Life insurance investment and stock market participation in Europe

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ABSTRACT

In most European countries life insurance has played a key role in household portfolios, to the extent that it has often been the first asset ever purchased. In this paper we use life history data from a host of European countries to investigate the role of life insurance investment in shaping individuals' attitudes towards participation in stocks and mutual funds. We show that individuals who purchased a life insurance policy are more likely to invest in stocks and mutual funds later. On the one hand, these findings support the notion that life insurance policies play an educational role in financial investment. On the other hand, they are also consistent with behavioural models where economic agents are first concerned with avoiding unacceptable adverse scenarios by purchasing low risk investments, such as life insurance policies, and then invest in riskier assets, such as stocks and mutual funds, to obtain higher economic returns.

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1. Introduction

Life history data on 50+ Europeans reveal that quite often the first form of financial investment is a life insurance policy. This pattern was first highlighted in Cavapozzi, Fiume, Garrouste and Weber (2011), who also showed that the median age of entry into financial markets is heavily affected by the development of the life insurance industry.

Very few life insurance policies are pure insurance instruments that cover the risk of premature death by the policy holder. Most, instead, have an important savings component, that increases over time and is paid back irrespective of the death of the policyholder. This savings component is invested by the insurance company – but the policy holder is normally guaranteed a minimum return. In most countries, life insurance policies can (or could until a few years ago) also act as tax shelters (insurance premiums could be deducted from taxable income up to some limit). For these reasons, and also because of aggressive door-to-door marketing strategies, life-insurance policies are often purchased by individuals who are liable to income tax, have little prior knowledge of and confidence in financial markets.

Life insurance policies are associated with high costs and commissions (that partly offset the value of tax exemptions) but turn out to be attractive to certain investors for specific reasons. For instance, they normally are not counted in the estate of a deceased, so they can be used as a device to increase testamentary freedom. Also, they cannot be seized by creditors in the case of bankruptcy, and this makes them potentially interesting to the self-employed.

Pure life insurance policies are relatively common in association with the purchase of bulky items, such as a car or, more frequently, a dwelling, particularly if a loan or mortgage contract is involved. These arrangements are aimed at protecting the mortgage repayment against the risk of premature death of mortgagor and might be required by the borrower. However, the data we use in this paper reveal that large fractions of young individuals who are not self-employed bought a life insurance policy at a time when they did not purchase their home.

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The evidence we present in this paper shows that individuals who purchased a life-insurance policy in a host of European countries were more likely to invest at a later stage also in the stock market, directly (stocks and shares) or indirectly (mutual funds), compared to individuals who did not. We use data drawn from SHARELIFE, the third wave of SHARE (Survey of Health, Ageing and Retirement in Europe), which collects life-history information on respondents who already participated in previous waves. SHARELIFE turns out to be a valuable survey for our analysis since it conveys unique information about the events occurred during the whole life of respondents with respect to a variety of dimensions, such as relationships, children, health, employment, housing and financial investments. More specifically, SHARELIFE asks respondents whether they have ever invested in stocks, mutual funds, retirement accounts and life insurance policies during their life. Those who have invested are asked about the year in which the first investment in each type of asset occurred. Our analysis will focus on the relationship between previous investments in life insurance policies and the participation in stocks and mutual funds at later ages.

The purchase of life insurance policies may be associated with an increased propensity to invest in stocks and mutual funds later in life if life insurance policies play the role of a financial education device, in so far as they are often the first form of managed savings an individual is made aware of – either by banks or insurance agents. Investments in life insurance policies might then have been the first occasion to familiarize with basic concepts related to financial investments, such as transaction costs or returns calculation. This way, purchasing a life insurance policy enhances the human capital of individuals and lowers the information costs associated with understanding basic financial instruments. There is a growing body of literature (including Lusardi & Mitchell, 2007; Jappelli & Padula, 2011) stressing the importance of financial literacy in shaping household financial investment decisions. Our paper suggests a novel way in which European households may have gained financial literacy over the half century after World War II.

Alternative explanations of the pattern highlighted in this paper can be found in behavioural finance literature. For instance, Shefrin and Statman (2000, p. 127) develop a behavioural portfolio theory model that produces a two-layer portfolio: "the low aspiration layer is designed to avoid poverty while the high aspiration layer is designed for a shot at riches". In our analysis, the low aspiration layer could be associated to life insurance investment, while the high aspiration would of course be associated to stock market participation. A life-cycle model with bounded rationality may also produce similar predictions: for Binswanger (2011) a feasibility goal approach leads to the optimal portfolio strategy of first investing in bonds (low risk assets for the worst case scenario), and later in life in stocks (risky assets for the normal case scenario). In this context, life-insurance may prove the natural vehicle for worst-case scenario investment.

Life insurance policies (that normally require investing a given sum over a number of years) and individual retirement accounts share many features. First of all, both can be used as a commitment device by individuals who have problems with planning over time (because they exhibit hyperbolic discounting, Laibson, 1997, or temptation preferences, Gul & Pesendorfer, 2004). Secondly, they are managed savings instruments where individuals enjoy the benefits of diversification in exchange for fees. And thirdly, they are or were tax-favoured financial instruments – typically, tax exemptions once granted to life insurance policies have been shifted over recent years to individual retirement accounts. This suggests that we should consider treating them as close substitutes, and repeat the analysis of first entry in stocks and mutual funds conditioning on prior investment in either life insurance or individual retirement accounts. It is reassuring to find out that the key findings of this paper are robust to broadening the definition of life-insurance policies to include individual retirement accounts.

There are several common factors, such as education, health, household composition and lifetime resources, driving both the decision of purchasing a life insurance policy at a given stage of an individual's life cycle and the composition of her financial portfolio in the following years. Some of these factors (e.g. education and to some extent lifetime resources) can be considered time-invariant and related to the early life conditions; others might exhibit considerable lifetime variation (e.g. health and household composition). In addition, macroeconomic factors such as rates of returns on stocks, extreme business-cycle episodes, the development of financial markets and country-level legislation about tax treatment of financial assets are expected to be strong determinants of individuals' propensity to undertake financial investments. Failing to control for such factors might produce misleading empirical evidence of the relationships of interest. To this end, our econometric specifications will combine an extensive use of the retrospective individual and household level information in SHARELIFE data with additional country- and time-varying macroeconomic indicators.

The paper is organized as follows. In Section 2 we provide a brief description of the data and display prima facie evidence on the importance of life insurance investment for portfolio decisions by European households. Section 3 describes our estimation strategy to model the hazard of first investing in stocks and mutual funds. Section 4 explains how the data have been rearranged into a panel to allow estimation of the discrete hazard model. Section 5 discusses and interprets estimation results. In Section 6 we draw our conclusions.

2. Prima facie evidence

The data set contains information on when (if ever) respondents first invested in a life insurance policy, in stocks or mutual funds and in individual retirement accounts. It also contains family and work history as well as residential mobility information, so we are for instance able to say when the respondents bought their homes, and whether they did so by taking up a mortgage. The data also include information on the parental home (or other place