CONSUMER FINANCIAL PROTECTION BUREAU | APRIL 2019

Youth financial education research priorities

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1. Introduction and purpose

Many young people reach adulthood without the basic financial knowledge and skills that are critical for establishing healthy financial futures. Given the increasing complexity of the financial services landscape, young people have a greater need to improve their financial capability.

Compared with their peers in other nations, U.S. 15-year-olds rank in the middle of the countries and economies participating in the Organization for Economic Co-operation and Development's 2015 Program for International Student Assessment (PISA) financial literacy assessment. Nearly one in five failed to demonstrate more than a basic level of financial knowledge and skill. Furthermore, there was no measurable change in U.S. financial literacy performance between 2012 and 2015.[1] This suggests that youth in the United States have substantial room to improve their financial knowledge and skills.

Across the country, policymakers, educators, and program leaders are pursuing a wide range of approaches for teaching financial education and capability. Notwithstanding these efforts, there is still a lack of rigorous evidence as to effective practices for youth financial education.[2] Education leaders and practitioners have expressed a great deal of interest in research on effective financial education practices to bolster their efforts to advance financial education.

This report, the Youth Financial Education Research Priorities (Research Priorities), lays out key unanswered research questions in youth financial education identified by a range of stakeholders. The Consumer Financial Protection Bureau (Bureau or CFPB) encourages investigation into these questions to point the way towards evidence-based solutions that are effective, scalable, and invite implementation.

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1 *See* Organization for Economic Co-operation and Development, Program for International Student Assessment Results (Volume IV), Students' Financial Literacy (2015), oecd.org/education/pisa-2015-results-volume-iv-9789264270282-en.htm. The United States ranked 7 out of 15 with a score of 487, similar to the average for all participating OECD countries and economies (489).

2 According to a 2011 GAO report on financial literacy, "[r]elatively few evidence-based evaluations of financial literacy programs have been conducted, limiting what is known about which specific methods and strategies are most effective." See U.S. Government Accountability Office, GAO-11-614, and Financial Literacy: A Federal Certification Process for Providers Would Pose Challenges (June 2011) at Highlights, gao.gov/assets/330/320203.pdf.

The CFPB has focused on evidence-based financial education initiatives. The Bureau's youth financial education research strategy serves a number of Dodd-Frank Act statutory mandates[3] and is consistent with the goals of the Financial Literacy and Education Commission's (FLEC) National Strategy for Financial Literacy. [4] It also supports the research agenda of the Federal Interagency Working Group on Youth Policies' (IWGYP) Positive Youth Development[5].

The Bureau consulted with various key stakeholders including representatives of the IWGYP and FLEC, leading academic researchers, nonprofit financial education leaders, research funders and policy experts in the financial education field for the development of this document.

The Bureau has three goals in mind for the Research Priorities:

1. **Provide a research roadmap**. First, the Bureau seeks to provide a roadmap for future research in youth financial education by identifying and documenting key research questions of interest to the field.

2. **Encourage ongoing research activity and interest.** Second, the Bureau seeks to encourage research that addresses the key questions outlined in this report. The Bureau can generate research, and, more important, interest in undertaking some of the proposed research inquiries among the wider field of researchers.

3. **Translate research into action.** The Bureau hopes to encourage the spreading and sharing of empirically-driven learning in order to support the continuous improvement and maturing of the field of youth financial education. The Bureau is committed to using evidence as the basis for an ongoing conversation across the field to identify implications for policy and practice.

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3 For example, the Dodd-Frank Act directs the Office of Financial Education, together with the Office of Research, to "conduct research related to consumer financial education and counseling." 12 U.S.C. § 5493(d)(3)(B).

4 The Financial Literacy and Education Commission's National Strategy identifies and facilitates implementation of evidence-based program and practices, and supports a vision of "sustained financial well-being for all individuals and families in the United States." *See* Financial Literacy & Education Commission, Promoting Financial Success in the United States: National Strategy for Financial Literacy 2011 at 7, 11 (Goal 4), treasury.gov/resource-center/financial-education/Documents/NationalStrategyBook_12310%20(2).pdf. As noted above, one of the four core goals of the National Strategy is to "identify, enhance and share effective practices" through supporting "research and evaluation to identify effective programs and practices" and encouraging "implementation and reproduction of evidence-based programs and practices."

5 Positive Youth Development is the intentional, prosocial approach that engages youth within their communities, schools, organizations, peer groups, and families in a manner that is productive and constructive; recognizes, utilizes, and enhances young people's strengths; and promotes positive outcomes for young people by providing opportunities, fostering positive relationships, and furnishing the support needed to build on their leadership strengths. *See* Interagency Working Group on Youth Programs, Research Agenda on Positive Youth Development, youth.gov/youth-topics/positive-youth-development/pyd-research-agenda.

As a companion to this document, the Bureau published "A review of youth financial education: Effects and evidence" to help stakeholders use existing research to make evidence-informed policy, programming and resourcing decisions in school-based financial education. The review of current research is a companion to, and forms the basis for, the Bureau's recommendations for future research. Taken together, both documents provide a thorough understanding of youth financial education research to date and a proposed roadmap for future research.

Through the Research Priorities laid out in this document, the Bureau hopes to initiate research efforts that can unlock efficient and effective delivery of youth financial education in three areas: schools, households, and communities. In the next section, readers will find a set of key research questions and priorities in each of these areas.

Section 3 of this document, Executing on the research priorities: Metrics and methods, offers resources and considerations for undertaking future research on youth financial education. It summarizes the Bureau's developmental framework for teaching youth financial capability and discusses the importance of using reliable metrics to gauge results of education efforts at different ages and stages of development. Section 3 also recommends study designs, particularly those that allow for causal interpretation wherever feasible.

2. Research roadmaps: Gaps and priorities

Through dialogue with the youth financial education community, the Bureau has heard repeated themes of interest and knowledge gaps that need to be addressed. Stakeholders have also consistently raised the need for a focus on effectiveness, efficiency, and scalability of financial education solutions for youth.

