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HOW DO HOUSEHOLDS ALLOCATE THEIR ASSETS? STYLISTED FACTS FROM THE EUROSYSTEM HOUSEHOLD FINANCE AND CONSUMPTION SURVEY

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**HOUSEHOLD FINANCE AND
CONSUMPTION NETWORK**

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Household Finance and Consumption Network

This paper contains research conducted within the Household Finance and Consumption Network (HFCN). The HFCN consists of survey specialists, statisticians and economists from the ECB, the national central banks of the Eurosystem and a number of national statistical institutes.

The HFCN is chaired by Gabriel Fagan (ECB) and Carlos Sánchez Muñoz (ECB). Michael Haliassos (Goethe University Frankfurt), Tullio Jappelli (University of Naples Federico II), Arthur Kennickell (Federal Reserve Board) and Peter Tufano (University of Oxford) act as external consultants, and Sébastien Pérez Duarte (ECB) and Jiri Slacalek (ECB) as Secretaries.

The HFCN collects household-level data on households' finances and consumption in the euro area through a harmonised survey. The HFCN aims at studying in depth the micro-level structural information on euro area households' assets and liabilities. The objectives of the network are:

1) understanding economic behaviour of individual households, developments in aggregate variables and the interactions between the two; 2) evaluating the impact of shocks, policies and institutional changes on household portfolios and other variables; 3) understanding the implications of heterogeneity for aggregate variables; 4) estimating choices of different households and their reaction to economic shocks; 5) building and calibrating realistic economic models incorporating heterogeneous agents; 6) gaining insights into issues such as monetary policy transmission and financial stability.

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The paper is released in order to make the results of HFCN research generally available, in preliminary form, to encourage comments and suggestions prior to final publication. The views expressed in the paper are the author's own and do not necessarily reflect those of the ESCB.

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Abstract

Using the first wave of the Eurosystem Household Finance and Consumption Survey (HFCS), a large micro-level dataset on households' balance sheets in 15 euro area countries, this paper explores how households allocate their assets. We derive stylised facts on asset participation as well as levels of asset holdings and investigate the systematic relationships between household characteristics and asset holding patterns. Real assets make up the bulk of total assets. Whereas ownership of the main residence varies strongly between countries, the value of the main residence tends to be the major asset for homeowners and represents a significant part of total assets in all countries. While almost all households hold safe financial assets, a low share of households holds risky assets. The ownership rates of all asset categories generally increase with wealth (and income). The significance of inheritances for home ownership and holding of other real estate is remarkable. We tentatively link differences in asset holding patterns across countries to differences in institutions, such as mortgage market institutions and house price-to-rent ratios.

Keywords: Household financial decisions, individual portfolio choice, real and financial assets, cross-country comparisons

JEL Classification: D1, D3

Non-technical summary

This paper provides a set of stylised facts on the asset composition of households in the euro area. It uses the results from the first wave of the Eurosystem Household Finance and Consumption Survey (HFCS), carried out between end-2008 and mid-2011, and covering household level information on wealth, debt, income and consumption, from around 62000 households, from 15 euro area countries.

Although knowledge about asset holdings of households is interesting in its own right, understanding the reasons why households decide to hold certain assets (and the respective amounts) are also important for policy-makers. Asset ownership is the main vehicle for households to transform current income into future consumption. Interest rate changes caused by monetary policy affect both the value of assets and this transformation process. Monetary policy-makers are interested, among other things, in the cross-sectional effects of policy interventions. This might allow them to better understand the transmission of monetary policy.

Stylised facts are derived for asset participation (i.e. why households decide to own a particular asset or not) as well as levels of asset holdings (i.e. the value of the asset they own). The systematic relationship between household characteristics and asset holding patterns is investigated using probit and tobit regressions. These regressions allow us to uncover the determinants which are important for the asset holding decisions of households. Since the values of financial and real assets, might change substantially over time, especially during the financial and economic crisis during which the survey was carried out, we focus on more structural determinants rather than conjunctural ones.

The heterogeneity in wealth levels of typical households across euro area countries is sizeable. Also the heterogeneity within countries is very large across households. We find that the following stylised facts form a good description of household financial positions. First, wealthier households are more likely to own their main residence (i.e. the dwelling they live in), other real estate, risky assets (such as stocks and bonds) and are more likely to own a private business. Although this result is not surprising, it points to the direct relationship between diversity of asset holdings and the level of wealth. Second, inheritances are positively related to owning the main residence and other real estate. These effects are quite sizeable, pointing towards a significant degree of passing down of houses and other real estate across generations in the euro area. Third, couples with children are more likely to own a house than singles. Fourth, educational attainment of the head of the household is positively related to the probability of owning risky assets. This result confirms the role of education for the portfolio choice of households. It is also suggestive of the possible role of financial education. Fifth, single households are more likely to hold (and have higher values) of risky assets. Single households do not have to 'cover' for the income risk of other household members, and can therefore take on higher risks. Sixth, there is little systematic difference between the employed and the unemployed in the asset portfolio. This is likely to be explained by unemployment being considered a transitory and unexpected period in life. Given a quasi-universal unemployment insurance in the European Union, the lack of any link may be due to ability of the unemployed to survive the unemployment spell without having to liquidate (at least partially) the assets in question.

This paper also attempts to identify institutional sources that are behind the differences in the estimated effects of the demographic variables on asset holdings. Many environmental and institutional factors (culture, history, welfare state, housing and credit markets, financial institutions, etc.) are likely to affect wealth accumulation and portfolio choices of households so that any conclusion can only be tentative. One of the main striking differences across euro area countries is the large heterogeneity in the share of households that owns the main residence. We find that the cross-country heterogeneity in the correlations between ownership and various demographic variables may be linked to cross-country differences in terms of price-to-rent ratios and mortgages markets. Households that have older household heads are generally more likely to own their home. However, this age-related effect is heterogeneous across countries. We find a negative cross-country correlation between the price-to-rent ratios and the age effect of ownership. This correlation with the age variable indicates that the life-cycle profile of housing wealth (main residence) in a country is related to the housing market conditions, and in particular to housing prices. We also find cross-country differences in the correlation between the ownership of other real estate and income that are related to the price-to-rent ratios. We further find that the impact of net wealth on ownership of the main residence is less important in countries where households use contracted mortgages to finance other purposes, which could reflect differences in credit constraints faced by households across countries. Finally, the results show that households with higher wealth tend to hold more risky assets. The effect of wealth is, however, less strong in countries with higher internet access. This is consistent with the idea that better access to information lowers the entry and transaction costs, so that households' own resources become less important for holding risky financial assets.

1 Introduction

How do households choose to allocate their wealth across available assets? Is there a systematic relationship between underlying household characteristics and asset holding patterns across countries? This paper uses a large dataset containing comparable household micro-data from 15 euro area countries to shed light on these research- and policy-relevant questions.

Recent findings in the household finance literature have emphasised that asset holdings are heterogeneous across households and across countries (See Guiso et al., 2002, 2003; Christelis et al., 2013 and Sierminska and Doorley, 2012). Unlike the existing literature, this paper documents differences in asset participation and holdings across a broad range of assets for 15 euro area countries in a dataset consisting of ex ante comparable country surveys representative of the respective total population.

Our analysis is based on the Eurosystem Household Finance and Consumption Survey (HFCN, 2013a), which provides detailed household-level information on wealth, assets and debt holding, income, as well as on household composition for 15 euro area countries. We study the determinants of both asset holdings (extensive margin) and the amount invested in each asset by households (intensive margin). The main components of household wealth considered are: housing assets (decomposed into household main residence and other real estate), risky financial assets (mutual funds, bonds and shares), and safe financial assets (defined as deposits, life insurance contracts, and voluntary private pension plans) and business wealth (defined as self-employment participation).

We first document participation rates and conditional holdings in these asset categories across wealth quintiles and across euro area countries. We confirm the standard finding that wealthier households tend to participate in a wider range of asset categories and to hold larger amounts conditional on participation. However, we uncover substantial differences across countries, in particular for housing wealth.

In a second step, we analyse the household level determinants of asset participation and of the amount invested by estimating, respectively, probit and tobit models. We find considerable overlap in the factors that determine asset participation choices and amounts invested. We find that a number of household characteristics are robust predictors of household portfolio choices in the sense that, in a majority of countries, their estimated marginal effects are statistically significant and have the same sign, even though their estimated sizes may differ. This not only points to the importance of such factors but also to the conclusion that the variation in institutional, policy, and other environmental factors within the euro area does not seem to reverse or render insignificant the importance of such underlying household characteristics.

Nevertheless, there remain differences across countries in the measured effects of demographic variables. Identifying the potential sources explaining those differences is not an easy task. Many factors, including culture, history, welfare state, housing and credit markets, financial institutions, are likely to affect the wealth accumulation process and portfolio choices of households. To this end, we examine the correlations between the estimated marginal effects from the estimations on key socio-demographic explanatory variables and se-

lected institutional factors. We find some evidence that suggests the strength of the influence of the socio-demographic factors on the choice of holding real and risky financial assets to be correlated with the institutional framework in a given country.

A brief literature review (section II) introduces the topic of household portfolio choices and the issues that have evolved in this field. After presenting the data and the first descriptive analysis of assets composition in section III, we analyse extensive margins using probit regressions for different asset categories and countries. Furthermore, we present results on the intensive margins using tobit regressions (both in section IV). Section V investigates the role of institutions as factors altering the impact of certain household characteristics on portfolio choice. Section VI concludes the paper.

2 International differences in asset holding behaviour

2.1 Existing research

The first cross-country comparisons of wealth and investment behaviour at the household level on a relatively large scale were provided by Guiso et al. (2002, 2003). They find substantial differences in stock market participation between major European countries (France, Germany, Italy, the Netherlands, Sweden, and the UK), and the US. They also emphasise some regular empirical facts, such as the positive correlation of stockholding with financial wealth and with education. More recently, Christelis et al. (2013) use SHARE, ELSA and HRS microdata¹ to document international differences in ownership and holdings of stocks, private businesses, homes, and mortgages among households with age of 50+ in thirteen countries (the US, the UK and eleven continental European countries). They find that households with given characteristics have different probabilities of participating in a given asset category both across the Atlantic and within Europe. US households tend to invest more in stocks and less in homes, and tend to have larger mortgages than European households with similar characteristics. Based on counterfactual analysis, they show that these differences in ownership and amounts are primarily linked to differences in economic environments (i.e. institutional factors) rather than related to population characteristics. Furthermore, reported differences seem to be even more pronounced among European countries than among US regions, suggesting the potential for more harmonisation. From the point of view of this paper, their finding suggests a higher potential for testing the relevance of each household characteristic across euro area countries than across US regions and more importance of robust effects of any given factor across euro area countries.

Sierminska and Doorley (2012) extend the Christelis et al. (2013) approach in the direction of studying survey data that is representative of the entire population. They use the ex post harmonised dataset from the Luxembourg Wealth Study (LWS) to analyse household portfolios for the whole population in 5 countries (US, Germany, Italy, Luxembourg and Spain). Concerning cross-country differences in asset participation, their results confirm the limited role of demographic characteristics for households with age of 50+; and they also reveal a

¹ SHARE is one major survey with standardised information on household behaviour, including wealth and portfolio composition. It also includes the ELSA survey for England and HRS data for the US. As it focuses on retirement and ageing issues, it includes only individuals over 50 years and does not provide any information for the rest of the population.

stronger role of observable demographic characteristics for younger households. They find that the household characteristics helping to explain the amount of assets held change along the wealth distribution. It seems that they do better in explaining the existing cross-country differences in the middle than in the tails of the wealth distribution. All in all, they conclude that institutional and non-observed characteristics are more likely to influence cross-country differences for old and wealthy households.

2.2 *Asset holdings in the euro area*

Our data is taken from the Eurosystem HFCS.² The net sample of the survey includes 62,521 households from Belgium (BE), Germany (DE), Greece (GR), Spain (ES), France (FR), Italy (IT), Cyprus (CY), Luxembourg (LU), Malta (MT), Netherlands (NL), Austria (AT), Portugal (PT), Slovenia (SI), Slovakia (SK), and Finland (FI).³ The survey was conducted in each country separately under common guidelines. Households were interviewed in 2010/2011 with the exception of France (2009/2010), Spain (2008/2009) and Greece (2009).⁴ The reference period for most of the information on wealth is the time of the interview. In comparing especially the values of the asset holdings across countries the differences in the reference years have to be kept in mind. Notwithstanding this, our focus is more on structural determinants of asset holdings, which should be less fluctuating over time. The HFCS contains detailed information on asset holdings. We distinguish the following asset categories:

- Household main residence (HMR): owner occupied housing
- Other real estate (ORE): real estate other than the main residence (including holiday homes/apartments, commercially used real estates, and land)
- Self-employed businesses (BUS): market value of all business assets including property and intangibles minus value of liabilities (net value concept)
- Safe financial assets (SAFE): comprising deposits (sight and savings accounts), life insurance contracts, and voluntary private pension plans
- Risky financial assets⁵ (RISKY): comprising mutual funds, bonds (including public bonds for which the degree of risk is lower), and shares

In the next sections, we document households' wealth composition for each of the 15 euro area countries. More specifically, for each of the outlined asset categories, we provide the participation rates (extensive margin) and the conditional median values (intensive margin) and explore their variations along the wealth distribution.⁶

² Here, we only briefly summarise the most basic information on the survey. For more detail see HFCN (2013a,b).

³ The remaining euro area countries Estonia, Ireland and Latvia did not take part in the first wave of the HFCS.

⁴ Although differences in the valuation of real estate are acknowledged, internal calculations by the ECB adjusting for price variations show only small variation in the results. Hence in this analysis, we refrain from any adjustment of the collected data.

⁵ The separation of safe and risky financial assets is along the lines laid out in Guiso et al. (1996) who also include long-term government bonds as well as corporate bonds in the category of risky financial assets.

⁶ The estimations of the results below are based on all 5 implicates of the multiple imputed data provided in the Eurosystem HFCS. That means that the estimations are done on each implicate separately and then combined using Rubin's rule. All the estimations - including probit and tobit models - are done using the final household weights in order to take the survey design of the underlying data into account. For the calculation of the

3 Descriptive results

3.1 *The distribution of net wealth in the euro area*

Before looking at the household wealth composition, Table 1 provides an overview of the distribution of household net wealth within and across countries. Net wealth values differ substantially within and across euro area countries. This fact holds for all parts of the wealth distribution. For example, the households' median net wealth is around €109,000 for the euro area as a whole and it ranges from roughly €51,000 in Germany to €398,000 in Luxembourg.

Table 1: Descriptive statistics of net wealth (EUR thousands)

	Observations	Median	Mean	P5	P95
Euro area	62,521	109.2	230.8	0.0	762.1
Austria	2,380	76.4	265.0	-0.2	934.6
Belgium	2,327	206.2	338.6	0.3	1,073.4
Cyprus	1,237	266.9	670.9	0.0	2,411.9
Germany	3,565	51.4	195.2	-1.6	661.2
Spain	6,197	182.7	291.4	0.2	878.5
Finland	10,989	85.8	161.5	-8.4	553.6
France	15,006	115.8	233.4	0.4	775.4
Greece	2,971	101.9	147.8	0.0	469.3
Italy	7,951	173.5	275.2	1.0	855.0
Luxembourg	950	397.8	710.1	0.1	2,023.9
Malta	843	215.9	366.0	4.0	1,049.4
Netherlands	1,301	103.6	170.2	-34.6	581.2
Portugal	4,404	75.2	152.9	0.1	482.4
Slovenia	343	100.7	148.7	0.3	434.5
Slovakia	2,057	61.2	79.7	1.5	207.4

Source: HFCS 2013. Estimates – apart from the number of observations – are given in thousands of euro.

Common across countries, the distribution of net wealth is very unequal and highly skewed to the right, as illustrated by the difference between the median and the mean values. This concentration of wealth at the top end of the wealth distribution is a well-documented fact (see for instance Davies and Shorrocks, 1999; Campbell, 2006) and also confirmed by our data across 15 euro area countries. In the euro area, 50% of households below or just at the median level hold only 12% of the net wealth, while the top decile holds 50% of net wealth.

3.2 *The composition of total assets*

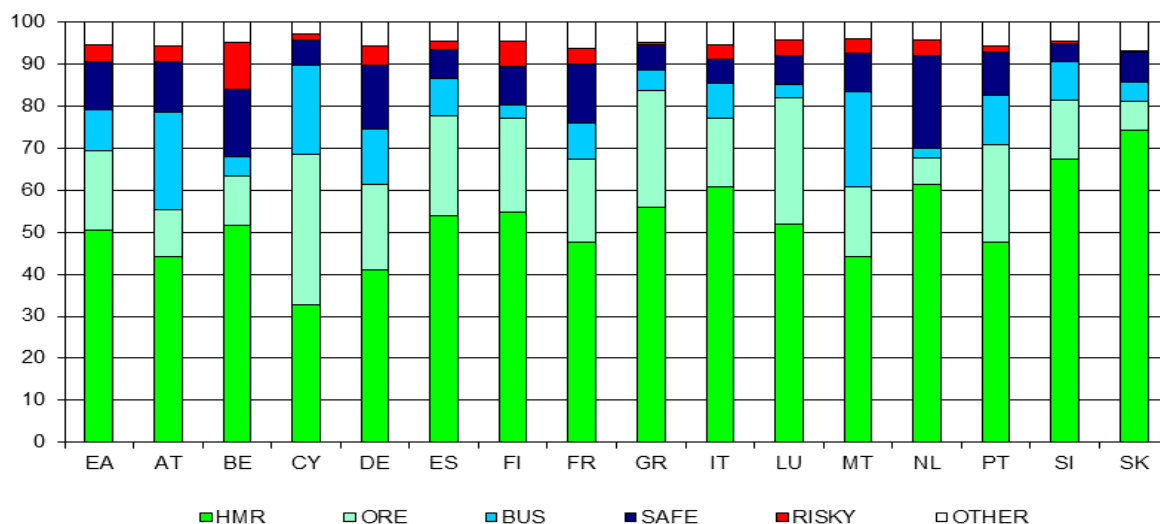
Household portfolios consist of real assets and financial assets. Taken all 15 countries together, the share of the household main residence in total gross assets is about 51%. This means that households in the euro area hold the majority of their wealth in the form of their main residence (see Figure 1).⁷ Country figures range from 41% in Germany to 61% in Italy and the Netherlands. All other asset categories account for substantially smaller shares of

standard errors in the multivariate analysis a bootstrap procedure using replicate weights, which are also provided in the HFCS, is applied. Standard errors presented below are based on the first one hundred replicate weights in the dataset.

⁷ The figures reported here are calculated by dividing the total value of all assets of a specific type by the total gross assets. This is a different approach compared to calculating the share of an asset type in the portfolio of each household and then averaging across the shares.

gross wealth. The share of risky financial assets (4%), i.e. the least important category in average terms, ranges from about 1% for Cyprus and Slovenia to 11% for Belgium. There is also considerable cross-country variation, e.g. while, in the Netherlands, 22% of gross wealth is held in safe financial assets this asset category only represents 6% and 4% of gross wealth in Italy and Slovenia.⁸

Figure 1: Shares of asset categories relative to gross wealth



Source: HFCS 2013.

