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Can Internet banking affect households' participation in financial market and financial awareness?

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Summary

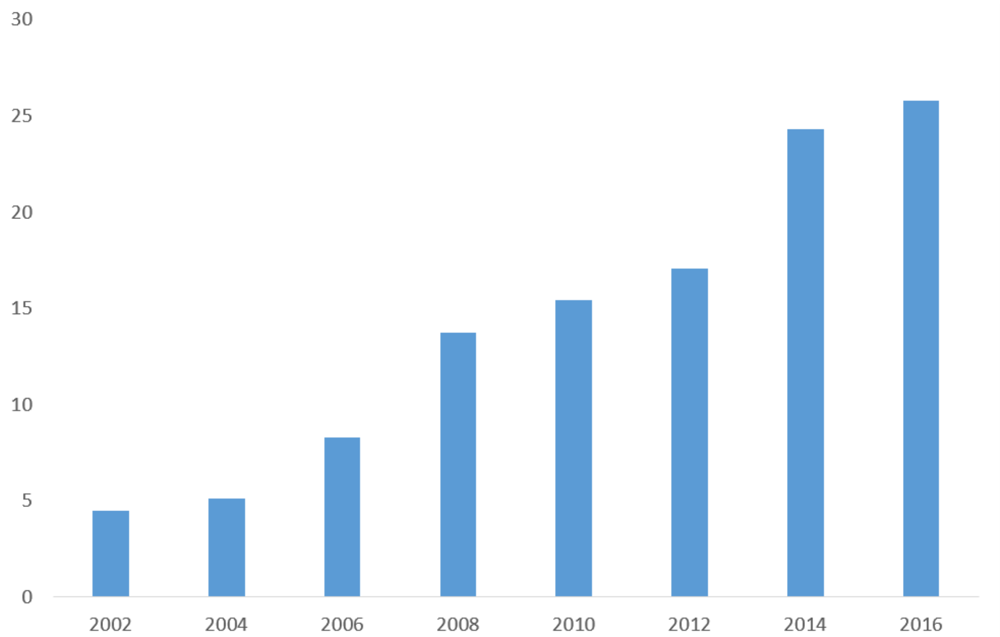
This note evaluates whether the adoption of Internet banking affects households' participation in financial markets and financial awareness. These are relevant and timely questions as digitalization process, in act by almost two decades, has dramatically accelerated during the Covid-19 crisis, when households could access many services only through online platforms. Exploiting Italian data from banks' supervisory reports merged with household survey information, we show that the adoption of Internet banking induces households to invest in financial markets and, in particular, to detain short-term assets with a low risk/return profile. The adoption of Internet banking also leads, over time, to a higher understanding of basic financial concepts.

We are in a digital era. New Internet-based technologies allowed for a massive increase in the speed and breadth of transactions and communication (Goldstein et al, 2019). Conventional ways of conducting businesses, selling and buying products, and exchanging knowledge are complemented by innovative digital approaches. The digitalization process, in act by almost two decades, has dramatically accelerated during the Covid-19 crisis, when households could access many services only through online platforms. In recent years, banks have made great effort in developing simple and appealing websites and easy-to-use mobile apps, which offer clients both a direct access to banking services and more information on the services themselves. Customers have also increased their demand for Internet banking wishing to lower trading, search, and transportation costs associated with financial investments.

In a recent paper (Michelangeli and Viviano, 2021), we empirically evaluate whether the availability of Internet banking for trading and managing bank accounts affects households' choice to participate into financial markets and their awareness about financial concepts. These are relevant and timely questions as the adoption of Internet banking has increased due to the Covid-19 crisis (Bank of Italy, 2021).

We focus on Italy, which is a relevant case study. Indeed, this country experienced an expansion in the use of Internet banking over the past 15 years, from around 4 per cent of Italian households at the beginning of the 2000s to about 25 per cent in 2016 (Figure 1). This trend has been favoured by the development of the broadband network, intensified after 2010.