There are three primary settings through which financial education can be administered for youth: (1) schools, (2) households, and (3) community. The Research Priorities identify and discuss important and unanswered research questions in youth financial education for these settings. To date, there has been relatively less research on financial education in households and communities than on school-based financial education. Accordingly, the research questions on households and communities below are more preliminary or exploratory in nature and intended to spark new research initiatives in these areas.

The Bureau does not intend for the Research Priorities to be an exhaustive overview of all youth financial education research questions; rather it is an attempt at providing an overview into some of the most pressing questions regarding effective financial education practices.

2.1 Schools

Schools offer an efficient way to reach young people at scale, especially those who may not have as much access to financial educational opportunities through other means. A number of states have recognized the value of including financial education into school curricula. As of 2016, 17 states required students to take a personal financial course as a high school graduation requirement. Research also shows that teachers generally support financial education course requirements for students. A 2010 teacher survey funded by the National Endowment for Financial Education found that 89 percent of K-12 teachers agree that students should either take a financial education course or pass a competency test for high school education. However, in the same survey, only 20 percent of teachers believed that they were adequately prepared to teach personal finance topics.

There is a broad array of school-based financial education strategies and an emerging body of research to measure results. However, a review of the existing literature reveals a relative absence of rigorous program evaluation and gaps in research about the effectiveness of financial education in schools and how to equip teachers to deliver it.[6] These research questions include:

What is being taught to whom?

Evidence-based research on the efficacy of financial education in schools requires information on 1) which schools require financial education, 2) which schools offer financial education, and 3) in what years these requirements and offerings started. Without these three components, researchers cannot determine the number of students who have taken (and completed) a financial education course, and, from there, assess the effects of financial education on knowledge gains or financial behaviors.

Next Gen Personal Finance found that one in six U.S. students attends a school where the student is required to take a stand-alone personal finance course prior to high school graduation.[7] However, there is no census of which students actually complete financial education coursework. The presence of a requirement does not mean students are getting financial education, just as a lack of a requirement does not mean students are not getting financial education. Ideally, researchers would benefit from knowing which students actually receive what kind of financial education, though this will be very difficult to catalog. Reliable documentation of requirements and standards would be a big step forward.

The Council on Economic Education, the Champlain College Center for Financial Literacy, and independent researchers[8] have cataloged high school financial education requirements by state but there is no information available about local-level (school district or county) financial education requirements for the entire country that spans multiple years to allow researchers to study changes within areas. Further, there is no documentation of financial literacy standards in grades K-8 at any geography. Without knowing what financial education currently exists, assessing outcomes and cost-benefit is challenging.

6 *See* Consumer Financial Protection Bureau, A review of youth financial education: Effects and evidence (April 2019), consumerfinance.gov/data-research/research-reports/review-youth-financial-education-effects-and-evidence/.

7 Next Gen Personal Finance, "Who has access to financial education in America today?" (September 2017), mbea-ma.org/wp/2017/09/28/report-who-has-access-to-financial-education-in-america-today/.

8 Urban C. and Schmeiser M. FINRA Investor Education Foundation Issue Brief: "State Mandated Financial Education: A National Database of Graduation Requirements," montana.edu/urban/FinEd_Insights_MSU%20Issue%20Brief%202_FINAL.pdf.

What is the best way to reach low-income students and other underserved groups?

The 2015 PISA report found that 15-year olds in schools with the highest fraction of students receiving free and reduced price lunches scored the lowest on the financial literacy exam.[9] Moreover, the Next Gen Personal Finance report showed that, within schools in the top 20th percentile of students receiving free or reduced price lunch, only 1 in 20 students were required to take a financial education course (compared with 1 in 6 students from all schools, regardless of share of students receiving free or reduced price lunch).[10]

These findings suggest financial capability building needs are greater in schools serving a greater fraction of low-income students. Research should explore to what extent the gaps in financial literacy are due to a lack of financial education, ineffectiveness of traditional financial education for low-income populations, and other factors, and to what extent effective financial education could narrow those gaps. If school-based financial education can make a concrete difference among lower-income youth, further research is needed to understand best approaches. One line of inquiry might be to learn from schools with both high rates of free- and reduced-lunch participation and high financial literacy performance.

Youth in other categories beyond low-income students may benefit from specialized approaches. Examples include English-language learners and students with disabilities, including developmental disabilities. Research to identify which factors create specific challenges in financial capability development, and how to address those challenges, could help practitioners close gaps faced by those who are often the least empowered financially.

What methods for delivering financial education are effective and efficient in a variety of conditions?

There is a lot of discussion on whether it is "better" to integrate personal finance into existing curriculum (such as social studies, math, or another class) or to teach personal finance stand-alone. While future studies may suggest that one model is preferable to the other, the Bureau recognizes one of the two models is not always reasonably practical to implement, and certainly not at all age levels. Present research has found that both integrated curricula and stand-alone

9 National Center for Education Statistics, "A First Look at the 2015 Program for International Student Assessment Financial Literacy Results" (2017) Presentation to the Financial Literacy and Education Commission. treasury.gov/resource-center/financial-education/Documents/NCES%20U.S.%20PISA%20Results%20for%20Financial%20Literacy%20Presentation.pdf.

10 Next Gen Personal Finance, "Who has access to financial education in America today?" (September 2017), mbea-ma.org/wp/2017/09/28/report-who-has-access-to-financial-education-in-america-today/.

courses can be effective.[11] Thus, the Bureau hopes that new studies will seek out best practices for both models in order to give practitioners the opportunity to implement financial education in the best way feasible.

How can teacher training be used to enhance the effectiveness of financial education?

Teachers are critical to the success of any programs or initiatives that rely on teaching financial education in the classrooms. Only one in three teachers report feeling knowledgeable about financial education while two-thirds feel unqualified to teach to their state's financial literacy standards.[12] Preparedness to teach financial education is relatively uncommon among schoolteachers. Few teachers have taken a finance-related college course or received training in teaching personal finance.[13] Additionally, barriers to accessing training--such as cost, time and travel--are especially acute for educators.