Notes: HMR: Household main residence, ORE: other real estate, BUS: Self-employment business, SAFE: Safe financial assets, RISKY: Risky financial assets, OTHER: other real assets (e.g. vehicles) and other financial assets (e.g. money owed to the households, money held in managed accounts).

¹ Finland collects information on BUS only in a summarizing way, estimates are not comparable.

These differences in the aggregate wealth composition reflect differences both in the extensive margin (the percentage of households owning a particular asset) and in the intensive margin (the value of this particular asset held by the household).⁹ Overall, positive participation rates are observed for each of the asset categories in each of the 15 euro area countries. The majority of households own their household main residence (notable exceptions are Austria and Germany) whereas other real estate, business and risky assets are held only by a comparatively small share of the population. The highest conditional median values are generally found in real assets especially in the form of real estate (household main residence as well as other real estate) whilst the conditional median value of financial assets is comparatively small. In terms of cross-country variation, the participation rate of HMR ranges from 44% in Germany to 83% in Spain, and the conditional median value ranges from €90,000 in Portugal to €500,000 in Luxembourg. Despite being substantially less prevalent and of lower value than HMR, both participation and the level of risky assets display a huge level of

⁸ For safe assets a large part of the heterogeneity may be due to the different role of public pension schemes: where the latter are predominant, voluntary private pension plans are less relevant.

⁹ The figures for the extensive (participation rate) and intensive margin (conditional median) are given in the appendix (see Table A1.1a and A1.1b).

variation across countries as well. A more homogenous picture between countries is obtained for the other real estate assets. Other real estate assets seem to be somewhat more important in terms of participation in Southern euro area countries and Luxembourg, than in Northern euro area countries. It should be stressed that “other” real estate in the South does not necessarily mean real estate purchased for investment or recreational purposes after the HMR is secured. In many cases, it is inherited real estate, such as the deceased parents’ home in the village and is kept not so much because of its asset properties but more so in order to keep in touch with the circle of relatives.

In addition to these variations in the composition of household wealth across countries, differences in the composition are also observed along the wealth distribution within countries. In particular, the existing empirical literature shows that the portfolio breadth increases with wealth. We contribute to this literature by comparing the participation rates and median values of asset categories along the net wealth distribution for each of the 15 euro area countries. This confirms the larger variety of assets held as wealth increases and reveals moreover some interesting cross-country differences.

3.2.1. Real assets over the net wealth distribution

Real assets represent the predominant asset category, accounting for 85% of total gross assets on average (HFCS, 2013b). And among real assets, the HMR is the most important asset category. Table 2 shows the share of households owning their main residence broken down by quintiles of the net wealth distribution. As expected the percentage of households owning either their household main residence (Table 2) or other real estate (Table 3) increases with net wealth. For the HMR, the participation rate reaches more than 90% in the 5th net wealth quintile for every country. However, there are pronounced differences between countries at the lower half of the wealth distribution. Participation is already above 90% in the 2nd quintile in Spain; it stays below 10% in Austria and Germany and below 15% in France.

With regard to the HMR, the conditional medians shown in Table 2 reveal interesting patterns at the lower end of the net wealth distribution. Median values for the main residence are lower in the second than in the 1st net wealth quintile in Austria, Belgium, Germany, Finland, France, the Netherlands and Portugal. Apart from this irregularity, they always increase for larger quintiles in each country. A more homogenous picture between countries is obtained for other real estate. The conditional medians in Table 3 reveal that, for most countries, at the bottom of the net wealth distribution the values invested in other real estate are relatively low compared to the HMR¹⁰ and rise with net wealth. Low net wealth either signals limited gross asset values, in which case owning other real estate is unlikely to be a priority or high indebtedness (usually in the form of mortgages), in which case the household would be more likely to have a mortgage for an HMR rather than for other real estate.

¹⁰ Note that for some countries we find a similar decreasing pattern from the first to the second net wealth quintile as described for the HMR.

Table 2: Shares of households owning their main residence and conditional median values

	Participation rates over net wealth distribution (percentages)							Conditional median over net wealth distribution (EUR thousands)						
	Overall	Quintiles						Overall	Quintiles					
		1st	2nd	3rd	4th	5th	Top 5%		1st	2nd	3rd	4th	5th	Top 5%
Euro area	60.1	4.8	28.7	78.9	93.4	94.8	94.1	180.3	130.2	50.0	112.5	200.0	300.3	438.6
Austria	47.7	3.1	3.9	52.0	87.9	91.7	90.1	200.0	145.3	42.2	90.2	180.7	323.4	514.2
Belgium	69.6	2.7	60.0	94.8	96.1	95.0	92.8	250.0	146.0	129.8	200.0	278.8	350.0	423.6
Cyprus	76.7	19.3	81.4	94.7	92.7	96.0	98.6	240.3	103.0	139.9	208.0	312.1	414.0	500.0
Germany	44.2	3.8	6.7	39.4	79.0	92.3	91.8	168.0	90.0	20.0	77.8	150.0	252.0	400.0
Spain	82.7	30.6	92.6	96.6	96.9	96.9	96.9	180.3	67.3	114.3	180.3	240.2	332.4	420.7
Finland	69.2	22.5	36.7	91.5	96.8	98.3	98.7	127.8	90.5	77.7	92.2	139.0	218.1	306.8
France	55.3	1.2	13.4	77.5	91.1	93.2	93.7	193.8	126.1	102.4	128.0	200.1	301.0	368.5
Greece	72.4	6.5	73.9	92.8	95.0	94.4	93.8	100.0	48.0	50.0	91.5	134.1	180.0	200.0
Italy	68.7	2.3	54.1	93.2	97.2	97.0	97.3	200.0	16.3	80.0	150.0	240.0	400.0	700.0
Luxembourg	67.1	3.8	48.2	93.9	95.7	94.4	94.5	500.0	215.6	299.6	400.0	549.6	800.0	1,000.0
Malta	77.7	12.8	85.2	97.0	98.5	95.5	94.5	186.6	41.5	96.2	176.7	232.9	286.0	293.6
Netherlands	57.1	25.0	22.8	55.1	87.3	95.5	96.9	240.0	203.0	194.8	201.0	226.0	323.5	450.0
Portugal	71.5	12.4	66.6	89.2	94.5	94.9	92.5	90.0	61.4	37.5	70.5	109.5	175.0	200.0
Slovenia	81.8	23.7	92.6	97.9	98.8	98.2	95.9	110.9	23.5	51.4	92.5	156.0	196.0	222.9
Slovakia	89.9	52.7	98.7	99.6	99.0	99.5	98.5	55.9	22.2	38.5	52.2	75.0	114.5	200.5

Source: HFCS 2013.

Table 3: Shares of households owning other real estate and conditional median values

	Participation rates over net wealth distribution (percentages)							Conditional median over net wealth distribution (EUR thousands)						
	Overall	Quintiles						Overall	Quintiles					
		1st	2nd	3rd	4th	5th	Top 5%		1st	2nd	3rd	4th	5th	Top 5%
Euro area	23.8	2.3	8.7	20.2	28.2	59.8	78.3	100.0	42.2	15.5	39.9	70.3	200.0	422.6
Austria	13.4	1.4	1.9	9.2	18.2	36.6	50.5	94.0	68.4	11.7	35.0	64.9	178.8	321.8
Belgium	16.4	2.0	8.8	6.8	18.0	46.3	61.0	174.0	46.0	51.0	66.4	105.4	256.2	566.0
Cyprus	51.6	13.1	28.8	52.6	71.4	92.5	93.9	202.2	48.5	62.1	100.0	212.1	758.0	1,766.4
Germany	17.8	3.1	2.2	9.9	21.5	52.4	79.4	115.0	91.0	7.2	44.6	79.0	199.6	385.1
Spain	36.2	8.6	19.6	29.6	47.9	75.4	89.9	120.2	21.8	41.0	49.3	101.0	258.7	510.4
Finland	29.8	2.8	6.3	20.5	45.3	74.2	87.9	107.6	42.8	26.6	50.3	76.6	176.3	322.6
France¹	28.5	2.4	8.6	25.8	36.6	69.0	86.2	96.1	-	11.8	27.3	60.6	187.0	396.6
Greece	37.9	5.1	26.2	31.6	48.3	78.4	92.0	61.9	10.0	20.0	30.0	60.0	150.0	360.0
Italy	24.9	1.8	16.6	17.3	27.8	61.2	76.6	100.0	5.0	20.0	45.0	60.0	200.0	430.0
Luxembourg	28.2	5.1	23.8	17.2	24.7	70.4	86.6	300.0	205.2	141.8	170.8	238.2	742.0	1,641.8
Malta	31.4	4.5	14.5	23.7	44.8	69.5	65.2	120.1	15.8	27.2	55.2	95.2	236.1	531.0
Netherlands²	6.1	-	0.8	2.3	4.7	22.0	41.7	165.5	-	184.1	80.5	134.5	197.4	235.7
Portugal	27.1	3.5	15.1	21.9	31.2	64.1	91.6	53.5	4.1	8.8	16.9	41.9	137.8	405.4
Slovenia³	23.2	-	17.9	17.9	26.5	54.8	69.5	52.4	-	16.0	31.1	30.9	105.6	204.2
Slovakia	15.3	2.1	8.6	16.1	14.0	35.9	45.2	16.4	14.6	5.5	9.4	25.3	39.0	62.6

Source: HFCS 2013.

Notes: ¹ Missing values in France for owners of other real estate. ² No observation in the Netherlands in the first quintile for some implicates. ³ No observation in Slovenia in the first quintile for some implicates. Other real estate is defined as real estate other than the main residence. It includes holiday homes/apartments, commercially used real estates, and land.

Turning to business wealth, the participation rate also clearly increases with net wealth.¹¹ In particular, in the top 5% of the net wealth distribution almost 50% of the households in the euro area hold business wealth, whereas in the 1st four wealth quintiles ownership is restricted to a maximum of 10% of the households (only 2% of the households in the 1st quintile own a business). The pattern of ownership is relatively similar across countries with the ex-

¹¹ These non-reported results are available from the authors upon request.

ception of Cyprus, Finland,¹² Italy, and, to some degree, Spain, where ownership rates start to increase at a lower net wealth quintile than in other countries. The median values (see Table 4) generally increase with net wealth but display a very high degree of cross-country heterogeneity.¹³

Table 4: Shares of households owning business assets and conditional median values

	Participation rates over net wealth distribution (percentages)							Conditional median over net wealth distribution (EUR thousands)						
	Overall	Quintiles						Overall	Quintiles					
		1st	2nd	3rd	4th	5th	Top 5%		1st	2nd	3rd	4th	5th	Top 5%
Euro area	11.1	2.3	7.3	8.5	10.3	26.9	46.9	30.0	1.7	2.9	13.4	30.0	100.0	298.6
Austria	9.4	1.0	1.8	3.4	5.9	34.7	67.5	180.6	0.0	7.1	8.7	26.3	356.1	924.3
Belgium	6.6	0.4	3.2	4.7	7.5	17.1	27.8	50.0	6.9	13.5	15.4	50.0	123.4	475.6
Cyprus	19.5	4.1	6.3	17.4	20.5	49.5	77.7	98.8	2.8	23.0	33.2	97.0	475.9	2,036.6
Germany	9.1	1.4	4.9	8.8	7.8	22.7	50.7	19.4	4.8	1.6	4.8	20.0	100.0	294.0
Spain	14.2	5.7	5.9	9.3	16.7	33.7	50.9	50.8	5.1	17.2	29.0	30.8	140.0	355.8
Finland¹	13.8	3.8	6.3	13.9	18.6	26.6	37.2	0.9	0.7	0.8	0.9	0.8	1.1	15.8
France	8.9	1.0	4.7	6.4	7.2	25.3	42.5	53.1	2.4	5.1	24.5	40.7	130.3	302.0
Greece	9.8	2.5	7.4	7.8	11.0	20.4	22.3	36.2	8.6	15.8	16.6	33.5	100.0	200.0
Italy	18.0	6.7	16.8	12.5	18.1	36.1	52.9	15.0	0.0	2.5	20.0	15.0	80.0	160.0
Luxembourg	5.2	1.0	3.3	1.5	4.7	15.6	32.5	97.6	29.9	53.5	123.0	33.3	200.0	468.6
Malta²	11.5	-	2.2	4.5	9.3	41.2	73.5	136.5	-	13.0	28.4	26.5	300.6	928.7
Netherlands³	4.8	3.5	-	4.8	6.0	8.5	17.0	51.7	17.5	-	44.7	198.8	123.8	92.8
Portugal	7.7	0.2	2.5	4.7	6.6	24.2	35.4	47.1	4.4	5.5	27.5	18.7	92.5	250.0
Slovenia	11.6	1.7	7.0	7.1	9.6	33.5	79.2	25.5	5.0	3.9	16.3	6.8	140.1	103.6
Slovakia	10.7	5.7	5.9	7.9	9.0	25.2	39.8	4.6	0.2	0.9	1.4	1.0	30.7	89.6

Source: HFCS 2013.

Notes: ¹ Finland collects information on Business Assets only in a summary way, estimates are not comparable.

² No observation in Malta in the 1st quintile for some implicates. ³ No observation in the Netherlands in the 2nd quintile for some implicates.

3.2.2. Financial assets over the wealth distribution

By far the most commonly held assets are safe financial assets. These are held by almost every household, whether rich or poor (see Table 5): 93% of the households in the euro area in the lowest wealth quintile hold safe financial assets and this share increases to 99% for the highest wealth quintile.¹⁴ The financial instrument with the highest participation rate is deposits. The amounts held in deposits are nevertheless rather limited, even in the top of the wealth distribution.¹⁵ As expected, the picture for risky financial assets is very different (Table 6). Overall, only a few households hold such assets, which is an illustration of the “stock-market participation puzzle” commonly mentioned in the literature. For each country, this percentage increases with wealth. In the 5th net wealth quintile, it ranges between 8% (Slovakia) and 67% (Finland).

¹² Finland collects the information on business wealth only in an aggregate way and hence the estimates are not completely comparable.

¹³ For example, in the top 5% of the net wealth distribution, median values of business wealth range from about €16,000 in Finland, €93,000 in the Netherlands to €924,000 in Austria and over €2 million in Cyprus.

¹⁴ Detailed information on participation rates and median values over the wealth distribution is available from the authors upon request.

¹⁵ The top 5% show values ranging from €9,000 in Slovakia to €137,000 in the Netherlands; in the lowest wealth quintile for some countries (Austria, Germany, Finland, France, Portugal, Slovenia and Slovakia) the conditional median is even below €1,000.

Table 5: Shares of households owning safe financial asset and conditional median values

	Participation rates over net wealth distribution (percentages)							Conditional median over net wealth distribution (EUR thousands)						
	Overall	Quintiles						Overall	Quintiles					
		1st	2nd	3rd	4th	5th	Top 5%		1st	2nd	3rd	4th	5th	Top 5%
Euro area	96.7	92.8	96.5	96.3	98.4	99.4	99.7	9.2	1.1	8.7	9.5	15.0	37.9	61.1
Austria	99.4	98.6	99.8	99.5	99.9	98.9	99.4	11.9	1.0	8.2	18.7	20.7	50.6	59.8
Belgium	97.9	92.8	99.5	99.0	98.5	99.5	99.3	20.7	1.8	15.5	18.5	52.2	92.9	102.1
Cyprus	85.9	70.1	85.5	87.2	90.9	96.0	97.9	18.3	4.3	13.9	15.3	27.2	61.4	120.8
Germany	99.1	96.8	98.9	99.8	100.0	100.0	100.0	13.2	0.6	6.6	22.5	29.8	62.9	100.9
Spain	98.2	96.7	98.0	97.1	99.5	99.7	99.9	5.1	1.0	2.2	5.0	10.0	26.3	60.4
Finland	100.0	100.0	100.0	100.0	100.0	100.0	100.0	5.7	0.7	4.3	5.7	11.3	23.0	39.6
France	99.6	98.4	99.8	99.8	100.0	100.0	100.0	8.9	1.0	7.5	9.5	16.7	47.1	106.6
Greece	73.9	61.5	64.4	74.9	82.2	86.4	92.6	3.9	1.0	2.3	3.6	5.2	14.1	23.1
Italy	91.9	77.8	90.2	94.7	97.7	99.2	99.5	7.4	2.0	6.5	7.3	10.0	20.0	27.0
Luxembourg	98.4	94.8	98.6	99.9	100.0	98.5	98.7	23.1	2.9	22.4	22.2	40.4	79.4	99.2
Malta	96.9	90.6	96.9	97.2	100.0	99.6	100.0	17.7	7.9	10.2	16.8	30.4	39.5	61.6
Netherlands	97.3	92.9	98.8	97.7	97.9	99.1	99.5	30.4	2.7	18.7	55.9	50.1	97.3	137.4
Portugal	94.3	86.1	94.2	95.0	97.4	98.8	100.0	3.8	0.7	2.4	3.9	6.1	24.6	59.2
Slovenia	93.6	85.4	91.2	95.5	98.5	97.7	97.0	1.1	0.3	0.5	1.1	1.3	8.7	14.2
Slovakia	91.5	83.8	88.8	95.4	91.8	97.5	97.4	2.3	0.8	1.6	2.3	2.8	7.3	9.3

Source: HFCS 2013.

Table 6: Shares of households owning risky financial assets and conditional median values

	Participation rates over net wealth distribution (percentages)							Conditional median over net wealth distribution (EUR thousands)						
	Overall	Quintiles						Overall	Quintiles					
		1st	2nd	3rd	4th	5th	Top 5%		1st	2nd	3rd	4th	5th	Top 5%
Euro area	20.2	3.1	13.0	17.0	23.7	44.2	55.0	12.1	1.7	5.0	8.2	11.2	28.2	50.4
Austria	14.6	2.4	4.4	13.8	18.5	33.8	38.9	12.3	3.0	4.5	10.3	11.5	22.0	107.3
Belgium	30.7	4.8	18.6	25.7	38.8	65.7	72.8	20.1	4.0	5.0	6.8	19.8	75.0	363.2
Cyprus	36.3	18.1	24.3	35.3	41.7	62.4	77.6	2.0	0.2	1.5	0.9	2.2	6.6	13.9
Germany	23.0	3.5	9.0	27.1	28.0	47.5	55.7	12.1	1.7	3.0	7.8	12.5	30.0	49.7
Spain	14.0	1.8	5.1	9.3	17.8	36.2	48.6	12.0	5.8	8.5	7.6	7.6	19.1	56.0
Finland	38.7	14.6	29.7	36.1	45.7	67.4	81.7	3.7	0.5	2.2	2.2	3.8	12.8	33.6
France	21.7	3.0	10.9	19.1	27.9	47.5	63.8	8.1	1.0	2.3	4.1	7.3	20.5	47.3
Greece	4.0	0.4	1.1	1.6	3.9	12.8	22.8	7.3	1.9	0.7	4.9	4.9	10.0	30.8
Italy	19.8	1.0	11.1	14.4	28.6	44.0	53.6	22.4	4.0	13.0	15.0	20.0	35.0	60.0
Luxembourg	25.8	4.6	17.4	21.3	31.8	54.4	65.6	28.5	10.2	9.6	15.3	26.9	87.8	282.6
Malta	33.7	10.8	17.9	30.4	48.6	60.7	61.8	21.6	8.9	10.0	16.5	24.1	45.6	57.0
Netherlands	23.9	7.8	12.4	23.9	29.7	45.8	60.3	8.2	4.2	2.9	5.3	10.8	21.7	105.9
Portugal	6.5	0.9	1.4	4.0	6.5	19.9	37.6	8.9	0.8	3.0	8.0	5.0	15.7	28.2
Slovenia	20.3	9.8	11.6	15.3	27.4	37.9	55.0	3.4	2.2	1.4	2.4	3.3	4.8	5.3
Slovakia	4.1	1.6	2.2	3.9	5.2	7.6	11.8	1.1	0.7	0.4	0.7	1.2	4.1	9.3

Source: HFCS 2013.