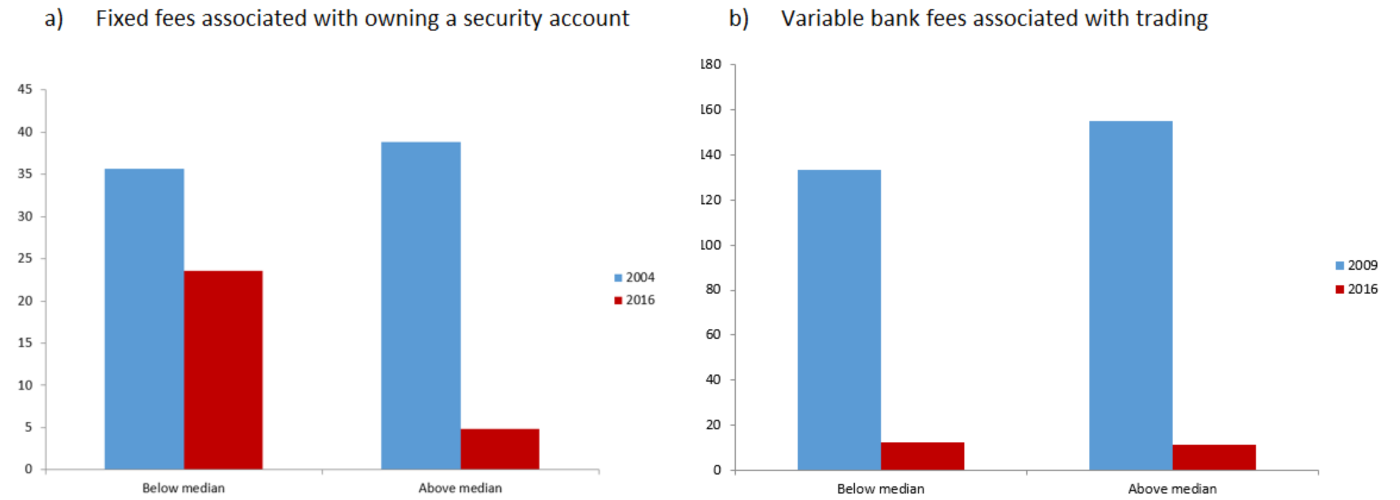
Figure 1: Share of households with Internet banking by year (percentages)



Source: Survey on Household Income and Wealth (SHIW), Bank of Italy.

The main channel through which the diffusion of Internet services could affect portfolio choices is the decrease in both one-off and ongoing costs (Vissing-Jorgensen, 2002; Goldfarb & Tucker, 2017; Gomes, 2020), as the returns of a given investment are the same irrespective of whether the household buys it at a physical branch or through an online platform or app. Aggregate evidence shows that since the beginning of 2000s Italian banks have reduced both the fixed fees for opening a security account and the variable trading fees. In both cases, the reduction was more intense for banks with a share of Internet banking connections higher than the median (Figure 2). As Internet banking allowed banks to rationalize their supply of consultancy and financial services, these lower costs are likely to be passed-through to their clients.

Figure 2: Average fixed and variable fees (mean, euro)



Source: Supervisory reports.

Furthermore, for a household with Internet banking it may be easier to access its bank account and change its investment composition over time: this flexibility is taken into account upon adopting the digital technology. A survey conducted in 2018 on 2,000 English adults found that, as people switch to mobile and online banking, the average weekly time spent in the physical branch has decreased by 40 minutes in the last decade. It has also been computed that Internet banking saves around 21 minutes each week for the average person and could be classified as the top best modern convenience, followed by email, microwaves, online clothes shopping, etc. (The London Economic, 2018).

Empirically, it is extremely difficult to obtain an estimate of the effects of Internet banking on portfolio choices, as they are very likely to be jointly determined. To address issues related with identification, we exploit a unique household-bank dataset, obtained by merging the Bank of Italy Survey on Household Income and Wealth (SHIW) and bank data from Supervisory reports (SR). Our dataset contains information on the number of Internet connections for all financial intermediaries (available in the SR), on households portfolio choices and on households' use of Internet banking (available in the SHIW). In particular, the SHIW panel component allows us to relate the adoption of Internet banking to changes in financial investments.