Common strategies are to train teachers either in how to teach financial education, or in personal financial management for themselves, or a combination. The research and evaluation questions should move beyond asking whether teacher training improves student knowledge. Instead, studies should ask *which types* of teacher training affect *instructor knowledge and instructor competency; and among* those that improve teacher knowledge and competency, which improve pedagogy and student outcomes?

11 *See* Consumer Financial Protection Bureau, A review of youth financial education: Effects and evidence (April 2019), consumerfinance.gov/data-research/research-reports/review-youth-financial-education-effects-and-evidence/.

12 *See* Consumer Financial Protection Bureau, Transforming the financial lives of a generation of young Americans (April 2013), consumerfinance.gov/data-research/research-reports/transforming-the-financial-lives-of-a-generation-of-young-americans/.

13 Way, W. and K. Holden, Teachers' Background and Capacity to Teach Personal Finance: Results of a National Study (2010) fdic.gov/about/comein/mar3.pdf.

Does state-mandated financial education in high school affect financial and economic outcomes?

While some research has documented the effectiveness of U.S. state-mandated financial education in high schools,[14,15,16,17,18] these findings are limited to studying the effects of state-mandated financial education on credit scores, delinquency rates, student debt, non-student debt, asset accumulation, and knowledge.[19,20] Additional research needs to ask how financial education requirements affect a battery of financial and non-financial outcomes. Positive effects for individuals may also have broader implications for the health of the economy. For example, does state-mandated high school financial education improve worker productivity in that state?

Some of the untested outcomes or behavioral effects of financial education once students enter financial adulthood include, but are not limited to:

- Becoming employed or earning a relatively higher wage
- Acquiring additional financial knowledge
- Avoiding late or overdraft fees
- Shopping for interest rates
- Having relatively higher financial well-being
- Post-secondary educational aspirations, attainment and financing
- Successful attainment of homeownership
- The likelihood of saving for retirement or the amount of money saved for retirement

14 Bernheim, D., D. Garrett, and D. Maki. "Education and saving: The long-term effects of high school financial curriculum mandates." *Journal of Public Economics* 80.3 (2001): 435-465.

15 Brown, M., J. Grigsby, W. van der Klaauw, J. Wen,, & B. Zafar, Financial education and the debt behavior of the young. *The Review of Financial Studies*, 29.9 (2016), 2490-2522.

16 Cole, S., A, Paulson, and G.K. Shastry. "High school curriculum and financial outcomes: The impact of mandated personal finance and mathematics courses." *Journal of Human Resources* 51.3 (2016): 656-698.

17 Tennyson, Sharon, and Chau Nguyen. "State curriculum mandates and student knowledge of personal finance." *Journal of Consumer Affairs* 35.2 (2001): 241-262.

18 Urban, C., M. Schmeiser, A. Brown, & J. M. Collins. The Effects of High School Personal Financial Education Policies on Financial Behavior. Forthcoming: *Economics of Education Review* (2018).

19 Stoddard, C. and C. Urban. The Effects of Financial Education Graduation Requirements on Postsecondary Financing Decisions. Forthcoming: *Journal of Money, Credit, and Banking* (2019).

20 Harvey, M., Dissertation: Financial Education among Financially Vulnerable Populations in the United States (2018), rand.org/pubs/rgs_dissertations/RGSD410.html.

- The likelihood of investing in bond and equity markets (outside of employer-based retirement plans or IRAs)

Given that the economy is changing such that young adults may begin employment without (or with limited) benefits, and with seasonal or varying work hours, how can financial education help young adults make sound financial decisions in this new economy?

It would be particularly helpful to understand the linkages between measures in the Bureau's Building Blocks to Help Youth Achieve Financial Capability: Measurement guide (discussed in Section 3) and specific long-term outcomes of interest such as these. Using the Building Blocks milestone metrics for teens and young adults could then contribute to a more immediate evaluation of potential long-term outcomes and to more rapid development of program innovations.

How does pre-high school financial education affect youth financial capability?

This is perhaps one of the largest gaps in the research. One exception is the My Classroom Economy (MCE) study that finds interactive and integrated learning for elementary school students improves financial capability and knowledge, though this study only examines one school district.[21,22] Many states have K-8 financial education standards that are required to be implemented. However, there is no clear documentation about these standards, making it difficult for researchers to study. Future research can explore best practices in teaching personal finance to pre-high school-aged youth.

Again, the Building Blocks Measurement Guide may be particularly germane to these questions. Measurement of pre-high school students can be especially challenging, given that research on younger youth includes navigating disclosure issues and there are relatively fewer financial behaviors to measure. Moreover, there are comparatively fewer assessment tools available for pre-high school youth than for high school-aged students. Thus, the Building Blocks Measurement Guide may be especially useful for identifying the available age-appropriate assessment tools needed to answer research questions for this age group.

21 Batty, M., J. M. Collins, C. O'Rourke, and E. Odders-White, Experiential Financial Literacy: A Field Study of My Classroom Economy. University of Wisconsin-Madison Center for Financial Security Report (2016), cfs.wisc.edu/2016/09/15/mce/.

22 *See* Consumer Financial Protection Bureau, A review of youth financial education: Effects and evidence (April 2019), consumerfinance.gov/data-research/research-reports/review-youth-financial-education-effects-and-evidence/.

Stakeholders that the Bureau spoke with raised other questions related to K-12 financial education that seem to remain unanswered in the research community. A non-exclusive list includes:

- With the dramatic expansion of financial education games in the last few years, what is the effectiveness of game-based learning in financial education in the school setting? A 2009 study found that the Stock Market Game™ improved student knowledge in a randomized control trial study for 4th and 5th grade students.[23] Are some games more effective than others? What attributes of these games improve student outcomes?
- How do state financial literacy standards affect test scores in other subjects? Does financial literacy crowd out other education (for example, reading) or does it complement similar subjects (for example, math)?
- Is there evidence of better outcome of school-based financial education if it is located in one discipline versus another (that is, taught by a math instructor, in a business class, in social studies, etc.)?
- What are effective ways to include parents or guardians in school-based financial education?
- What ways can community-based groups and institutions work within schools to help youth build financial capability? (See the Communities section for more discussion.) Notably, federal and local level initiatives promote banking in schools.[24],[25] Do banks-in-schools programs change savings behavior or financial development for young adults? At what age is it proper to include banks in school settings? In what ways can explicit financial instruction complement these programs?

