Financial Knowledge and Financial Fragility of US Households

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Abstract

Financial fragility refers to the inability to repay financial debt. It has been measured in various ways, such as the debt-to-income ratio, debt service ratio, mortgage payment burden or other types of debt arrears. Researchers have analyzed the importance of financial knowledge on financial stability and debt repayment issues. This study examined the relationship between financial fragility and financial knowledge using the 2015 National Financial Capability Study (NFCS) data. To extend the existing literature, this study constructed an index of financial fragility incorporating five aspects of financial distress, including having difficulty in paying bills, having no emergency fund savings, having an experience of overdrawing, not being able to come up with $2,000, and experiencing a revolving credit card. Financial knowledge was measured in three ways to check its robustness: (1) a financial knowledge index based on the five questions (i.e., interest, inflation, bond price, mortgage, portfolio) using the iterated principal factor with the Bartlett method; (2) the number of correct answers to the five questions as a continuous variable; and (3) a binary indicator of whether or not a household answered them all correctly. To address a possible endogeneity issue in financial knowledge, this study employed an instrument variable approach that exploit exogenous variation in the average education level of neighborhoods using each Zip Code Tabulation Area (ZCTA) derived from the educational attainment module of 2011-2015 American Community Survey (ACS)). The results from the OLS regressions indicated that financial knowledge was negatively related to financial fragility, and the effect was greater when the financial knowledge was instrumented, when various household characteristics were controlled. The robust result held in all three financial knowledge measures, suggesting that financial knowledge drives financial fragility. With respect to various household characteristics, households who were retired, had health insurance, had higher income and Black or Hispanic households were less likely to be financially fragile. Those who were separated or divorced or widowed, had a dependent child, completed some college, and experienced a negative transitory income shock were more likely to be financially fragile than the reference groups. Future research analyzing the relationship between financial knowledge and financial behaviors should consider the issue of endogeneity and future researchers could adopt the instrument of financial knowledge which we developed for this study.

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