Note: Risky financial assets are defined as mutual funds, bonds and shares.

4 Determinants of asset ownership rates

4.1 Model specification

We focus on the household main residence, other real assets and risky financial assets and estimate the ownership and conditional holdings of these assets with a multivariate model. For each of these assets categories, the asset ownership (dummy that equals 1 if the household holds a certain asset category) and the asset level is analysed for the euro area as a whole and each country separately by applying a probit and tobit model respectively.¹⁶ All

¹⁶ While the former estimator is standard in the participation literature, the latter is used when the data do not include variables that could plausibly influence the participation decision but not the amount conditional on participation.

estimations take appropriate household weights as well as the imputation structure into account. In particular, both the probit and the tobit models make use of the final household weights and the resulting average marginal effects are population estimates. The standard errors are based on 100 replicate weights. As the tobit model depends on the normality assumption that hardly can be justified with wealth data, we apply the inverse hyperbolic sine transformation (IHS) (see e.g. Burbidge et al., 1988) with the scaling parameter of $\theta = 1$ to the level of each asset for a given household. Hence, the coefficients can be interpreted as conditional percentage changes for the part of the distribution where the IHS is close to the logarithmic transformation (see e.g. Pence, 2006).

Trying to find systematic relationships between socio-economic characteristics and households' asset composition or investment behaviour, there are plenty of traits that could be potentially relevant. In line with the household finance literature, the following determinants commonly used are considered¹⁷: household composition (household type, gender and marital status of the reference person), age, education, inheritance received, labour market situation (employment status), and resources (net wealth and income distribution quintiles).

Net wealth is an endogenous explanatory variable by construction since each asset component is part of the net wealth definition. However, as demonstrated in the descriptive analysis above, the position in the net wealth distribution is a (very) important factor for the explanation of the portfolio composition, and hence we need to control for the household's position in the distribution of net wealth when investigating the conditional correlations. Addressing this endogeneity, either the indicator for the position of a household in the net wealth distribution can be dropped or, as it is sometimes done in the literature, the specific type of asset that is modelled can be excluded and the remaining "aggregate wealth" distribution can be used. The latter approach has the weakness that the household's position in the distribution of the remaining wealth ceases to be a good indicator for its position in the overall net wealth distribution. This problem is particularly pronounced if major wealth components are excluded. Furthermore, one does not condition on the same indicator of the wealth distribution in the different models (i.e. each model for the separated asset types) that are estimated below. Thus, we take the model including the net wealth quintiles and examine systematic correlations between wealth and asset behaviour of households, without attributing a causal role to wealth. In the appendix, we additionally provide results of the model where the indicator for the household position in the net wealth distribution (and the indicator for the marital status of the household reference person) is excluded from the explanatory variables. The fundamental results remain unchanged, but this exclusion has an impact on some variables. Especially variables other than the wealth quintiles gain significance, typically because they act as proxies for the excluded wealth component.

In what follows, we report stylised facts, i.e. results for variables that exhibit both a fairly systematic cross-country and significant relationship with the respect to the particular asset analysed. Our informal rule for classifying an observed relationship as a stylised fact is that the empirical result should be statistically significant in the estimation for the euro area as a whole. To make sure that the "stylised fact" is not driven by only very few (large) countries, we require additionally that i) an analogous (and statistically significant) coefficient estimate

¹⁷ See detailed definitions in the appendix 6.

is observed in at least 8 euro area countries under consideration (the so called 50 percent rule), and ii) there is maximal one country with a opposite significant coefficient estimate (the so called “exception to the rule”). Although, we comment primarily those results, we also report some interesting anomalies.

4.2 Stylised facts

Fact 1: The probability of ownership and the value of the household main residence, other real estate, risky asset assets and business ownership are positively related to net wealth, even after controlling for other observable household characteristics.

The varying probabilities of owning an asset between the 1st and the 5th quintile of the net wealth distribution (the wealthiest versus the poorest) is substantial in each country and every type of asset considered. This implies that wealthier households have more portfolio breadth in all euro area countries, consistent with Carroll’s (2002) report for the US.

Fact 2: Ownership and the value of both the main residence and other real estate are positively linked to previously having received inheritances

In the euro area as a whole and in 8 countries individually, the inheritance dummy is a positively significant factor for explaining ownership of the household main residence.¹⁸ This effect is much expected, as clearly, some households have inherited their household main residence or have used the proceeds of any bequests and gifts to acquire a dwelling for use as their household main residence. In some countries, the effect can be quite sizeable. In Germany for instance, a country with a low HMR ownership rate (44%), overall, having received an inheritance increases households’ likelihood to own their main residence by 8 percentage points. In Greece, the average marginal effect is a very large 20 percentage points. Also in 9 countries and the euro area as a whole, the inheritance dummy is significant and positively related to other real estate ownership (which includes holiday homes). In Spain, a country with a high rate of other real estate ownership (36%), probably related to holiday-homes, the average marginal effect is largest with 22 percentage points. As family tradition is known to influence bequest behaviour (Cox and Stark, 2005), these cross-country differences are likely to reflect varying cultural traditions of passing houses down generations.

Fact 3: Couples with dependent children both are more likely to own and to have a more valuable household main residence (relative to singles).

In 8 countries and the euro area as a whole, we find that couples with children are significantly more likely to own their household main residence relative to singles. One possible rationale for this fact is that house ownership has large reversibility costs so that it is economically meaningful to wait until family structure is more certain before deciding on homeownership. Singles, especially young ones, are likely to be more uncertain about future family structure.

Fact 4: The probability of owning risky assets and the value thereof is positively related to the educational attainment of the household (head).

¹⁸ France has a small negative coefficient, which is puzzling as it is the only country with such a negative sign.

Having a higher education increases the likelihood of owning risky assets. This effect could reflect various underlying factors. It could be linked to a permanent income effect, if education is positively associated with future income profiles and higher expected wage earnings. It could also be linked to a background risk effect (especially unemployment risk): educated people may face lower unemployment risk, and thus they could be incited to invest in risky financial assets (Guiso et al., 1996, Heaton and Lucas, 2000). Finally, there is a wide literature on financial literacy which shows that less educated people are less likely to hold stocks (see for instance van Rooij et al., 2011).

Fact 5: The probability of owning and the value of risky assets are higher for single households.

Relative to two or more person households, single households are much more likely to own risky assets. One likely factor is that having responsibilities for children and/or a partner increases the risk aversion. It could also simply reflect that having children implies certain committed expenditures that households may have to meet, so that they are less prone to take additional financial risks when they have children.

Fact 6: Varying labour market statuses have remarkably little effect on ownership and values of assets with the obvious exception of the self-employed being much more likely to own businesses (and to some extent other real estate).

There is little systematic difference between being employed or unemployed and being employed and retired in the ownership of assets. This implies that unemployment (after controlling for income, education and relative wealth position) has little explanatory power for the asset participation decision. A possible explanation may be that unemployment is considered a transitory and unexpected event in life. Given quasi-universal unemployment insurance in the European Union, the lack of any significant link may indicate the ability of the unemployed to survive the unemployment spell without having to liquidate (at least partially) the assets in question. On a less positive note, however, it may also imply that the households most likely to suffer unemployment spells and financial pressures to liquidate assets are those who find it most difficult to liquidate their assets in order to preserve the consumption levels to which they are accustomed.

4.2.1. Determinants of asset ownership

The results presented in the tables refer to average marginal effects (*ame*) derived from the probit models introduced above. Thus, the estimates can be interpreted in terms of a conditional increase in the likelihood of holding a certain asset type in a given country relative to the baseline. For example, we investigate whether conditional on all other factors there are relatively more single parents that own the household main residence compared to the baseline which in this case is a household with a single occupant. Due to space constraints we discuss only the results of the specifications¹⁹ concerning the extensive margin for the household main residence and risky financial assets. Results for other specifications are provided in the tables in the appendix and are discussed only very briefly in the text. All tables contain

¹⁹ The specification referred to in the main text includes an indicator for the position of the household in the net wealth distribution. Results for an alternative specification of the model excluding net wealth and marital status are provided in the appendix.

the estimation results for each individual country as well as the euro area as a whole. The euro area results are provided as a point of reference. The discussion below mainly focuses on cross country differences and similarities.

The results for the ownership rate of HMR (see Table 7) suggest, beyond the significance of the position in the wealth distribution and conditional on all other factors, that the likelihood of owning the household main residence is higher in all countries (except Cyprus and Malta) for a couple with dependent children compared to a single household, although it is statistically significant in only 8 out of 15 countries. Somewhat surprisingly, conditional on all other factors, higher education seems to indicate a reduction in the likelihood of owning the main residence (statistically significant in only some countries, e.g. Austria, Spain, Greece, and Portugal, but also in the euro area as a whole). This is probably linked to a need for more mobility of more educated people and a delayed decision to settle down and to become a homeowner. In all but one country, the dummy for inheritance has the expected positive sign.²⁰

There are also some interesting anomalies in the sense that results for some countries deviate from the main observed relationship. For example, whereas the likelihood of owning the HMR for households with a self-employed reference person is significantly lower than for an employee in the euro area as a whole and in several individual countries, the estimate for Finland has the opposite sign (and is statistically significant).

Considering the specification without explicitly controlling for the position of the household in the wealth distribution (see appendix Table A3.1) we find that in particular the age and inheritance indicator are affected. So without controlling for the net wealth position households with an older reference person and/or households that have previously received an inheritance are much more likely to own their main residence. These changes, however, are likely to reflect that households with an older reference person and those having inherited are higher up in the net wealth distribution. Additionally, in the specification without the control for the net wealth position, the coefficient estimates of the position of the household in the income distribution display the expected positive sign. This is likely to be due to the positive correlation between income and net wealth.

²⁰ The only exception to this finding is France with a statistically negative coefficient estimate for the inheritance dummy. In the model excluding the wealth position controls, the coefficient has the expected sign and is significant, though (see Appendix 10, Table A3.1).

The estimates of the ownership of risky financial assets are reported in Table 8. Households with dependent children are in general less likely to hold risky financial assets compared to single households in the euro area (not statistically significant in some countries). These estimates seem to suggest that single households have a different risk profile than households with dependent children. Apart from the control for the position in the net wealth distribution, the likelihood of ownership of risky financial assets varies across levels of educational attainment. As said above, the higher the level of education of the household (head) the more likely the household is to hold these assets. The coefficient estimates are statistically significant for the euro area as a whole and all countries with exception of Cyprus, Malta and Slovakia for both medium and high education, Greece and the Netherlands for the medium education, and Italy for high education. Even after controlling for the position in the net wealth distribution, households with higher incomes are more likely to hold risky financial assets. This is consistent with intertemporal portfolio models with fixed costs; higher income and higher wealth are associated with more demand for risky assets and, for given entry or participation costs, a higher probability to overcome the threshold and decide that it is worthwhile to enter the asset market or remain in it. Especially for the highest income quintile the estimated average marginal effects are positive and statistically significant (exceptions are Greece, Malta, Slovenia and Slovakia). The specification without net wealth (Table A3.2 in the appendix) qualitatively provides similar results. A noteworthy difference is that the indicator for inheritances gains significance.

The conditional participation in real estate other than the main residence shows two homogeneous patterns. As discussed in above results variables explicitly controlling for the position of a household in the net wealth distribution (see Table A2.1 in the appendix) soak up most of the variation in the data. In particular the top two quintiles are significant everywhere and have the expected positive sign. In addition, the dummy for inheritance received is positively significant in 9 countries. Leaving out the control for the position in the net wealth distribution, age and being self-employed are positively linked (in the majority countries in a statistically significant manner) to holding other real estate (see Table A3.3 in the appendix). For the regression on business assets, obviously being self-employed (on top of the distribution of net wealth) plays the expected important role (see Table A2.2 for the model including and A3.4 excluding the net wealth distribution respectively).

4.2.2. Determinants of asset values

As in the section above, we present here the results from the tobit models for the level²¹ of asset holdings in form of the main residence and in form of risky financial assets. All remaining results are provided in the appendix.

Controlling for the position in the net wealth distribution, couples with dependent children (and three or more adults with dependent children) tend to have a household main residence of higher value compared to single households (some countries show a statistically insignificant effect; Cyprus, Finland and Malta seem to be exceptions with negative but statistically insignificant estimates; Table 9). This reflects the obvious need for more space of households with more household members. Furthermore, the inheritance dummy is positive for all countries, except for France, and significantly so for a majority of countries, including France. It is

²¹ Using the inverse hyperbolic sine transformation, as was explained above.

positively significant in all countries, including France, once the position of the household in the net wealth distribution is not explicitly controlled for (see Table A5.1).

Quite interestingly, while we find some significant effects for other household characteristics for the euro area (e.g. age and marital status) there is no consistent pattern of significance for these covariates across countries, pointing towards diversity in the factors that influence the value of the main residence in each country. Considering the specification without controlling for the position in the net wealth distribution (see Table A5.1 in the appendix) the significant relationships remain qualitatively in tact and are complemented with significant income and age correlations that now proxy for the missing level of wealth: households with an older reference person and higher income live in a more valuable household main residence.

Turning to the tobit model for the value of risky financial assets (Table 10), the results suggest that the positions in the wealth and in the income distribution are both significantly correlated with the amount of exposure to risky financial assets, especially at the upper end. This holds for the euro area and most countries individually.

Furthermore, consistent with the nature of risky financial assets being information-intensive, there is a significant positive correlation between the level of education and the level of risky asset holdings. This positive correlation could also reflect a permanent income effect or differences in unemployment risk (background risk). The obtained average marginal effects are quite substantial. Highly educated households have investments in this asset category more than four times higher than low educated households in the euro area. In several countries, the differences across education levels are even more pronounced. In Austria, Germany, Spain, Greece, Luxembourg, Portugal, and Slovenia the risky financial asset holdings of highly educated households are between 8 and 12 times higher than for low educated households. We find that households with dependent children tend to have less money invested in risky financial assets than single households (this result is also in line with a lower extensive margin for these types of households, i.e. they are both less likely to hold this particular type of financial asset and conditional on holding they have less money invested in it). Again, these patterns are qualitatively robust to not controlling for the position in the net wealth distribution, except again inheritance tends to play a more important role; it is positively significant for the euro area, as well as in all countries but Greece, Slovenia and Slovakia (see Table A5.2 in the appendix). The likely explanation is that having received inheritance acts as a proxy for the missing indicator for the position of the household in the net wealth distribution.

In the tobit model for the value of other real estate (see Table A4.1 in the appendix) the largest and in most countries also significant coefficient (other than the controls for the household position in the net wealth distribution) is the dummy on inheritance. The conditional mean value of other real estate in the euro area almost 5 times larger for households that have received an inheritance. This may be due to the receipt of real estate assets other than the household main residence in the form of inheritance or due to a tendency to devote at least part of inheritances to acquiring other real estate. Self-employment of the reference person is another factor that has a positive and statistically significant impact on the mean value of other real estate held by euro area households. The same effect is also observed in 8 out of 15 countries (i.e. in Belgium, Cyprus, Finland, France, Italy, Luxembourg, Portugal, and Slovakia). This suggests that the tendency to take income risks in terms of self-employment tends to correlate with the tendency to invest in real estate beyond the main residence. Removing the controls for the position in the net wealth distribution (Table A5.3 in the appendix), has a substantial effect for the estimates of age, the positioning the income distribution and to some extent the indicator for retirement, as these three variables now proxy for the missing wealth control.

Confirming the finding from the tobit model above, the labour market status, especially being self-employed, exhibits generally the highest marginal effect in the regression on business assets (see Table A4.2 in the appendix). This may arise from a close relationship between ownership of businesses and employment in those businesses, or from a tendency to own a private business only if the person still works and is able to monitor it. The significantly higher probability of households belonging to the top 20% of the net wealth distribution to own a private business is a finding that is consistent across all countries except for Luxembourg and Portugal. For the euro area, the coefficient estimates for wealth controls are positively significant. In contrast, for a majority of countries, only the highest (or second to highest) wealth quintile exerts a significantly positive effect. However, most large countries show a pattern similar to the euro area.

Finally, one can also look at the level of safe financial assets (recall that there is no probit model since almost all households hold this type of assets). Table A4.3 in the appendix reveals that the two indicators that are significant with a qualitatively similar pattern across (almost) all countries are the controls for the position in the wealth and income distribution. So households with a higher position in the income and the net wealth distribution in general also tend to have substantially larger amounts in safe assets, along with higher amounts in all other types of assets, as we saw above. Somewhat surprisingly for low-risk, widely held assets, we find that the level of education has a positively significant effect. This may be partly linked to a diminished tendency of the better educated to be unbanked, and result from a higher tendency to save for retirement or to keep liquid assets in order to meet committed expenditures (such as children's education, mortgage payments, and the like). For the euro area and most countries alike, households with unemployed reference person have significantly lower level of safe financial assets, as would be expected, as this is a reflection of the run-down of liquid assets induced by the effort to maintain expenditure commitments in a period with reduced (or no) income inflows. For the euro area, we obtain a few more statistically significant effects, e.g. for marital status and household structure. However, looking at

results for individual countries, the other determinants are often statistically insignificant and their pattern is not consistent across countries.²²

5 Cross-country differences in coefficient estimates and institutional factors

Identifying the sources of the differences in the estimated effects of the demographic variables on the conditional mean for certain assets categories across countries is not an easy task. Many environmental and institutional factors (culture, history, welfare state, housing and credit markets, financial institutions, etc.) are likely to affect the wealth accumulation and portfolio choices of households. This section aims to shed some light on these potential sources of cross-country heterogeneity. To this end we focus on real estate and risky financial assets and examine the correlations²³ between the estimated marginal effects of the key socio-demographic explanatory variables on the propensity to hold these assets (see above) and some institutional factors.²⁴ We adopt a pragmatic approach and choose to investigate the correlations between selected institutional factors and the estimated marginal effects of the following variables:²⁵ education and income on risky assets holding, age, net wealth, income and inheritances on housing decisions.