23 Hinojosa, T., S. Miller, A. Swanlund, K. Hallberg, M. Brown, and B. O'Brien The Stock Market Game™ Study Final Report. Learning Point Associates (2009), stockmarketgame.org/assets/pdf/2009%20Learning%20Point%20Study%20Full%20Report.pdf.

24 Collins, J.M., M. L'Esperance, and E. Odders-White, The Effects of Access to Banking Services on Elementary Student's Financial Learning: A Field Study (2018), ssc.wisc.edu/~jmcollin/wp/wp-content/uploads/2018/02/Bank-in-School_CollinsLesperanceOddersWhite_APPAM.pdf.

25 *See*, for example, Federal Deposit Insurance Corporation Youth Banking Resource Center, fdic.gov/consumers/assistance/protection/depaccounts/youthsavings/youth-savings.html.

2.2 Households

It is common for financial behaviors to be learned at home by children observing caregivers and family members.[26] Significant learning takes place in the household, shaping financial knowledge, habits, and attitudes that persist into adulthood.[27] A longitudinal study found that parents exert the most influence over their children when it comes to developing positive financial attitudes and behaviors.[28]

Financial socialization is the process by which people acquire and develop the knowledge, behaviors, and beliefs about money that influence their financial practices and attitudes.[29,30] The most influential agents of financial socialization are families, particularly parents.[31,32] Parental financial socialization primarily takes place through two channels: (1) the modeling of behavior by adult caregivers (as observed by children), also known as implicit teaching; and (2) the explicit sharing of information, such as adult explanations of behavior or giving of advice.[33,34] It is commonplace for children to form financial habits that persist into adulthood by watching how caregivers discuss and make financial decisions.[35,36] While this observational learning is

26 Britt, S., The Intergenerational Transfer of Money Attitudes and Behaviors, *Journal of Consumer Affairs*, 50. 3, (2016): 539-556.

27 Consumer Financial Protection Bureau, Building Blocks to Help Youth Achieve Financial Capability: A new model and recommendations (2016), consumerfinance.gov/data-research/research-reports/building-blocks-help-youth-achieve-financial-capability/.

28 Shim, S., J. Serido, L. Bosch., and C. Tang, Financial Identity Processing Styles Among Young Adults, *Journal of Consumer Affairs*, 47.1 (2013): 131-148.

29 Kim, J., T. Spangler, and M. Gutter, Extended families: Support, socialization, and stress. *Family and Consumer Sciences Research Journal*, 45.1 (2016): 104-118.

30 Danes, S. M., Parental perceptions of children's financial socialization. *Financial Counseling and Planning*, 5 (1994): 127–146.

31 Kim, J., and S. Chatterjee, Childhood financial socialization and young adults' financial management. *Journal of Financial Counseling and Planning*, 24.1 (2013):, 61–79.

32 Kim, J., J. LaTaillade, and H. Kim, Family processes and adolescents' financial behaviors. *Journal of Family and Economic Issues*, 32.4 (2011): 668–679.

33 Kim, J., T. Spangler, and M. Gutter, Extended families: Support, socialization, and stress. *Family and Consumer Sciences Research Journal*, 45.1 (2016): 104-118.

34 Hira, T. K., Financial Attitudes, Beliefs and Behaviours: Differences by Age. *International Journal of Consumer Studies*, 21.3 (1997): 271-290.

35 Garrison, S., and M. Gutter, Gender Differences in Financial Socialization and Willingness to Take Financial Risks. *Journal of Financial Counseling and Planning*, 21.2 (2010): 60-72.

36 Britt, S. The Intergenerational Transfer of Money Attitudes and Behaviors. *Journal of Consumer Affairs*, 50.3 (2016): 539-556.

very influential, explicit teaching about money by parents and other caregivers and family members matters as well.[37]

Research has shown that the way in which parents communicate with their children about money can influence financial decisions made as teens and young adults.[38] Moreover, the quality of parental interactions may be at least as important as the content of parental interactions.[39] Recollections of parental money arguments has been shown to be associated with higher credit card debt among college students.[40,41] Recalling parental arguments about money has also been shown to be associated with higher materialism among high school students, regardless of parental income.[42] Furthermore, evidence of parental socialization (based on the child's memory) having a positive impact on children's later saving behavior is found throughout the literature.[43]

While caregivers are important transmitters of lessons about how a young person should approach financial management, many lack knowledge and skills in this area and confidence in their ability to convey these lessons to children. Indeed, it is typical for adults to report never talking with their parents about money as children.[44] The Bureau believes that working with caregivers to encourage and support healthy money conversations at home is critical to putting young people on the path to exercising greater control over their personal finances.

Research questions regarding financial learning in the household may focus on financial socialization, household relationships and communication around money, at-home financial education practices, and other related topics. Notably, single-factor causality may often be

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37 Consumer Financial Protection Bureau, Building Blocks to Help Youth Achieve Financial Capability: A new model and recommendations (2016), consumerfinance.gov/data-research/research-reports/building-blocks-help-youth-achieve-financial-capability/.

38 Britt, S. The Intergenerational Transfer of Money Attitudes and Behaviors. *Journal of Consumer Affairs*, 50.3 (2016): 539-556

39 Consumer Financial Protection Bureau, Building Blocks to Help Youth Achieve Financial Capability: A new model and recommendations (2016), consumerfinance.gov/data-research/research-reports/building-blocks-help-youth-achieve-financial-capability/.

