

Evidence and Ideology in Assessing the Effectiveness of Financial Literacy Education

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I. FINANCIAL LITERACY EDUCATION AS FINANCIAL REGULATION

Families are losing their homes; during 2007, 2008, and 2009 alone, economists anticipate at least 2.5 million completed foreclosures in the United States.¹ When it comes to health care, 42% of Americans are uninsured or underinsured.² Annual bankruptcy filings, the overwhelming majority of which are consumer bankruptcies, march towards the one million mark.³ Retirement savings are at pitiful levels; over a third of workers have less than \$10,000 in savings and nearly half have less than

1. In 2007, just over half a million foreclosures were completed. BILL LONGBRAKE, HOPE NOW ALLIANCE SERVICERS, PRIME AND SUBPRIME RESIDENTIAL MORTGAGES: 2007 LOSS MITIGATION ACTIVITY 7 (2008), <http://www.fsround.org/media/pdfs/NationalDataFeb.pdf>. In 2008 and 2009 collectively, economists expect at least two million more completed foreclosures. JAMES LARDNER, DÉMOS, BEYOND THE MORTGAGE MELTDOWN: ADDRESSING THE CURRENT CRISIS, AVOIDING A FUTURE CATASTROPHE 1 (2008), <http://www.demos.org/pubs/housingpaper.pdf> (referring to estimates by economist Mark Zandi). To put this in some perspective, 2.5 million households would cover the entire population, renter and homeowner, of Massachusetts. U.S. CENSUS BUREAU, MASSACHUSETTS, FACT SHEET—AMERICAN FACTFINDER (2005), <http://factfinder.census.gov/> (in the “state” search bar, select “Massachusetts” and then click “GO”). More recent projections have been more dire. See ROD DUBITSKY ET AL., CREDIT SUISSE, FORECLOSURE UPDATE: OVER 8 MILLION FORECLOSURES EXPECTED 1 (2008), <http://www.chapa.org/pdf/ForeclosureUpdateCreditSuisse.pdf> (projecting 8.1 million foreclosures over the next four years, meaning more than 16% of homeowners with a mortgage will lose their homes to foreclosure).

2. Cathy Schoen et al., *How Many Are Underinsured? Trends Among U.S. Adults, 2003 and 2007*, HEALTH AFF. WEB EXCLUSIVE, June 10, 2008, at w300.

3. News Release, U.S. Courts, Bankruptcy Filings Up in March (June 3, 2008), http://www.uscourts.gov/Press_Releases/2008/BankruptcyFilingsMar2008.cfm.

\$25,000.⁴ Consumer testing reveals widespread ignorance of even basic financial concepts.⁵

As the United States economy slides into recession, policymakers across the political spectrum grasp at one common explanation and solution: financial illiteracy and financial literacy education (FLE). In the words of then-Federal Reserve Board Governor Frederic Mishkin:

There can hardly be a better time to make the case for economic and financial literacy than right now. . . . [W]e face a downturn . . . fueled, at least in part, by unwise mortgage borrowing
. . . [A] better-informed citizenry would likely have resulted in more-prudent decision making and . . . less harm to the economy.⁶

The embrace of FLE is not new. It has enjoyed widespread public support in the United States going back to at least the 1930s.⁷ Many states require their schools to teach it, the federal government devotes financial and logistical resources to it, and financial institutions and community organizations offer it.⁸ When government agencies pursue financial services firms for violations of consumer protection statutes,

4. RUTH HELMAN ET AL., EMPLOYEE BENEFIT RESEARCH INST., AMERICANS MUCH MORE WORRIED ABOUT RETIREMENT, HEALTH COSTS A BIG CONCERN 13 fig.10 (2008), http://www.ebri.com/pdf/briefspdf/EBRI_IB_04-2008.pdf.

5. See, e.g., Annamaria Lusardi & Olivia S. Mitchell, *Baby Boomer Retirement Security: The Roles of Planning, Financial Literacy, and Housing Wealth*, 54 J. MONETARY ECON. 205, 215, 216 tbl.5 (2007) (reporting that over 80% of baby boomers approaching retirement could not correctly answer the following question: “Let’s say you have 200 dollars in a savings account. The account earns 10 percent interest per year. How much would you have in the account at the end of two years?”).

6. Frederic S. Mishkin, Governor, Fed. Reserve Sys., *The Importance of Economic Education and Financial Literacy*, Speech at the Third National Summit on Economic and Financial Literacy (Feb. 27, 2008). *Accord* President George W. Bush, Remarks by the President in Roundtable Interview with Business Reporters (Aug. 8, 2007), available at http://www.washingtonpost.com/wp-dyn/content/article/2007/08/09/AR2007080900780_pf.html (stating in response to skyrocketing home foreclosure rates: “[T]here needs to be financial education measures in place.”); Bill Analysis, S.B. 1137, 2007–2008 Leg., Reg. Sess., at 11 (Cal. 2008) (“Finally, the stunning lack of financial literacy was a major contributing factor to the subprime crisis.”); Housing and Economic Recovery Act of 2008, Pub. L. No: 110-289 § 1132, 122 Stat. 2654, 2727 (2008) (providing funding for financial literacy education).

7. Leland J. Gordon, Book Review, 6 S. ECON. J. 403, 403 (1940).

8. See LOIS A. VITT ET AL., FANNIE MAE FOUNDATION, PERSONAL FINANCE AND THE RUSH TO COMPETENCE: FINANCIAL LITERACY EDUCATION IN THE U.S. 13–14 (2000), http://www.isfs.org/rep_finliteracy.pdf.

financial education is frequently included as a component of any settlement agreement.⁹

FLE is widely believed to turn consumers into responsible and empowered market players, motivated and competent to handle their own credit, insurance, savings, and investment matters by confidently navigating the marketplace.¹⁰ In this financially literate world, other forms of legal regulation of financial products are unnecessary and even counterproductive.¹¹ This vision depends on the belief that FLE can not only improve financial behavior, but that it can do so to the degree necessary for consumers to protect and even increase their welfare in the modern financial marketplace.

9. See, e.g., Stephen Labaton, *10 Wall St. Firms Reach Settlement in Analyst Inquiry*, N.Y. TIMES, Apr. 29, 2003, at A1 (stating that investment firms have agreed to settlement terms that include \$80 million for investor education); *Met Life to Pay Fine for a Sales Practice*, N.Y. TIMES, Oct. 21, 1998, at B7 (explaining the settlement of claims alleging deceptive life insurance sale tactics includes money for consumer education); Press Release, Att’y Gen. of Pa., Attorney General Corbett Announces \$200,000 Settlement in Lehigh Valley College Probe; Funds Will Support New Statewide Education Program for Consumer Credit Issues (Feb. 20, 2008), available at <http://www.attorneygeneral.gov/press.aspx?id=3417> (“[T]he civil penalties and costs included in this settlement will be used to help launch a new statewide education program about consumer credit, helping every Pennsylvania family make wise choices about college financing, credit cards, home loans and other financial issues.”); Press Release, State of Cal., California Department of Corporations Announces Ameritrust Mortgage to Pay \$325 Million and Undertake Compliance Reforms to Settle States’ Investigations (Jan. 23, 2006), available at <http://www.corp.ca.gov/press/pdf/2006/nr0601.pdf> (announcing the settlement of predatory mortgage lending charges will include \$30 million that states can use for, inter alia, financial literacy education).

10. *The State of Financial Literacy and Education in America: Hearing Before the S. Comm. on Banking, Housing, and Urban Affairs*, 107th Cong. 55 (2002) (statement of Alan Greenspan, Chairman, Board of Governors, Federal Reserve), available at http://banking.senate.gov/02_02hr/020502/grnspan.htm.

11. See, e.g., *Calculated Risk: Assessing Non-Traditional Mortgage Products: Hearing Before the S. Subcomm. on Housing and Transportation and S. Subcomm. on Economic Policy of the S. Comm. on Banking, Housing, and Urban Affairs*, 109th Cong. 6 (2006) (prepared testimony of George Hanzimanolis, President-Elect, National Association of Mortgage Brokers), available at http://banking.senate.gov/public/_files/hanzimanolis.pdf.

[C]onsumer education is the cornerstone of any effort geared to address the issues facing the mortgage industry today No law or regulation should ever require any mortgage originator to supplant the consumer’s ability to decide for him or herself what is or is not an appropriate loan product. As the decision-maker, the role of the consumer is to acquire the financial acumen necessary and take advantage of the competitive marketplace, shop, compare, ask questions and expect answers.

Id. See also U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-07-100, FINANCIAL LITERACY AND EDUCATION COMMISSION: FURTHER PROGRESS NEEDED TO ENSURE AN EFFECTIVE NATIONAL STRATEGY 1 (Dec. 2006) (“[F]inancial markets function best when consumers understand how financial services providers and products work and know how to choose among them.”).

Although this vision is seductive to conservatives and liberals alike, the necessary predicate belief in the efficacy of FLE is largely based on ideology rather than evidence. The U.S. Financial Literacy and Education Commission, created to spearhead the federal government's involvement in FLE, issued a 2006 report that makes claim after claim about what FLE can achieve, although it simultaneously observes that "there is little research on successful methods for financial education."¹² Financial literacy program advocates make their case by presenting lists of dire statistics about how little Americans know about financial matters and detailing how poorly they are managing their financial affairs.¹³ But they do not demonstrate that FLE will cure these ills. Policymakers throw mandatory financial education and counseling at problems of bankruptcy and home mortgage foreclosures without proof that the education will help.¹⁴ Legal academics routinely suggest FLE as a solution to consumer personal finance problems; however, they assume FLE's efficacy without evidence.¹⁵

The resources spent on financial literacy education and the opportunity costs of pursuing financial literacy, rather than other public policies that might improve consumer financial conditions, call for empirical assessment of FLE's effectiveness. Although cited by policymakers as support for financial literacy initiatives,¹⁶ research to date has yet to produce

12. U.S. FIN. LITERACY & EDUC. COMM'N, *TAKING OWNERSHIP OF THE FUTURE: THE NATIONAL STRATEGY FOR FINANCIAL LITERACY* xi (2006).

13. See, e.g., JUMPSTART COAL. FOR PERS. FIN. LITERACY, *MAKING THE CASE FOR FINANCIAL LITERACY—2008* (2008), <http://www.jumpstart.org/fileindex.cfm>.

14. E.g., Bankruptcy Abuse Prevention and Consumer Protection Act of 2005, 11 U.S.C. § 1328(g)(1) (2006) (requiring FLE as a condition of consumer bankruptcy discharge); Housing and Economic Recovery Act of 2008, 12 U.S.C.S. § 1701x (LexisNexis, LEXIS through 2008 amendments) (funding FLE with the goal of preventing foreclosures); N.C. GEN. STAT. § 24-1.1E (2000) (requiring FLE as a condition for obtaining a high cost home mortgage).

15. E.g., Michael S. Barr, *Access to Financial Services in the 21st Century: Five Opportunities for the Bush Administration and the 107th Congress*, 16 NOTRE DAME J.L. ETHICS & PUB. POL'Y 447, 460–61 (2002); Howell E. Jackson & Stacy A. Anderson, *Can States Tax National Banks to Educate Consumers About Predatory Lending Practices?*, 30 HARV. J.L. & PUB. POL'Y 831, 880 (2007); Creola Johnson, *Mixed Out College Students: A Call to Limit Credit Card Solicitations on College Campuses*, 8 N.Y.U. J. LEGIS. & PUB. POL'Y 191, 245 (2005).

16. For example, a bill introduced in the U.S. Congress claims:

An evaluation by the National Endowment for Financial Education High School Financial Planning Program undertaken jointly with the United States Department of Agriculture Cooperative State Research, Education, and Extension Service demonstrates that as little as 10 hours of classroom

reliable, statistically significant evidence of effectiveness. Past literature reviews generally have approached the subject with the goal of “Building the Case for Financial Education.”¹⁷ A 2007 review out of the Federal Reserve Bank of Virginia, after recognizing many of the methodological problems in the existing research and without locating a single instance of replicated results, surprises the reader with the following: “Generally, we can conclude from this literature review that there is a need for financial education and that many existing approaches are effective.”¹⁸

This Article aims to fill the gap in the literature by critically examining the studies commonly cited as evidence of the effectiveness of FLE. By way of introduction, the Article sets forth the model underlying public and policymaker support for financial literacy programs today. The Article’s critique of existing findings regarding FLE is paired with explanations of the barriers to better research. The Article recommends further investigation of a number of alternative public policies suggested by the FLE studies. The concluding section asks researchers to help

instruction can impart substantial knowledge and affect significant change in how teens handle their money.

