

# Insights: Financial Capability

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## Financial Literacy Around the World (FLAT World)

Across the world, people are being asked to assume more responsibility for their financial well-being. Because of changes in the pension landscape, notably a shift from defined benefit to defined contribution type pensions, individuals must determine not only how much to save for retirement but also how to allocate that retirement wealth. This responsibility is paired with financial instruments that are increasingly complex. Rules and terms for credit cards, mortgages, lines of credit and other vehicles for borrowing have changed substantially, often providing more exposure to risk.

How prepared are individuals to take on this greater burden and to process the economic information needed to make informed decisions about their current and future finances?

In short, they are not prepared. To paraphrase the title of the bestselling book by Thomas Friedman about our FLAT World (an acronym in this case for Financial Literacy Around the World), we are also flat when it comes to consumers' knowledge of basic financial concepts. This Brief describes key findings about financial literacy in eight countries.

### Measuring financial literacy

To measure levels of financial literacy, Lusardi and Mitchell (2011a) designed a set of questions that were piloted in national surveys in the United States before being added to the 2009 FINRA Investor Education Foundation National Financial Capability Survey, which covers a representative sample of the U.S. population.<sup>1</sup> The questions were also added to national surveys in seven other nations, making it possible to provide cross-country analysis of financial literacy as well as breakdowns based on differences and similarities (Lusardi and Mitchell, 2011b).

A set of basic concepts sits at the heart of financial decision-making. Those concepts include: (i) *numeracy and an understanding of interest rates and interest compounding*; (ii) *an understanding of inflation*; and (iii) *an understanding of risk diversification*. The aim of the following questions, used in the surveys, was to measure basic understanding of the ABCs of finance:

- 1) *Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?*

**More than \$102; Exactly \$102; Less than \$102; Do not know; Refuse to answer**

1. See the discussion of these data in FINRA Investor Education Foundation (2009) and Lusardi (2011).

- 2) *Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?*

**More than today; Exactly the same; Less than today; Do not know; Refuse to answer**

- 3) *Please tell me whether this statement is true or false. "Buying a single company's stock usually provides a safer return than a stock mutual fund."*

**True; False; Do not know; Refuse to answer**

The first question addresses numeracy, or the capacity to do a simple calculation related to compounded interest rates. The second question measures understanding of inflation, again in the context of a simple financial decision. The third question gauges knowledge of risk diversification; it is a joint test of knowledge about "stocks" and "stock mutual funds," and of risk diversification. Since individuals must deal with financial markets, it is important to understand their knowledge of the stock markets and to differentiate among levels of financial sophistication.

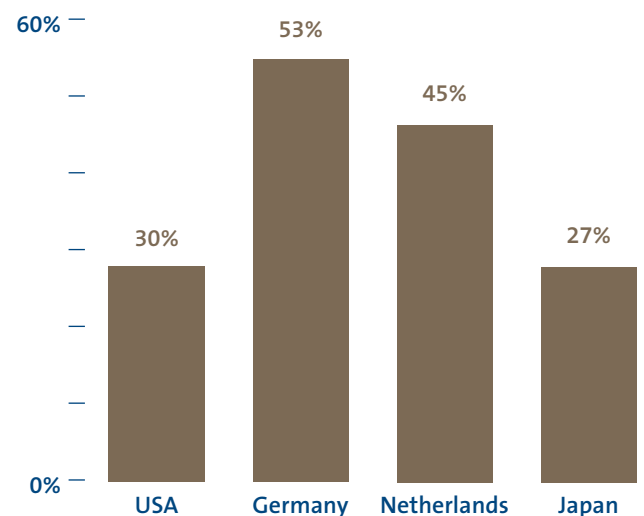
### How much do individuals know?

Financial literacy data across eight countries reveal three striking similarities. First, financial illiteracy is prevalent, regardless of the country or its economic development stage. In the United States, only 30 percent of the population (as measured in the FINRA Investor Education Foundation's 2009 National Financial Capability Study) is able to correctly answer all three questions. Similar results are found in Germany, the Netherlands, Sweden, Italy, Japan and New Zealand—as well as in countries where financial markets are changing rapidly, such as Russia (Figure 1).