40 Hancock, A., B. Jorgensen, and M. Swanson. College Students and Credit Card Use: The Role of Parents, Work Experience, Financial Knowledge, and Credit Card Attitudes. *Journal of Family and Economic Issues*, 34.4 (2013): 369-381.

41 Shim, S., J. Xiao, B. Barber, and A. Lyons. Pathways to Life Success: A Conceptual Model of Financial Well-Being for Young Adults. *Journal of Applied Developmental Psychology*, 30.6 (2009): 708-723.

42 Flouri, E. Exploring the Relationship between Mothers' and Fathers' Parenting Practices and Children's Materialist Values. *Journal of Economic Psychology*, 25.6 (2004): 743-752.

43 Britt, S. The Intergenerational Transfer of Money Attitudes and Behaviors. *Journal of Consumer Affairs*, 50.3 (2016): 539-556

44 Hira, T. K., Financial Attitudes, Beliefs and Behaviours: Differences by Age. *International Journal of Consumer Studies*, 21.3 (1997): 271-290.

challenging to pinpoint in studies of household relationships, especially in comparison with studies of school-based financial education. However, research in the household space that is rigorously designed and executed can contribute to revealing patterns of correlations that have probative and exploratory value to the research community.

Key research questions include:

Can improving parental financial knowledge and confidence play a role in the financial knowledge, habits and attitudes learned by youth?

Does improving the financial capability of parents and other caregivers contribute to better financial socialization of children? If so, through which channels? Similar to the questions raised about teacher training, is it more effective to increase the financial know-how and confidence of caregivers, or to give them tools to teach their children, or some combination? Is "whole family" learning, or dual-generation financial education, where youth and parents receive financial education together, effective? In what ways, for whom, and under what circumstances?

What teachable moments exist at home?

At-home activities offer opportunities for developing the building blocks of financial capability (executive function, financial habits and norms, and financial knowledge and decision-making skills) at different developmental stages. [45] How can caregivers best identify "teachable moments" (e.g., moving, introducing a family pet, choosing student loans)? What teachable moments are most effective for teaching positive money habits to youth? Studies have shown that children as young as age five can have a significant effect on family purchase decisions.[46] Can the influence that children have on caregiver financial choices be leveraged as a teachable moment for financial education at home, and if so, how? What are the most effective ways for parents to support their children in learning productive lessons from their real-world money experiences? Another topic is around allowances. Can allowances be an effective teaching tool?

45 Consumer Financial Protection Bureau, Building Blocks to Help Youth Achieve Financial Capability: A new model and recommendations (2016), consumerfinance.gov/data-research/research-reports/building-blocks-help-youth-achieve-financial-capability/.

46 Kim, J., T. Spangler, and M. Gutter. Family Financial Decisions and Implications for Financial Education. *Journal of Financial Counseling and Planning*, 28.2 (2017): 253-267.

How do household financial dynamics affect the development of youth financial capability?

Financial capability may differ according to socioeconomic circumstances. How do financial shocks in the family, such as job loss, death or health crises, affect the financial lessons learned by youth? How do they affect the financial outcomes and financial well-being of young people later in life? What approaches can minimize negative effects, if any?

This line of questioning raises empirical questions of how differences in financial stressors may influence the way in which caregivers communicate about money to their children. For example, if the head of a household experiences job loss, does the style of financial socialization within the household change? If so, what are ways to weather shocks without passing on financial stress to children?

What are the comparative influences and interactions of the two channels of financial socialization in the home: implicit and explicit learning?

This discussion raises important, underlying questions about the potential role of and best approaches for explicit parental teaching. Some children observe their caregivers making money decisions without explicit teaching about money while others receive explicit parental teaching.[47] How can explicit teaching inform, reinforce or counteract learning that occurs through observation and experience?

Additional research questions on youth financial learning in the household include:

- Do youth who have positive financial role models as children do better in terms of financial outcome and financial well-being as adults? Are non-parental role models as effective as parental role models in formulating healthy habits and norms in youth?
- How do other household factors affect the development of financial capability in youth? While it may be hard to draw policy and program implications from some of these questions, it may be useful to learn what effect certain aspects have, for example: different parental occupations, familial entrepreneurship or farming, cultural

47 For more on implicit and explicit learning, *see* Consumer Financial Protection Bureau, Building Blocks to Help Youth Achieve Financial Capability: A new model and recommendations (2016), consumerfinance.gov/data-research/research-reports/building-blocks-help-youth-achieve-financial-capability/.

background, elements of family structure, and the role of extended family members and multi-generational households.[48]

- The FDIC's 2017 biennial Survey of Unbanked and Underbanked Households finds that 6.5% of households are unbanked and 18.7% are underbanked (indicating that the household had an account, but also used alternative financial services providers in the past year).[49] What effect does the banked status of caregivers have on the financial socialization of youth in the household?

2.3 Communities

An important lesson in financial education is the value and efficacy of meeting people where they are, including in their communities. Community organizations, youth activity groups, libraries, faith-based groups, financial institutions and their trade associations, and others are creating opportunities to provide financial education to youth. By offering tailored programs, materials, and other avenues of learning, these groups help youth who may otherwise not be exposed to financial education.

In community settings, experiential learning often takes place.[50] This is because financial education occurs in active (nonclassroom) settings where students happen to be anyway, such as after-school clubs, sports, places of employment, or other extracurricular activities. During experiential learning, youth derive meaning from direct or hands-on experiences. These learning opportunities allow youth to make independent decisions in a safe environment and to learn from those firsthand experiences. Providing guidance and opportunities for decision-making practice and reflection may help youth better learn and retain financial knowledge and skills.[51]

Hands-on learning opportunities often allow youth to interact with financial products and services, either through simulations or in real-world transactions such as youth bank accounts

48 Kim, J., T. Spangler, and M. Gutter, Extended families: Support, socialization, and stress. *Family and Consumer Sciences Research Journal*, 45.1 (2016): 104-118.

49 Federal Deposit Insurance Corporation. 2017 FDIC National Survey of Unbanked and Underbanked Households. (October 2018), fdic.gov/householdsurvey/2017/2017report.pdf.