A Bill to Promote Youth Financial Education, S. 925, 109th Cong., 2–3 (2005), apparently referencing Sharon M. Danes, Evaluation of the National Endowment for Financial Education High School Financial Planning Program 5 (2003–2004) (unpublished manuscript, on file with author, *available at* <http://hsfpp.nefe.org/loadFile.cfm?contEntid=273>). In his statement before a 2006 Senate hearing, Federal Reserve Board Chairman Ben Bernanke cited: Abdighani Hiram & Peter Zorn, *Prepurchase Homeownership Counseling: A Little Knowledge is a Good Thing*, in *LOW-INCOME HOMEOWNERSHIP: EXAMINING THE UNEXAMINED GOAL* 146, 146 (Nicholas Retsinas & Eric S. Belsky eds., 2002); Marsha Courchane & Peter Zorn, Consumer Literacy and Creditworthiness 23, 25 (Apr. 7–8, 2005) (unpublished manuscript, on file with author), *available at* http://www.chicagofed.org/cedric/files/2005_conf_paper_session3_courchane.pdf; Kimberly Gartner & Richard M. Todd, Effectiveness of Online “Early Intervention” Financial Education for Credit Cardholders 8, 15 (July 2005) (unpublished manuscript, on file with author), *available at* http://www.chicagofed.org/cedric/files/2005_conf_paper_session3_todd.pdf; Gregory Elliehausen et al., The Impact of Credit Counseling on Subsequent Borrower Credit Usage and Payment Behavior 49–50 (Jan. 2003) (unpublished manuscript, on file with author), *available at* http://www.chicagofed.org/cedric/files/2003_conf_paper_session1_staten.pdf [hereinafter Elliehausen et al. I]. *Improving Financial Literacy in the United States: Hearing Before the S. Comm. on Banking, Housing, and Urban Affairs*, 109th Cong. (May 23, 2006) (statement of Ben S. Bernanke, Chairman, Federal Reserve Board), *available at* http://banking.senate.gov/public/_files/bernankel.pdf. All of these cited studies use data, methods, or measures that seriously undermine their conclusions, as explained further below.

17. Jonathan Fox et al., *Building the Case for Financial Education*, 39 J. CONSUMER AFF. 195, 195 (2005).

18. Matthew Martin, *A Literature Review on the Effectiveness of Financial Education* 22 (Fed. Reserve Bank of Richmond, Working Paper No. 07-03, 2007), *available at* http://www.richmondfed.org/publications/research/working_papers/2007/pdf/wp07-3.pdf.

policymakers and the public better understand the limits of empirical findings regarding the effectiveness of FLE.

II. THE IMPLICIT MODEL OF EFFECTIVE FINANCIAL LITERACY EDUCATION

Consumer financial education is conducted through classroom teaching, self-study materials, informational websites, interactive games, and the educational component of counseling. Programs vary in content, audience, and methodology. But they all aim to achieve welfare-enhancing financial behavior engaged in by consumers as the result of acquired financial literacy. Such literacy requires both cognitive knowledge and skills and a well-calibrated degree of psychological confidence in that knowledge and those skills. Hogarth has elaborated on the cognitive components as “being knowledgeable, educated, and informed on the issues of managing money and assets, banking, investments, credit, insurance, and taxes” and “understanding the basic concepts underlying the management of money and assets (e.g. the time value of money in investments and the pooling of risks in insurance).”¹⁹ Turning this cognitive literacy into positive action requires a particular degree of confidence—neither underconfidence,²⁰ nor overconfidence.²¹

Ultimately, FLE is only effective if it enables consumers, given their financial resource constraints, to make the decisions and to take the actions necessary for financial well-being today.²² Effectiveness must

19. Jeanne M. Hogarth, *Financial Literacy and Family and Consumer Sciences*, 94 J. FAM. & CONSUMER SCI. 14, 15–16 (2002).

20. *E.g.*, Danes, *supra* note 16, at 2 (identifying boosting students’ confidence in their financial acumen as one goal of FLE).

21. *E.g.*, VITT ET AL., *supra* note 8, at 23 (asserting that overconfidence “costs consumers millions of dollars each year”); Brad M. Barber & Terrance Odean, *Trading Is Hazardous to Your Wealth: The Common Stock Investment Performance of Individual Investors*, 55 J. FIN. 773, 774 (2000) (explaining that individual investors sufficiently confident to make frequent trades in their portfolio have lower returns). Although little discussed in the FLE literature, research in behavioral economics indicates that even knowledge, skills, and well-calibrated confidence will not necessarily produce good financial decisions. As I have discussed at length elsewhere, heuristics, biases, and emotional coping mechanisms that interfere with good decisionmaking are ubiquitous in personal finance. *See, e.g.*, Lauren E. Willis, *Against Financial-Literacy Education*, 94 IOWA L. REV. 197, 226–48 (2008). Policy measures designed to ameliorate consumer finance problems must address these behavioral barriers to better financial decisionmaking.

22. NAT’L ENDOWMENT FOR FIN. EDUC., CLOSING THE GAP BETWEEN KNOWLEDGE AND BEHAVIOR: TURNING EDUCATION INTO ACTION 2 (2005), <http://www.nefe.org/>

therefore be measured against the decisions and actions that our society and marketplace require.

The demands of contemporary personal financial management are prodigious and varied. A Federal Reserve Board consumer handbook explains that, in shopping for a home mortgage, “[t]o compare two ARMs [adjustable-rate mortgages] with each other or to compare an ARM with a fixed-rate mortgage, you need to know about indexes, margins, discounts, caps on rates and payments, negative amortization, payment options, and recasting (recalculating) your loan.”²³ Retirement planning skills, including the ability to predict rates of return—even if “past performance is no guarantee of future results”²⁴—are similarly complex. A worksheet from the U.S. Department of Labor booklet *Taking the Mystery Out of Retirement Planning*, located on the following page, exemplifies the government’s expectations of consumer proficiency.

Accompanying directions explain that for Column 1, the consumer must project future savings and asset purchases, and for Column 2, the consumer must select “a savings growth factor representing 3, 5, or 7 percent rates of return, depending on how much you believe each of the worksheet items will increase in value.”²⁵

tabid/86/Default.aspx (follow “Closing the Gap Between Knowledge and Behavior” hyperlink).

23. BD. OF GOVERNORS, U.S. FED. RESERVE SYS., CONSUMER HANDBOOK ON ADJUSTABLE-RATE MORTGAGES 4 (2006), <http://www.federalreserve.gov/pubs/arms/armsbrochure.pdf>.

24. MARK T. HEBNER, INDEX FUNDS: THE 12-STEP PROGRAM FOR ACTIVE INVESTORS 94 (2005) (“[S]ome variation of the disclaimer ‘past performance is no guarantee of future results’ must appear in all mutual fund advertisements and prospectuses . . .”).

25. U.S. DEP’T OF LABOR, TAKING THE MYSTERY OUT OF RETIREMENT PLANNING 14, 47 (2006), available at <http://www.dol.gov/ebsa/pdf/nearretirement.pdf>.

**NEW SAVINGS BETWEEN NOW AND RETIREMENT
SAVINGS GROWTH FACTORS FOR THREE SELECTED RATES OF RETURN**

	139.741 for 3%	155.282 for 5%	173.085 for 7%
	1	2	3
Work-related retirement savings	Estimated monthly savings amount	Savings growth factor	Value of savings in 10 years (Column 1 x Column 2)
401(k) or 403(b)			
Keogh			
SEP-IRA			
SIMPLE IRA			
Other			
IRAs (traditional)			
IRAs (Roth)			
Other			
Home equity			
Market value of home			
Mortgage and liens (enter as positive amount)			
Personal savings and investments			
Other assets (collections, etc.)			
TOTAL ASSETS			

Consumers with limited resources might never have a mortgage or own a 401(k), but mere budgeting may require them to make economic forecasts that elude experts because incomes in low-wage sector jobs can be uncertain and variable from one week to the next.²⁶ These sectors

26. HEATHER BOUSHEY ET AL., CTR. FOR ECON. POLICY & RESEARCH, UNDERSTANDING LOW-WAGE WORK IN THE UNITED STATES 1 (2007), www.inclusionist.org/files/lowwage_work.pdf. This is not to say that higher income consumers make more accurate forecasts, but typically their base income is less volatile. See Daniel L. Tortorice, Unemployment Expectations and the Business Cycle 24–26 (Nov. 15, 2007) (unpublished manuscript), available at <http://people.brandeis.edu/~tortoric/Papers/UnempExpBCFinal.pdf> (finding that consumer expectations about unemployment reflect

also provide fewer employee benefits.²⁷ Consequently, low-wage consumers need the literacy to shop for insurance and retirement savings vehicles on the open market, without the expertise or bargaining power of a human resources department.

Some discussions of FLE assume that poor financial outcomes evidence “bad” financial behavior and that “good” decisions and behaviors always lead to good outcomes.²⁸ But this is both too onerous and too weak a demand. Resource constraints, job loss, disability, discrimination, and natural disasters can prevent consumers from enjoying good financial outcomes no matter how high their literacy and how welfare-enhancing their behaviors. For example, paying bills late is generally classified as a “bad” financial behavior reflecting poor cash flow management skills. However, as Getter explains, “An unanticipated negative [income] shock can still reduce solvency and trigger delinquencies even for ‘financially responsible’ households that have accumulated precautionary wealth.”²⁹ Good financial outcomes, standing alone, are likewise not evidence of literacy or welfare-enhancing behaviors. Given sufficient resources and a professional financial advisor, even the most spendthrift financial illiterate may experience good financial outcomes.

Diagrammed, the model of effective FLE implicitly endorsed by policymakers and advocates appears:

Financial Education → Financial Literacy → Good Financial Decisions & Behavior

III. THE LIMITS OF EXISTING RESEARCH ON FINANCIAL LITERACY EDUCATION

Policymakers routinely cite a number of studies for the proposition that the financial literacy education model works.³⁰ However, the academics who have performed this research generally do not make such

recent past experience, such that they are overly optimistic at the beginning of a recession and overly pessimistic at the end of a recession, and that higher income and more education reduce these errors in expectations only slightly).

27. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-07-355, EMPLOYER-SPONSORED HEALTH AND RETIREMENT BENEFITS 9 (2007).

28. For example, studies that use credit report data to assess FLE such as Courchane & Zorn, *supra* note 16, and Ellichhausen et al. I, *supra* note 16, implicitly assume that the presence or absence of derogatory information recorded in a credit report is evidence of bad or good decisions and behaviors, respectively.

29. Darryl E. Getter, *Contributing to the Delinquency of Borrowers*, 37 J. CONSUMER AFF. 86, 99 (2003).

30. For examples, see *supra* note 16.

a sweeping claim. Despite resourceful data collection methods, ingenious research designs, and rigorous statistical analysis techniques, researchers have been unable to overcome problems with data reliability, controls on conditions, measure validity, and interpretation of results.³¹

A. Data Reliability Issues

1. Self-Reports

Research on FLE often relies on surveys in which consumers evaluate the education, assess their own knowledge, report their behaviors, reveal their financial condition, or recall their exposure to FLE.³² But responses to surveys conducted to evaluate FLE are vulnerable to social desirability, demand characteristic, and selective recall biases. As explained below, each of these errors is likely to inflate estimates of the efficacy of FLE. Their cumulative effect indicates that relying on survey data to demonstrate the effectiveness of FLE is unsound.

Survey data on any topic contains errors. Sometimes errors are small and randomly distributed. Other times, errors are large and systematic. When widespread social norms favor a particular behavior, consumers overreport engaging in that behavior.³³ When respondents believe that administrators want a particular response, results are skewed in favor of that response.³⁴ Misreporting can also reflect respondents' misperceptions

31. This article does not catalog every weakness of every study; it sets forth the widespread weaknesses in the empirical work and provides selective examples of each. Most studies suffer from more than one such weakness.

32. E.g., VITT ET AL., *supra* note 8, at 2, 7; Angela C. Lyons et al., *Are We Making the Grade? A National Overview of Financial Education and Program Evaluation*, 40 J. CONSUMER AFF. 208, 217 (2006).

33. Roger Tourangeau & Ting Yan, *Sensitive Questions in Surveys*, 133 PSYCHOL. BULL. 859, 861 (2007) (discussing the problem of social desirability bias, which makes it "difficult or impossible" for researchers "to distinguish among (a) respondents who are actually highly compliant with social norms, (b) those who have a sincere but inflated view of themselves, and (c) those who are deliberately trying to make a favorable impression by falsely reporting positive things about themselves").

