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In a recent speech Federal Reserve Chairman Ben Bernanke<sup>1</sup> spoke of the importance of financial education. People commonly make financial mistakes such as saving too little, taking on too much debt, holding too little life insurance, making bad investment decisions and, in general, paying fees that are unnecessary. The consequences of these mistakes can be enormous. They can be measured in terms of foregone opportunities, lesser net worth, or even personal bankruptcy and family impoverishment.

Why do people make these “mistakes”? One possibility is a widespread lack of financial literacy. Perhaps financial decision-making would improve if more people became financially astute. Or, another possibility is people are fully aware of what they are doing. For example, savings rates are low simply because people discount future consumption heavily, strongly preferring favor consumption today. To choose between these alternative explanations, we need to assess the effect of financial literacy on financial decision making.

Academic experts aim to measure financial literacy using survey techniques. If people are unable to answer simple questions about percentages, or interest rates or even arithmetic, then they are deemed to be not financially literate. This problem is widespread. For example, more than 50% of the respondents on a survey were unable to correctly answer all of the following questions: 1. A disease has an incidence of 10%. Given 1,000 people, how many would you expect to have the disease? 2. If 5 people all have the winning number in a lottery and the prize is \$2 million, how much will each of them get? 3. If you invest \$200 at 10% annual interest, what sum will you have in two years? Based on questions like these, Professor Annamaria Lusardi has put together an index of financial Literacy (the FLI), and in one research paper<sup>2</sup> she shows that people that score higher on the FLI tend to save more and spend more time engaged in retirement planning. People who score higher on the FLI also have higher savings rates, less debt, and in general appear to make more sensible financial decisions.

When you stop and think about the complexity of financial products, it is easy to see that ordinary people may not fully grasp the intricacies. This point was driven home to me by another Bernanke speech<sup>3</sup>; a presentation to his fellow professional economists at the American Economic Association in January 2009. In this speech Chairman Bernanke was describing what he felt to be the root cause of the financial crisis; namely, proliferation in mortgage loans with low initial payments. In particular, he focused on the “Pay Option ARM” in which borrowers were allowed to select their desired payment from a set of choices. The

lowest payment generally was based on an initial start rate of 1%. The Chairman calculated the monthly payment on a hypothetical \$180,000 loan to be just \$150 ( $\$180,000 \cdot .01/12 = \$150$ ), as compared to \$1,079 for the payment on a thirty year fixed rate fully amortizing loan at the then market rate of 6%. Obviously, \$150 is a lot lower than \$1,000 and this enabled many more people buy homes or to refinance. However, the typical Pay Option loan payment was not “interest only” as assumed by the Chairman, but rather was fully amortizing. The fully amortizing payment at a 1% annual rate is \$579. In other words, if one of the smartest economists on the planet, in a speech assigning blame for a major financial calamity could be off on his estimate of the correct payment by 300%, how are the rest of us going to get it right?

It seems to me that financial illiteracy is the failure to understand adequately how financial products work and, in particular, what are the downside risks. Rather than being a narrow problem, Professor Lusardi’s research and Chairman Bernanke’s 2009 speech suggest that it is widespread. In fact, maybe nearly all of us are afflicted with this disease. It is important and worthwhile to search for a cure, or at least a way to cope.

One possibility is product simplification. A major goal of the new consumer protection agency, the Consumer Financial Protection Board, is to require that major financial institutions provide simple and streamlined versions of major financial products. This is intended to make it a lot easier for customers to conduct comparison shopping. However, this does not address the reality that financial decision making is inherently complex. There are several sources of uncertainty including future wage income, investment returns and mortality. Simple products would be great; but which ones should we buy and how much?

Another approach is to develop educational programs in financial literacy for school children and adults, just as Chairman Bernanke discussed in his recent speech. The Fed has established a [website](#) that contains useful materials for students and teachers alike. Professor Lusardi has shown that people who participate in financial education programs score higher on her literacy index, and therefore are more like to make sensible financial decisions.

A complementary strategy is to appeal to the theory of the second best. Let’s try and find simple strategies which work pretty well most of the time, and which hold up in stress conditions. I think a set of simple rules provided several years ago by Ben Franklin<sup>4</sup> is useful: be diligent and frugal, buy life insurance if you have dependents, and invest in passively managed index funds (actually, Ben only proposed the first two of these rules).

At the end of the day, each individual needs to choose the information sources that they find most amenable and trustworthy. The goal is to find advice that is unbiased and expert. You

don't necessarily have to become an expert yourself, but you do have to learn enough about the issues so that you are comfortable you are not being led astray.

<sup>1</sup>Ben Bernanke, "Financial Education," 2012.

<sup>2</sup>Annamaria Lusardi, "Planning for Retirement: The Importance of Financial Literacy," Public Policy and Aging Report, 2009.

<sup>3</sup>Ben Bernanke, "Monetary Policy and the Housing Bubble," 2010.

<sup>4</sup>Ben Franklin, The Way to Wealth, 1758.