Is financial fragility a matter of illiquidity? An appraisal for Italian households

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Abstract The aim of this paper is to assess the role played by the composition of the household portfolio besides standard determinants of financial fragility (e.g. income, indebtedness, age, gender, financial literacy). Our analyses provide a contribution on these issues by taking the case of Italy, which lends itself to the investigation given the very peculiar portfolio composition (high level of housing on the one hand, low level of indebtedness and financial diversification on the other) and the very pronounced demographic structure (strong population ageing). First, we propose a novel definition of financial fragility. Second, based on this new measure, we use data drawn from the 1998-2010 Bank of Italy Survey on Household Income and Wealth (SHIW) and we perform an empirical analysis to investigate the main determinants of financial fragility. The results highlight that our definition confirms the role played by most usual marker of fragility but emphasises new dimensions of financially fragile households.

PRELIMINARY, PLEASE DO NOT QUOTE, COMMENTS ARE WELCOME

1 Introduction

The aim of this paper is to assess the role played by the composition of the household portfolio, with respect to standard determinants (e.g. income, indebtedness, age,

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gender, financial literacy), in determining household financial fragility. More specifically, the analyses we perform mean to answer a set of related questions: are householdsô portfolios too illiquid and, in particular, is there too much housing in them? Are households too procyclical in their portfolio decisions?

Our analyses provide a contribution on these issues by taking the case of Italy, which lends itself to the investigation given the very peculiar portfolio composition (high level of housing on the one hand, low level of indebtedness and financial diversification on the other) and the very pronounced demographic structure (strong population ageing, whereby elderly are typically ñhouse rich and cash poorò). We use data drawn from the 1998-2010 Bank of Italy Survey on Household Income and Wealth (SHIW), which provides a complete picture of the socio-economic and financial condition of around 8,000 households every two years.

In recent years, household portfolios have attracted much attention and research efforts in a life cycle perspective, also due to a progressive shift from public to private pension schemes which force households to take a long-term perspective when deciding the portfolio composition. However, the recent financial and economic crisis has brought to the forefront the issue of household financial fragility, whose definition is by itself not univocal and remains somewhat controversial (see, e.g. Christelis et al., 2009; Fuenzalida and Ruiz-Tagle (2009), McCarthy, 2011). In fact, the existing literature uses different measures for (and hence definitions of) household financial fragility, most of them based on the degree of indebtedness, whereby financially fragile households are those unable to repay debts (ECB (2005), Worthington, 2006; Bonaccorsi di Patti and Felici (2008), Jappelli et al., 2008; Chiorazzo et al. (2009), Anderloni and Vandone, 2010; Georgarakos et al., 2010).

We here propose a new definition aimed to detect those households unable to quickly finance unexpected expenses (even if possibly small), thus obtaining a more comprehensive and ex-ante measure of financial fragility. Based on this new measure, we empirically investigate the main causes of financial fragility, including not only the typical socio-economic characteristics - e.g. income, wealth, age, gender, position on the labour market and education ï but also some characteristics of their portfolios, especially focusing on the presence of housing. These analyses allow to gauge to what extent the excessive weight placed on housing accounts for the financial fragility of some households with specific demographic features (e.g. old age).
The rest of the paper is organized as follows. Section 2 presents the dataset and the methodology used, while Section 3 provides an overview of the main results and of the robustness tests performed. Last Section concludes.

2 Dataset and Methodology

Our dataset spans over the period 1998-2010 and draws from the Bank of Italy Survey of Household Income and Wealth (SHIW). For each household, the SHIW provides plenty of demographic information, of which we have used the following: the number of components, as well as their age, level of education, gender, marital and occupational status. Besides, the SHIW also provides economic information about the households, including income, net wealth (real and financial assets net of financial liabilities) as well as the amounts (expressed in Italian lira until 2000 and in Euro thereafter) invested in a variety of financial assets.

Based on two conditions, namely (i) whether or not income suffices to meet expected expenses; and (ii) whether or not the liquid assets held by the household suffice to meet potential unexpected expenses, we have classified households into the following four unordered and mutually exclusive categories:

1) Financially in good shape households: with *Income* Ó *Expected* and *Liquidity* Ó *Unexpected*
2) Financially fragile households: with *Income* Ó *Expected* and *Liquidity* < *Unexpected*
3) Dissaving households: with *Income* < *Expected* and *Liquidity* Ó *Unexpected Exenses*
4) Poor households: with *Income* < *Expected* and *Liquidity* < *Unexpected*.

with *Income* is the total yearly income earned by the household, *Expected* represents the planned expenditures of the household (i.e. nondurable consumption, payments for rent and/or mortgages, maintenance payments and life, health and indemnity insurances), *Liquidity* represents the assets held in bank and postal deposits, *Unexpected* correspond to ñnon-plannedò outflows, such as the restoration of household capital stocks including cars, housing and its appliances and other household durables, unexpected medical expenses, or even temporary income loss, e.g. resulting from changing jobs, reduction of wages and employment layoffs or temporary cessation. We here quantify them with 1500 ú (in real terms) , which is coherent with a survey question investigated by Lusardi et al. (2011).
Since household type might be one out of a set of four mutually exclusive and unordered categories, a multinomial logit is estimated to investigate which household characteristics are mostly associated with the final household type. All regressions always include a set of time and regional dummies, with the initial year and Piedmont taken as reference categories, and are estimated with robust standard errors clustered at the regional level.

3 Results

Based on the main specification results, it is apparent that the probability of being financially fragile is decreasing in income and wealth, but increases with house ownership**.** As for the demographic dimension, it is to be noted that financial fragility is lower for male, but much higher for divorced. Consistent with the literature on financial education, the educational attainment, which can be taken as a proxy of financial education, is very relevant. As for the indebtedness, mortgage debt is not highly significant but it points to a decrease financial fragility, while debt versus family indicates a state of financial distress, possibly due to the fact that household resorting to relatives for credit have already been rated low from banks. The time dimension indicate procyclicality of this indicator, possibly due to overall portfolio procyclicality, as shown by previous studies for Italy (Brunetti and Torricelli, 2010).
Finally, adding the interaction between the dummies for being widowed and owner confirms how the financial fragility of widowed emerges only in the presence of housing.

These results persist with different specifications: e.g. for income and wealth (quadratic rather than in quintile dummies), with age dummies rather than age in level and quadratic terms, with different thresholds for the liquidity level entering our definition of financial fragility (1200 to 2000ú). We also tried different approaches to the modelling of the dependent variable, using a binary (logit) choice model, obtaining similar results (available upon request).

4 Conclusions

The empirical analysis performed confirms the role played by most usual marker of fragility (income, wealth, education, gender etc), but emphasises new dimensions. In particular, contrary to common credence, we show that the fragility is not connected with mortgages and that connection with age and widowhood is not extant, but it is confirmed only in the presence of housing.

Our analyses, which is preliminary to further investigations, is relevant for markets and intermediaries (e.g. financial advisors) and highlight the need for normative models for household portfolio selection to drive realistic choices in consideration of the housing decisions and the need to hedge its riskiness.

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