50 Experiential learning is the process of deriving meaning from direct or hands-on experiences. Experiential learning opportunities encourage children and youth to take initiative, make decisions, experience the results of their choices in a safe environment, and learn through reflection.

51 Peng, T. M., S. Bartholomae, J. Fox, and G. Cravener. The Impact of Personal Finance Delivered in High School and College Courses. *Journal of Family and Economics Issues*, 28.2 (2007): 265-284

or jobs. Experiential education teaching methods include practice-based learning, role-play, simulation, imagination, inner exploration, encounter, and group work. Programs that incorporate access to financial services may increase the effectiveness of financial education curricula.[52] Several leaders in the education field have developed hands-on financial education opportunities for youth. The few examples of hands-on learning programs listed below demonstrate the great variety and potential of community organizations and institutions to contribute to building children's financial capability:

- **Girl Scouts of the USA** where the organization provides young girls with money-earning projects, such as selling cookies. Participants learn about goal setting, decision-making, and money management.
- **Junior Achievement Finance Park** helps students build financial skills by engaging them in experiential, hands-on learning opportunities on topics related to entrepreneurship, work readiness, and financial literacy. The on-site activities are managed in a dynamic environment outside the classroom.
- **Kindergarten To College (K2C)** provides every kindergartener attending public school in San Francisco with a college savings account containing a $50 deposit from the city and county of San Francisco. In addition, schools are integrating financial subjects into the K-12 math curriculum, with each child's K2C account serving as a teaching tool.
- **4-H Youth Development Program** offers age-appropriate, financial-learning experiences for youth. The 4-H program's learn-by-doing philosophy engages youth in strategies to learn financial terms and practice financial activities, including being treasurers of their 4-H clubs and learning how to budget and manage projects.[53]

The research on community-based financial education for youth is scant. While large-scale programs have done some level of evaluation of their efficacy, many innovative hands-on learning programs may not yet have robust results. Interim qualitative and descriptive results suggest that these programs have positive impact on the financial knowledge and outlook of children and youth. In this section, we outline some important questions that others could explore. A preliminary list of research questions might include the following:

52 Peng, T. M., S. Bartholomae, J. Fox, and G. Cravener. The Impact of Personal Finance Delivered in High School and College Courses. *Journal of Family and Economics Issues*, 28.2 (2007): 265-284

53 4-H Youth Development, Ohio State University Extension. Real Money. Real World. (2009): 2. realmoneyrealworld.osu.edu/documents/RMRW_FollowUpStudy_execsum.pdf.

Does experience with financial products change financial capability for youth?

For example, do youth accounts improve future savings habits or credit ratings? Are the effects different for those with noncustodial and custodial accounts? Does youth access to saving and checking accounts improve college attendance rates or career readiness? Are these effects different if accounts are paired with experiential learning? How do out-of-school bank-based financial education programs create changes in youth financial capability? In what ways can child savings accounts (e.g., 529 accounts) affect future financial capability and college attendance?

What teachable moments exist in communities?

A second question explores how to leverage teachable moments that occur in a youth's life within the community to support the development of financial capability. Some examples of teachable moments include a first paycheck, fundraisers for after-school activities, driver's education, and many other experiences. Entrepreneurship activities in and out of school, such as raising funds for a trip could be an effective way to teach money management skills. A discussion of transportation costs and budgeting could be embedded into driver's education programs. However, these types of financial education have not yet been tested empirically. What are effective ways to teach financial management to youth in activities and events that they already participate in? Can high-quality, streamlined financial education activities or programs be effectively incorporated into youths' lives as part of community events they already participate in? How does working as a young adult complement financial education? Should a first job be paired with some information about money management?

What types of institutions can efficaciously reach children?

Reaching youth where they are reduces the costs of attracting youth to new programs. Thus, it is important to understand how existing institutions can support the financial development of youth. For example, how do library-based programs affect financial capability? Are libraries an effective resource for youth who do not participate in other extracurricular activities? Are there unique challenges and opportunities for rural youth? What financial education programs work best in 4-H settings?

How can community organizations best engage with and support parents and caregivers in teaching their children about money and modeling good habits for their children?

Another potential avenue for improving youth financial capability is to support parents and caregivers. What community organizations can best reach parents in this regard? For example, how effective is outreach to parents and caregivers through libraries, doctors' offices and health centers, employers, faith-based organizations, social workers, on-line communities, etc.?

2.4 Other considerations: The role of technology

Technology is changing the way financial products and services are offered and accessed by youth and the way youth make decisions. While technology provides a good way to develop skills at potentially low costs in scalable models, the degree to which technological changes affect youth financial skill development has not been rigorously tested. Implications for technological change cut across schools, households, and communities. Yet, little research exists on how technology can effectively be incorporated to teach financial education.

How will emerging new technologies influence the financial capabilities and financial education of young adults?

Today's youth will be increasingly exposed to technology platforms: mobile phone apps, internet videos, virtual reality, video games, social media, etc. At the same time, research finds that Millennials using mobile payments are more likely to overdraw on their accounts, pay credit card fees, and withdraw from their retirement savings when compared to Millennial non-users, even after controlling for socio-economic and demographic characteristics.[54] As technological platforms for managing finances and making financial decisions expand, new types of financial education on similar platforms also appear. Evaluating the effectiveness of modes of financial education with new technologies is integral to understanding this new reality. In what ways can financial education be designed in effective, timely, and efficient manners through these platforms? At the same time, how can they avoid enabling scammers to take advantage of vulnerable populations? What is the role of mobile apps and social media in providing effective youth financial education and which programs are most effective? Can mobile apps and social media enhance in-person or in-school financial education? Or should they be deployed as standalone products?

54 Lusardi, A., C. de Bassa Scheresber, M. Avery. Millennial Mobile Payment Users: A Look into their Personal Finances and Financial Behaviors, Global Financial Literacy Excellence Center Insights Report. (2017), gflec.org/wp-content/uploads/2018/04/GFLEC-Insight-Report-Millennial-Mobile-Payment-Users-Final.pdf?x87657.