34. Martin T. Orne, *On the Social Psychology of the Psychological Experiment: With Particular Reference to Demand Characteristics and Their Implications*, 17 AM. PSYCHOLOGIST 776, 778 (1962) (discussing tendency of subjects to "behave in an experimental context in a manner designed to play the role of a 'good subject' or, in other words, to validate the experimental hypothesis").

or unconscious biases favoring beliefs, recollections, or predictions about their own behavior consistent with self-concept.³⁵

In surveys taken at or after completion of a personal finance course, consumers on the whole report that the course was effective and that they will or already have improved their financial behavior.³⁶ Demand characteristics render these responses suspect. Consumers likely overreport the extent to which they are following their teachers' instructions. As the review out of the Federal Reserve Bank of Richmond notes, "[A]fter employees sit through over four hours of training, they are likely to say they learned something" and "they are likely to praise the company that provided the training as a courtesy, if nothing else."³⁷ Field data supports this conjecture; although Braucher's analysis of an FLE program for bankruptcy debtors revealed a small negative effect on financial outcomes,³⁸ the participants rated the classes highly.³⁹

The belief in the efficacy of FLE is propagated by the programs. One of the first items in the American Homeowner Education and Counseling Institute's "core curriculum" is "the importance of education."⁴⁰ When participation is voluntary, programs use "marketing techniques" to induce consumers to incur childcare and transportation costs and spend time

35. MARK L. MITCHELL & JANINA M. JOLLEY, RESEARCH DESIGN EXPLAINED 213–15 (6th ed. 2007).

36. See, e.g., Sissy Osteen et al., *Financial Management Education: Its Role in Changing Behavior*, 45 J. EXTENSION No. 3RIB2, at 4–5 (2007), available at <http://www.joe.org/joe/2007june/rb2.shtml> (presenting data reflecting self-reports of behavior change among participants in the Money 2000™ financial education program); Robert L. Clark et al., *Retirement Plans and Saving Decisions: The Role of Information and Education*, 5 J. PENSION ECON. & FIN. 45, 62 tbl.6 (2006) (presenting data on self-reported expectations of future behavior change among recipients of retirement-related financial education); Richard L. Wiener et al., *Debtor Education, Financial Literacy, and Pending Bankruptcy Legislation*, 23 BEHAV. SCI. & L. 347, 347 (2005) (presenting data reflecting self-reports of behavior change among bankruptcy debtors who received financial education); Danes, *supra* note 16, at 11 tbl.7, 14 tbl.10 (presenting data reflecting self-reports of positive behavioral changes among high school students who had participated in a financial literacy program).

37. Martin, *supra* note 18, at 14.

38. Jean Braucher, *An Empirical Study of Debtor Education in Bankruptcy: Impact on Chapter 13 Completion Not Shown*, 9 AM. BANKR. INST. L. REV. 557, 578–79 (2001).

39. *Id.* at 567, 585. Cf. E. Bere et al., *Outcome and Process Evaluation of a Norwegian School-Randomized Fruit and Vegetable Intervention*, 21 HEALTH EDUC. RES. 258 (2006), available at <http://her.oxfordjournals.org/cgi/content/abstract/21/2/258> (explaining that although teachers rated a fruit and vegetable education program positively and students reported that they enjoyed it, the program failed in its goal to increase student fruit and vegetable intake).

40. Alan Mallach, *Homeownership Education and Counseling: Issues in Research and Definition* 23 tbl.5 (unpublished manuscript, on file with author), available at <http://www.philadelphiafed.org/community-development/publications/discussion-papers/homeowner.pdf>.

attending class rather than earning income.⁴¹ Regardless of whether these programs improve financial decisions and behavior, they may either convince participants to believe in FLE's efficacy or screen out the nonbelievers at the first class.

Misperception and overoptimism can also skew survey responses unidirectionally. For example, the U.S. Department of Agriculture has reported results from its Financial Security in Later Life course: of nearly 50,000 Americans who attended the course and completed a survey, nearly 90% said that they "increased their financial knowledge."⁴² But comparing self-assessments to performance tests shows that consumers think that they learn more from FLE than they do. In one experiment, well-educated consumers approaching retirement who were given financial training believed that their financial planning skills had improved.⁴³ However, although they increased their factual knowledge, they did not increase their ability to make good financial decisions at a statistically significant level; they continued to overestimate retirement income by many years.⁴⁴ Thus, consumer self-assessments must be taken as a measure of confidence—or overconfidence—rather than literacy.

Society views many personal financial decisions and behaviors as having a normative valence, raising the problem of social desirability bias. In anonymous surveys unconnected with FLE, Americans overstate their good financial habits and understate their poor habits. For example, about 60% claim that they pay off their credit card balances in full every month, but card issuer data shows that the number is closer to 40%.⁴⁵ In the Survey of Consumer Finances, families disclose on average about a third as much credit card debt as issuers report to the Federal Reserve.⁴⁶

41. Margaret Clancy et al., *Financial Education and Savings Outcomes in Individual Development Accounts 3* (Wash. Univ. Ctr. for Soc. Dev., Working Paper No. 01-2, 2001), available at <http://csd.wustl.edu/Publications/Documents/65.FinancialEducationAndSavingsOutcomes.pdf>.

42. U.S. DEPT. OF AGRIC., COOP. STATE RESEARCH, EDUC., & EXTENSION SERV., FINANCIAL SECURITY IN LATER LIFE IMPACT REPORT 1 (2006), http://www.csrees.usda.gov/nea/economics/pdfs/fsll_impacts_jan06.pdf [hereinafter IMPACT REPORT].

43. Douglas A. Hershey et al., *Challenges of Training Pre-Retirees to Make Sound Financial Planning Decisions*, 24 EDUC. GERONTOLOGY 447, 468 (1998).

44. *Id.*

45. Larry Getlen, *Why We Lie About Money and Debt*, BANKRATE.COM, Apr. 28, 2005, <http://www.bankrate.com/brm/news/financial-literacy2004/debt-psychology.asp>.

46. TAMARA DRAUT & JAVIER SILVA, DÉMOS, BORROWING TO MAKE ENDS MEET: THE GROWTH OF CREDIT CARD DEBT IN THE '90S 7, 10 (2003), http://archive.demos.org/pubs/borrowing_to_make_ends_meet.pdf.

Financial literacy programs attempt to reinforce social messages to consumers about the desirability of engaging in particular financial behaviors. With this in mind, consumers are likely to consciously or unconsciously exaggerate their behavioral change after FLE. Mandell, who runs the JumpStart Coalition's annual nationwide test of high school seniors, has consistently found that—controlling for family income, intention to attend college, and other factors associated with differences in scores—students who have taken personal finance classes score no better on that test, but report higher levels of thriftiness than their peers.⁴⁷ Although Mandell hypothesizes that the classes increase savings without increasing literacy, an explanation at least as plausible is that the classes affect self-reporting but not actual thriftiness. Analyses of the effectiveness of the heavily promoted Money 2000™ and the National Endowment for Financial Education High School Financial Planning programs suffer from a similar reliance on self-reports of financial behaviors.⁴⁸

Bernheim and Garrett used self-reports of financial condition to conclude that workplace financial education stimulates savings.⁴⁹ They concede that “education may [a]ffect reporting, rather than behavior,” but they argue that (a) if education causes people to inflate their savings behavior, then it should cause them to inflate their overall wealth and spouse savings behavior, and (b) their data does not show any correlation between education and reported wealth or spouse behavior.⁵⁰ This assumes that only intentional misreporting inflates consumer responses to savings questions and that consumers possess sufficient financial literacy and forethought to inflate their savings and wealth numbers in a consistent manner. In reality, social desirability bias could cause respondents unconsciously to report their intended or wishful savings behavior.

Indeed, even if misreporting is conscious, people are not very consistent liars. Bernheim and Garrett's data suggest erroneous overreporting of retirement savings—8.8% of respondents stated higher rates of saving for retirement than rates of saving for all purposes.⁵¹ Further, financial issues are a major source of marital discord, and spouses typically disagree

47. Lewis Mandell, *Financial Literacy—Does It Matter?* 12 (Apr. 8, 2005) (unpublished manuscript, on file with author), available at <http://www.jumpstartcoalition.org/upload/Mandell%20Paper%20April%202005.doc>.

48. Osteen et al., *supra* note 36; Danes, *supra* note 16, at 2.

49. B. Douglas Bernheim & Daniel M. Garrett, *The Effects of Financial Education in the Workplace: Evidence from a Survey of Households*, 87 J. PUB. ECON. 1487, 1489 (2003).

50. *Id.*

51. *Id.* at 1515.

on the family's income, wealth, and debt.⁵² Consumers exposed to FLE might inflate their own savings numbers in contrast to their spouses' numbers.

Studies that survey consumers about past participation in FLE to assess the relationship between FLE and outcomes may suffer from selective recall. To estimate the effect of past education on current creditworthiness, Courchane and Zorn relied on data from a Freddie Mac survey that asked consumers whether they had learned about personal finance in courses or seminars.⁵³ However, respondents who have experienced financial setbacks might answer that they had not "learned" from courses or seminars, and they might not even recall courses or seminars that they had attended. Contrariwise, respondents who have experienced financial success would be prone to believe that they learned from FLE and to better recall having received FLE. Analyses that rely on respondent recall of whether past employers offered financial education⁵⁴ have the same weakness—selective recall is likely to distort estimates of FLE effectiveness upwards.

2. *Unrepresentative Samples*

No voluntary survey receives a perfect response rate. When respondents do not systematically differ from nonrespondents, the response rate does not need to be high for the data to be valuable. However, voluntary surveys of consumers who attend FLE classes are nigh destined to reflect a nonresponse bias, in that the sample that completes the surveys is unlikely to be representative of the population surveyed.

Financial educators complain that surveys given at the completion of courses "are simply too long—unduly taxing program participants . . . [which] unnecessarily drives down response rates."⁵⁵ Participants who believe that they learned the most are likely to complete the survey at

52. Jay L. Zagorsky, *Husbands' and Wives' Views of the Family Finances*, 32 J. SOCIO-ECON. 127, 127 (2003).

53. Courchane & Zorn, *supra* note 16, at 2.

54. E.g., Annamaria Lusardi & Olivia Mitchell, *Financial Literacy and Retirement Planning: New Evidence from the Rand American Life Panel 5* (Univ. of Mich. Ret. Res. Ctr., Working Paper No. 2007-157, 2007), available at <http://ssrn.com/abstract=1095869>.

55. Lyons et al., *supra* note 32, at 218.

higher rates, whether out of a sense of pride or reciprocity.⁵⁶ The net effect is to inflate the results in favor of finding FLE to be effective.

The population that completes follow-up surveys is no doubt even less representative. Wiener and his colleagues, in their experimental testing of the efficacy of FLE given to bankruptcy debtors, ran into this problem. For the test instrument that the experimenters sent three months after conducting financial training sessions, response rates varied dramatically; for debtors who received the training the response rate was 34%, for debtors who did not receive the training it was 56%, and for nondebtors it was 71%.⁵⁷ Those who had participated in the program—who, if they felt it had helped them, would have had the most motivation to complete the survey, but who also would be the most embarrassed to report not having changed their behavior—were the least likely to respond.

The National Endowment for Financial Education advertises that three months after completing its ten-hour High School Financial Planning Program, over half the students improved their spending and saving habits.⁵⁸ However, only 17% of the students responded, meaning that about 10% of the students who completed the program reported improved financial habits.⁵⁹ Because those who, accurately or inaccurately, believe that they improved their behavior have more impetus to report their improvement, it is plausible that few nonrespondents saw any improvement. Further, high school students who voluntarily complete and return a survey three months after a program might be unusually approval-seeking and obedient, personality traits predisposing them to exaggerate good behavior.

Given the likelihood that response rates are biased, it is not possible to conclude from studies with low response rates that FLE changed participant financial decisions and behavior.

3. *Barriers to Better Data Collection Methods*

If survey data is so unreliable, and those who complete them unrepresentative, why do academics use these sources? Why do researchers

56. Cf. Christiane Spitzmüller et al., *Survey Nonrespondents as Bad Soldiers: Examining the Relationship Between Organizational Citizenship and Survey Response Behavior*, 15 INT'L J. SELECTION & ASSESSMENT 449, 450 (2007) (finding that survey respondents had more courteous personalities and a stronger sense of reciprocal social obligations to others than nonrespondents); Steven G. Rogelberg et al., *Profiling Active and Passive Nonrespondents to an Organizational Survey*, 88 J. APPLIED PSYCHOL. 1104, 1111–12 (2003) (finding that intentional decisions not to respond to surveys were caused by dissatisfaction with the entity performing the survey and that unintentional failures to respond were caused by a lack of conscientiousness).

57. See Wiener et al., *supra* note 36, at 353.

58. Danes, *supra* note 16, at 16.

59. *Id.* at 6.

not objectively test financial knowledge and skills before and after finance courses? Why do they not track consumer decisions and behavior before and after FLE through longitudinal observation?