5.1 Cross country differences in real estate holdings

The decision to hold real estate in general and household main residence in particular, results from a dual role of this asset for households: as a generator of housing services, housing satisfies consumption needs, and being an asset, it is also driven by investment decisions. In addition, housing wealth also represents household debt collateral, as loans contracted for buying housing assets or for financing other needs (such as acquiring other assets or financing consumption spending) could be guaranteed by the value of the housing asset. This is why, when turning to cross-country comparisons, national specificities about the functioning of mortgage markets, housing market conditions, wealth taxation or long-term financing needs are likely to affect household investment decisions concerning real estate via their impact on consumption or investment motives and via the collateral effect. These institutional factors may indeed induce the cross-country heterogeneity in the impact of the socio-demographic determinants on real estate assets discussed in the previous section. We investigate this link between the institutional context and the cross-country heterogeneity in the estimated average marginal effects by studying the correlations between institutional indicators (related to the buy/rent trade-off, the mortgage market and the wealth taxation) and the country specific average marginal effects of net wealth, income, age and inheritance, both on the value of the household main residence and on the value of other real estate.

²² For completeness the models for BUS and SAFE categories excluding the indicator for net wealth are reported in the appendix in Tables A5.4 and A5.5 respectively.

²³ Our approach is similar to Christelis et al. (2013), Bover et al. (2013) and Le Blanc et al. (2014). Given the limited number of countries available this analysis, one should interpret results with caution.

²⁴ See Appendix 6 for the definitions of the institutional indicators.

²⁵ These variables have been selected according to their significant estimated impacts obtained in the regressions, their links with the theoretical backgrounds of wealth accumulation and portfolio choices as well as according to their potential interactions with institutional factors.

5.1.1. Mortgage markets

Household credit conditions vary across the euro area (Bover et al., 2013) and mortgage markets exhibit differences in many aspects (European Commission, 2011). In particular, in some countries the use of mortgages to finance purposes other than acquiring the collateralised housing asset is widespread, while in other countries this phenomenon is very rare. According to ECB (2009), the share of debt secured on housing assets used for other purposes than financing a new home varies from less than 1% in Luxembourg to 30% in Greece. We use this information as an indicator for the prevalence of the role of housing wealth as debt collateral (Table 11 and Table 12).

A negative cross-country correlation is obtained between this mortgage market indicator and the marginal effects of net wealth (4th and 5th quintiles) on the value of the household's main residence. This result is consistent with the idea that the impact of net wealth (excluding HMR) on investment in HMR is less important in countries where households use contracted mortgages to finance other purposes. It could reflect differences in credit constraints faced by households with respect to home acquisitions (and potentially through differences in down payment requirement, e.g. Chiuri and Jappelli, 2003) and the financing of other spending (consumption, repayment of unsecured debt).

Table 11: HMR - Correlations between estimated marginal effects and institutional indicators

	Net wealth				Income				Age		Inheritance
	Q2	Q3	Q4	Q5	Q2	Q3	Q4	Q5	40-64	65 and over	
Mortgage market	0.174 <i>0.571</i>	-0.274 <i>0.365</i>	-0.474 <i>0.101</i>	-0.499 <i>0.082</i>	-0.184 <i>0.547</i>	-0.149 <i>0.626</i>	-0.116 <i>0.706</i>	-0.020 <i>0.949</i>	0.312 <i>0.299</i>	0.354 <i>0.236</i>	0.513 <i>0.107</i>
Housing price-to-rent ratio	0.140 <i>0.648</i>	-0.003 <i>0.991</i>	-0.124 <i>0.687</i>	-0.174 <i>0.571</i>	-0.181 <i>0.553</i>	0.209 <i>0.494</i>	0.274 <i>0.365</i>	0.275 <i>0.364</i>	-0.504 <i>0.079</i>	-0.657 <i>0.015</i>	-0.627 <i>0.039</i>
Inheritance tax on HMR	-0.378 <i>0.182</i>	0.100 <i>0.734</i>	0.297 <i>0.302</i>	0.323 <i>0.260</i>	0.019 <i>0.948</i>	0.139 <i>0.635</i>	0.163 <i>0.578</i>	0.069 <i>0.814</i>	-0.180 <i>0.539</i>	-0.312 <i>0.277</i>	-0.290 <i>0.361</i>
Pension -replacement rate	0.254 <i>0.403</i>	-0.225 <i>0.461</i>	-0.343 <i>0.251</i>	-0.344 <i>0.250</i>	-0.164 <i>0.592</i>	-0.149 <i>0.628</i>	-0.103 <i>0.738</i>	-0.069 <i>0.823</i>	0.077 <i>0.803</i>	0.206 <i>0.499</i>	0.335 <i>0.313</i>

P value in italics, cells with significant estimates are shaded.

Estimated marginal effects are taken from the tobit regression (Table 7) - see the definition of the institutional indicators in the appendix.

Table 12: Other real estate - Correlations between estimated marginal effects and institutional indicators

	Net wealth				Income				Age		Inheritance
	Q2	Q3	Q4	Q5	Q2	Q3	Q4	Q5	40-64	65 and over	
Mortgage market	0.120 <i>0.696</i>	0.103 <i>0.739</i>	0.079 <i>0.798</i>	-0.008 <i>0.980</i>	0.024 <i>0.939</i>	0.147 <i>0.632</i>	-0.053 <i>0.863</i>	-0.123 <i>0.690</i>	-0.075 <i>0.808</i>	0.061 <i>0.844</i>	-0.338 <i>0.310</i>
Housing price-to-rent ratio	-0.007 <i>0.983</i>	-0.010 <i>0.974</i>	0.064 <i>0.835</i>	0.107 <i>0.727</i>	-0.115 <i>0.709</i>	-0.544 <i>0.054</i>	-0.500 <i>0.082</i>	-0.470 <i>0.105</i>	-0.016 <i>0.959</i>	-0.298 <i>0.323</i>	-0.046 <i>0.892</i>
Inheritance tax on HMR	0.156 <i>0.594</i>	0.181 <i>0.537</i>	0.229 <i>0.430</i>	0.311 <i>0.279</i>	0.225 <i>0.438</i>	0.072 <i>0.806</i>	0.251 <i>0.386</i>	0.211 <i>0.469</i>	0.312 <i>0.277</i>	0.195 <i>0.503</i>	0.237 <i>0.458</i>
Pension -replacement rate	0.142 <i>0.645</i>	0.080 <i>0.796</i>	0.028 <i>0.927</i>	-0.019 <i>0.952</i>	0.221 <i>0.468</i>	0.234 <i>0.442</i>	0.079 <i>0.798</i>	0.016 <i>0.958</i>	0.020 <i>0.948</i>	0.042 <i>0.892</i>	-0.326 <i>0.327</i>

P value in italics, cells with significant estimates are shaded.

Estimated marginal effects are taken from the tobit regression (Table A4.1) see the definition of the institutional indicators in the appendix.

The positive correlation between the average marginal effects of inheritance and the mortgage market indicator is also likely to reflect a collateral effect. Having received inheritances increases the ownership of the household main residence and this effect tends to be higher in countries where mortgage markets are better developed, probably because assets received as inheritances can be used to finance home acquisition or other spending.

5.1.2. Buy-Rent trade-off and long term financing needs

Obviously, the housing markets and the relative prices for buying versus renting could lead to cross-country heterogeneity in the participation and in the values of the household main residence and of other housing assets. In particular, differences in these market conditions may induce cross-country heterogeneity in the estimated effects of available household resources (e.g. income and wealth) on the decision to be or not to be a homeowner.

Another source for cross-country heterogeneity in the trade-off between renting versus buying could be the need to finance household consumption in old age. In that respect, one could expect that holding assets in the form of real estate is linked to expectations concerning the evolution of house prices and national features of the pension system.²⁶ The diversity of national pension systems could lead to the very heterogeneous impacts of age on the value of the household main residence: a positive increasing effect, a hump shaped profile or a decreasing effect depending on the country (Table 9).

We investigate these possible underlying factors leading to cross-country heterogeneity in the tenancy choice trade-off by considering two indicators, the price-to-rent ratio and the average pension replacement rate, and their links with the determinants of the value of the household main residence and other real estate (see Tables 11 and 12).

Concerning the determinants of household main residence, we obtain negative correlations between the price-to-rent ratio and age (40-64 and 65+). This correlation with the age variable indicates that the life-cycle profile of housing wealth (main residence) in a country is related to the housing market conditions, and in particular to house prices. We do not obtain such a significant correlation for the age profile of other real estate.

For other real estate, we find a negative correlation between the buy-to-rent ratio and the marginal effects of income (which are estimated to be positive with large cross-country heterogeneity in the magnitude of the effects, except in Italy where the income levels are negatively related to the value of other real estate, see Table A4.1). This negative correlation between the buy-to-rent ratio and the marginal effects of income could reflect that relative house prices are likely to influence households' investment decisions in housing assets: an increase in the relative price-to-rent ratio decreases the rent yield and may reduce the incentive to invest savings in real estate.

The differences in correlations between the buy-to-rent ratio on the one hand and the age and income effects on the other hand across the two real estate assets considered (household main residence and other real assets), can probably be explained by the dual nature of hous-

²⁶ One also could think about other institutional factors such as intergenerational cohabitation or housing equity withdrawal.

ing assets, the household main residence being more related to housing consumption and other real estate being more driven by investment decisions.

Finally, we can conclude that we draw some hints on the links between the holding of real estate assets in the euro area and the mortgage and housing market conditions. These correlations tend to hold when considering simultaneously both indicators (see regression results in the appendix). We do not find evidence for the role of taxes,²⁷ and the negative correlation between the estimated average marginal effects of inheritances and the price-to-rent ratio is unexpected, because in case of an increase in the price-to-rent ratio, we would have expected a larger positive impact of having past intergenerational transfers on holding of the HMR.

5.2 Cross country differences in risky financial assets holding

Institutional factors are also likely to affect households' decisions to invest in risky financial assets. In particular, one could suspect that cross-country heterogeneity in the households' capacities to gather and process financial information, local firms' demand for long-term financing or the existence of country-specific factors affecting risk perceptions and expectations at the household level could induce heterogeneity in the estimated marginal effects of the socio-demographic variables (Table 10). The correlation between various institutional factors and the estimated average marginal effect of net wealth, income, education and inheritances are computed in Table 13.

Table 13: Risky financial assets - Correlations between estimated marginal effects and institutional indicators

	Net wealth				Income				Education		Inheritance
	Q2	Q3	Q4	Q5	Q2	Q3	Q4	Q5	Middle	High	
Stock market capitalization	0.019	0.009	-0.126	-0.108	0.206	0.238	0.285	0.353	0.259	0.210	0.190
	<i>0.946</i>	<i>0.973</i>	<i>0.655</i>	<i>0.702</i>	<i>0.462</i>	<i>0.393</i>	<i>0.303</i>	<i>0.197</i>	<i>0.351</i>	<i>0.452</i>	<i>0.535</i>
Literacy	-0.129	-0.032	-0.178	-0.168	0.231	0.149	0.199	0.058	-0.243	-0.350	0.355
	<i>0.674</i>	<i>0.918</i>	<i>0.562</i>	<i>0.584</i>	<i>0.448</i>	<i>0.627</i>	<i>0.514</i>	<i>0.852</i>	<i>0.423</i>	<i>0.241</i>	<i>0.284</i>
Trust	0.291	0.364	0.257	0.214	0.076	0.130	0.207	0.115	-0.045	-0.176	0.083
	<i>0.293</i>	<i>0.183</i>	<i>0.355</i>	<i>0.443</i>	<i>0.788</i>	<i>0.644</i>	<i>0.458</i>	<i>0.682</i>	<i>0.875</i>	<i>0.530</i>	<i>0.787</i>
Confidence	0.186	0.303	0.290	0.257	0.042	-0.003	0.074	-0.083	-0.192	-0.311	0.313
	<i>0.524</i>	<i>0.293</i>	<i>0.315</i>	<i>0.374</i>	<i>0.887</i>	<i>0.992</i>	<i>0.802</i>	<i>0.777</i>	<i>0.511</i>	<i>0.280</i>	<i>0.322</i>
Internet access	-0.338	-0.236	-0.489	-0.488	0.138	0.193	0.143	0.066	-0.068	-0.113	0.652
	<i>0.259</i>	<i>0.439</i>	<i>0.090</i>	<i>0.091</i>	<i>0.653</i>	<i>0.529</i>	<i>0.640</i>	<i>0.830</i>	<i>0.826</i>	<i>0.712</i>	<i>0.030</i>
wealth tax	0.183	0.134	0.143	0.115	0.183	-0.043	0.037	0.127	-0.017	-0.052	0.166
	<i>0.515</i>	<i>0.633</i>	<i>0.611</i>	<i>0.682</i>	<i>0.514</i>	<i>0.879</i>	<i>0.896</i>	<i>0.651</i>	<i>0.952</i>	<i>0.853</i>	<i>0.587</i>
Pension -replacement rate	0.240	0.074	0.280	0.388	-0.373	-0.579	-0.323	-0.235	0.334	0.283	-0.503

P values are in italics. Cells with significant estimates are shaded.

Estimated marginal effects are taken from the tobit regression (Table A4.1)- see the definition of the institutional indicators in the appendix.

We find some evidence of a negative cross-country correlation between the share of households with internet access and the average marginal effects of the controls for the position of the household in the net wealth distribution. Such an effect is consistent with the idea that a better access to information lowers the entry and transaction costs so that households' own resources play a less important role for the holding of risky financial assets.

²⁷ Various indicators for taxes have been tested: an indicator for inheritance tax wealth on HMR, the existence of the wealth tax in the country or the property tax.

There is also some weak evidence suggesting the existence of a negative cross-country correlation between the average marginal effects of the controls for the position of the household in the income distribution and the average pension replacement rate, which could reflect that, in countries, with a high replacement rate, households are less incited to invest in long-term assets.

These correlations tend to be confirmed when running multivariate regressions (see the results in appendix 7). In addition, there is some weak evidence of a positive correlation between the level of trust in the country and the positive income effect on risky assets, consistent with results reported by Guiso et al. (2008).

6 Conclusions

This paper provides stylised facts on the asset composition of households in the euro area. The heterogeneity across euro area countries is sizeable, across a number of dimensions, such as income and wealth. Still, some facts of general validity are obtained.

Whereas ownership of the household main residence varies strongly between countries, the value of the main residence is the main asset for those who own it and it represents a significant part of total assets in all countries including those with relatively low ownership rates. The vast majority of total assets consist of real assets. With regard to financial assets, almost all households hold safe assets, such as deposit or savings accounts while a rather low share of households holds risky assets, such as stocks, bonds and mutual funds.

The ownership rates of all asset categories generally increase with households' position in the net wealth and income distribution. Ownership rates of safe financial assets are uniformly high across all euro area countries. They diverge substantially for ownership of the household main residence. Especially the share of risky financial asset holders rises sharply with the position of the household in the net wealth distribution but stays surprisingly low even for households in the highest net wealth deciles. The significance of inheritances for the wealth accumulation process is remarkable.

Although our stylized facts are derived from survey data obtained in a high turmoil period (2010-2011), we believe they are related to structural factors of asset holdings that are not so much varying over the cycle. A joint analysis of structural determinants and factors that vary over the business cycle will become possible when more waves of the survey become available.

Our analysis of the relationship between institutions and the impact of socio-demographics on asset holdings indicates that institutional factors can moderate the impact of some household characteristics on households' portfolio choices in different countries. Investigating institutional factors in more detail, in particular uncovering the mechanisms how they affect portfolio choice is a promising avenue for future research. The particularly large heterogeneity in homeownership rates across the euro area seems an area worth further research (see for example Mathä, Poriglia and Ziegelmeier, 2014). House price developments and mortgage indebtedness were key factors in the financial crisis so that homeownership has important macro-economic implications. Public policies such as mortgage interest tax deductibility, subsidized housing, rent policies, taxation on house buying transactions and inheritance tax

on homes are not only substantially different across countries they are also likely all playing a significant role in shaping the decisions of households. Disentangling the effects of a multitude of policies on household asset holding choices in a number of ways is certainly not easy. As more household wealth survey data becomes available, not only across countries but also across time one can hope that the role of public policies can be more vigorously investigated.

7 References

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8 Appendix 1: Results on the extensive and intensive margin

Table A1.1a: Participation rates for asset categories, in %

	HMR	ORE	BUS	SAFE	RISKY
Euro area	60.1	23.8	11.1	96.7	20.2
Austria	47.7	13.4	9.4	99.4	14.6
Belgium	69.6	16.4	6.6	97.9	30.7
Cyprus	76.7	51.6	19.5	85.9	36.3
Germany	44.2	17.8	9.1	99.1	23.0
Spain	82.7	36.2	14.2	98.2	14.0
Finland¹	69.2	29.8	13.8	100.0	38.7
France	55.3	28.5	8.9	99.6	21.7
Greece	72.4	37.9	9.8	73.9	4.0
Italy	68.7	24.9	18.0	91.9	19.8
Luxembourg	67.1	28.2	5.2	98.4	25.8
Malta	77.7	31.4	11.5	96.9	33.7
Netherlands	57.1	6.1	4.8	97.3	23.9
Portugal	71.5	27.1	7.7	94.3	6.5
Slovenia	81.8	23.2	11.6	93.6	20.3
Slovakia	89.9	15.3	10.7	91.5	4.1

Source: HFCS 2013.

Notes: HMR: Households main residence, ORE: Other real estates, BUS: Self-employment business, SAFE: Safe financial assets, RISKY: Risky financial assets.

¹ Finland collects information on BUS only in a summarizing way, estimates are not comparable.

Table A1.1b: Conditional median of asset categories, in EUR thousands

	HMR	ORE	BUS	SAFE	RISKY	TOTAL
Euro area	180.3	100.0	30.0	9.2	12.1	142.0
Austria	200.0	94.0	180.6	11.9	12.3	92.8
Belgium	250.0	174.0	50.0	20.7	20.1	249.9
Cyprus	240.3	202.2	98.8	18.3	2.0	331.9
Germany	168.0	115.0	19.4	13.2	12.1	67.9
Spain	180.3	120.2	50.8	5.1	12.0	210.2
Finland¹	127.8	107.6	0.9	5.7	3.7	132.7
France	193.8	96.1	53.1	8.9	8.1	150.4
Greece	100.0	61.9	36.2	3.9	7.3	110.2
Italy	200.0	100.0	15.0	7.4	22.4	188.0
Luxembourg	500.0	300.0	97.6	23.1	28.5	494.4
Malta	186.6	120.1	136.5	17.7	21.6	227.4
Netherlands	240.0	165.5	51.7	30.4	8.2	217.3
Portugal	90.0	53.5	47.1	3.8	8.9	93.2
Slovenia	110.9	52.4	25.5	1.1	3.4	105.2
Slovakia	55.9	16.4	4.6	2.3	1.1	64.4

Source: HFCS 2013.

Notes: HMR: Households main residence, ORE: Other real estates, BUS: Self-employment business, SAFE: Safe financial assets, RISKY: Risky financial assets.