Second, knowledge of inflation correlates with individuals' experiences. For example, Italians were more likely to answer the question on inflation correctly while respondents in Japan, which experienced deflation, were more likely to get it wrong.

Third, risk diversification proved to be the most difficult concept. More respondents answered "do not know" to the risk diversification question than to any other, and the results were similar across countries. Some 34 percent of U.S. respondents responded that they did not know the answer, as did 32 percent of respondents in Germany and 33 percent in the Netherlands. Consistent with expectations, the percentage of "do not know" answers was very high in Russia and East Germany, where individuals had little exposure to stock markets, and lower in countries like Sweden, which implemented a vast privatization of its social security system.

**Figure 1. Percentage of respondents who answered correctly all three financial literacy questions**



**NOTE:** *The graph reports the percentage of survey respondents who answered the same three financial literacy questions on interest rate, inflation and risk diversification correctly. In order to allow for comparison, the graph does not include countries that asked slightly different financial literacy questions.*

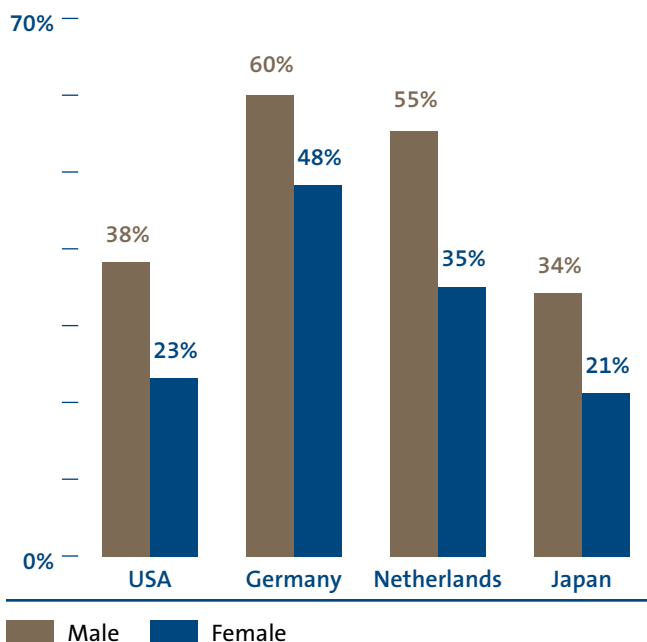
### Who knows the least?

Financial literacy is alarmingly low among specific demographic groups, with age, education levels, employment status and gender as factors. This finding was consistent across countries. When it comes to age, financial literacy follows an inverted U pattern—lowest for younger and older consumers but peaking in the middle of the life cycle. A single cross-section is not sufficient for distinguishing between age and generational effects, but the survey results show a pattern consistent with the notion that knowledge rises with experience but decays at older ages.

Financial literacy is also strongly correlated with higher levels of education although, even at the highest level of schooling, literacy levels are low. Financial knowledge is also higher among those who are working and, in some countries, the self-employed, than those who are unemployed. This difference may stem in part from financial education programs offered in the workplace (such as in the United States). It could also reflect knowledge learned from colleagues or from skills acquired on the job.

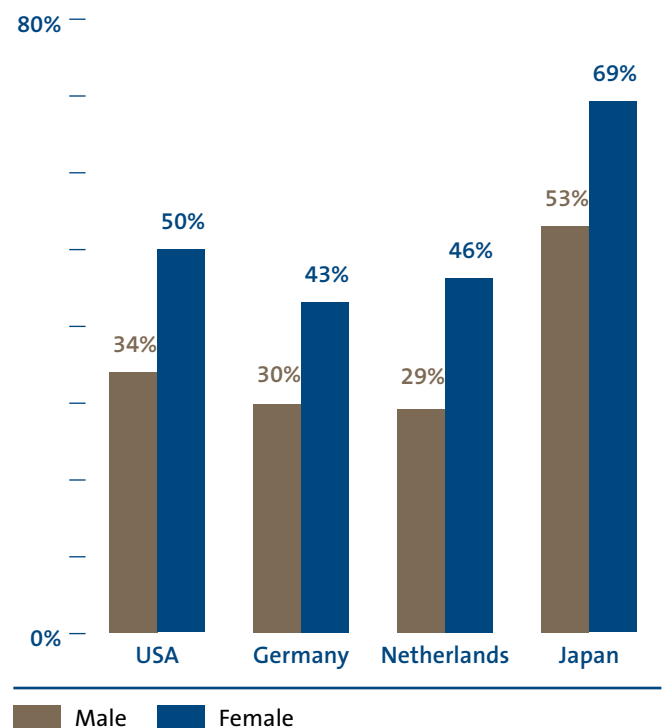
Women generally have poorer financial understanding than men.<sup>2</sup> Women are less likely to answer the financial literacy questions correctly (Figure 2).