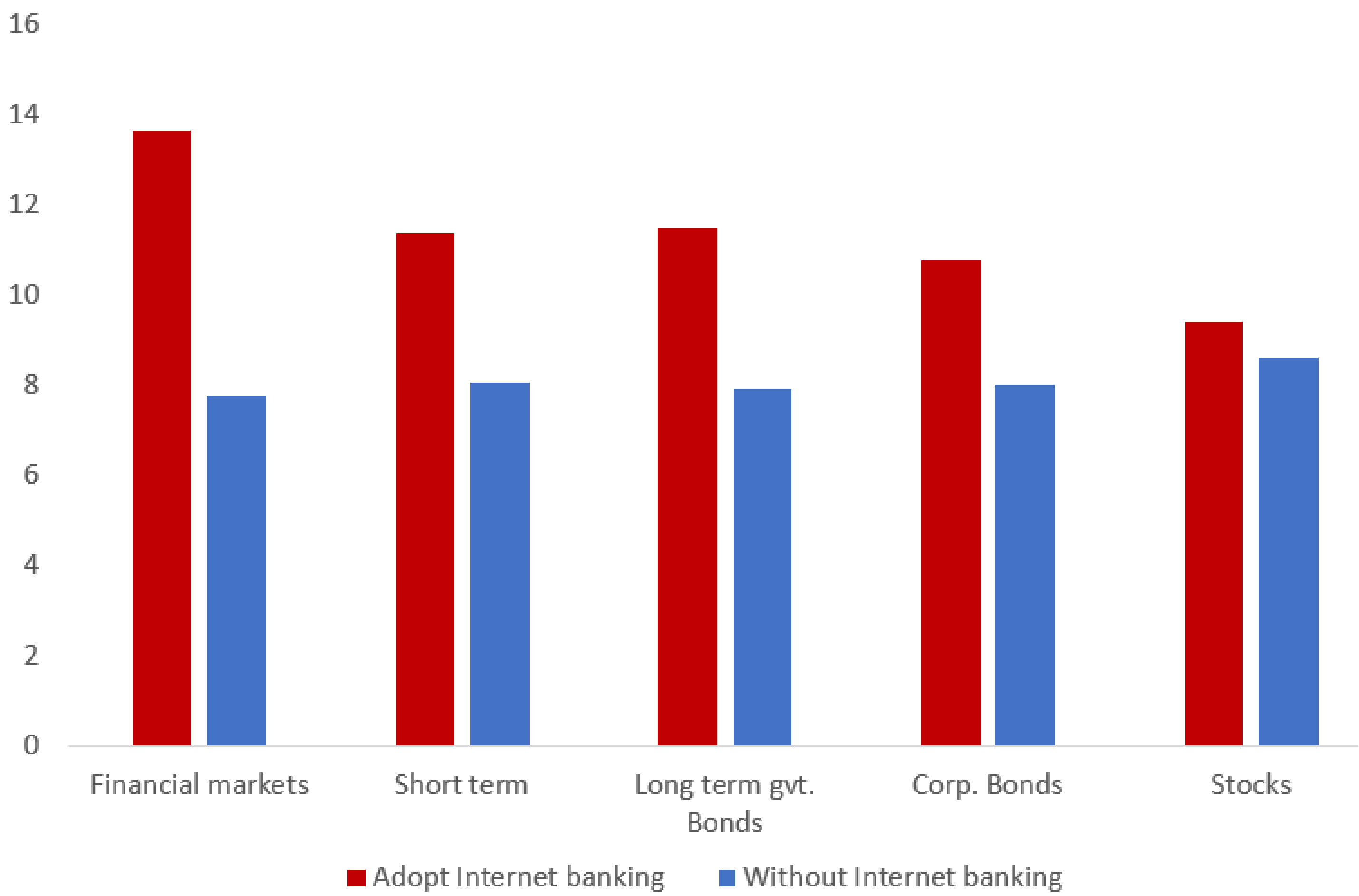
We find that the adoption of Internet banking drives participation in financial markets, i.e. households that start using Internet banking also begin to hold at least one financial asset different from deposits. Results are confirmed using both Ordinary least squares (OLS, Figure 3) and Instrumental variable (IV) methods, where the instrument is constructed using a methodology similar to Greenstone et al. (2020). The impact on short-term assets, typically characterised by a low risk/return profile, is positive and sizeable. The effect on other risky assets, like corporate bonds and stocks, is less precise across OLS and IV, but positive. With respect to long-term government bonds, OLS and IV provide estimates with different sign, suggesting that the impact of the adoption of Internet banking is less robust.

We find that households with less than two banks and living in small cities are those that more likely benefit from using Internet banking and choose to enter into financial markets after its adoption. This result suggests that the costs of accessing banking services and, more in general transaction costs, are more important for households that have limited access to bank branches (e.g. they are served only by one bank) and/or live in small cities, where the density of bank branches and the number of financial experts are presumably lower. For such households, transportation and search costs are very likely higher than for other ones, who can benefit from higher proximity and interaction with more financial intermediaries. Our results on the heterogeneity in household income, financial assets, and wealth indicate that the effects of the adoption of Internet banking are higher among households with less financial resources and suggest that a reduction in participation costs could contribute to households' choices over financial market participation.

These results have important policy implications. Indeed to increase participation in financial markets, policies aimed at decreasing the initial cost of participation (annual account fee) could be coupled with policies aimed at reducing the transaction costs, such as those related to information about financial opportunities and easiness of making and tracking investments and expenses.

We also show that the adoption of Internet banking drives over time a higher household knowledge about key financial concepts. This result is in line with the hypothesis that an easier access to information can increase awareness not only about financial opportunities, but also about some basic financial concepts that are potentially useful for both financial investments and other choices of the everyday life.

Figure 3: Entry into financial markets (percentages of households)



Source: SHIW. The estimates control for socio-demographic characteristics, province, year and bank of the household.

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Valentina Michelangeli works as an Economist at the Directorate General for Economics, Statistics and Research of the Bank of Italy. She is currently the Deputy Coordinator of the Bank of Italy Seminar Committee. Before joining the Bank of Italy, she worked as Senior Analyst at the Congressional Budget Office, in Washington DC, focusing on the macroeconomic implications of fiscal policy reforms. Her main research interests lie in the fields of household finance and financial stability. Her works include analyses of household consumption, mortgages, portfolio choices, households' and firms' financial vulnerability. She has published, among others, in the American Economic Journal: Macroeconomics, Macroeconomic Dynamics, and Economics Letters.

Eliana Viviano is Head of the Household and Labour Market Division at the Economics and Research Department of the Bank of Italy. She has published both micro and macro papers on various labor market issues, such as labor market reforms, determinants of wage dynamics, methodological aspects related to the estimation of unemployment and employment rates, the connection between product market liberalization and employment growth.

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