How will the advent of the cashless society influence youth financial capability and youth financial education?

Teaching young people about the value of money in the context of an increasingly cashless society is another new challenge in developing youth financial capability that may be better understood through research. For example, studies could conceive of learning initiatives that educate students on the value of money using cards as opposed to cash and coins. Other research could consider the developmental stage at which the transition from currency to alternate forms of payment should begin. Research on behavioral cues that leverages haptics and visual information in order to make handling money more palpable in a digital environment could also contribute to teaching youth about money in a world where money is less tangible.[55] Assessing the impact of new fin tech innovations would be of interest as well. Future work should consider these technological advances in implementing strategies to improve the financial capability and financial trajectories of youth.

55 Haptics is the science of touch, and is used to modulate, for example, the vibration of a smartphone in response to one's finger.

3. Executing on the research priorities: Metrics and methods

As the field takes up these research priorities, the Bureau encourages studies to be designed to generate valid findings that can be used to improve real-world policy and practice. The section below discusses two key considerations. First, studies should use meaningful ways to define effectiveness. The Bureau recommends a framework for measuring results based on its developmental model of youth financial capability. Second, studies should use rigorous methods where possible to allow for causal interpretation of findings. The companion literature review discusses study design in more detail; this section makes recommendations for future research.

3.1 How can financial education efforts be effective?

To answer to that question first requires defining success: What is meant by "effective" and how can it be measured? The PISA tests measure financial literacy of 15-year-olds across countries but little is known at a level more granular than national, and even less about the financial capability of other age groups of young people.[56]

The Bureau commissioned research to understand how young people develop financial capability. The Bureau's resulting report, "Building blocks to help youth achieve financial capability: A new model and recommendations," describes when, where, and how children and young adults typically acquire the foundations of financial capability during three broad developmental stages.[57] The Bureau's research suggests that the personal factors that comprise financial capability most likely all stem from three interlocking elements or "building blocks":

56 North Carolina and Massachusetts were the two U.S. states who participated in state-level PISA testing in 2015. See Organization for Economic Co-operation and Development, Program for International Student Assessment, Students' Financial Literacy (2015), oecd.org/education/pisa-2015-results-volume-iv-9789264270282-en.htm.

57 The Building Blocks Framework was originally outlined in Consumer Financial Protection Bureau, Building Blocks to Help Youth Achieve Financial Capability: A new model and recommendations (2016), consumerfinance.gov/data-research/research-reports/building-blocks-help-youth-achieve-financial-capability/.

- **Executive function**. A set of cognitive processes used to plan for the future, focus our attention, remember information, and juggle multiple tasks successfully. Executive function helps manage the flow of information in our day-to-day lives and keeps mental distractions at bay. It encourages the development of personal traits and social/emotional skills used to achieve financial well-being such as perseverance, self-regulation, and the ability to prioritize future gain over current desires.
- **Financial habits and norms**. The values, standards, routine practices, and rules of thumb used to routinely navigate our day-to-day financial lives that develop unconscious, automatic decision-making strategies based on attitudes, values, emotions, social norms, and contextual cues. Financial habits and norms come into play in financial capability because consumers use them to decide what is desirable, or even possible, in their lives as well as to guide day-to-day behaviors.
- **Financial knowledge and decision-making skills**. Familiarity with financial facts and concepts, as well as conscious and intentional decision-making skills. These include budding versions of skillful money management, financial planning, goal setting, and financial research.

FIGURE 1: PRIMARY DEVELOPMENTAL STAGES WHEN CHILDREN TYPICALLY ACQUIRE THE BUILDING BLOCKS OF FINANCIAL CAPABILITY

	1. Executive function *Self-control, working memory, problem solving*	**2. Financial habits and norms** *Healthy money habits, norms, rules of thumb*	**3. Financial knowledge and decision making skills** *Factual knowledge, research and analysis skills*
Early childhood (ages 3–5)	✓	Early values and norms	Basic numeracy
Middle childhood (ages 6–12)		✓	Basic money management
Adolescence and young adulthood (ages 13–21)	Development continues	Development continues	✓

To support implementation of the Building Blocks research, the Bureau commissioned a follow-up report that provides the means of assessing young people's progress toward achievement of the financial capability milestones. Based on the Building Blocks framework, the "Building blocks to help youth achieve financial capability: Measurement guide" (Building Blocks Measurement Guide) catalogs recommended outcome measures to be used in evaluating youth progress towards financial capability.[58] It draws on a variety of established valid measures for assessing youth learning in domains outside of financial education. Accordingly, the Building Blocks Measurement Guide includes and adapts these available measures to the task of evaluating youth development in the financial education domain while offering the opportunity for greater comparative evaluation and greater standardization of measures most typically used.

The Building Blocks Measurement Guide gives financial education stakeholders a new resource for systematically evaluating youth financial skills, knowledge and capability at various stages of

58 See Consumer Financial Protection Bureau, Building Blocks to Help Youth Achieve Financial Capability: Measurement guide, (2016), consumerfinance.gov/data-research/research-reports/building-blocks-help-youth-achieve-financial-capability-measurement-guide/.

childhood development. This assessment tool can support efforts to evaluate, improve and innovate financial education programs.

The Building Blocks Measurement Guide marks a substantial improvement in the potential efficacy of research on youth financial education. By using the milestone metrics, researchers and educators may assess progress without needing to wait until participants become adult financial actors. This assessment input, much closer to "real time," can inform financial education program and policy decisions in a shorter timeframe and can create a feedback loop wherein programmatic innovation and testing inform one another.

While new studies have begun to provide key findings on the effectiveness of youth financial education, each study identifies unique outcomes to evaluate their interventions.[59] Because knowledge and test scores may not be the appropriate outcome for youth of all ages, the Bureau encourages researchers to use the Building Blocks Measurement Guide in determining the appropriate outcome measure for the group of interest.