**Figure 2. Correct answers, percentage by gender**



Strikingly, in countries as diverse as the United States, Sweden, Italy and Japan, women responded to the surveys in the same way: they stated that they do not know the answers to the financial literacy questions (Figure 3). The proportion of women’s “do not know” responses is particularly high on the question about risk diversification.

**Figure 3. Respondents who answer with at least one “don’t know,” percentage by gender**



Across countries, women may be less likely to guess the correct answers or may lack confidence in their financial knowledge. When asked to self-assess their financial literacy, women are more likely than men to rate themselves as having low financial knowledge, consistent with their high prevalence of “do not know” responses. This awareness of their own lack of knowledge may make women ideal targets for financial education programs.

2. See Mottola (2012) for an analysis of gender difference in financial literacy and behavior in the FINRA Financial Capability Study.

Some countries show other interesting patterns. For example, there are distinct geographical differences when it comes to financial literacy. Financial knowledge is higher in the northern and central regions of Italy than in southern Italy. In the United States, financial literacy differs by state, with southern states tending to score low.<sup>3</sup> In Russia, meanwhile, people in urban areas are generally more financially literate than those in rural areas. Racial and ethnic differences are also important. Whites and Asians in the United States, for example, tend to be more financially knowledgeable than African Americans and Hispanics.

### Does financial literacy matter?

While financial literacy is important overall, the critical question is whether it influences behavior. Across all countries surveyed, financial literacy was linked to retirement planning or participation in private pension plans. In the majority of the countries studied, the financially literate were more likely to plan for retirement, even after taking into account numerous economic characteristics and circumstances. This was a remarkably consistent result, regardless of the differences in pension schemes, the privatization of pensions and the varying generosity of pension systems across countries.

**“In the majority of countries studied, those who are financially literate are more likely to plan for retirement.”**

Financial literacy is important quantitatively; for every additional survey question answered correctly, there was a 3 to 4 percentage point higher likelihood that the respondent planned for retirement. This was true across countries as diverse as Germany, the United States, Japan and Sweden. In the majority of countries, what matters most for retirement is an understanding of interest rates and, more importantly, risk diversification. The question arises whether financial literacy affects retirement planning or whether it is the desire to plan for retirement that influences individuals’ financial knowledge. It was possible to address the causality nexus in several countries, and results showed that financial literacy affects retirement planning, not the other way around.<sup>4</sup>

### Concluding remarks

The use of the same financial knowledge questions across eight countries provides researchers with a deeper understanding of the causes and consequences of financial illiteracy. The finding of poor financial literacy across all countries means financial knowledge should not be taken for granted, not even in countries with well-developed markets. Moreover, particular groups—notably the young, the old, women, those not working and those with low education levels—must manage with very weak levels of financial literacy, a pattern that is consistent across borders. The financial security of these groups may be at risk, since a strong link has been found between financial literacy and retirement planning. In turn, retirement planning is a good predictor of retirement wealth and security.

These are important findings with several implications. First, it is unlikely that one-size-fits-all programs will be effective in tackling financial illiteracy. Instead, programs that target the financial literacy gaps of population subgroups are more likely to be effective. Second, knowledge about risk and risk diversification must be improved. Across countries, knowledge of risk diversification is very low but it is a key element for retirement planning. This finding, combined with the importance of numeracy for retirement planning, suggests that it is important to foster financial education in school. To conclude, financial literacy is an essential skill for financial decision-making and wellbeing over the life cycle.

3. For a discussion of this finding, see Bumcrot, Lin and Lusardi (2011).
4. See Alessie, van Rooij and Lusardi (2011), Bucher-Koenen and Lusardi (2011), Klapper and Panos (2011), and Sekita (2011).

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