Does Overconfidence Affect Financial Behaviors? Evidence from Retirement Readiness, Precautionary Savings, and Household Investments

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1 Literature Review

1.1 Demographic Factors that Affect Financial Literacy and Overconfidence

Households do not always behave optimally in the financial markets. Campbell (2006) points out that it is common for households to make "investment mistakes". Existing literature suggests that financial literacy and overconfidence can be potential reasons. A natural question is what demographic factors would affect financial literacy and overconfidence.

A large amount of literature has worked on disaggregating financial literacy. Lusardi and Mitchell (2014) build a life cycle model with endogenous financial literacy investment and find that young and old people tend to have low financial literacy. This finding is verified in Agarwal et al. (2009), which suggests that the youth and the old are more likely to make suboptimal decisions. Hsu (2016) constructs a life cycle model with marriage decision to explain why women tend to be less financially literate, which is supported by Hung et al. (2009), Lusardi et al. (2010) and Lusardi et al. (2014). Education also has an impact on financial literacy. Lusardi and Mitchell (2007a) and Lusardi and Mitchell (2011b) suggest that high education is correlated with high financial literacy, but education alone is not a good proxy for it.

Less literature examines the demography of overconfidence. Bhandari and Deaves (2006) conclude that the male and the well-educated are more likely to be overconfident. Lin (2011) suggests that the male, the youth, and the old are more vulnerable to overconfidence bias. Anderson et al. (2017) find that gender, income, education, and occupation may have an effect on overconfidence.

1.2 How Financial Literacy and Overconfidence Affect Financial Behaviors

How will financial literacy and overconfidence affect financial behaviors?
On one hand, the lack of financial literacy makes it difficult for consumers to figure out their optimal choices. Hence, we may observe sub-optimal behaviors. The model in Lusardi and Mitchell (2014) also implies that the optimal paths of financial literacy are hump shaped over life time, and consumers with low financial literacy choose to receive lower returns and thus accumulate less wealth during their life. There are also empirical evidences that support this argument. Calvet et al. (2007) and Calvet et al. (2009) make use of Swedish households data to examine the relationship between financial literacy and investment mistakes. Although they do not construct financial literacy directly, they find that proxies such as wealth, income, education, and immigration status are associated with mistakes. Lusardi and Mitchell (2007b), Lusardi and Mitchell (2011a), and Lusardi and Mitchell (2017) formally construct a measure of financial literacy and find that financial literacy is positive related to retirement-readiness.
On the other hand, consumers may be overconfident in their ability, which leads to misperception of optimum. Odean (1998) examines overconfidence bias in stock markets. Under an extensive form game structure with traders, insiders, and marketmakers, he finds that overconfident players tend to receive lower returns due to their excess trade. Empirically, Barber and Odean (2001) use gender as a proxy of overconfidence and find that male traders trade more and thus receive less. With financial markets becoming more accessible in this time and age, households are ex-

pected to be affected by their overconfidence. Anderson et al. (2017) try to combine these two sources together for the first time. They find that households tend to overestimate their financial literacy, and both perceived and true financial literacy affects their financial behaviors. Nevertheless, they do not directly examine the effect of overconfidence.

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