Educators explain that their clients do not want to be tested. The U.S. Department of Agriculture Cooperative Extension Service warns teachers of its Financial Security in Later Life course that if they attempt to evaluate the program by giving tests, “some adult audiences may be turned off by having to take a ‘test,’ and choose not to continue participation in the program.”⁶⁰ Educators are unlikely to permit testing of their students for fear of deterring participation. If researchers did test students, the manipulation might create attrition bias; consumers who withdrew to avoid testing would differ from those who continued with the course, and these differences would probably correlate with factors that affect outcomes.⁶¹

Tracking financial behavior is even more difficult. Because we generally do not know who will participate in FLE in the future, academics can view pre-FLE behavior only retrospectively, when the consumer’s memory has faded or has been distorted by ensuing events. Direct observation of consumer decisionmaking after FLE, were it logistically possible, would alter behavior. Decisions are therefore usually observed only after they are made, in effect observing outcomes rather than behavior. However, as discussed above, outcomes are influenced by more than behavior, and behavior is not always accurately reflected in outcomes. In addition, consumers frequently find surveys about their finances invasive and will not answer the questions.⁶²

One way to increase consumers’ willingness to be tested and to respond to follow-up surveys would be to provide incentives for them to do so. However, as the next section explains, such incentives can introduce the problem of confounds.⁶³

60. U.S. DEPT. OF AGRIC. COOP. STATE RESEARCH, EDUC., & EXTENSION SERV., FINANCIAL SECURITY IN LATER LIFE, TOOLS FOR EDUCATORS, http://www.csrees.usda.gov/nea/economics/fsll/edu_intro.html (follow “Program Evaluations and Accountability” hyperlink; then follow “FSLL Eval Tools and Ideas—Participant Changes” hyperlink).

61. Paul N. Bloom & Gary T. Ford, *Evaluation of Consumer Education Programs*, 6 J. CONSUMER RES. 270, 272 (1979).

62. See Lyons et al., *supra* note 32, at 219.

63. To avoid the biases inherent in surveys and to obtain longitudinal data, some researchers, using exacting procedures to maintain consumer anonymity, have managed to obtain credit bureau reports and credit scores. E.g., Gregory Elliehausen et al., *The Impact of Credit Counseling on Subsequent Borrower Behavior*, 41 J. CONSUMER AFF. 1, 3 (2007) [hereinafter Elliehausen et al. II]; Courchane & Zorn, *supra* note 16, at 3–4.

B. Research Design Issues

1. Confounds

Financial education is frequently bundled with other forms of assistance, in part to encourage participation in FLE. As a result, the contribution of the education to any changes in participant behaviors is uncertain. Programs that provide financial assistance with their classes may lead to better outcomes due to the former rather than the latter.⁶⁴ For example, the American Dream Demonstration project conducted an FLE program for low-income consumers and gave the participants one to seven dollars for every dollar that they saved,⁶⁵ obscuring the effect of the FLE component of the project. Studies of FLE coupled with homebuyer down payment assistance or reduced mortgage interest rates suffer from the same problem.⁶⁶

Confounding assistance need not be tangible. Financial counseling may improve financial outcomes due to noneducative components of the process rather than any change in literacy. “Counseling” includes actions that counselors take on behalf of their clients. Some homeownership counselors admit that their interventions on behalf of consumers are more effective than their interactions with consumers.⁶⁷ Credit counselors can negotiate payment plans that reduce interest rates, fees, and minimum payments.⁶⁸ Counselor intervention can alleviate consumer stress, which may improve health and increase employability and productivity, potentially increasing income⁶⁹ without increasing financial literacy.

Merely disputing errors on a client’s credit report can have an effect. About half of the sixteen million credit reports sent to consumers each year result in a question or dispute, and of the formal disputes lodged, over half result in a change to the credit report.⁷⁰ Results of studies that

But measuring FLE efficacy through credit report and score changes is problematic for reasons discussed in Part III.C.3, *infra*.

64. Mallach, *supra* note 40, at 7–8.

65. MARK SCHREINER ET AL., WASH. UNIV. CTR. FOR SOC. DEV., SAVING PERFORMANCE IN THE AMERICAN DREAM DEMONSTRATION: A NATIONAL DEMONSTRATION OF INDIVIDUAL DEVELOPMENT ACCOUNTS 3 (2002), <http://csd.wustl.edu/Publications/Documents/ADDReport2002.pdf>.

66. See Roberto G. Quercia & Susan M. Wachter, *Homeownership Counseling Performance: How Can It Be Measured?*, 7 HOUSING POL’Y DEBATE 175, 185, 196 (1996) (discussing this methodological problem with studies of homeownership counseling efficacy).

67. Mallach, *supra* note 40, at 11.

68. Ellichehausen et al. I, *supra* note 16, at 2.

69. Jinhee Kim et al., *Relationships Among Credit Counseling Clients’ Financial Well Being, Financial Behaviors, Financial Stressor Events, and Health*, 14 FIN. COUNSELING & PLAN. 75, 84 (2003).

70. *The Accuracy of Credit Report Information and the Fair Credit Reporting Act: Hearing Before the S. Comm. on Banking, Housing, and Urban Affairs*, 108th Cong. 21

use credit bureau reports and credit scores to assess outcomes could reflect counselor-initiated changes in the credit report data rather than consumer changes in behavior, skewing results toward findings that policymakers interpret as evidence that FLE works.⁷¹

Even when they do not take actions on behalf of clients, counselors and teachers in small class settings can give consumers personalized advice and written action plans. Compliance with these specific instructions might improve finances regardless of whether the consumer increases financial literacy in the process. For example, because “[t]he first requirement for credit counseling clients is to cut up all their credit cards and close the accounts,”⁷² all but the noncompliant consumers who attend counseling should close these accounts. Findings of investigations that use a reduction in the number of open accounts as evidence of improved financial behavior⁷³ could reflect counselor persuasiveness and consumer obedience rather than any effect of FLE.

A frequently cited analysis by Hiram and Zorn of participants in Freddie Mac’s Affordable Gold mortgage program found that, controlling for selection effects, classroom-based homeownership counseling significantly reduced mortgage delinquency rates.⁷⁴ Without testing consumer knowledge, the title of their paper attributes these good outcomes to “knowledge” gained through the counseling. But in the text, the authors also note: “Counseling is specific and tailored to the particular needs of the individual Classroom counseling also can fall into this category because, although it is administered to a group of borrowers, it too can give borrowers personal attention”⁷⁵ It is therefore plausible that these consumers received direct assistance and personal financial advice, and that following instructions, rather than changes in knowledge, contributed to the reduction in delinquency rates.

Elliehausen, Lundquist, and Staten compared credit reports of consumers who had received counseling with credit reports of consumers who had

(2003) (statement of Stuart K. Pratt, President, Consumer Data Industry Association), available at http://banking.senate.gov/03_07hr/071003/pratt.pdf.

71. *E.g.*, Elliehausen et al. II, *supra* note 63, at 7 (using Emprica credit scores as a “comprehensive and objective measure of creditworthiness” to measure changes in behavior). Problems with using credit reports and credit scores are discussed further in Part III.C.3, *infra*.

72. Kim et al., *supra* note 69, at 77.

73. Elliehausen et al. II, *supra* note 63, at 26–27.

74. Hiram & Zorn, *supra* note 16, at 162–63.

75. *Id.* at 148.

not, controlling for a number of other factors, and found that counseled consumers experienced comparatively more improvement in creditworthiness during the three years subsequent to the counseling dates.⁷⁶ They self-published a monograph preliminarily attributing their results to “financial education conducted in a one-on-one setting.”⁷⁷ This 2003 monograph is widely cited by policymakers even today as evidence of the effectiveness of FLE.⁷⁸ But because the study did not limit the treatment to education, the 2007 version of this paper—published in a peer-reviewed journal—concludes only that any greater improvement in credit standing experienced by counseled consumers is “associated with” counseling.⁷⁹ As the authors implicitly recognize, financial changes that they had earlier attributed to FLE could have been caused by confounding factors.

A variant on this problem was spotted by Braucher in her analysis of the effects of mandatory FLE on bankruptcy debtors. Before the passage of the 2005 bankruptcy law requiring all consumer debtors to receive FLE,⁸⁰ some bankruptcy districts required FLE and some did not. Braucher compared debtors in the former with those in the latter, controlling for a variety of other ways in which the populations of consumer bankruptcy debtors might differ among districts.⁸¹ At first blush, the data seemed to indicate that FLE made a difference—debtors in the districts requiring the education program were more likely to complete their bankruptcy debt repayment plans successfully. But on closer analysis, Braucher determined that the districts requiring the classes also created conditions that made it easier for debtors to complete their plans. Judges in these districts approved more lenient payment plans and more frequently required payments under those plans to be deducted directly from the consumers’ paychecks—a self-control mechanism rather than education.⁸²

76. Elliehausen et al. I, *supra* note 16, at 50.

77. *Id.* at 6. Other work of the Credit Research Center has been criticized for methodological problems and erroneous assumptions consistently biasing the Center’s results in favor of the credit industry. For examples, see Elizabeth Warren, *The Market for Data: The Changing Role of Social Sciences in Shaping the Law*, 2002 WIS. L. REV. 1, 11–15, 18–19, 41, and sources cited therein.

78. E.g., Bernanke, *supra* note 16; *Financial Literacy and Education: The Effectiveness of Governmental and Private Sector Initiatives: Hearing Before the H. Comm. on Financial Services*, 110th Cong. 5 & n.1 (2008) (statement of Sandra F. Braunstein, Director, Division of Consumer and Community Affairs, U.S. Federal Reserve System), available at <http://financialservices.house.gov/hearing110/braunstein041508.pdf>; Fox et al., *supra* note 17, at 201; Kim et al., *supra* note 69, at 76.

79. Elliehausen et al. II, *supra* note 63, at 27.

80. Bankruptcy Abuse Prevention and Consumer Protection Act of 2005, 11 U.S.C. § 1328(g)(1) (2006).

81. Braucher, *supra* note 38, at 558.

82. *Id.*

Once these differences among districts were controlled for, “[e]ducation resulted in a small, significant and negative effect” on outcomes.⁸³

Similarly, in a study of FLE provided to members of the military, simple bivariate analyses seemed to show that soldiers who had received FLE training engaged in slightly better financial behaviors than soldiers who had not received the training. The soldiers who received the FLE were relatively more likely to participate in the government’s retirement savings plan and less likely to buy worthless “life insurance” products marketed to soldiers.⁸⁴ However, once controls were added for other factors such as pay grade, education, and marital status, no positive behaviors were associated with having taken the course. To the contrary, soldiers who had received the financial training were, *ceteris paribus*, more likely to use informal rather than formal budgeting than soldiers who had not taken the class.⁸⁵

These two studies of FLE, provided in the particular settings of bankruptcy and the military, do not prove that FLE is harmful or ineffective, but they do demonstrate the susceptibility of analyses of the effectiveness of FLE to an upward bias due to confounds. Studies that do not control for potential confounds are not probative evidence regarding FLE’s effects.

2. Inadequate Controls

The biggest methodological problem that undermines the results of FLE efficacy studies has been the lack of adequate controls needed to

83. *Id.* at 578.

84. Catherine Bell et al., Does Financial Education Affect Soldiers’ Financial Behaviors? 2 (Feb. 18, 2009) (draft paper, 2009 Federal Reserve System Community Affairs Research Conference). The authors claim that their bivariate results demonstrate a number of other improvements in financial behavior, *id.* at 1–2, but all of these suffer from very serious problems, even absent controls. Most lack statistical significance. A few, such as comparison shopping for major purchases, were behaviors that the group who received the education was already doing better than the comparison group prior to the education, and in one case—paying off credit card bills in full—the group who received the education only went downhill after the course. *Id.* at 9 tbl.5, 13 tbl.11. In addition, although the authors cite decreased use of car title loans as an improvement in financial behavior, *id.* at 14 tbl.12, these loans were effectively outlawed for members of the military during the study period such that the “improvement” in lowered use of car title loans cannot be attributed to financial education. See Talent Amendment to the Servicemembers Civil Relief Act, Pub. L. 109-364, sec. 670(a), § 987(b), 120 Stat. 2266, 2266 (2006) (codified at 10 U.S.C. § 987(b) (effective Oct. 1, 2007)).

85. Bell et al., *supra* note 84, at 19 & tbl.16.

demonstrate the causal links from education to literacy to financial decisions and behaviors. Consumers generally cannot be forced to take FLE courses. Therefore, the treatment group that academics must use consists of consumers who choose to receive FLE. Common sense suggests many unobserved ways in which these consumers differ from those who do not participate. In addition to being better informed or more motivated,⁸⁶ those who attend may have more free time for researching and making financial decisions or less embarrassment and denial about personal finance problems or “bad” decisions that they made in the past.