¹ Finland collects information on BUS only in a summarizing way, estimates are not comparable.

9 Appendix 2: Probit Models (including net wealth indicator)

Table A2.1: Average marginal effects from a probit model of participation in other real estate

	EA ¹	AT	BE	CY	DE	ES	FI	FR	GR	IT	LU	MT	NL	PT	SI	SK
Household Type [Base: Single]																
Couple	0.001	-0.008	0.023	0.141	-0.036	0.027	0.085***	-0.001	0.006	0.035	-0.063	-0.042	-0.017	0.017	0.031	-0.024
w/o children	(0.012)	(0.032)	(0.035)	(0.107)	(0.033)	(0.029)	(0.018)	(0.020)	(0.041)	(0.024)	(0.067)	(0.072)	(0.049)	(0.033)	(0.053)	(0.043)
>=3 adults	0.008	-0.001	0.008	0.236*	-0.047	-0.016	0.208***	0.010	0.060	0.092***	-0.030	0.011	-0.021	0.027	0.057	0.052
w/o children	(0.017)	(0.049)	(0.047)	(0.135)	(0.037)	(0.035)	(0.036)	(0.030)	(0.051)	(0.030)	(0.081)	(0.091)	(0.062)	(0.038)	(0.069)	(0.051)
Single Parent	0.002	0.000	0.032	-0.065	0.031	0.030	0.001	-0.004	0.043	-0.055	-0.000	0.059	-0.018	-0.049	-0.173***	-0.007
(0.020)	(0.065)	(0.051)	(0.106)	(0.066)	(0.055)	(0.026)	(0.027)	(0.074)	(0.042)	(0.094)	(0.178)	(0.136)	(0.043)	(0.047)	(0.064)	
Couple	-0.002	-0.021	0.029	0.158	-0.034	0.028	0.051***	0.000	-0.005	0.038	-0.103	0.055	-0.015	-0.001	-0.004	0.011
with children	(0.015)	(0.036)	(0.042)	(0.117)	(0.037)	(0.038)	(0.017)	(0.020)	(0.048)	(0.028)	(0.066)	(0.092)	(0.061)	(0.039)	(0.063)	(0.047)
>=3 adults	0.011	-0.008	0.038	0.106	-0.061	0.072	0.103***	0.019	0.048	0.077**	-0.074	0.048	-0.086	0.010	0.098	-0.004
with children	(0.019)	(0.044)	(0.080)	(0.133)	(0.045)	(0.045)	(0.037)	(0.037)	(0.067)	(0.037)	(0.084)	(0.088)	(0.080)	(0.047)	(0.083)	(0.056)
Gender (Reference Person)																
Male	-0.001	-0.003	0.033*	0.028	-0.017	-0.037	0.025***	0.000	0.005	0.004	0.023	-0.033	-0.002	0.010	-0.079**	-0.000
(0.009)	(0.018)	(0.020)	(0.047)	(0.020)	(0.023)	(0.008)	(0.012)	(0.026)	(0.015)	(0.041)	(0.050)	(0.022)	(0.014)	(0.031)	(0.024)	
Age (Reference Person) [Base: Below 40 years]																
40-64 years	0.039***	0.020	0.028	0.084*	0.005	0.055**	0.047***	0.027	0.007	0.083***	0.044	0.040	0.068***	0.017	0.192***	-0.012
(0.009)	(0.020)	(0.033)	(0.049)	(0.025)	(0.026)	(0.012)	(0.018)	(0.026)	(0.021)	(0.045)	(0.052)	(0.024)	(0.023)	(0.028)	(0.030)	
65 years and over	0.030**	0.026	0.021	-0.075	0.010	0.021	0.054**	-0.009	0.016	0.093***	0.126	0.107	0.037	0.048	0.312***	-0.071
(0.014)	(0.033)	(0.043)	(0.122)	(0.044)	(0.039)	(0.022)	(0.030)	(0.045)	(0.029)	(0.083)	(0.084)	(0.035)	(0.030)	(0.059)	(0.048)	
Marital Status (Reference Person) [Base: Unmarried]																
Married	0.013	-0.000	-0.054	-0.113	0.038	-0.003	-0.033**	0.027	-0.012	-0.004	0.117**	0.016	0.073*	0.003	-0.068	0.001
(0.013)	(0.027)	(0.034)	(0.095)	(0.033)	(0.032)	(0.015)	(0.020)	(0.036)	(0.027)	(0.055)	(0.059)	(0.041)	(0.026)	(0.062)	(0.052)	
Divorced	0.003	0.011	0.013	-0.024	0.036	-0.047	-0.011	0.002	-0.003	-0.046	0.065	0.098	-0.001	-0.010	-0.201***	0.065
(0.015)	(0.035)	(0.047)	(0.089)	(0.032)	(0.038)	(0.016)	(0.023)	(0.056)	(0.032)	(0.055)	(0.103)	(0.028)	(0.033)	(0.066)	(0.051)	
Widowed	-0.026**	0.027	-0.021	-0.109	-0.014	-0.105***	-0.063***	0.011	-0.053	-0.039*	0.033	-0.040	-0.016	0.019	-0.171**	0.016
(0.013)	(0.041)	(0.053)	(0.085)	(0.032)	(0.036)	(0.023)	(0.025)	(0.049)	(0.024)	(0.063)	(0.084)	(0.024)	(0.034)	(0.067)	(0.055)	
Labor market status (Reference Person) [Base: Employee]																
Self-employed	0.055***	0.037	0.104**	0.101*	0.028	0.032	0.085***	0.059***	0.028	0.093***	0.102*	0.059	0.084	0.064***	0.105	0.057
(0.013)	(0.028)	(0.050)	(0.057)	(0.026)	(0.033)	(0.015)	(0.020)	(0.032)	(0.021)	(0.058)	(0.057)	(0.089)	(0.023)	(0.068)	(0.038)	
Unemployed	-0.033**	0.032	-0.050	0.038	-0.070	0.017	-0.046**	-0.095***	-0.076	-0.059	x5	-0.073	0.130	-0.022	-0.074	0.012
(0.016)	(0.068)	(0.042)	(0.114)	(0.059)	(0.036)	(0.021)	(0.025)	(0.090)	(0.041)		(0.193)	(0.169)	(0.039)	(0.053)	(0.089)	
Retired	0.015	-0.006	0.048	0.048	0.019	0.077**	0.018	-0.002	0.002	-0.016	-0.043	0.047	0.016	0.021	-0.056	0.131***
(0.012)	(0.023)	(0.031)	(0.108)	(0.032)	(0.030)	(0.018)	(0.023)	(0.035)	(0.016)	(0.053)	(0.060)	(0.028)	(0.028)	(0.044)	(0.041)	
Other	-0.023	x2	-0.034	-0.008	-0.012	0.056	-0.012	-0.075***	-0.096	-0.074*	-0.199**	-0.077	-0.024	0.056	-0.125**	0.078
(0.017)	(0.063)	(0.090)	(0.047)	(0.034)	(0.017)	(0.028)	(0.066)	(0.045)	(0.081)	(0.083)	(0.022)	(0.049)	(0.064)	(0.089)		
Missing	-0.005		-0.009	0.263									-0.007	0.085		x8
(0.043)		(0.076)	(0.189)										(0.024)	(0.140)		
Education (Reference Person) [Base: Low (ISCED 1 and 2)]																
Middle (ISCED 3)	-0.015**	-0.016	0.003	0.071	0.059**	-0.014	0.007	0.000	-0.075**	-0.010	-0.057	0.045	0.001	-0.035*	0.000	-0.168**
(0.006)	(0.025)	(0.029)	(0.049)	(0.028)	(0.029)	(0.012)	(0.012)	(0.030)	(0.014)	(0.039)	(0.038)	(0.022)	(0.021)	(0.038)	(0.082)	
High (ISCED 4-6)	0.017*	0.052	-0.009	-0.008	0.099***	-0.032	0.000	0.008	-0.060*	0.044**	0.025	0.048	0.063**	0.033	0.041	-0.056
(0.010)	(0.034)	(0.026)	(0.054)	(0.034)	(0.023)	(0.012)	(0.015)	(0.033)	(0.019)	(0.053)	(0.053)	(0.027)	(0.029)	(0.060)	(0.090)	
Inheritance																
Dummy	0.098***	0.104***	0.041**	0.171***	0.046***	0.222***	x3	0.118***	-0.028	x4	0.054	0.072*	0.042	0.164***	0.107***	0.030
(0.008)	(0.015)	(0.018)	(0.037)	(0.013)	(0.017)		(0.011)	(0.022)		(0.036)	(0.037)	(0.030)	(0.017)	(0.030)	(0.020)	
Net Wealth Distribution [Base: First Quintile]																
Second Quintile	0.063***	0.001	0.073**	0.174***	-0.022	0.099**	0.042***	0.062***	0.184***	0.139***	0.171**	0.101**	x6	0.104***	x7	0.092***
(0.008)	(0.030)	(0.031)	(0.061)	(0.020)	(0.039)	(0.009)	(0.014)	(0.024)	(0.015)	(0.068)	(0.045)		(0.020)		(0.031)	
Third Quintile	0.131***	0.067**	0.040	0.344***	0.035	0.174***	0.186***	0.209***	0.232***	0.143***	0.083	0.195***		0.154***		0.179***
(0.009)	(0.029)	(0.024)	(0.082)	(0.027)	(0.032)	(0.014)	(0.017)	(0.029)	(0.014)	(0.062)	(0.058)		(0.027)		(0.041)	
Fourth Quintile	0.216***	0.126***	0.133***	0.422***	0.110***	0.295***	0.402***	0.284***	0.392***	0.236***	0.138**	0.370***		0.231***		0.147***
(0.013)	(0.035)	(0.030)	(0.077)	(0.032)	(0.038)	(0.015)	(0.020)	(0.040)	(0.015)	(0.067)	(0.057)		(0.026)		(0.036)	
Fifth Quintile	0.453***	0.222***	0.371***	0.660***	0.312***	0.517***	0.667***	0.545***	0.700***	0.528***	0.488***	0.586***		0.497***		0.332***
(0.015)	(0.042)	(0.039)	(0.077)	(0.044)	(0.036)	(0.015)	(0.024)	(0.030)	(0.023)	(0.074)	(0.065)		(0.033)		(0.042)	
Income Distribution [Base: First Quintile]																
Second Quintile	-0.002	0.042	-0.027	0.008	-0.029	0.071***	-0.014	0.008	-0.008	-0.035	0.030	-0.001	0.009	-0.011	0.178***	0.019
(0.011)	(0.029)	(0.035)	(0.064)	(0.029)	(0.024)	(0.020)	(0.018)	(0.033)	(0.023)	(0.071)	(0.056)	(0.046)	(0.028)	(0.047)	(0.035)	
Third Quintile	0.011	0.043*	-0.038	0.013	0.030	0.080***	0.000	-0.002	0.051	-0.050**	0.051	0.040	-0.040	-0.009	0.199***	0.094**
(0.013)	(0.025)	(0.038)	(0.071)	(0.034)	(0.023)	(0.021)	(0.024)	(0.038)	(0.025)	(0.070)	(0.064)	(0.045)	(0.031)	(0.051)	(0.045)	
Fourth Quintile	0.033**	0.066**	0.018	-0.007	0.081**	0.127***	-0.005	0.003	0.015	-0.073***	0.072	0.008	-0.011	0.018	0.123***	0.121**
(0.015)	(0.027)	(0.044)	(0.074)	(0.039)	(0.035)	(0.021)	(0.022)	(0.042)	(0.024)	(0.070)	(0.059)	(0.042)	(0.033)	(0.045)	(0.050)	
Fifth Quintile	0.051***	0.118***	0.046	0.129	0.087*	0.161***	-0.022	0.028	0.025	-0.063**	0.102	0.024	0.000	0.038	0.280***	0.142**
(0.016)	(0.030)	(0.046)	(0.082)	(0.046)	(0.040)	(0.021)	(0.023)	(0.041)	(0.026)	(0.077)	(0.069)	(0.042)	(0.031)	(0.064)	(0.061)	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: HFCS 2013

1) The model for the euro area includes country fixed effects for which the estimates are not reported.

2) In Austria "other" labor status perfectly predicts failure and is dropped from the estimation.

3) Dummy for inheritance for Finland is dropped from the model due no recorded inheritances.

4) Italy does not collect information on inheritance.

Table A2.2: Average marginal effects from a probit model of participation in business ownership

	EA ¹	AT	BE	CY	DE	ES	FI	FR	GR	IT	LU	MT	NL	PT	SI	SK
Household Type [Base: Single]																
Couple	0.024***	0.017	0.019	-0.035	0.034**	0.013	0.028*	0.030***	0.007	0.030***	0.026	-0.105	0.031	0.002	x12	-0.068**
w/o children	(0.007)	(0.020)	(0.018)	(0.094)	(0.016)	(0.017)	(0.014)	(0.009)	(0.010)	(0.010)	(0.027)	(0.112)	(0.030)	(0.021)		(0.032)
>=3 adults	0.055***	0.065**	0.023	0.022	0.035*	0.036	0.017	0.045***	0.036**	0.118***	0.008	-0.113	x8	0.015		-0.030
w/o children	(0.009)	(0.029)	(0.035)	(0.106)	(0.019)	(0.023)	(0.025)	(0.015)	(0.018)	(0.021)	(0.026)	(0.115)		(0.024)		(0.037)
Single Parent	0.002	0.003	0.021	-0.081	0.014	-0.042**	0.018	-0.007	-0.025**	0.008	-0.012	-0.089		-0.007	0.041	-0.010
(0.009)	(0.042)	(0.044)	(0.093)	(0.030)	(0.020)	(0.027)	(0.010)	(0.012)	(0.016)	(0.023)	(0.143)	(0.060)	(0.047)			(0.034)
Couple	0.029***	-0.002	0.012	-0.026	0.032*	0.020	0.029*	0.044***	0.025*	0.053***	0.019	-0.135	-0.002	0.003		-0.065**
with children	(0.007)	(0.018)	(0.018)	(0.093)	(0.018)	(0.020)	(0.017)	(0.010)	(0.014)	(0.015)	(0.025)	(0.112)	(0.026)	(0.022)		(0.032)
>=3 adults	0.045***	0.046*	-0.006	-0.017	0.055*	0.023	-0.065***	0.070***	0.034*	0.095***	0.060	-0.112	0.048	-0.009		-0.059
with children	(0.007)	(0.027)	(0.029)	(0.096)	(0.030)	(0.025)	(0.019)	(0.016)	(0.020)	(0.019)	(0.044)	(0.123)	(0.078)	(0.022)		(0.038)
Gender (Reference Person)																
Male	-0.017***	-0.021	-0.013	0.052	-0.015	-0.023**	-0.013*	-0.024***	-0.029***	-0.011	-0.020	-0.045	0.009	-0.010	-0.054***	-0.018
(0.004)	(0.013)	(0.016)	(0.032)	(0.012)	(0.012)	(0.008)	(0.006)	(0.010)	(0.011)	(0.019)	(0.034)	(0.017)	(0.012)	(0.019)	(0.016)	
Age (Reference Person) [Base: Below 40 years]																
40-64 years	-0.010	0.002	-0.014	-0.057	0.020	-0.036**	0.052***	-0.021**	-0.023*	-0.011	-0.020	-0.014	-0.009	-0.029***	-0.026	-0.017
(0.006)	(0.017)	(0.019)	(0.038)	(0.017)	(0.018)	(0.010)	(0.008)	(0.013)	(0.014)	(0.027)	(0.036)	(0.027)	(0.011)	(0.022)	(0.015)	
65 years and over	-0.031***	-0.005	-0.034	-0.137	-0.023	-0.047	0.067***	-0.031**	-0.029	-0.027	-0.045	-0.066	-0.040	-0.012	-0.053*	-0.020
(0.007)	(0.025)	(0.026)	(0.137)	(0.019)	(0.029)	(0.020)	(0.012)	(0.025)	(0.017)	(0.034)	(0.054)	(0.043)	(0.024)	(0.032)	(0.039)	
Marital Status (Reference Person) [Base: Unmarried]																
Married	0.008	-0.005	0.022	0.039	0.009	0.027*	0.024*	0.004	0.017	-0.004	0.006	0.107	-0.018	0.032**	0.076***	0.021
(0.007)	(0.018)	(0.019)	(0.067)	(0.017)	(0.015)	(0.014)	(0.008)	(0.014)	(0.020)	(0.025)	(0.082)	(0.026)	(0.015)	(0.025)	(0.021)	
Divorced	0.012	-0.019	0.038	0.170**	0.021	-0.011	-0.006	0.005	0.010	0.045	0.009	0.058	-0.007	0.028	0.015	-0.016
(0.008)	(0.021)	(0.026)	(0.068)	(0.019)	(0.019)	(0.015)	(0.011)	(0.023)	(0.032)	(0.027)	(0.044)	(0.049)	(0.022)	(0.018)	(0.017)	
Widowed	-0.016*	-0.029	-0.024	0.125	-0.001	-0.004	0.021	-0.022**	-0.024**	-0.011	0.068	x12	-0.009	-0.004	x12	-0.046*
(0.009)	(0.038)	(0.019)	(0.085)	(0.035)	(0.020)	(0.021)	(0.010)	(0.012)	(0.026)	(0.064)			(0.104)	(0.022)		(0.026)
Labor market status (Reference Person) [Base: Employee]																
Self-employed	0.639***	0.349***	0.457***	0.404***	0.539***	0.765***	0.168***	0.629***	0.244***	x4	0.318***	0.538***	0.472***	0.272***	0.657***	0.675***
(0.018)	(0.057)	(0.053)	(0.061)	(0.050)	(0.031)	(0.017)	(0.030)	(0.030)	(0.030)		(0.075)	(0.086)	(0.128)	(0.031)	(0.110)	(0.065)
Unemployed	-0.020***	-0.005	-0.004	-0.067	x2	-0.032**	-0.012	-0.016	0.016	0.034	x6	0.034	x9	-0.017	0.016	x12
(0.006)	(0.060)	(0.026)	(0.048)		(0.013)	(0.022)	(0.014)	(0.018)	(0.033)		(0.138)			(0.016)	(0.031)	
Retired	-0.004	-0.028**	-0.011	-0.057	0.004	0.003	0.020	-0.019**	0.017	0.010	-0.001	0.039	-0.009	-0.025**	0.004	0.033
(0.006)	(0.012)	(0.014)	(0.121)	(0.015)	(0.024)	(0.018)	(0.008)	(0.017)	(0.013)	(0.018)	(0.040)	(0.025)	(0.011)	(0.027)	(0.026)	
Other	-0.002	-0.010	0.052	x12	-0.004	-0.020	-0.024*	-0.023**	0.042	0.002		x12	0.036	x11	x12	0.046
(0.010)	(0.057)	(0.055)		(0.023)	(0.024)	(0.014)	(0.010)	(0.031)	(0.028)				(0.050)			(0.058)
Missing	0.068*		-0.029***	-0.115*									0.068	0.280		x12
(0.039)		(0.008)	(0.069)										(0.042)	(0.199)		
Education (Reference Person) [Base: Low (ISCED 1 and 2)]																
Middle (ISCED 3)	0.003	-0.013	0.017	0.003	0.013	0.018	-0.000	0.006	-0.014	-0.003	0.009	0.006	0.023	0.010	0.000	-0.015
(0.004)	(0.018)	(0.015)	(0.047)	(0.016)	(0.013)	(0.011)	(0.007)	(0.012)	(0.009)	(0.017)	(0.027)	(0.019)	(0.013)	(0.045)	(0.029)	
High (ISCED 4-6)	0.008	-0.019	0.029*	-0.051	0.024	0.002	-0.007	-0.002	-0.033***	0.015	0.006	0.007	0.064**	-0.016	-0.027	0.025
(0.005)	(0.024)	(0.015)	(0.044)	(0.019)	(0.011)	(0.012)	(0.009)	(0.012)	(0.016)	(0.020)	(0.031)	(0.027)	(0.011)	(0.050)	(0.037)	
Inheritance																
Dummy	0.015***	0.013	0.015	-0.051	0.025**	0.016*	x3	0.000	-0.009	x5	0.003	0.033	0.064**	0.011	-0.022*	-0.019
(0.005)	(0.010)	(0.009)	(0.035)	(0.011)	(0.009)			(0.005)	(0.006)		(0.013)	(0.027)	(0.028)	(0.010)	(0.013)	(0.013)
Net Wealth Distribution [Base: First Quintile]																
Second Quintile	0.030***	0.012	0.033	0.001	0.054***	-0.001	0.033***	0.034***	0.025***	0.033**	0.008		x7	x10	0.031***	0.009
(0.006)	(0.019)	(0.022)	(0.042)	(0.021)	(0.012)	(0.012)	(0.011)	(0.008)	(0.008)	(0.016)	(0.024)				(0.011)	(0.019)
Third Quintile	0.034***	0.025	0.044*	0.118**	0.046***	0.014	0.090***	0.051***	0.023**	0.022**	0.002			0.043***	0.015	0.008
(0.005)	(0.018)	(0.024)	(0.052)	(0.017)	(0.014)	(0.012)	(0.010)	(0.009)	(0.011)	(0.026)				(0.011)	(0.029)	(0.016)
Fourth Quintile	0.035***	0.045**	0.055***	0.130**	0.020	0.040***	0.108***	0.061***	0.030***	0.012	0.044*			0.056***	0.037	0.016
(0.006)	(0.019)	(0.020)	(0.061)	(0.016)	(0.013)	(0.013)	(0.011)	(0.008)	(0.009)	(0.025)				(0.010)	(0.027)	(0.022)
Fifth Quintile	0.087***	0.179***	0.114***	0.405***	0.064***	0.089***	0.144***	0.146***	0.050***	0.052***	0.109**			0.172***	0.124*	0.060**
(0.008)	(0.041)	(0.031)	(0.068)	(0.018)	(0.023)	(0.014)	(0.016)	(0.013)	(0.014)	(0.044)				(0.025)	(0.072)	(0.027)
Income Distribution [Base: First Quintile]																
Second Quintile	0.002	-0.011	0.018	0.030	0.003	0.023	-0.002	-0.011	0.000	0.006	0.012	0.047	-0.021	0.015	-0.002	0.004
(0.007)	(0.024)	(0.019)	(0.053)	(0.025)	(0.015)	(0.014)	(0.014)	(0.006)	(0.010)	(0.028)	(0.041)	(0.045)	(0.018)	(0.023)	(0.019)	
Third Quintile	0.013	0.011	0.062***	0.107*	0.008	0.039***	-0.008	-0.029**	0.011	0.028**	0.020	0.036	0.020	0.013	0.015	0.034
(0.008)	(0.027)	(0.024)	(0.056)	(0.022)	(0.013)	(0.015)	(0.013)	(0.012)	(0.011)	(0.028)	(0.043)	(0.042)	(0.019)	(0.021)	(0.024)	
Fourth Quintile	0.016**	0.008	0.039**	0.059	0.017	0.061***	0.007	-0.037***	0.023**	0.038***	0.017	0.068	-0.010	0.003	0.026	0.048
(0.007)	(0.024)	(0.019)	(0.058)	(0.022)	(0.016)	(0.016)	(0.013)	(0.012)	(0.011)	(0.023)	(0.048)	(0.036)	(0.019)	(0.019)	(0.029)	
Fifth Quintile	0.034***	0.008	0.042**	0.083	0.054**	0.047***	0.065***	-0.037***	0.041***	0.087***	0.027	0.127**	0.004	0.009	0.029	0.076**
(0.008)	(0.024)	(0.020)	(0.057)	(0.028)	(0.017)	(0.020)	(0.013)	(0.014)	(0.015)	(0.029)	(0.056)	(0.039)	(0.018)	(0.033)	(0.039)	

