted with a †) is half the length of the long version. Scores from the abbreviated version are highly correlated to the standard version and are still highly reliable. The abbreviated version can be useful if time or space is limited, perhaps in the case of the scale being included on a longer survey. More information on the development and use of the Financial Skill Scale, including how to score responses, can be found in *Measuring Financial Skill: A guide to using the Financial Skill Scale*, consumerfinance.gov/financial-skill-scale.

# APPENDIX C: VARIABLES INCLUDED IN FINANCIAL SITUATION MEASURE

| Survey Item | Description |
|---|---|
| Difficulty making ends meet | *In a typical month, how difficult is it for you to cover your expenses and pay all your bills?* Coded on a 3-point scale from 1=not at all difficult to 3=very difficult. |
| Liquid savings | Self-reported savings balance (in cash, checking, and savings accounts) – set to the midpoint of each survey response range: $0; $1-49; $50-99; $100-249; $250-499; $500-999; $1,000-1,999; $2,000-4,999; $5,000-9,999; $10,000-19,999; $20,000-49,999; $50,000-74,999; $75,000 or more. |
| Ability to absorb a negative financial shock | *How confident are you that you could come up with $2,000 in 30 days if an unexpected need arose within the next month?* Coded on a 4-point scale from 1= I am certain I could not to 4= I am certain I could. |
| Number of financial products | Count of traditional financial products owned (e.g., checking/savings account, retirement account, non-retirement investments) |
| Material hardship 1 | *In the past 12 months, I worried whether our food would run out before I got money to buy more.* Coded on a 3-point scale from 1=never true to 3=often true. |
| Material hardship 2 | *In the past 12 months, the food that I bought just didn't last and I didn't have money to get more.* Coded on a 3-point scale from 1=never true to 3=often true. |
| Material hardship 3 | *In the past 12 months, I couldn't afford a place to live.* Coded on a 3-point scale from 1=never true to 3=often true. |
| Material hardship 4 | *In the past 12 months, I or someone in my household needed to see a doctor or go to the hospital but did not go because we couldn't afford it.* Coded on a 3-point scale from 1=never true to 3=often true. |
| Material hardship 5 | *In the past 12 months, I or someone in my household stopped taking a medication or took less than directed due to the costs.* Coded on a 3-point scale from 1=never true to 3=often true. |
| Material hardship 6 | *In the past 12 months, one or more of my utilities was shut off due to non-payment.* Coded on a 3-point scale from 1=never true to 3=often true. |
| Debt collection experience | Binary variable indicating whether the respondent had been contacted in the past year by a person or company trying to collect a past-due debt. Coded 1=yes, 0=no. |
| Credit rejection experience | Binary variable indicating whether the respondent had applied for credit and been turned down in the past year. Coded 1=yes, 0=no. |
| Credit rejection concerns | Binary variable indicating whether the respondent had decided not to apply for credit in the past year due to concerns about getting turned down. Coded 1=yes, 0=no. |

# APPENDIX D: VARIABLES INCLUDED IN FINANCIAL BEHAVIOR MEASURE

| Survey Item | Description |
|---|---|
| Money management 1 | Paid all your bills on time. Coded on a 5-point scale from 1=not applicable or never to 5=always. |
| Money management 2 | Stayed within your budget or spending plan. Coded on a 5-point scale from 1=not applicable or never to 5=always. |
| Money management 3 | Paid off credit card balance in full each month. Coded on a 5-point scale from 1=not applicable or never to 5=always. |
| Money management 4 | Checked your statements, bills and receipts to make sure there were no errors. Coded on a 5-point scale from 1=not applicable or never to 5=always. |
| Follow-through 1 | I follow-through on my financial commitments to others. Coded on a 5-point scale from 1=not at all to 5=completely. |
| Follow-through 2 | I follow-through on financial goals I set for myself. Coded on a 5-point scale from 1=not at all to 5=completely. |
| Propensity to plan 1 | I consult my budget to see how much money I have left. Coded on a 5-point scale from 1=strongly disagree to 5=strongly agree. |
| Propensity to plan 2 | I actively consider the steps I need to take to stick to my budget. Coded on a 5-point scale from 1=strongly disagree to 5=strongly agree. |
| Propensity to plan 3 | I set financial goals for what I want to achieve with my money. Coded on a 5-point scale from 1=strongly disagree to 5=strongly agree. |
| Propensity to plan 4 | I prepare a clear plan of action w/ detailed steps to achieve my financial goals. Coded on a 5-point scale from 1=strongly disagree to 5=strongly agree. |
| Saving habit | Putting money into savings is a habit for me. Coded on a 5-point scale from 1=strongly disagree to 5=strongly agree. |