A number of studies support this intuition. College students who completed an online version of VISA’s Practical Money Skills for Life course had better financial behaviors than students who were offered but declined the course, but the former were on average already wealthier, more educated, and more creditworthy.⁸⁷ In the Elliehausen, Lundquist, and Staten study’s raw data, credit counseling produced a 66 point average increase in credit scores of debtors who had low scores prior to the counseling—a large change amounting to a 30% reduction in predicted likelihood of bankruptcy.⁸⁸ However, after applying statistical techniques to reduce selection effects, the authors discovered that counseling produced less than a single point increase in credit score, indicating that selection, not FLE, was probably responsible for the higher credit scores of counseled consumers.⁸⁹ Further, the statistical technique that they used, a two-stage least squares regression, can significantly reduce, but cannot eliminate, selection effects.⁹⁰

Most data sets containing information on FLE and financial outcomes provide no reliable way to control for selection effects. For example, the Health and Retirement Study contains data on households whose heads are between fifty and sixty-one years of age.⁹¹ Approximately 10% of the households in that study stated that they had attended an employer-sponsored meeting on “retirement planning,” although they gave no indication of when this meeting took place.⁹² Using this data set to evaluate FLE, Lusardi found that the households who reported attending a retirement planning meeting had saved more for retirement, controlling

86. Bernanke, *supra* note 16, at 3.

87. Gartner & Todd, *supra* note 16, at 9.

88. Elliehausen et al. II, *supra* note 63, at 25.

89. *Id.* at 18.

90. James Heckman et al., *Characterizing Selection Bias Using Experimental Data*, 66 *ECONOMETRICA* 1017, 1071 (1998).

91. See Annamaria Lusardi, *Saving and the Effectiveness of Financial Education*, in *PENSION DESIGN AND STRUCTURE: NEW LESSONS FROM BEHAVIORAL FINANCE* 157, 172 (Olivia S. Mitchell & Stephen P. Utkus eds., 2004).

92. *Id.* at 164, 165 tbl.9-4 (506 out of 5292 respondents stated that they attended a meeting on retirement).

for variables such as demographics and income, and concluded that “financial education can boost saving, particularly for those with low financial literacy.”⁹³ But consumers who attended these meetings might have saved just as much without attending. Perhaps they accumulated their savings prior to the meeting and attended to learn how to plan their drawdown rates during retirement. Although the study used an impressive number of controls, without an instrumental variable that affects attendance at FLE but does not affect the dependent variable—here, savings—controlling for selection when subjects attend FLE voluntarily may not be possible.

Supporting their conclusion that increased financial literacy positively affects financial behavior, Lusardi and Mitchell find that consumers who score higher on tests of financial knowledge report having thought more about retirement.⁹⁴ To address endogeneity effects—the possibility that the financial planning led to the financial literacy—the study uses as an instrumental variable consumer self-reports on how much of their education, including high school, college, or higher degrees, was devoted to economics. Having devoted “a lot” of their coursework to economics has a strong correlation with financial literacy in this sample, providing some support for the authors’ point that the planning did not cause the literacy.⁹⁵

However, even absent an endogeneity effect, selection effects are still likely. The dataset that Lusardi and Mitchell use—one of the best datasets collected in this area—does not allow them to demonstrate that having devoted a lot of schooling to economics is not correlated with omitted variables that affect retirement planning.⁹⁶ Yet it is plausible that the same personality traits that lead consumers in their youth to choose “a lot” of economics coursework independently lead the same consumers in adulthood to plan more for retirement. Preliminary research on determinants of success in economics courses indicates that students who are goal-oriented and make detailed plans perform better.⁹⁷

93. *Id.* at 157.

94. Lusardi & Mitchell, *supra* note 54, at 14.

95. *Id.* at 14–15.

96. *See id.* at 15 (suggesting only that economics education is an “arguably exogenous instrument[.]”).

97. *E.g.*, Kurtis J. Swope & Pamela M. Schmitt, *The Performance of Economics Graduates over the Entire Curriculum: The Determinants of Success*, 37 J. ECON. EDUC. 387, 392 (2006); Andrea L. Ziegert, *The Role of Personality Temperament and Student Learning in Principles of Economics: Further Evidence*, 31 J. ECON. EDUC. 307, 310,

It seems plausible that success leads to enrollment in more economics courses, and that the same personality traits that lead to classroom success lead to more planning for retirement.

In what appears to be the only direct examination of self-selection in this context, Meier and Sprenger found that consumers who chose to participate in FLE differed sharply from those who did not.⁹⁸ Their experiment offered over 800 low-to-moderate-income consumers waiting in line for income tax assistance a free fifteen-minute credit counseling session.⁹⁹ Testing revealed that those who accepted the offer had significantly lower financial discount rates—meaning that they were more willing to wait for a larger financial reward in the future rather than taking a smaller reward sooner—than those who declined.¹⁰⁰ Consumers who accepted also had relatively more education and prior financial knowledge, although even controlling for these, discount rates remained significant.¹⁰¹

Those who declined the credit counseling session were surely influenced by other unmeasured factors, such as a preference for privacy rather than allowing a stranger to see one's credit report or a desire not to be confronted with one's past credit problems. But the authors' conclusion—that consumers who choose to participate in FLE concern themselves more with the future and so are likely to engage in relatively more welfare-enhancing financial behavior even absent any participation in FLE¹⁰²—remains plausible. Given that the “class” in the experiment required so little time and effort, a real FLE course might be expected to show stronger selection effects.

In sum, self-selection poses a significant problem for much FLE research, one that likely biases estimates of the effectiveness of FLE upwards.

3. *Barriers to Better Research Design*

A number of researchers have eliminated much of the bias created by individual self-selection by focusing on settings where FLE is exogenously set. Bernheim and Garrett, in their workplace financial education research—critiqued above for reliance on self-reports about

319 (2000). This is the “judging” personality type indicator of the Meyers-Briggs scale. *Id.* at 308.

98. Stephan Meier & Charles Sprenger, *Selection into Financial Literacy Programs: Evidence from a Field Study* 9–11 (Fed. Reserve Bank of Boston, Discussion Paper No. 07-05, 2007), available at <http://ssrn.com/abstract=1073158>.

99. *Id.* at 5.

100. *Id.* at 9–10.

101. *Id.* at 11.

102. *Id.* at 12–13.

personal savings—did not compare employees who participated in FLE programs with those who did not.¹⁰³ Instead, to eliminate the biasing effect of self-selection, they compared employees at workplaces that offered retirement education and planning assistance with employees at workplaces that did not.¹⁰⁴ In their investigation of the effects of high school FLE, described further below, Bernheim, Garrett, and Maki examined differences between consumers who had attended high school in states that mandated financial education and those who had lived in states that did not.¹⁰⁵ That some employees and students in workplaces and schools that did not offer or require FLE must have received FLE, and that some employees in workplaces that offered FLE certainly did not receive FLE, should drive their estimates of the effectiveness of FLE downward.

However, although this methodology can eliminate self-selection problems, it does not create true controls. Workplaces that offer financial education and advice are not controlled settings in which employees are otherwise exposed to the same conditions as employees in workplaces not offering these services. States with financial education mandates cannot be kept identical in all other relevant respects to states without mandates. Given differing economic conditions across states and firms, omitted variable bias is likely. In fact, recent work attempting to replicate Bernheim, Garrett, and Maki's study of the effect of state financial education mandates, using a data set several orders of magnitude larger, found that states imposed mandates at times when they were experiencing high economic growth, and that increased savings and investment rates correlated with economic growth, not with the imposition of state financial education mandates.¹⁰⁶

Nonexperimental designs cannot prove causality in the social sciences.¹⁰⁷ Randomized experiments are not always possible, forcing researchers to rely on observational or survey data. But comparisons between results of nonexperimental and experimental research consistently demonstrate

103. Bernheim & Garrett, *supra* note 49, at 1493–94.

104. *Id.*

105. B. Douglas Bernheim et al., *Education and Saving: The Long-Term Effects of High School Financial Curriculum Mandates*, 80 J. PUB. ECON. 435, 442 (2001).

106. Shawn Cole & Gauri Kartini Shastry, *If You Are So Smart, Why Aren't You Rich? The Effects of Education, Financial Literacy and Cognitive Ability on Financial Market Participation* 20–21 (Nov. 2008) (draft paper, 2009 Federal Reserve System Community Affairs Research Conference).

107. MITCHELL & JOLLEY, *supra* note 35, at 112.

that findings from the former deviate—sometimes quite substantially—from the latter. For example, a recent article compared the findings of three different research designs used to determine the effect of get-out-the-vote phone calls on voter turnout. The randomized experiment found no increase in voter turnout, whereas regression analysis and matching estimation found a large and significant increase.¹⁰⁸ Another article compared experimental and nonexperimental analyses of the impact of, for example, job training programs, and found that nonexperimental studies often produced results that differed from experimental results by “policy-relevant margins.”¹⁰⁹ As Caskey has argued, “[T]hese results alone should raise doubts about the ability of non-experimental studies, even when conducted in a very conscientious manner, to measure accurately the impact of [financial] education.”¹¹⁰

Societal pressures and institutional review boards beyond the control of researchers prevent most from engaging in randomized experiments that could eliminate confounds and establish a proper control group for comparison. Analyses of consumer education have long wrestled with the problem that “program administrators find it socially unacceptable to withhold an educational treatment from any individuals.”¹¹¹ For example, if a high school offers a personal finance course, educators are unlikely to allow researchers to assign randomly one group of students to the treatment group—meaning required to take the course—and another group of students to the control group—meaning prohibited from taking the course. For these reasons, it is extremely difficult to find naturally occurring FLE settings that can be used to determine the efficacy of FLE.

The first wave of results from the one ongoing study that appeared likely to surmount these research design barriers is discouraging. The Federal Reserve Board conducted a multiyear study to determine the effectiveness of FLE given to members of the armed services.¹¹² The military is in a unique position. In theory, it could randomly assign its members to control and treatment groups, and mandate participation in follow-up surveys so as to eliminate selection and nonresponse biases.

However, neither random assignment nor required participation in the follow-up survey appears to have occurred in this study. Soldiers were

108. Kevin Arceneaux et al., *Comparing Experimental and Matching Methods Using a Large-Scale Voter Mobilization Experiment*, 14 POL. ANALYSIS 37, 55 (2006).

109. Steven Glazer et al., *Nonexperimental Versus Experimental Estimates of Earnings Impacts*, 589 ANNALS AM. ACAD. POL. & SOC. SCI. 63, 63 (2003).

110. John P. Caskey, *Can Personal Financial Management Education Promote Asset Accumulation by the Poor?* 5 (Ind. State Univ. Networks Fin. Inst., Policy Brief No. 2006-PB-06, 2006).

111. Bloom & Ford, *supra* note 61.

112. Bernanke, *supra* note 16, at 8; Lynn Fox & Joy Hoffman, *Federal Reserve Personal Financial Education Initiatives*, 2004 90 FED. RESERVE BULL. 447, 451 (2004).

“offered” FLE rather than randomized into treatment and control groups, and completing the follow-up was optional.¹¹³ The researchers obtained follow-up data on less than 4% of the subjects in their treatment group.¹¹⁴ Further, comparing the treatment group’s behaviors at the time of the FLE and at follow-up is problematic because many became married and gained some college education or a college degree between the time of the FLE and their follow-up survey, and both of these might cause a financial behavior change.¹¹⁵ Moreover, as explained above, at follow-up some time after the course, the study found worse financial behaviors among soldiers who received the FLE training than among soldiers who did not participate in the FLE, controlling for other variables affecting financial behavior.¹¹⁶

C. Measurement Issues

Recall the model of effective FLE:

Financial Education → Financial Literacy → Good Financial Decisions & Behavior

To empirically evaluate the model, researchers must employ measures of the following: exposure to financial education, financial literacy levels, and the quality of financial decisions and behavior. To validate this particular model, they must demonstrate that any link between FLE and improved behavior is moderated by increased literacy. But locating reliable measures of each stage of the model and of the model overall has proven challenging.

113. Bell et al., *supra* note 84 at 1, 3.

114. *Id.* at 3. The researchers do not report any statistics about subjects who did not respond at follow-up, but the fact that more follow-up respondents were white and fewer were black than the comparison group is a hint that the respondents and nonrespondents differed. *Id.* at 4 tbl.1. The comparison group was not a randomized control group, and comparison group members were a bit older with more military experience than the members of the treatment group who responded to the follow-up survey. *Id.*

115. *Id.* Cole & Shastry, *supra* note 106, at 30, find that additional years of education, but not mandated financial literacy education programs, increase retirement savings and investment income.