Standard errors in p.

*** p<0.01, ** p<0.05.

Source: HFCS 2013

- 1) The model for the euro area includes country fixed effects for which the estimates are not reported.
- 2) In Germany "unemployment" labor status perfectly predicts and is dropped from the estimation
- 3) Dummy for inheritance for Finland is dropped from the model due no recorded inheritances.
- 4) In Italy "self-employment" labor status perfectly predicts success and is dropped from the estimation.
- 5) Italy does not collect information on inheritance.
- 6) In Luxembourg "unemployment" and "other" labor status perfectly predicts and is dropped from the estimation.
- 7) In Malta in the first wealth quintile there is no observation in some implicates, so it is removed from the model.
- 8) In the Netherlands "three or more adults without children" household type perfectly predicts and is dropped from the estimation.
- 9) In the Netherlands "unemployment" labor status perfectly predicts and is dropped from the estimation.
- 10) In the Netherlands there are wealth quintiles with no observations that participate, so it is removed from the model.
- 11) In Portugal "other" labor status perfectly predicts and is dropped from the estimation.
- 12) Various indicators in several countries are perfect predictors and hence dropped from the model.

10 Appendix 3: Probit Models (excluding net wealth indicator)

Table A3.1: Average marginal effects of probit model of participation in households' main residence

	EA ¹	AT	BE	CY	DE	ES	FI	FR	GR	IT	LU	MT	NL	PT	SI	SK
Household Type [Base: Single]																
Couple	0.096***	0.181***	0.135***	-0.015	0.098***	0.058**	0.034**	0.074***	0.126***	0.040**	0.036	0.113**	0.171***	0.104***	0.284***	0.104***
w/o children	(0.014)	(0.027)	(0.037)	(0.056)	(0.031)	(0.025)	(0.014)	(0.022)	(0.024)	(0.020)	(0.047)	(0.055)	(0.054)	(0.027)	(0.068)	(0.029)
>=3 adults	0.097***	0.244***	0.127*	0.070	0.164***	0.008	0.044	0.102***	0.150***	0.025	-0.107	0.063	0.160	0.120***	0.345***	0.155***
w/o children	(0.020)	(0.063)	(0.071)	(0.079)	(0.048)	(0.039)	(0.037)	(0.035)	(0.044)	(0.032)	(0.087)	(0.080)	(0.148)	(0.035)	(0.069)	(0.038)
Single Parent	-0.008	0.037	0.006	0.026	-0.018	0.040	-0.023	-0.061**	0.079	0.025	-0.002	-0.021	-0.026	-0.012	0.214**	0.042
	(0.025)	(0.059)	(0.057)	(0.094)	(0.072)	(0.044)	(0.026)	(0.031)	(0.067)	(0.043)	(0.079)	(0.117)	(0.107)	(0.043)	(0.096)	(0.034)
Couple	0.147***	0.233***	0.164***	0.079	0.135***	0.110***	0.087***	0.145***	0.147***	0.070***	0.046	0.235***	0.382***	0.149***	0.353***	0.141***
with children	(0.014)	(0.037)	(0.038)	(0.057)	(0.042)	(0.025)	(0.019)	(0.023)	(0.026)	(0.022)	(0.048)	(0.059)	(0.058)	(0.030)	(0.070)	(0.032)
>=3 adults	0.100***	0.229***	0.208**	-0.038	0.249***	-0.011	0.058	0.016	0.145***	0.033	0.081	0.193**	0.324*	0.098**	0.408***	0.146***
with children	(0.023)	(0.070)	(0.084)	(0.103)	(0.067)	(0.043)	(0.064)	(0.042)	(0.041)	(0.037)	(0.074)	(0.078)	(0.196)	(0.044)	(0.073)	(0.042)
Gender (Reference Person)																
Male	-0.005	0.002	-0.043	-0.036	-0.004	-0.003	0.023**	0.004	0.008	-0.014	-0.080**	-0.026	0.042	0.014	-0.022	-0.015
	(0.010)	(0.034)	(0.026)	(0.046)	(0.028)	(0.020)	(0.011)	(0.013)	(0.018)	(0.014)	(0.038)	(0.040)	(0.040)	(0.018)	(0.037)	(0.016)
Age (Reference Person) [Base: Below 40 years]																
40-64 years	0.183***	0.143***	0.161***	0.065	0.191***	0.115***	0.232***	0.250***	0.188***	0.170***	0.083**	0.036	0.030	0.208***	0.136***	0.196***
	(0.009)	(0.023)	(0.034)	(0.055)	(0.025)	(0.024)	(0.013)	(0.018)	(0.019)	(0.022)	(0.039)	(0.045)	(0.050)	(0.030)	(0.048)	(0.028)
65 years and over	0.233***	0.181***	0.069	0.134	0.239***	0.134***	0.257***	0.266***	0.242***	0.237***	0.238***	0.024	0.145**	0.251***	0.113	0.234***
	(0.014)	(0.040)	(0.075)	(0.123)	(0.053)	(0.037)	(0.027)	(0.028)	(0.049)	(0.032)	(0.069)	(0.060)	(0.069)	(0.039)	(0.089)	(0.047)
Labor market status (Reference Person) [Base: Employee]																
Self-employed	0.042**	0.149***	0.050	-0.042	0.074	-0.041	0.155***	0.126***	0.040	0.006	-0.131*	0.055	-0.069	0.031	0.101	0.035
	(0.016)	(0.043)	(0.063)	(0.078)	(0.047)	(0.036)	(0.023)	(0.027)	(0.026)	(0.024)	(0.067)	(0.053)	(0.113)	(0.027)	(0.091)	(0.032)
Unemployed	-0.091***	-0.136**	-0.095*	-0.042	-0.113*	-0.076**	-0.073***	-0.126***	0.042	0.055	-0.192	0.041	-0.074	-0.132***	-0.016	-0.208**
	(0.020)	(0.068)	(0.050)	(0.084)	(0.061)	(0.034)	(0.027)	(0.027)	(0.066)	(0.048)	(0.183)	(0.099)	(0.157)	(0.034)	(0.060)	(0.091)
Retired	0.103***	0.072*	0.237***	-0.049	0.099*	0.091***	0.133***	0.141***	0.147***	0.177***	0.088	-0.027	-0.112*	-0.018	0.262***	0.056
	(0.013)	(0.038)	(0.049)	(0.112)	(0.052)	(0.029)	(0.024)	(0.028)	(0.038)	(0.024)	(0.060)	(0.059)	(0.065)	(0.031)	(0.060)	(0.034)
Other	-0.014	-0.061	-0.096	-0.208	-0.051	0.048	-0.082***	-0.037	-0.026	0.222***	0.147**	0.050	-0.131**	-0.009	0.003	0.050*
	(0.020)	(0.092)	(0.063)	(0.133)	(0.067)	(0.032)	(0.024)	(0.031)	(0.056)	(0.041)	(0.060)	(0.071)	(0.064)	(0.051)	(0.081)	(0.028)
Missing	0.060		0.071	-0.217									-0.045	-0.051		x4
	(0.042)		(0.116)	(0.256)									(0.055)	(0.199)		
Education (Reference Person) [Base: Low (ISCED 1 and 2)]																
Middle (ISCED 3)	0.038***	-0.009	0.017	0.045	0.055	-0.048**	0.036**	0.062***	-0.004	0.086***	0.101**	0.083**	-0.006	0.020	0.093**	0.021
	(0.010)	(0.028)	(0.033)	(0.054)	(0.036)	(0.022)	(0.015)	(0.014)	(0.027)	(0.018)	(0.042)	(0.038)	(0.036)	(0.025)	(0.044)	(0.044)
High (ISCED 4-6)	0.054***	-0.090**	0.086**	0.077	0.055	-0.012	0.061***	0.094***	-0.049	0.100***	-0.006	0.111**	0.086**	0.033	0.051	0.057
	(0.012)	(0.038)	(0.035)	(0.057)	(0.042)	(0.023)	(0.016)	(0.019)	(0.037)	(0.033)	(0.057)	(0.050)	(0.039)	(0.029)	(0.050)	(0.044)
Inheritance																
Dummy	0.200***	0.269***	0.104***	0.204***	0.249***	0.139***	x2	0.122***	0.439***	x3	0.180***	0.176***	0.162**	0.226***	0.292***	0.150***
	(0.010)	(0.025)	(0.025)	(0.040)	(0.021)	(0.018)		(0.012)	(0.028)		(0.036)	(0.031)	(0.065)	(0.020)	(0.040)	(0.018)
Income Distribution [Base: First Quintile]																
Second Quintile	0.068***	0.076	0.053	0.162**	0.118**	0.044	0.150***	0.077***	0.013	0.107***	0.174**	0.034	-0.011	-0.051*	0.031	-0.002
	(0.016)	(0.046)	(0.044)	(0.078)	(0.052)	(0.034)	(0.025)	(0.021)	(0.034)	(0.024)	(0.070)	(0.060)	(0.064)	(0.031)	(0.080)	(0.025)
Third Quintile	0.132***	0.097**	0.174***	0.131	0.161***	0.110***	0.250***	0.156***	0.051	0.189***	0.331***	0.049	0.017	0.030	0.024	0.020
	(0.017)	(0.048)	(0.048)	(0.089)	(0.050)	(0.037)	(0.024)	(0.025)	(0.035)	(0.026)	(0.067)	(0.065)	(0.067)	(0.029)	(0.073)	(0.029)
Fourth Quintile	0.220***	0.102**	0.264***	0.276***	0.264***	0.117***	0.349***	0.287***	0.070	0.297***	0.457***	0.081	0.131*	0.050	0.090	0.032
	(0.017)	(0.050)	(0.046)	(0.085)	(0.048)	(0.039)	(0.030)	(0.026)	(0.046)	(0.026)	(0.063)	(0.069)	(0.075)	(0.035)	(0.071)	(0.028)
Fifth Quintile	0.275***	0.194***	0.298***	0.305***	0.340***	0.158***	0.411***	0.328***	0.148***	0.332***	0.462***	0.105	0.138**	0.102***	0.114	-0.004
	(0.020)	(0.056)	(0.054)	(0.083)	(0.058)	(0.035)	(0.031)	(0.028)	(0.044)	(0.028)	(0.070)	(0.076)	(0.069)	(0.032)	(0.074)	(0.047)

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: HFCS 2013

Notes:

- 1) The model for the euro area includes country fixed effects for which the estimates are not reported.
- 2) Dummy for inheritance for Finland is dropped from the model due to no recorded inheritances.
- 3) Italy does not collect information on inheritance.
- 4) In Slovakia there are missing observations in the labour market status, but due to perfect prediction the dummy is dropped.

Table A3.2: Average marginal effects of a probit model of participation in risky financial assets