Indeed, the Building Blocks Measurement Guide can serve as a first stop in determining the most appropriate research tool to use in assessing particular developmental milestones as children and youth advance towards adult financial capability. Research that compares different measures and determines the most effective measurement tool for assessing specific milestones would represent a significant step toward more standardized measurement in the field of youth financial education research.

3.2 Approaches, methods, and tools

Research on youth financial education presents a host of methodological opportunities and challenges. Projects that seek to identify causal effects of interventions are especially of interest. The Bureau's companion report, "A review of youth financial education: Effects and evidence," looks at prior youth financial education research that features studies that have casual interpretation evidenced by rigorous study design. Additionally, the research review offers considerations that decisionmakers will find helpful in deciding how to evaluate and interpret various studies, explains the validity of different types of school-based financial education

59 *See* Consumer Financial Protection Bureau, A review of youth financial education: Effects and evidence (2019), consumerfinance.gov/data-research/research-reports/review-youth-financial-education-effects-and-evidence/.

studies, and discusses the importance of selecting meaningful measures to assess effectiveness in youth financial education.

Looking ahead, future research should include randomized controlled trials (RCTs) that will evaluate the effects of financial education programs whenever feasible. Quasi-experimental methods in naturally occurring settings can be useful in pinpointing causality as well. Statewide pilots that collect pre- and post-intervention data for pilot and control states provide a causal framework through which to study the resulting effect of interventions on outcomes of interest. Comparisons of counties, with a pilot intervention in one county and a demographically similar neighboring county as control, is a viable approach to isolating the true effects of financial education and its inputs on a community-wide basis.

Building large datasets for use in youth financial education can be an important step in accomplishing these research priorities. To implement the natural experiments described above, researchers need a good understanding of institutional details of changes in financial education and data with enough observations to compare cohorts before and after changes and across counties or states. Researchers can select datasets that specifically focus on youth populations and reference the Building Blocks Measurement Guide to seek outcomes that suggest progress towards adult financial well-being. One example of a dataset with youth responses is the National Longitudinal Survey of Youth.[60] A second example would allow the researcher to use 4th grade and 9th grade assessment data across states from the National Assessment of Educational Progress.[61]

When feasible, the Bureau suggests that researchers design longitudinal studies to measure youth development of financial capability over the life cycle. This will allow the field to have a baseline of average financial development for youth, related to a specific threshold of financial well-being, and can allow for causal inferences as well.

On the other hand, the milestones measurements found in the Building Blocks Measurement Guide can allow for assessment of progress towards adult financial well-being on the part of youth in a more immediate timeframe and at less cost than required with full longitudinal studies measuring adult outcomes. Assessing these empirically valid, interim milestones can verify if youth participating in financial education efforts are on track for eventual adult financial capability, and supporting cost-efficient policy and program innovations in the near term.

60 U.S. Bureau of Labor Statistics. National Longitudinal Surveys, nlsinfo.org/content/cohorts/nlsy97.

Notably, research on household financial socialization presents a somewhat different set of methodological challenges and opportunities than research on school- or community-based financial education. Most research to date on household financial socialization has been descriptive and correlational in nature. Descriptive studies can provide significant scientific value especially for exploratory efforts in emerging fields of study. The Bureau cautions researchers, however, against interpreting the effects of these studies as more than associations.

Much of the literature on youth financial socialization relies on adults reporting on their recollections of experiences with money as a child. Studies of dyads within the household could counteract the biases implicit in asking adults to report on their own past experiences and those of other household members. Research analyzing matched parent-child data, parent pairs, and sibling pairs would provide more accurate and granular data, and deeper insights into the workings of how children learn about finances.[62]

Understanding how children learn about money would also be significantly improved with more longitudinal research, collecting data across multiple points in time, exploring real-time effects as they occur, examining the influence of events over the life course, and allowing for the parsing of causality. Experimental designs using hypothetical scenarios or randomized treatments can be useful as well for research on the process of household financial decision-making, for example, studies of household communication, negotiation, and conflict resolution.[63]

While causal analysis of household and social interactions can be methodologically challenging, the opportunity for identifying valuable insights that can be used to develop more effective financial education programs is considerable. Research in household financial education also presents the opportunity to study the process of socialization (what caregivers do) as well as near-term and long-term behavioral and financial outcomes for youth (what youth learn from socialization and their outcomes as adults).

62 Even with these designs, it could be that parents can be reinforcing or compensating. For example, parents could choose to have more financial conversations with a child that seems to be less skilled in managing money; or, they could choose to reinforce the knowledge of the child who seems to be further ahead. Since these attitudes cannot be measured, it is hard to pin down a causal effect of financial socialization even across differences within one household.

63 Kim, J., T. Spangler, and M. Gutter. Family Financial Decisions and Implications for Financial Education. *Journal of Financial Counseling and Planning*, 28.2(2017): 253-267.

4. Conclusion

The Bureau is deeply committed to a vision where everyone has the opportunity to build financial capability. This starts with recognizing that programs and policies must provide opportunities that help youth acquire the building blocks of financial capability. Additionally, the Bureau is committed to engaging with others who are working in this field to ensure that youth have access to evidence-based, age- and developmentally-appropriate financial education, and will work to promote these findings to a variety of policy and other leaders working to advance financial education in the states and nationally.

The frontier of this line of research is vast. Developing rigorous research to inform future interventions is pivotal for continued improvement of financial and economic self-sufficiency. Methodologically sound research underpins improved financial education for youth and is well worth the investment. Improving the financial capability of youth through better financial education has important policy implications for the mental and physical health of youth, as well as their financial security, as they reach adulthood.

The research questions outlined in this document represent a comprehensive approach to addressing the complex and dynamic issue of effectively promoting the financial education and capability of young Americans. Further research into any one of these topics can have the potential to help transform the financial lives of youth.

All together, the Building Blocks framework, Building Blocks Measurement Guide, the review of current research in the field, and this document aim to provide a constructive roadmap for youth financial education research going forward.