116. Controlling for other variables, the researchers found that soldiers who took the financial education course reported that they were less likely to use a formal budget and more likely to use an informal budget than soldiers who did not take the course. Bell et al., *supra* note 84, at 19 & tbl.16.

*1. Accuracy of Measures of Exposure to Financial
Literacy Education*

As noted above, to avoid self-selection problems, Bernheim, Garrett, and Maki used a proxy measure for exposure to FLE in their investigation of the effect of high school financial education on adult retirement savings.¹¹⁷ The proxy was whether the state in which the respondent attended high school had a mandate requiring students to receive instruction in personal finance at the time the respondent was in high school.¹¹⁸ The authors found that residents schooled in states with mandates had more retirement savings.¹¹⁹ Their proxy measure appears to have some validity, in that adults who attended high school in “mandate” states were more likely to report having attended a class that included personal finance topics. However, only about half of those in “mandate” states recalled taking such a course, and over a quarter of those in “nonmandate” states recalled taking such a course. Further, state education departments report that “mandates” can mean as few as 25 to 50% of students are receiving FLE.¹²⁰ These mandates thus do not appear to be a particularly accurate measure of exposure to FLE.

Depending on the high school state distribution of respondents, the misclassification of even a state or two could substantially undermine the Bernheim, Garrett, and Maki results. As these researchers acknowledge, there is conflicting evidence as to which states had mandates during the relevant time period. Officials in New Mexico and Oklahoma, which the authors classified in their analysis as “mandate” states,¹²¹ responded to surveys conducted in 1985¹²² and 1990¹²³ that they had no consumer education mandates and that fewer than 25% of their students took such a class by graduation.¹²⁴ In the 1985 survey, officials in Pennsylvania, which the authors classified as a “nonmandate” state, responded that they had a consumer education mandate.¹²⁵

117. Bernheim et al., *supra* note 105, at 436.

118. *Id.*

119. *Id.* at 462.

120. CHARLOTTE H. SCOTT, NAT’L COAL. OF CONSUMER EDUC., INC., 1990 NATIONAL SURVEY: THE STATUS OF CONSUMER EDUCATION IN UNITED STATES SCHOOLS GRADES K–12, at 64–65 (1990), http://eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/22/d3/8a.pdf.

121. Bernheim et al., *supra* note 105, at 440 tbl.1.

122. DENNIS C. BRENNAN, JOINT COUNCIL ON ECON. EDUC., A SURVEY OF STATE MANDATES FOR ECONOMICS INSTRUCTION 1985–86, at 14–15 (1986), *available at* http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/2f/22/fa.pdf.

123. SCOTT, *supra* note 120, at 49.

124. *Id.* at 65.

125. BRENNAN, *supra* note 122, at 3, 16.

Given that only 200 of the 1900 respondents in the study attended a high school that the authors had designated as covered by a mandate, results could be spurious, perhaps reflecting local economic conditions—70% of respondents still lived in their high school state—rather than any effect of FLE.¹²⁶ Indeed, as set forth above, a recent study attempting to replicate the Bernheim, Garrett, and Maki results using census data with a sample size of 3.6 million households found that household savings and investment income were correlated with state economic growth, and not with the imposition of financial education mandates.¹²⁷

A similar problem is at play in the research of Bernheim and Garrett on workplace “education” and saving for retirement. As their measure of exposure to education, the authors used self-reports as to whether the respondent’s employer offered “seminars, professional assistance, or informative materials to assist with retirement planning.”¹²⁸ Even accurate survey responses to this question would be a poor measure of FLE because the question did not distinguish between seminars and professional assistance. During the time period relevant to the question, just over half of the employees offered workplace “education” were eligible to attend seminars, and a slightly higher proportion were given access to a financial planner or investment advice.¹²⁹ Thus, although the study is frequently cited as demonstrating that workplace FLE boosts savings, the results might reflect the efficacy of professional retirement planning assistance in boosting savings. This would not support the model of FLE that its promoters have in mind.

2. *Validity of Measures of Financial Knowledge, Skills, and Confidence*

A number of studies are cited as evidence for the first causal link of the model, between FLE and financial knowledge and skills. One investigation, for example, found that taking a college course covering personal finance topics increases a consumer’s score on the National Association of Securities Dealers (NASD) investment knowledge test by three-quarters of a point out of ten possible points.¹³⁰ However, the NASD

126. For further discussion of this study, see Caskey, *supra* note 110, at 9–10.

127. Cole & Shastry, *supra* note 106, at 16, 20–21.

128. Bernheim & Garrett, *supra* note 49, at 1493.

129. *Id.* at 1491.

130. Tzu-Chin Martina Peng et al., *The Impact of Personal Finance Education Delivered in High School and College Courses*, 28 J. FAM. & ECON. ISSUES 265, 271, 277 (2007).

test asks about basic facts—for example, whether “a reasonable average annual return that can be expected from a broadly diversified US stock mutual fund over the long run” is 5%, 10%, 15%, 20%, or 25%.¹³¹ The JumpStart survey asks similar factual questions, in addition to questions requiring simple addition, subtraction, and multiplication.¹³² Even the questions that consumers find most challenging and are least likely to answer correctly (for example, when interest rates fall, what should happen to bond prices?, or, if you put \$100 in an account bearing interest at 20% per year and make no withdrawals, will you have more or less than \$200 at the end of five years?)¹³³ are factual or require mathematical calculations based on specified dollar figures, interest rates, and time periods.

But the knowledge and skills evidenced by these tests are a far cry from what consumers need to compare two adjustable rate mortgages or calculate the amount that they should save for retirement—knowledge and skills that the Federal Reserve and the Department of Labor implicitly believe consumers should have. For low-wage sector consumers, the literacy needed to score highly on these tests would not help them establish and follow household budgets; the income side of these consumers’ budget equations is too uncertain to be determined without probability calculations based on forecasts of macroeconomic factors that will affect their employers’ labor needs. Moreover, consumers who answer “correctly” that the stock mutual fund annual return that can be expected is 10% are not knowledgeable so much as impressionable; past performance of the stock market cannot be used to predict future performance over long horizons, and a consumer who calculates retirement savings by assuming a 10% return is not engaging in good financial behavior as some economists see it.¹³⁴

As for the link between FLE and confidence, all research has concluded that participants gain increased financial confidence after taking a personal finance class. One report quotes a consumer who had just completed the Financial Security in Later Life course: ““It is amazing how a few changes made me feel empowered. I made a “to do” list and I am determined to get them all checked off.””¹³⁵ This is an

131. *Id.* at 283.

132. JUMPSTART COAL. FOR PERS. FIN. LITERACY, 2008 SURVEY OF PERSONAL FINANCIAL LITERACY AMONG COLLEGE STUDENTS 1–6 (2008), <http://www.jumpstart.org/fileindex.cfm> (follow “Download” hyperlink next to “2008 Survey of Personal Financial Literacy Among High School Students”).

133. Lusardi & Mitchell, *supra* note 54, at 6–7.

134. *E.g.*, Zvi Bodie, *An Analysis of Investment Advice to Retirement Plan Participants*, in *THE PENSION CHALLENGE: RISK TRANSFERS AND RETIREMENT INCOME SECURITY* 19, 24 (Olivia S. Mitchell & Kent Smetters eds., Oxford Univ. Press 2003).

135. IMPACT REPORT, *supra* note 42.

incomplete measure of the element of “confidence” in the FLE model, however, because it could indicate overconfidence rather than appropriate confidence. In one study, half of the respondents who reported that their financial literacy was very high did not objectively test within the highest quartile of the sample, and over 15% were in the bottom quartile.¹³⁶ For FLE to be effective, consumers’ confidence in the knowledge and skills that they believe they have gained must be justified. To estimate whether a personal finance course produced an improved degree of confidence, empiricists would need to compare how well-calibrated consumers’ self-assessments of knowledge and skills were before and after participation in FLE.

3. *Validity of Measures of Financial Behavior*

Studies cited as evidence for the proposition that FLE improves behavior use rough measures of behavior quality. Most commonly, this research takes change in, or amount of, savings as its indicator of FLE’s efficacy.¹³⁷ Other measures used to assess the quality of financial behavior derive from data in credit reports, such as number of credit cards, late payments, bankruptcies, foreclosures, and credit score.¹³⁸ For studies of particular FLE programs, progress toward the goals of the program is the measure by which researchers typically measure behavior quality.¹³⁹

However, these measures may not accurately reflect the quality of financial behavior. What appears to be good financial behavior may be caused by inertia rather than literacy. Savings and insurance may reflect employer decisions about default or matching contribution rates. Credit reports contain inaccuracies and incomplete information, and although the majority of errors are inconsequential, the errors are not randomly distributed but rather vary by consumer age and income and share of

136. Lusardi & Mitchell, *supra* note 54, at 23 tbl.4.

137. *E.g.*, Bernheim et al., *supra* note 105, at 462; Bernheim & Garrett, *supra* note 49, at 1488; Lusardi, *supra* note 91, at 157.

138. *E.g.*, Elliehausen et al. II, *supra* note 63; Courchane & Zorn, *supra* note 16, at 3–5.

139. *E.g.*, Braucher, *supra* note 38, at 562–63 (relying on the goal of the program—to increase bankruptcy repayment plan completion rates—to assess a debtor education program’s success); Hiraad & Zorn, *supra* note 16 (relying on reductions in homeownership delinquency rates to measure the quality of counseling programs that aimed to lower mortgage delinquency rates).

minorities in the consumer's home census tract.¹⁴⁰ Further, credit report contents and resulting credit scores may not be good measures of behavior. Credit scores discount excellent financial behaviors by individuals who pay rent rather than a mortgage, place great weight on poor financial outcomes that may not be a result of poor financial behavior, and reflect good financial outcomes unrelated to literacy.¹⁴¹

Goals of some FLE programs, such as increasing savings, avoiding bankruptcy, or reducing mortgage default, are not always financially wise. Savings is not invariably the best use of money; investment in education or job training, housing, or a business might generate higher long-term returns. Declaring bankruptcy and getting a fresh start might be optimal financial behavior for consumers who have lost their homes or jobs in a natural disaster. Defaulting on an underwater mortgage—meaning that the debt exceeds the market value of the house—can be financially advantageous, depending, for example, on whether the negative effect on the consumer's credit report is smaller or greater than the positive effect on her balance sheet from the divestment of the debt.¹⁴²

Further, because an individual's financial well-being is determined by meeting a web of interrelated goals and along many metrics, meeting one goal or improving one metric may have little effect on a consumer's financial situation overall. If FLE increases savings, this will be of no help in retirement if the money is poorly invested, diverted to crises precipitated by underinsurance, or spent to meet subsequent credit payment obligations.¹⁴³ If FLE causes a reduction in late payments sufficient to increase credit scores, this may reduce prices paid for insurance and credit, but only if consumers understand different pricing structures for insurance and credit products and shop for the best price.¹⁴⁴

140. Michael E. Staten & Fred H. Cate, *Accuracy in Credit Reporting*, in BUILDING ASSETS, BUILDING CREDIT: CREATING WEALTH IN LOW-INCOME COMMUNITIES 237, 237 (Nicolas P. Retsinas & Eric S. Belsky eds., 2005); Robert B. Avery et al., *Credit Report Accuracy and Access to Credit*, 90 FED. RESERVE BULL. 297, 318–19 (2004).

141. Staten & Cate, *supra* note 140, at 240; Avery et al., *supra* note 140, at 315.

142. E.g., Valentina Hartarska & Claudio Gonzalez-Vega, *Credit Counseling and Mortgage Termination by Low-Income Households*, 30 J. REAL EST. FIN. & ECON. 227, 239 (2005). See also Ron Lieber, *Thoughts on Walking Away from Your Home Loan*, N.Y. TIMES, Mar. 13, 2009, <http://www.nytimes.com/2009/03/14/your-money/mortgages/14money.html> (discussing pros and cons of defaulting on an underwater mortgage).

143. ROBERT I. LERMAN & ELIZABETH BELL, THE URBAN INST., FINANCIAL LITERACY STRATEGIES: WHERE DO WE GO FROM HERE? 1, 3–4 (2006), http://www.urban.org/UploadedPDF/311352_financial_literacy.pdf.

144. Lauren E. Willis, *Decisionmaking and the Limits of Disclosure: The Problem of Predatory Lending: Price*, 65 MD. L. REV. 707, 831 (2006).