	EA ¹	AT	BE	CY	DE	ES	FI	FR	GR	IT	LU	MT	NL	PT	SI	SK
Household Type [Base: Single]																
Couple	-0.050***	-0.029	-0.001	-0.070	-0.067***	-0.028	0.004	-0.080***	0.014	-0.085***	-0.069*	0.029	0.002	-0.017	0.048	-0.011
w/o children	(0.010)	(0.021)	(0.032)	(0.061)	(0.025)	(0.021)	(0.017)	(0.013)	(0.017)	(0.021)	(0.042)	(0.055)	(0.040)	(0.023)	(0.059)	(0.019)
>=3 adults	-0.099***	-0.062**	-0.020	-0.011	-0.106***	-0.075***	-0.036	-0.147***	0.017	-0.165***	-0.087	0.055	-0.152**	-0.051*	0.014	-0.001
w/o children	(0.012)	(0.028)	(0.051)	(0.095)	(0.036)	(0.025)	(0.030)	(0.022)	(0.021)	(0.023)	(0.055)	(0.076)	(0.076)	(0.030)	(0.061)	(0.023)
Single Parent	-0.039	-0.015	-0.094*	0.085	0.028	-0.003	-0.033	-0.087***	-0.013	-0.083	-0.153	-0.093	-0.176	-0.029	-0.040	0.023
with children	(0.029)	(0.053)	(0.054)	(0.095)	(0.073)	(0.051)	(0.032)	(0.026)	(0.015)	(0.056)	(0.102)	(0.145)	(0.145)	(0.035)	(0.070)	(0.044)
Couple	-0.076***	-0.026	-0.015	-0.055	-0.084***	-0.052*	-0.043**	-0.089***	0.005	-0.134***	-0.079*	0.141**	-0.070	-0.022	0.058	-0.002
with children	(0.010)	(0.026)	(0.040)	(0.060)	(0.026)	(0.027)	(0.019)	(0.016)	(0.016)	(0.024)	(0.043)	(0.068)	(0.044)	(0.029)	(0.069)	(0.016)
>=3 adults	-0.100***	-0.095***	-0.041	-0.040	-0.133***	-0.013	-0.067*	-0.147***	0.012	-0.172***	-0.170***	0.080	-0.040	-0.048	0.109	-0.010
with children	(0.017)	(0.031)	(0.066)	(0.101)	(0.040)	(0.043)	(0.035)	(0.021)	(0.028)	(0.026)	(0.061)	(0.081)	(0.089)	(0.031)	(0.083)	(0.029)
Gender (Reference Person)																
Male	0.018**	0.036**	0.019	0.090*	-0.004	0.018	0.020	0.028**	0.001	0.020	0.031	-0.104**	0.015	0.037**	0.036	0.005
	(0.008)	(0.017)	(0.027)	(0.047)	(0.021)	(0.019)	(0.013)	(0.012)	(0.014)	(0.015)	(0.036)	(0.050)	(0.036)	(0.016)	(0.036)	(0.013)
Age (Reference Person) [Base: Below 40 years]																
40-64 years	0.025**	0.009	0.076**	0.226***	-0.044*	0.072***	0.028**	0.037***	0.021**	0.121***	0.049	0.069	0.083**	0.023	0.082**	0.015
	(0.011)	(0.022)	(0.032)	(0.047)	(0.027)	(0.021)	(0.014)	(0.012)	(0.010)	(0.013)	(0.037)	(0.055)	(0.040)	(0.019)	(0.039)	(0.011)
65 years and over	0.040***	-0.025	0.136**	0.135	0.005	0.133***	0.090***	0.029	0.054*	0.093***	0.124	0.109	0.241***	0.028	0.076	0.031
	(0.015)	(0.033)	(0.058)	(0.143)	(0.050)	(0.043)	(0.027)	(0.024)	(0.032)	(0.023)	(0.080)	(0.079)	(0.066)	(0.023)	(0.059)	(0.035)
Labor market status (Reference Person) [Base: Employee]																
Self-employed	0.004	0.052*	0.006	-0.046	-0.035	0.017	0.093***	0.018	0.002	0.029*	0.038	0.069	0.046	0.019	-0.014	0.013
	(0.011)	(0.030)	(0.060)	(0.064)	(0.030)	(0.027)	(0.017)	(0.019)	(0.018)	(0.016)	(0.052)	(0.059)	(0.091)	(0.023)	(0.076)	(0.022)
Unemployed	-0.048**	0.030	-0.022	-0.039	-0.044	-0.042*	-0.079***	-0.084***	-0.016	0.043	0.042	0.086	-0.077	-0.002	0.000	-0.027
	(0.019)	(0.057)	(0.060)	(0.097)	(0.061)	(0.024)	(0.028)	(0.023)	(0.019)	(0.054)	(0.070)	(0.134)	(0.135)	(0.033)	(0.063)	(0.041)
Retired	0.031***	0.047	0.089*	0.063	-0.011	0.034	0.062**	-0.008	x3	0.127***	0.006	0.070	-0.116**	0.019	0.005	-0.024
	(0.011)	(0.029)	(0.052)	(0.140)	(0.036)	(0.036)	(0.026)	(0.018)		(0.018)	(0.062)	(0.068)	(0.056)	(0.023)	(0.053)	(0.021)
Other	0.043*	0.039	-0.064	-0.150	0.052	-0.016	0.017	-0.044		0.157*	0.065	-0.034	0.032	-0.033	-0.135***	0.012
	(0.025)	(0.064)	(0.077)	(0.163)	(0.057)	(0.043)	(0.025)	(0.035)		(0.089)	(0.120)	(0.093)	(0.071)	(0.031)	(0.045)	(0.070)
Missing	-0.005		-0.059	0.287									0.024	x5		x6
	(0.039)		(0.153)	(0.304)									(0.060)			
Education (Reference Person) [Base: Low (ISCED 1 and 2)]																
Middle (ISCED 3)	0.056***	0.085***	0.110***	0.028	0.085***	0.096***	0.066***	0.036***	0.027**	0.050***	0.126***	0.030	0.071	0.065***	0.110***	-0.001
	(0.007)	(0.021)	(0.028)	(0.055)	(0.033)	(0.019)	(0.015)	(0.012)	(0.012)	(0.012)	(0.027)	(0.043)	(0.044)	(0.017)	(0.034)	(0.049)
High (ISCED 4-6)	0.135***	0.146***	0.200***	0.076	0.217***	0.176***	0.163***	0.083***	0.041***	0.051**	0.256***	0.084	0.106**	0.130***	0.332***	0.056
	(0.011)	(0.033)	(0.034)	(0.060)	(0.040)	(0.020)	(0.016)	(0.015)	(0.014)	(0.020)	(0.043)	(0.054)	(0.044)	(0.020)	(0.061)	(0.054)
Inheritance																
Dummy	0.076***	0.077***	0.112***	0.102**	0.058***	0.077***	x2	0.095***	-0.007	x4	0.075**	0.207***	0.173***	0.062***	0.021	-0.001
	(0.009)	(0.017)	(0.022)	(0.041)	(0.019)	(0.017)		(0.009)	(0.010)		(0.034)	(0.038)	(0.051)	(0.014)	(0.034)	(0.013)
Income Distribution [Base: First Quintile]																
Second Quintile	0.048***	0.030	0.117***	0.109	0.025	0.058**	0.091***	0.058***	-0.004	0.074***	0.064	0.100*	0.044	0.001	0.010	-0.002
	(0.009)	(0.021)	(0.030)	(0.068)	(0.025)	(0.024)	(0.022)	(0.011)	(0.017)	(0.009)	(0.041)	(0.056)	(0.056)	(0.017)	(0.059)	(0.028)
Third Quintile	0.119***	0.076***	0.208***	0.115	0.132***	0.040	0.181***	0.134***	0.005	0.173***	0.181***	0.110*	0.055	0.032	0.106*	0.006
	(0.012)	(0.025)	(0.038)	(0.079)	(0.033)	(0.026)	(0.023)	(0.014)	(0.019)	(0.014)	(0.051)	(0.059)	(0.052)	(0.020)	(0.060)	(0.025)
Fourth Quintile	0.187***	0.150***	0.236***	0.207***	0.182***	0.084***	0.261***	0.229***	0.025	0.300***	0.281***	0.206***	0.134**	0.059***	-0.014	-0.024
	(0.012)	(0.034)	(0.034)	(0.079)	(0.035)	(0.029)	(0.026)	(0.017)	(0.022)	(0.020)	(0.052)	(0.065)	(0.063)	(0.020)	(0.057)	(0.023)
Fifth Quintile	0.327***	0.198***	0.279***	0.375***	0.335***	0.220***	0.427***	0.415***	0.062**	0.472***	0.495***	0.249***	0.164***	0.201***	0.015	-0.014
	(0.013)	(0.035)	(0.038)	(0.088)	(0.042)	(0.032)	(0.030)	(0.021)	(0.029)	(0.022)	(0.060)	(0.081)	(0.057)	(0.029)	(0.068)	(0.026)

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: HFCS 2013

Notes:

- 1) The model for the euro area includes country fixed effects for which the estimates are not reported.
- 2) Dummy for inheritance for Finland is dropped from the model due to no recorded inheritances.
- 3) In Greece some indicators for the labor market status are dropped due to perfect prediction.
- 4) Italy does not collect information on inheritance.
- 5) Portugal has missings in the labor market status, but a coefficient cannot be estimated due to perfect prediction.
- 6) In Slovakia there are missing observations in the labour market status, but due to perfect prediction the dummy is dropped.

Table A3.3: Average marginal effects of a probit model of participation in other real estate

	EA ¹	AT	BE	CY	DE	ES	FI	FR	GR	IT	LU	MT	NL	PT	SI	SK
Household Type [Base: Single]																
Couple	0.040***	0.007	0.008	0.116**	0.007	0.072***	0.149***	0.037**	0.063**	0.069***	0.007	-0.007	0.038	0.038	0.086	-0.022
w/o children	(0.010)	(0.021)	(0.024)	(0.058)	(0.023)	(0.024)	(0.015)	(0.016)	(0.028)	(0.017)	(0.060)	(0.056)	(0.024)	(0.032)	(0.053)	(0.039)
>=3 adults	0.040***	0.024	-0.016	0.242**	-0.004	0.028	0.278***	0.033	0.133***	0.103***	0.055	0.018	0.026	0.037	0.132**	0.062
w/o children	(0.015)	(0.045)	(0.039)	(0.102)	(0.034)	(0.033)	(0.037)	(0.029)	(0.036)	(0.024)	(0.078)	(0.071)	(0.047)	(0.035)	(0.064)	(0.052)
Single Parent	-0.004	-0.001	0.032	-0.064	0.046	0.025	0.005	-0.025	0.083	-0.061*	0.127	0.012	-0.011	-0.079*	-0.111**	0.017
	(0.020)	(0.059)	(0.054)	(0.085)	(0.067)	(0.056)	(0.030)	(0.026)	(0.062)	(0.034)	(0.095)	(0.191)	(0.102)	(0.044)	(0.045)	(0.062)
Couple	0.035***	-0.001	0.006	0.111*	0.001	0.063**	0.095***	0.040**	0.072**	0.083***	-0.030	0.107	0.047	0.015	0.055	0.028
with children	(0.013)	(0.026)	(0.035)	(0.061)	(0.027)	(0.029)	(0.017)	(0.017)	(0.036)	(0.025)	(0.059)	(0.069)	(0.039)	(0.033)	(0.062)	(0.039)
>=3 adults	0.036**	0.003	0.023	0.026	-0.004	0.087**	0.181***	0.022	0.098*	0.087***	0.032	0.085	-0.041	0.017	0.160**	0.002
with children	(0.018)	(0.036)	(0.073)	(0.087)	(0.042)	(0.043)	(0.044)	(0.036)	(0.053)	(0.031)	(0.085)	(0.083)	(0.068)	(0.044)	(0.078)	(0.050)
Gender (Reference Person)																
Male	0.005	-0.003	0.043**	0.049	-0.009	-0.017	0.049***	-0.001	0.037	0.007	0.069*	-0.043	0.013	0.021	-0.060**	-0.004
	(0.009)	(0.017)	(0.021)	(0.042)	(0.021)	(0.023)	(0.010)	(0.012)	(0.028)	(0.016)	(0.041)	(0.049)	(0.020)	(0.016)	(0.029)	(0.025)
Age (Reference Person) [Base: Below 40 years]																
40-64 years	0.103***	0.053***	0.086***	0.130**	0.046**	0.131***	0.206***	0.124***	0.089***	0.146***	0.094**	0.112**	0.076***	0.086***	0.169***	0.051*
	(0.008)	(0.017)	(0.025)	(0.056)	(0.021)	(0.024)	(0.012)	(0.015)	(0.026)	(0.017)	(0.041)	(0.053)	(0.022)	(0.023)	(0.026)	(0.026)
65 years and over	0.103***	0.057*	0.070	-0.032	0.070	0.079**	0.251***	0.097***	0.107**	0.178***	0.184**	0.138*	0.039	0.135***	0.275***	0.023
	(0.013)	(0.033)	(0.043)	(0.116)	(0.044)	(0.036)	(0.025)	(0.029)	(0.044)	(0.027)	(0.079)	(0.082)	(0.031)	(0.033)	(0.056)	(0.045)
Labor market status (Reference Person) [Base: Employee]																
Self-employed	0.136***	0.089***	0.173***	0.168***	0.072**	0.135***	0.192***	0.208***	0.129***	0.172***	0.157***	0.260***	0.082	0.162***	0.093	0.082**
	(0.014)	(0.033)	(0.057)	(0.062)	(0.031)	(0.034)	(0.018)	(0.024)	(0.032)	(0.027)	(0.060)	(0.055)	(0.089)	(0.028)	(0.066)	(0.041)
Unemployed	-0.047***	0.030	-0.040	0.031	-0.090**	-0.000	-0.051**	-0.104***	-0.068	-0.038	x5	-0.054	0.104	-0.027	-0.059	0.030
	(0.015)	(0.070)	(0.034)	(0.108)	(0.035)	(0.037)	(0.024)	(0.020)	(0.095)	(0.043)		(0.224)	(0.141)	(0.040)	(0.056)	(0.092)
Retired	0.061***	0.011	0.104***	0.017	0.038	0.151***	0.099***	0.064**	0.091***	0.051***	0.047	0.112*	0.025	0.046	-0.054	0.117***
	(0.013)	(0.024)	(0.040)	(0.103)	(0.036)	(0.031)	(0.023)	(0.026)	(0.032)	(0.018)	(0.055)	(0.062)	(0.028)	(0.030)	(0.045)	(0.041)
Other	-0.002	x2	-0.040	-0.065	-0.003	0.094**	0.011	-0.056**	-0.020	0.031	-0.185**	-0.072	-0.024	0.095	-0.092	0.092
	(0.017)		(0.046)	(0.103)	(0.051)	(0.037)	(0.019)	(0.027)	(0.068)	(0.053)	(0.075)	(0.078)	(0.021)	(0.060)	(0.072)	(0.084)
Missing	0.015		0.017	0.193									0.002	0.194		x6
	(0.044)		(0.084)	(0.231)									(0.025)	(0.191)		
Education (Reference Person) [Base: Low (ISCED 1 and 2)]																
Middle (ISCED 3)	0.018***	-0.014	0.022	0.120**	0.066***	0.022	0.025*	0.026**	-0.014	0.039***	-0.043	0.086***	-0.000	0.007	0.000	-0.130*
	(0.007)	(0.024)	(0.029)	(0.047)	(0.024)	(0.029)	(0.014)	(0.012)	(0.029)	(0.015)	(0.042)	(0.033)	(0.022)	(0.022)	(0.039)	(0.076)
High (ISCED 4-6)	0.075***	0.053	0.036	0.059	0.133***	0.041*	0.050***	0.051***	0.026	0.130***	0.075	0.115**	0.058**	0.105***	0.048	0.023
	(0.012)	(0.033)	(0.025)	(0.053)	(0.035)	(0.025)	(0.015)	(0.016)	(0.031)	(0.025)	(0.055)	(0.058)	(0.026)	(0.029)	(0.059)	(0.085)
Inheritance																
Dummy	0.165***	0.152***	0.082***	0.277***	0.105***	0.290***	x3	0.188***	0.066**	x4	0.128***	0.163***	0.043	0.239***	0.099***	0.051**
	(0.008)	(0.016)	(0.017)	(0.035)	(0.015)	(0.017)		(0.011)	(0.026)		(0.036)	(0.037)	(0.031)	(0.018)	(0.030)	(0.020)
Income Distribution [Base: First Quintile]																
Second Quintile	0.027***	0.045*	-0.003	0.049	-0.015	0.122***	0.053***	0.043***	0.029	0.022	0.027	0.047	0.009	0.010	0.157***	0.034
	(0.010)	(0.026)	(0.030)	(0.073)	(0.022)	(0.027)	(0.020)	(0.016)	(0.031)	(0.021)	(0.066)	(0.059)	(0.047)	(0.028)	(0.050)	(0.031)
Third Quintile	0.070***	0.062***	0.006	0.048	0.054*	0.162***	0.122***	0.072***	0.143***	0.052**	0.097	0.087	-0.043	0.049	0.184***	0.121***
	(0.013)	(0.023)	(0.032)	(0.078)	(0.030)	(0.024)	(0.022)	(0.023)	(0.037)	(0.024)	(0.063)	(0.067)	(0.046)	(0.034)	(0.054)	(0.046)
Fourth Quintile	0.130***	0.100***	0.083**	0.116	0.144***	0.240***	0.169***	0.126***	0.121***	0.074***	0.160**	0.106*	-0.010	0.098***	0.109**	0.164***
	(0.014)	(0.028)	(0.039)	(0.090)	(0.035)	(0.031)	(0.024)	(0.021)	(0.038)	(0.023)	(0.066)	(0.058)	(0.043)	(0.034)	(0.046)	(0.056)
Fifth Quintile	0.221***	0.189***	0.151***	0.322***	0.210***	0.350***	0.229***	0.246***	0.246***	0.176***	0.264***	0.174**	0.000	0.208***	0.275***	0.215***
	(0.017)	(0.030)	(0.042)	(0.097)	(0.049)	(0.038)	(0.025)	(0.024)	(0.040)	(0.028)	(0.077)	(0.073)	(0.043)	(0.032)	(0.065)	(0.064)

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: HFCS 2013

Notes:

- 1) The model for the euro area includes country fixed effects for which the estimates are not reported.
- 2) In Austria "other" labor status perfectly predicts failure and is dropped from the estimation.
- 3) Dummy for inheritance for Finland is dropped from the model due no recorded inheritances.
- 4) Italy does not collect information on inheritance.
- 5) In Luxembourg "unemployed" labor status perfectly predicts failure and is dropped from the estimation.
- 6) In Slovakia there are missing observations in the labour market status, but due to perfect prediction the dummy is dropped.

Table A3.4: Average marginal effects from a probit model of participation in business ownership