4. *Completeness of Measures of the Financial Literacy Education Model*

Policymakers cite academic work as support for the entire FLE model, although most work examines only one link, either between FLE and literacy or between literacy and behavior. Tests of knowledge and skills such as the JumpStart survey can demonstrate changed literacy, but not whether that literacy will change behavior. On the other hand, observations of behavior change cannot demonstrate that changed financial literacy was the moderator.

Investigations that look at both links falter if they measure the effect of FLE on financial literacy separately from the effect of financial literacy on financial behavior. For example, research that demonstrates that economics training and workplace retirement education are associated with increased literacy and that increased literacy is associated with better financial behavior¹⁴⁵ does not demonstrate causation from FLE to literacy to behavior. Likewise, a finding that consumers on average increased their financial knowledge and improved their reported behaviors after participating in financial training¹⁴⁶ does not show that these consumers used gained knowledge to improve their financial behavior.

Instead, a model in which financial literacy is the moderator between FLE and financial behavior must be empirically validated. Courchane and Zorn's recent work is designed to test the entire model.¹⁴⁷ If better data were available, selection effects eliminated, and valid measures of good financial behavior established, this design could form the basis for more complete research designs in the future.

5. *Barriers to the Development of Better Measures*

Why have researchers used financial education, literacy, and behavior measures of questionable validity? Demonstrating the effectiveness of the FLE model requires valid measures of each of these, as well evidence of causal links among them. But the FLE model is underspecified in both technical and normative respects. We lack consensus as to both "what

145. See, e.g., Lusardi & Mitchell, *supra* note 54, at 16.

146. Wiener et al., *supra* note 36, at 347.

147. Courchane & Zorn, *supra* note 16, at 2.

should be measured” and “how it should be measured.”¹⁴⁸ As researchers at the Federal Reserve have conceded, despite that agency’s own efforts to promote FLE, “In analyzing the efficacy of financial literacy programs, the primary challenge is defining and quantifying ‘success.’”¹⁴⁹

We have consensus on general principles of good financial behavior: where cost-effective, consumers should perform an adequate search for information about alternatives; should expend the needed resources to analyze those alternatives objectively; should base decisions on that analysis by trading off incommensurate costs and benefits where needed; should plan for the future and implement those plans through budgeting where necessary; should select financial products that meet needs without paying excessive prices or incurring excessive risk; should have a personal financial safety net through insurance, precautionary savings, or both; and once a safety net is established, should accept those risks that present a positive probability of higher returns rather than only low-risk, low-return alternatives.

But assessing whether a particular consumer has followed these principles before and after receiving FLE would require us to operationalize more concretely each of these principles. Here, measurement instruments flounder because we have few benchmarks for evaluating financial decisions and behavior.

First, we lack technical agreement about which financial decisions and behaviors are good ones. Ask three different planning software programs how much to save for retirement and they will give you three different results.¹⁵⁰ The common wisdom dispensed to consumers about investing for retirement is that they should invest in stocks when young and gradually shift to lower risk investments as they age, but respected economists disagree.¹⁵¹ In 2004, Federal Reserve Board Chairman Alan Greenspan publicly stated that consumers who took out fixed rate mortgages were leaving money on the table,¹⁵² but today we know that many consumers, and perhaps even the world economy, would be better off if they had declined adjustable rate mortgages that they can no longer afford.

148. Lyons et al., *supra* note 32, at 216.

149. Sandra Braunstein & Carolyn Welch, *Financial Literacy: An Overview of Practice, Research, and Policy*, 88 FED. RESERVE BULL. 445, 449 (2002).

150. Damon Darlin, *A Contrarian View: Save Less and Still Retire with Enough*, N.Y. TIMES, Jan. 27, 2007, at A1.

151. E.g., Bodie, *supra* note 134, at 20–22.

152. Alan Greenspan, Chairman, Bd. of Governors, Fed. Reserve Sys., Understanding Household Debt Obligations, Remarks at the Credit Union National Association 2004 Governmental Affairs Conference (Feb. 23, 2004) (transcript available at <http://www.federalreserve.gov/boarddocs/speeches/2004/20040223>).

Second, because consumer circumstances vary, behaviors that are welfare-enhancing for some are not for others. Consumers who are not “in a financial position to maintain a healthy [bank] account” might be better off without one.¹⁵³ In addition to paying overdraft charges, these consumers could suffer lowered credit scores that result in higher credit and insurance costs over the long-term. For low-income families, reducing current consumption to accumulate savings may do more harm than good.¹⁵⁴ Homeownership can also have a down side; it appears to lead to poorer neighborhood conditions, on average, for low-income consumers who were previously renters.¹⁵⁵ Even a credit card over-the-limit fee does not necessarily reflect a poor decision. On financial grounds alone, paying for medical treatment and incurring the fee might be wiser than foregoing treatment and suffering health consequences that reduce earning potential. These contextual factors mean that operationalized measures used to evaluate FLE must vary with the circumstances.

Third and more fundamentally, we lack normative consensus about the quality of financial decisions and behavior.¹⁵⁶ If financial decisions were just about money, if they were part of a game without real life consequences, we could develop decision rules that maximize wealth. But financial decisions do have consequences, requiring trade-offs among costs and benefits that are valued very differently by different consumers. Normatively, the decision to purchase anything from Neiman Marcus might be poor. Normatively, paying for a daughter’s wedding dress and incurring a credit card over-the-limit fee might be good. The quality of any financial decision will depend on the values held by the consumer and a host of other unobserved situational, psychological, and social factors.

153. Angela C. Lyons & Erik Scherpf, *Moving from Unbanked to Banked: Evidence from the Money Smart Program*, 13 FIN. SERV. REV. 215, 229 (2004).

154. John Karl Scholz & Ananth Seshadri, *The Assets and Liabilities Held by Low-Income Families* 28 (Oct. 2007) (unpublished manuscript, on file with author), available at http://www.npc.umich.edu/news/events/access_assets_agenda/scholz_and_seshadri.pdf.

155. Shannon Van Zandt, *Racial/Ethnic Differences in Housing Outcomes for First-Time, Low-Income Home Buyers: Findings from a National Homeownership Education Program*, 18 HOUSING POL’Y DEBATE 431, 465 (2007).

156. Braucher, *supra* note 38, at 563. See generally Toni Williams, *Empowerment of Whom and for What? Financial Literacy Education and the New Regulation of Consumer Financial Services*, 29 LAW & POL’Y 226 (2007).

D. Issues in the Interpretations of Results

1. “Findings” Suggestive of Bias

The ideological belief that FLE is effective runs so deep that even well-respected researchers—or perhaps the editors who publish their works—at times misinterpret null results from their own studies as providing support for the FLE model.

For example, a NASD investigation found that elderly consumer fraud victims were more financially literate, on average, than elderly nonvictims:

A major hypothesis going into the survey was that investment fraud victims do not know as much about investing concepts as non-victims and would therefore score lower on financial literacy questions. In fact, the study found the exact opposite: investment fraud victims scored higher than non-victims on eight financial literacy questions. Additionally, a subgroup of “likely active investors” was created within the larger group of non-victims to determine if the difference in financial literacy scores had to do with the number of active investors in the non-victim group. The investment victims outscored even this subgroup of likely active investors on the financial literacy questions.¹⁵⁷

Perhaps the experience of being victimized led to increased knowledge about investing. Perhaps preexisting knowledge led to overconfidence, which led to victimization. Perhaps the personality characteristics that lead some to seek and retain knowledge about investing also make them prone to falling for investment fraud schemes. The causal mechanism is unclear, so all one can deduce from the data is that literacy is correlated with the incidence of fraud. Instead, the study asserts that “[t]his finding suggests that financial literacy programs are necessary but probably not sufficient to prevent fraud.”¹⁵⁸

A study commissioned by the State of Washington to examine the financial literacy of victims of predatory home lending shows the same pattern, erroneously claiming that its data “strongly support[] the need for an education program that teaches financial concepts to consumers.”¹⁵⁹ The author tested consumers who had taken loans from a predatory home lender—“victim” group—against a sample from the general population.¹⁶⁰ Test results indicated that the former knew relatively more about home mortgages but less about investments.¹⁶¹ The author concludes that the group

157. NAT’L ASS’N OF SEC. DEALERS, INVESTOR EDUC. FOUND., INVESTOR FRAUD STUDY FINAL REPORT 5–6 (2006), <http://sec.gov/news/press/extra/seniors/nasdfraudstudy051206.pdf>.

158. *Id.* at 6.

159. DANNA MOORE, WASH. STATE UNIV. SOC. & ECON. SCI. RESEARCH CTR., SURVEY OF FINANCIAL LITERACY IN WASHINGTON STATE: KNOWLEDGE, BEHAVIOR, ATTITUDES, AND EXPERIENCES 15 (2003).

160. *Id.* at 6–7.

161. *Id.* at 25–26, 27 tbls.2 & 3.

who had taken loans with the predatory lender had “lower financial knowledge” and would benefit from a literacy program.¹⁶² The author does not explain how increasing knowledge of investments would help consumers avoid predatory lenders. More plausible explanations of the data would be that either victims were made more vulnerable by their knowledge, perhaps due to overconfidence, or victims became more financially literate in the area of mortgages through their bad experiences.

The conclusion in an evaluation of the Money 2000™ program that its “data lend support for the efficacy of financial literacy training in promoting improved financial behaviors” is similarly unfounded.¹⁶³ The only behavior changes reported in the study are decreased debt for some participants, increased savings for some, and increased debt for some. Overall, the study reports that increased debt exceeded decreased debt.¹⁶⁴ Increased debt could be a good financial behavior, depending on the surrounding circumstances, but it could also be a poor financial behavior. The data do not support the conclusion that FLE is effective.

2. *Low Statistical Significance*

Some findings cited as support for the FLE model lack statistical significance at the 0.05 level. For example, preliminary results of Courchane and Zorn’s work designed to test the entire FLE model suffer from low statistical significance. Courchane and Zorn merged several large data sets to test for links among FLE, financial knowledge and confidence, financial behavior, and creditworthiness—the study’s financial outcomes measure.¹⁶⁵ Employing elaborate controls, these empiricists determined that respondents who reported learning more from financial seminars or classes—the study’s FLE measures—were relatively more confident in their financial knowledge.¹⁶⁶ But preliminary analysis of the data did not demonstrate at the 0.05 level the relationships postulated in the FLE model between education and knowledge or, given high financial confidence, between various levels of financial knowledge and financial behavior.¹⁶⁷ Further, FLE through seminars did not have a

162. *Id.* at 60–61.

163. Osteen et al., *supra* note 36, at 5.

164. *Id.*

165. Courchane & Zorn, *supra* note 16, at 2.

166. *Id.* at 11–13 tbl.9.

167. *Id.* at 15 tbl.10, 17–19 tbl.11.

relationship to financial behavior demonstrable at the 0.05 level.¹⁶⁸ Although the data indicated that better financial behavior was associated with better outcomes, FLE had no direct relationship to outcomes at the 0.05 level.¹⁶⁹

Admittedly, 5% is not some holy grail; “surely, God loves the .06 nearly as much as the .05.”¹⁷⁰ But some of the results here were obtained at the 0.12 to 0.99 level.¹⁷¹ Courchane and Zorn explain that their results cannot reject the possibility that FLE is not effective—the null hypothesis—at conventional confidence levels.¹⁷² But policymakers and others who cite their results are not always so careful.¹⁷³

3. Limited Value of Reported Positive Effects

A number of studies have reported positive effects that, methodological issues aside, might have been caused by FLE. However, these improvements have tended to be very small, suggesting that even if FLE can work, it is not a cost-effective public policy.

Ellichausen, Lundquist, and Staten have presented evidence of a small negative relationship between credit counseling, which they assert involves an FLE component, and debt.¹⁷⁴ For consumers in middle and lower income groups, counseling was associated with a reduction in debt between 2% and 12%, although at higher incomes, counseling was associated with an increase in debt.¹⁷⁵ However, although a 12% reduction in debt for low-income consumers appears to be cause for celebration, it is apparently not important enough to affect these consumers’ credit

168. *Id.* at 19 tbl.11.

169. *Id.* at 20–22 tbl.12, 27 tbl.13.

170. Ralph L. Rosnow & Robert Rosenthal, *Statistical Procedures and the Justification of Knowledge in Psychological Science*, 44 AM. PSYCHOLOGIST 1276, 1277 (1989).

171. *E.g.*, Hired & Zorn, *supra* note 16, at 173 tbl.5A-2; Courchane & Zorn, *supra* note 16, at 15 tbl.10, 17–19 tbl.11, 22 tbl.12, 27 tbl.13.

172. Courchane & Zorn, *supra* note 16, at 2. Other research displays the same problem. For example, Gartner and Todd’s research on web-based FLE based on VISA’s FLE programs produced no statistically significant results. Gartner & Todd, *supra* note 16, at 9. Almost none of the military study’s bivariate results show statistically significant differences for the group who received financial education between baseline prior to the education and at follow-up some time later. Bell et al., *supra* note 84, at 7–14 tbs.3–12. Although some differences between the group who received the education and the comparison group were statistically significant at the 0.05 level, the difference cannot be attributed to having received the education because the group who received the education did not change from baseline prior to the course to follow-up after the course to any significant degree. *Id.*

173. *E.g.*, Bernanke, *supra* note 16, at 4; Martin, *supra* note 18, at 9, 20.

174. Ellichausen et al. II, *supra* note 63, at 18.

175. *Id.* at 20–22.

scores; the authors found that counseling was associated with virtually no increase in credit scores.¹⁷⁶

Tennyson and Nguyen, after contacting state education officials to confirm their state classifications, found improved financial literacy when particular FLE coursework was mandated for high school students.¹⁷⁷ They divide data from the Jump\$Start test of high school seniors into results from states with no FLE curriculum mandates, states with general mandates but no specific required course content, and the three states that require students to take specific coursework in personal finance.¹⁷⁸ Controlling for other variables that they determined affect scores, they saw no differences in scores between students in the first two types of states, but that students in the states with specific coursework mandates scored an average 2.3 points higher.¹⁷⁹ Examining particular questions, they found that these students scored no higher on the questions about spending, debt, or money management, but outperformed students in other states on questions about savings, investing, and income.¹⁸⁰

Unfortunately, financial gains accrued through knowledge about savings, investing, and income can be quickly lost through welfare-reducing spending, debt, or money management decisions. Further, the gain in scores associated with mandated personal finance coursework amounted to a difference of less than one of the thirty-one questions on the test.¹⁸¹ On average, students who attended schools with financial coursework mandates answered fewer than 60% of the questions correctly.¹⁸²

Wiener and his colleagues assessed the effectiveness of a voluntary program offered to consumers in bankruptcy in part by comparing the financial literacy levels of debtors who received financial training, debtors who did not, and nondebtors.¹⁸³ All subjects were tested for their financial knowledge using twelve identical questions before the training date and three months later. The group that received training was given course materials to bring home.¹⁸⁴ It was also the only group

176. *Id.* at 25–27.

177. Sharon Tennyson & Chau Nguyen, *State Curriculum Mandates and Student Knowledge of Personal Finance*, 35 J. CONSUMER AFF. 241, 259 (2001).

178. *Id.* at 245–46, 247 tbl.2.

179. *Id.* at 253.

180. *Id.* at 254.

181. *Id.* at 245, 253.

182. *Id.* at 249.

183. Wiener et al., *supra* note 36, at 352.

184. *Id.* at 350.

to increase their average score at a statistically significant level.¹⁸⁵ The authors conclude that “[a]lthough the gains are modest, these data show strong quasi-experimental evidence that the financial literacy training program improves knowledge of appropriate saving, spending, and credit use.”¹⁸⁶

The score increase for trained debtors was 4%, equivalent to less than half a question.¹⁸⁷ Given that the response rate of trained debtors to the post-test was 34% and of untrained debtors and nondebtors was 56% and 71% respectively,¹⁸⁸ and that when self-administering the post-test some of the trained debtors likely consulted their course materials, the 4% increase in the average trained debtor’s score might not reflect even a modest gain in financial literacy.

The American Dream Demonstration project is routinely cited for its findings that “financial education has positive effects on savings and . . . courses need not be long to take advantage of the potential benefits.”¹⁸⁹ For “savers” who attended personal finance classes in this program, each hour of FLE up to eight hours was associated with a statistically significant average increase in monthly savings.¹⁹⁰ Eight hours of education may have added about \$125 to annual savings of “savers” during the program, in which the average participation lasted two years.¹⁹¹

However, these results are reported only for the 56% of participants who had saved a net of at least \$100 in the program.¹⁹² For these “savers,” an additional \$125 each year could create a buffer that would help them cope with small financial shocks—missing a couple of days of work. But many events that require consumers to dip into savings are much more expensive. Further, the time spent in class and the increase in annual savings had to come from somewhere, and so results must be balanced against the reduction in hours available for work and in monthly spending experienced by these low-income consumers.¹⁹³ On the whole, this FLE program may not have improved participant financial welfare.

185. *Id.* at 363.

186. *Id.*

187. *Id.* at 358.

188. *Id.* at 353.

189. SCHREINER ET AL., *supra* note 65, at 51.

190. *Id.*

191. *Id.* at iv.

192. *Id.* at iv, 32.

193. Scholz & Seshadri, *supra* note 154.

4. Barriers to Better Interpretation of Results

Neither data nor financial support for FLE research is easy to come by. FLE advocates want to spend every dollar on programs. Government agencies have limited resources. This leaves many researchers dependent on industry, which already collects a large amount of data about its customers' payment histories, retirement savings contributions and investments, and other relevant statistics.

The financial services industry has no interest in discovering that FLE is ineffective. These programs help industry promote goodwill, penetrate new markets, cull out unqualified home loan applicants,¹⁹⁴ and ideally, increase retirement savings under their management. If FLE is not effective, industry loses its most potent argument against regulation—that consumers are better off making their own financial choices and that impediments to good consumer financial decisionmaking are better addressed through FLE. When industry is supplying the data, funding, or both, it cannot help but have an effect on the publicized research. For example, although Gartner and Todd's experiment using VISA's Practical Money Skills for Life FLE program produced no statistically significant results, and the results that were produced were likely driven by self-selection effects,¹⁹⁵ VISA claims on its website that the experiment demonstrated that the program was an "effective medium of education for this sample population" and does not explain either the lack of statistical significance or the self-selection problem.¹⁹⁶

None of the researchers hid their studies' weaknesses. Most included a substantial discussion of research limitations. But editors may obscure these caveats. For example, one table of data on consumers' *intentions to change* their financial behavior is titled "Estimates of *Changes in Retirement Savings Behavior*,"¹⁹⁷ even though the authors made plain in the text that few consumers followed up on their intentions.¹⁹⁸ The "A

194. GEORGE W. MCCARTHY & ROBERTO G. QUERCIA, RESEARCH INST. FOR HOUS. AM., BRIDGING THE GAP BETWEEN SUPPLY AND DEMAND: THE EVOLUTION OF THE HOMEOWNERSHIP, EDUCATION AND COUNSELING INDUSTRY 8–9 (2000), http://www.housingamerica.org/Publications/48506_BridgingtheGapBetweenSupplyandDemand.pdf.

195. Gartner & Todd, *supra* note 16, at 9.

196. Practical Money Skills for Life: Wells Fargo Case Study, http://www.Practicalmoneyskills.com/english/resources/about/WF_case_study.pdf (last visited Apr. 3, 2009).

197. Clark et al., *supra* note 36 (emphasis added).

198. *Id.* at 62.

Little Knowledge Is a Good Thing” title of the Hiram and Zorn homeownership counseling study similarly may reflect a publisher’s choice; as noted above, the authors neither tested participant knowledge nor claimed participants gained any.¹⁹⁹ Even without these sorts of invitations, FLE advocates and policymakers tend to see what they want to see in empirical work, and researchers have little ability to control that.

IV. CONCLUSION

What degree of effectiveness should appropriately be claimed for the current model of financial literacy education? As yet, none, and the barriers to research that would soundly demonstrate effectiveness or ineffectiveness may be insurmountable. But the conclusion is not that we must accept or reject FLE on ideological grounds alone and move on. Rather, we should search for alternative public policy models that recognize what financial education might realistically achieve. At least two such models are suggested by the studies critiqued above.

The first alternative policy model is suggested by Mandell’s examination of self-reported thrift among high school students. Mandell found that students who took financial classes did not improve their scores on the JumpStart exam but did report higher levels of thrift, and so he too conjectures, assuming students self-report accurately, a causal link between FLE and improved financial behavior unrelated to financial literacy.²⁰⁰ Courchane and Zorn come to a similar conclusion.²⁰¹ Likewise, although their reported finding that high school curriculum mandates increased savings has now been shown to be almost certainly incorrect,²⁰² they too conjecture that FLE might change behavior not through increased knowledge or skills, but through “increased comfort with financial transactions and concepts.”²⁰³

These academics present an intriguing possibility that it is not financial literacy, but a norm or rule of thumb of thrift that mediates between FLE and savings rates. Rather than providing support for the current FLE model, these results suggest an alternative model of norms training leading to changed behaviors. Financial norms education (FNE) would encounter the same challenges in developing appropriate norms that FLE faces in developing appropriate measures of good financial

199. Hiram & Zorn, *supra* note 16.

200. Mandell, *supra* note 47, at 7.

201. Courchane & Zorn, *supra* note 16, at 30.

202. See discussion of the findings of Cole & Shastry, *supra* note 106 and accompanying text.

203. Bernheim et al., *supra* note 105, at 450.

behavior—technical disagreement, appropriateness varying with context, and normative disagreement. But FNE would be forced to address these head on in establishing the norms to be taught. Wiener and his colleagues, among others, have been developing a financial education program that explicitly seeks to change participants' attitudes or norms.²⁰⁴ These sorts of programs should be developed and examined further.

For decisions and behavior that do not require a high degree of financial literacy, financial norms training could be effective.²⁰⁵ But adopting a norm can benefit consumers only when they can determine how to apply the norm to the context at hand. Sometimes this will be easy—a norm of not investing a 401(k) in an employer's stock is one that most consumers, if they have access to a 401(k), might follow.²⁰⁶ But knowing a rule of thumb to “diversify assets” in which that 401(k) is invested is not enough if a consumer does not understand the basics about how assets differ. Further, once a consumer decides how much to allocate to a mutual fund class, a norm of comparison price shopping will not be enough for her to determine which fund within the class has the lowest fees and expenses.

These and other demands placed on consumers by society and the marketplace today require more than knowledge of and motivation to follow financial norms. Thus, a norms model of financial education could be effective in improving consumer welfare only in conjunction with a reduction in the complexity of the consumer financial decisions and actions our society and marketplace require. Such simplification would inevitably require substantive legal regulation of consumer financial products. The variety, complexity, and sheer number of products available in the marketplace would need to be reduced. Then, once finance products were structured with only a few moving parts, consumers might be able to apply rules of thumb learned in financial education classes correctly, and the quality of their decisions might rise.

204. Wiener et al., *supra* note 36, at 350.

205. See Josh Wiener & Tabitha Doescher, *A Framework for Promoting Retirement Savings*, 42 J. CONSUMER AFF. 137, 146–50 (2008) (explaining ways in which norms can be harnessed to increase savings rates).

206. On the other hand, results thus far regarding financial education given to soldiers found that even teaching the soldiers the simple lesson not to take out payday loans or use pawn shops did not lead them to uniformly cease to do so, and once controls were added to the study, the financial training had no effect on the incidence of these poor financial practices among those who attended the training. Bell et al., *supra* note 84, at 14 tbl.12.

The second public policy model suggested by the research above stems from the studies of credit, retirement, and homeowner counseling. It is plausible that intervention by a counselor and individualized financial advice could improve consumer financial welfare. This raises the possibility that rather than education, a better public policy response to consumer finance problems might be to support pro bono expert financial advisors. Consumers would need sufficient education to select trustworthy and qualified advisors, but they would not need to perform difficult calculations, judge the value of information sources, or perform economic forecasting themselves.

Providing pro bono financial advice and enforcing quality and integrity standards on the advisors would be costly to taxpayers. But poor financial decisions by consumers and firms can also be costly to taxpayers—witness the cost to cities of cleaning up neighborhoods hit hard by mortgage foreclosures, the cost of emergency room medical care provided to those without adequate health insurance, and the cost to countries worldwide of the current financial crisis.

The two proposals dovetail in some respects. FNE might inculcate a norm of skepticism about claims made by sellers of financial products by explaining common scams and sellers' financial incentives to steer consumers to products that generate the most revenue for the seller. Many "consumer rights" education programs include this in their curricula already, as do some debtor education programs. A skepticism norm might be sufficient for simple financial matters, but for complex decisions, skepticism standing alone could lead to consumer fear without a way of distinguishing between scams and good financial products. In turn, skepticism about the market's offerings could lead consumers to seek out financial advisors for assistance. Provided that these advisors are trustworthy, qualified, and affordable, the best FNE might espouse a norm of relying on these advisors when making important financial decisions.

These policies and others should be tried and tested. But until and unless stronger evidence emerges that the current model of financial literacy education is effective, policymakers and regulators should be circumspect in their use of it as a response to consumer financial problems. Researchers should be particularly cautious in the presentation of their findings, so that academic work will contribute to the public policy discussion empirical, rather than ideological, assessments of financial literacy education.