	EA ¹	AT	BE	CY	DE	ES	FI	FR	GR	IT	LU	MT	NL	PT	SI	SK
Household Type [Base: Single]																
Couple	0.033***	0.036**	0.031**	0.004	0.039***	0.030**	0.053***	0.042***	0.024***	0.029***	0.030	-0.015	0.023	0.027*	x10	-0.033*
w/o children	(0.006)	(0.016)	(0.014)	(0.057)	(0.015)	(0.015)	(0.011)	(0.008)	(0.008)	(0.008)	(0.021)	(0.034)	(0.026)	(0.015)		(0.019)
>=3 adults	0.067***	0.106***	0.030	0.046	0.042**	0.058***	0.043*	0.056***	0.061***	0.109***	0.011	-0.015	x7	0.044**		0.016
w/o children	(0.008)	(0.028)	(0.029)	(0.083)	(0.018)	(0.021)	(0.023)	(0.014)	(0.020)	(0.019)	(0.029)	(0.047)		(0.020)		(0.030)
Single Parent	0.004	-0.002	0.021	0.002	0.015	-0.038**	0.008	-0.008	-0.010	0.024	0.007	-0.030	-0.008	0.028		-0.014
(0.008)	(0.033)	(0.032)	(0.095)	(0.029)	(0.018)	(0.024)	(0.008)	(0.007)	(0.023)	(0.026)	(0.101)	(0.067)	(0.040)			(0.022)
Couple	0.039***	0.027	0.025	-0.006	0.035**	0.046***	0.057***	0.057***	0.051***	0.049***	0.015	-0.040	-0.013	0.032*		-0.025
with children	(0.006)	(0.020)	(0.017)	(0.052)	(0.017)	(0.017)	(0.014)	(0.009)	(0.012)	(0.012)	(0.018)	(0.039)	(0.019)	(0.016)		(0.019)
>=3 adults	0.054***	0.077**	0.007	-0.021	0.062**	0.044*	-0.041**	0.077***	0.058***	0.085***	0.061	-0.013	0.035	0.019		-0.021
with children	(0.009)	(0.031)	(0.032)	(0.062)	(0.029)	(0.024)	(0.018)	(0.015)	(0.022)	(0.017)	(0.037)	(0.051)	(0.068)	(0.020)		(0.032)
Gender (Reference Person)																
Male	-0.016***	-0.019	-0.009	0.067**	-0.016	-0.017	-0.009	-0.023***	-0.021**	-0.012	-0.018	-0.032	0.008	-0.004	-0.051***	-0.016
(0.004)	(0.014)	(0.016)	(0.030)	(0.012)	(0.012)	(0.008)	(0.006)	(0.009)	(0.010)	(0.021)	(0.031)	(0.018)	(0.013)	(0.019)		(0.015)
Age (Reference Person) [Base: Below 40 years]																
40-64 years	0.004	0.028*	0.014	0.017	0.025*	-0.018	0.085***	0.004	-0.016	-0.003	0.002	-0.014	-0.014	-0.004	-0.010	-0.009
(0.005)	(0.015)	(0.013)	(0.039)	(0.015)	(0.014)	(0.008)	(0.007)	(0.011)	(0.012)	(0.021)	(0.036)	(0.026)	(0.012)	(0.018)		(0.012)
65 years and over	-0.016**	0.007	-0.015	-0.046	-0.015	-0.028	0.117***	-0.010	-0.020	-0.020	-0.017	-0.076	-0.047	0.017	-0.054*	-0.001
(0.006)	(0.023)	(0.023)	(0.145)	(0.016)	(0.025)	(0.020)	(0.011)	(0.022)	(0.015)	(0.030)	(0.052)	(0.051)	(0.024)	(0.029)		(0.035)
Labor market status (Reference Person) [Base: Employee]																
Self-employed	0.674***	0.452***	0.514***	0.481***	0.554***	0.791***	0.191***	0.735***	0.260***	x4	0.340***	0.564***	0.482***	0.377***	0.795***	0.703***
(0.017)	(0.046)	(0.060)	(0.070)	(0.054)	(0.030)	(0.018)	(0.021)	(0.032)	(0.032)		(0.078)	(0.080)	(0.136)	(0.037)	(0.063)	(0.065)
Unemployed	-0.022***	0.009	-0.006	-0.092**	x2	-0.033***	-0.018	-0.018*	0.011	0.030	x6	0.041	x8	-0.025**	-0.003	x10
(0.005)	(0.068)	(0.018)	(0.039)		(0.011)	(0.020)	(0.010)	(0.015)	(0.032)		(0.147)		(0.013)	(0.026)		
Retired	0.002	-0.016	0.000	-0.072	0.003	0.024	0.041**	-0.009	0.020	0.012	0.018	0.048	-0.011	-0.021	0.026	0.024
(0.006)	(0.011)	(0.017)	(0.124)	(0.015)	(0.027)	(0.019)	(0.008)	(0.017)	(0.013)	(0.021)	(0.042)	(0.027)	(0.013)	(0.036)		(0.020)
Other	0.000	0.004	0.035	x10	-0.006	-0.010	-0.022	-0.022***	0.039	0.007		x10	0.039	x9	x10	0.051
(0.010)	(0.071)	(0.042)		(0.022)	(0.028)	(0.014)	(0.008)	(0.031)	(0.029)			(0.055)				(0.066)
Missing	0.074*		-0.026***	-0.115*									0.064*	0.350		x10
(0.039)		(0.007)	(0.065)										(0.039)	(0.225)		
Education (Reference Person) [Base: Low (ISCED 1 and 2)]																
Middle (ISCED 3)	0.010**	-0.011	0.022	0.032	0.016	0.024*	0.001	0.013**	-0.010	0.003	0.015	0.010	0.023	0.022	0.033	-0.003
(0.004)	(0.019)	(0.015)	(0.046)	(0.016)	(0.013)	(0.011)	(0.006)	(0.011)	(0.008)	(0.017)	(0.027)	(0.019)	(0.016)	(0.027)		(0.027)
High (ISCED 4-6)	0.019***	-0.017	0.042***	-0.025	0.031*	0.015	0.001	0.009	-0.027***	0.025	0.011	0.012	0.066**	0.004	0.033	0.048
(0.006)	(0.025)	(0.015)	(0.045)	(0.018)	(0.012)	(0.011)	(0.009)	(0.010)	(0.015)	(0.021)	(0.031)	(0.028)	(0.013)	(0.031)		(0.039)
Inheritance																
Dummy	0.027***	0.047***	0.027***	0.011	0.031***	0.029***	x3	0.018***	-0.001	x5	0.021	0.035	0.064**	0.037***	-0.021	-0.015
(0.005)	(0.010)	(0.010)	(0.033)	(0.011)	(0.009)		(0.005)	(0.006)			(0.013)	(0.027)	(0.028)	(0.011)	(0.016)	(0.012)
Income Distribution [Base: First Quintile]																
Second Quintile	0.006	0.002	0.018	0.026	0.006	0.027**	0.015	-0.003	0.003	0.006	0.007	0.046	-0.022	0.026*	-0.011	0.012
(0.007)	(0.019)	(0.017)	(0.037)	(0.023)	(0.013)	(0.013)	(0.011)	(0.005)	(0.008)	(0.024)	(0.042)	(0.048)	(0.014)	(0.015)		(0.018)
Third Quintile	0.021***	0.033	0.069***	0.106**	0.012	0.049***	0.019	-0.012	0.016	0.030***	0.022	0.033	0.021	0.037**	0.036**	0.041*
(0.007)	(0.026)	(0.022)	(0.049)	(0.019)	(0.013)	(0.014)	(0.012)	(0.010)	(0.010)	(0.025)	(0.042)	(0.043)	(0.017)	(0.017)		(0.024)
Fourth Quintile	0.029***	0.037	0.052***	0.107**	0.024	0.080***	0.046***	-0.013	0.028***	0.044***	0.032	0.066	-0.012	0.032*	0.048*	0.063*
(0.006)	(0.024)	(0.018)	(0.054)	(0.019)	(0.017)	(0.015)	(0.011)	(0.011)	(0.010)	(0.024)	(0.048)	(0.036)	(0.018)	(0.028)		(0.032)
Fifth Quintile	0.062***	0.060***	0.061***	0.188***	0.069***	0.081***	0.126***	0.003	0.057***	0.105***	0.061*	0.134**	0.003	0.072***	0.118***	0.101**
(0.008)	(0.022)	(0.022)	(0.064)	(0.026)	(0.017)	(0.019)	(0.011)	(0.013)	(0.017)	(0.032)	(0.055)	(0.040)	(0.017)	(0.034)		(0.043)

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: HFCS 2013

Notes:

- 1) The model for the euro area includes country fixed effects for which the estimates are not reported.
- 2) In Germany "unemployment" labor status perfectly predicts and is dropped from the estimation
- 3) Dummy for inheritance for Finland is dropped from the model due no recorded inheritances.
- 4) In Italy "self-employment" labor status perfectly predicts success and is dropped from the estimation.
- 5) Italy does not collect information on inheritance.
- 6) In Luxembourg "unemployment" and "other" labor status perfectly predicts and is dropped from the estimation.

12 Appendix 5: Tobit Models (excluding net wealth indicator)

Table A5.1: Tobit model for the value of the households' main residence

	EA	AT	BE	CY	DE	ES	FI	FR	GR	IT	LU	MT	NL	PT	SI	SK
Household Type [Base: Single]																
Couple	2.283***	5.136***	2.667***	-0.046	3.000***	0.909**	0.586**	1.596***	2.351***	0.705*	0.657	2.385**	4.298***	1.880***	3.605***	1.358***
w/o children	(0.298)	(0.707)	(0.652)	(1.027)	(0.846)	(0.385)	(0.290)	(0.511)	(0.415)	(0.371)	(0.949)	(0.952)	(1.164)	(0.481)	(0.919)	(0.293)
>=3 adults	1.870***	6.058***	2.464**	1.130	4.119***	0.139	0.396	2.241***	2.556***	0.381	-1.286	1.463	4.345	1.915***	4.922***	1.989***
w/o children	(0.366)	(1.332)	(1.050)	(0.994)	(1.099)	(0.521)	(0.440)	(0.682)	(0.632)	(0.556)	(1.522)	(1.322)	(2.883)	(0.604)	(0.990)	(0.402)
Single Parent	-0.462	1.245	-0.109	1.073	-1.026	0.526	-1.132*	-1.931**	1.216	0.462	-0.011	-0.813	-0.914	-0.544	3.277*	0.867*
	(0.596)	(1.812)	(1.225)	(1.630)	(2.337)	(0.919)	(0.637)	(0.822)	(1.440)	(0.993)	(1.950)	(2.088)	(2.652)	(0.854)	(1.752)	(0.470)
Couple	3.570***	6.786***	3.535***	1.464	4.063***	1.958***	2.085***	3.714***	3.129***	1.507***	1.313	4.455***	8.579***	2.760***	5.739***	2.269***
with children	(0.320)	(0.952)	(0.715)	(0.911)	(1.083)	(0.442)	(0.349)	(0.565)	(0.524)	(0.477)	(1.091)	(1.072)	(1.179)	(0.575)	(1.120)	(0.404)
>=3 adults	2.342***	6.015***	4.012***	-0.182	6.533***	-0.257	1.148*	0.726	2.546***	0.613	1.969	3.521***	7.536***	1.678**	5.756***	1.867***
with children	(0.445)	(1.440)	(1.167)	(1.495)	(1.384)	(0.684)	(0.608)	(0.968)	(0.645)	(0.741)	(1.572)	(1.253)	(2.034)	(0.739)	(1.153)	(0.501)
Gender (Reference Person)																
Male	-0.203	-0.015	-1.010**	-0.426	-0.293	-0.033	0.307	0.007	-0.006	-0.396	-2.211***	-0.516	0.999	0.269	-0.826	-0.215
	(0.216)	(0.914)	(0.507)	(0.717)	(0.782)	(0.313)	(0.216)	(0.325)	(0.302)	(0.254)	(0.764)	(0.643)	(1.021)	(0.332)	(0.541)	(0.197)
Age (Reference Person) [Base: Below 40 years]																
40-64 years	4.357***	4.331***	3.648***	0.714	6.287***	2.052***	4.592***	6.220***	4.032***	3.674***	2.190***	0.791	0.641	3.713***	2.227***	2.492***
	(0.200)	(0.697)	(0.660)	(0.845)	(0.783)	(0.373)	(0.250)	(0.427)	(0.361)	(0.465)	(0.827)	(0.617)	(1.124)	(0.566)	(0.832)	(0.280)
65 years and over	5.738***	5.487***	3.003***	1.864	7.663***	2.584***	5.592***	6.841***	4.938***	5.102***	5.444***	0.615	3.965**	4.405***	2.070*	3.107***
	(0.300)	(1.098)	(0.948)	(2.173)	(1.291)	(0.531)	(0.408)	(0.618)	(0.703)	(0.618)	(1.383)	(1.023)	(1.854)	(0.710)	(1.101)	(0.392)
Labor market status (Reference Person) [Base: Employee]																
Self-employed	0.958***	3.390***	1.104	-0.195	1.989*	-0.368	2.526***	2.757***	1.048**	0.386	-2.220	1.053	-1.638	0.607	0.910	0.458
	(0.307)	(0.943)	(0.856)	(1.100)	(1.063)	(0.468)	(0.331)	(0.552)	(0.424)	(0.433)	(1.388)	(0.652)	(2.233)	(0.440)	(0.821)	(0.340)
Unemployed	-2.295***	-4.686***	-3.137***	-1.084	-4.306**	-1.484**	-1.984***	-3.909***	0.852	0.570	-6.710	0.605	-1.218	-2.580***	-0.416	-3.371**
	(0.456)	(2.303)	(1.126)	(1.543)	(2.185)	(0.616)	(0.574)	(0.773)	(1.359)	(1.162)	(10.570)	(1.628)	(3.517)	(0.679)	(1.120)	(1.716)
Retired	2.022***	1.960**	3.576***	-0.316	2.573**	1.176**	2.322***	3.009***	2.500***	3.382***	1.699*	-0.568	-2.711*	-0.211	4.234***	0.757***
	(0.261)	(0.914)	(0.676)	(1.937)	(1.120)	(0.406)	(0.370)	(0.597)	(0.549)	(0.442)	(1.032)	(1.046)	(1.647)	(0.491)	(0.843)	(0.265)
Other	-0.610	-2.352	-2.958**	-4.068	-2.302	0.817	-2.609***	-1.765**	-0.879	5.179***	3.892**	1.209	-3.267*	-0.002	-0.883	0.564
	(0.454)	(3.104)	(1.440)	(2.561)	(2.152)	(0.504)	(0.477)	(0.857)	(1.042)	(1.009)	(1.772)	(1.486)	(1.680)	(0.940)	(1.601)	(0.366)
Missing	1.316	1.901	-3.989									-1.130	-0.552			2.536***
	(0.976)		(2.306)	(7.828)								(1.182)	(12.298)			(0.806)
Education (Reference Person) [Base: Low (ISCED 1 and 2)]																
Middle (ISCED 3)	0.773***	-0.254	0.182	1.315	1.721	-0.665*	0.295	1.230***	0.176	1.626***	1.950**	1.446***	-0.067	0.599	1.478**	0.367
	(0.215)	(0.764)	(0.648)	(0.898)	(1.102)	(0.387)	(0.295)	(0.327)	(0.450)	(0.333)	(0.881)	(0.533)	(0.880)	(0.451)	(0.650)	(0.423)
High (ISCED 4-6)	1.259***	-2.056**	1.272*	1.679*	1.854	0.059	0.676**	2.070***	-0.447	1.876***	0.156	1.807***	2.155**	0.942**	0.990	0.992**
	(0.264)	(1.042)	(0.660)	(0.944)	(1.232)	(0.361)	(0.285)	(0.441)	(0.610)	(0.560)	(1.093)	(0.690)	(0.902)	(0.462)	(0.747)	(0.435)
Inheritance																
Dummy	4.180***	7.187***	1.882***	3.447***	6.788***	1.665***	x2	2.791***	5.191***	x3	3.051***	2.760***	3.072***	3.286***	3.362***	1.424***
	(0.214)	(0.635)	(0.422)	(0.599)	(0.590)	(0.230)		(0.287)	(0.206)		(0.622)	(0.452)	(1.173)	(0.321)	(0.462)	(0.132)
Income Distribution [Base: First Quintile]																
Second Quintile	1.722***	2.532*	1.283	2.945**	4.141**	0.712	2.906***	2.169***	0.355	2.154***	4.025**	0.917	-0.231	-0.626	1.217	-0.144
	(0.364)	(1.393)	(0.868)	(1.287)	(1.757)	(0.469)	(0.453)	(0.547)	(0.569)	(0.456)	(1.604)	(1.099)	(1.746)	(0.522)	(0.996)	(0.344)
Third Quintile	3.304***	3.216**	3.469***	2.609*	5.577***	1.873***	4.830***	4.133***	1.101**	3.820***	7.122***	1.227	0.803	0.941*	0.687	0.242
	(0.367)	(1.392)	(0.881)	(1.446)	(1.642)	(0.539)	(0.421)	(0.593)	(0.546)	(0.461)	(1.449)	(1.150)	(1.748)	(0.512)	(1.061)	(0.406)
Fourth Quintile	5.191***	3.398**	5.054***	4.840***	8.269***	2.089***	7.110***	7.113***	1.547**	6.016***	9.979***	1.712	3.377*	1.353**	1.580	0.407
	(0.372)	(1.443)	(0.827)	(1.406)	(1.537)	(0.589)	(0.486)	(0.572)	(0.717)	(0.477)	(1.403)	(1.180)	(1.787)	(0.575)	(0.981)	(0.377)
Fifth Quintile	6.401***	5.577***	5.523***	5.333***	10.125***	2.944***	8.015***	7.748***	3.147***	6.944***	10.618***	1.880	3.194**	2.333***	2.496**	0.171
	(0.418)	(1.486)	(0.952)	(1.390)	(1.715)	(0.529)	(0.533)	(0.638)	(0.707)	(0.544)	(1.579)	(1.266)	(1.623)	(0.548)	(1.022)	(0.483)
Constant	-8.483***	-11.348***	-1.159	2.509	-17.017***	5.552***	-2.545***	-9.388***	-1.375***	-2.613***	-2.246*	3.928***	-1.677	0.699	-0.445	5.707***
	(0.506)	(1.311)	(0.987)	(1.656)	(1.774)	(0.586)	(0.545)	(0.554)	(0.478)	(0.698)	(1.361)	(1.377)	(1.703)	(0.673)	(1.369)	(0.506)
Sigma	8.154***	10.143***	7.014***	6.637***	9.864***	5.467***	6.769***	8.909***	6.116***	7.684***	7.692***	6.170***	9.342***	6.895***	4.705***	3.532***
	(0.056)	(0.224)	(0.191)	(0.316)	(0.176)	(0.175)	(0.078)	(0.101)	(0.077)	(0.116)	(0.277)	(0.227)	(0.170)	(0.185)	(0.257)	(0.067)

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: HFCS 2013

Notes:

1) The model for the euro area includes country fixed effects for which the estimates are not reported.

2) Dummy for inheritance for Finland is dropped from the model due to no recorded inheritances.

3) Italy does not collect information on inheritance.

Table A5.2: Tobit model for the value of risky financial assets

	EA ¹	AT	BE	CY	DE	ES	FI	FR	GR	IT	LU	MT	NL	PT	SI	SK
Household Type [Base: Single]																
Couple	-2.511***	-2.299	0.139	-1.727	-3.345***	-1.845	-0.068	-3.543***	4.461	-4.385***	-3.196	1.087	0.184	-1.506	3.035	-1.696
w/o children	(0.447)	(1.406)	(1.112)	(1.596)	(1.075)	(1.152)	(0.405)	(0.527)	(4.018)	(1.041)	(1.978)	(1.802)	(1.388)	(1.896)	(2.567)	(3.155)
>=3 adults	-5.180***	-4.980**	-0.736	-1.421	-5.597***	-4.776***	-1.068	-7.093***	4.096	-9.188***	-4.112*	2.025	-7.074*	-5.198*	1.226	-0.021
w/o children	(0.600)	(2.244)	(1.908)	(2.131)	(1.802)	(1.564)	(0.704)	(1.185)	(4.561)	(1.242)	(2.263)	(2.369)	(3.815)	(3.033)	(2.832)	(3.701)
Single Parent	-1.924	-1.214	-3.946*	1.355	1.265	-0.667	-1.181	-3.970***	-3.887	-4.198	-7.270	-4.149	-8.455	-3.086	-2.188	3.541
	(1.449)	(3.748)	(2.305)	(2.188)	(3.044)	(2.689)	(0.781)	(1.227)	(34.167)	(2.964)	(24.947)	(6.290)	(9.061)	(9.235)	(3.698)	(5.500)
Couple	-3.951***	-2.009	-0.409	-1.863	-4.278***	-3.466**	-1.455***	-4.121***	1.850	-7.187***	-3.495**	4.437**	-2.615	-2.021	3.364	-0.063
with children	(0.490)	(1.792)	(1.442)	(1.500)	(1.228)	(1.594)	(0.443)	(0.666)	(4.443)	(1.249)	(1.781)	(2.117)	(1.686)	(2.586)	(3.009)	(2.658)
>=3 adults	-5.311***	-8.422***	-1.482	-2.456	-7.155***	-1.268	-2.328***	-7.080***	3.630	-9.722***	-8.018**	2.375	-1.429	-5.025*	5.035	-1.576
with children	(0.925)	(3.152)	(2.407)	(2.080)	(2.436)	(2.322)	(0.784)	(1.111)	(6.295)	(1.536)	(3.310)	(2.455)	(3.337)	(2.967)	(3.219)	(5.327)
Gender (Reference Person)																
Male	0.849**	2.736**	0.733	2.617**	-0.325	0.968	0.517*	1.278**	0.901	1.001	1.162	-3.173**	0.338	3.330**	1.389	1.034
	(0.375)	(1.230)	(1.010)	(1.250)	(0.976)	(1.115)	(0.301)	(0.501)	(3.057)	(0.786)	(1.467)	(1.480)	(1.403)	(1.369)	(1.456)	(2.273)
Age (Reference Person) [Base: Below 40 years]																
40-64 years	1.555***	0.741	3.334***	5.879***	-1.870	5.026***	0.990***	1.987***	6.740**	7.297***	2.499	2.334	4.145**	2.192	4.016**	3.078
	(0.571)	(1.524)	(1.264)	(1.175)	(1.225)	(1.491)	(0.324)	(0.554)	(3.078)	(0.954)	(1.566)	(1.813)	(1.922)	(1.911)	(1.932)	(2.287)
65 years and over	2.328***	-1.771	5.367***	5.738*	0.657	7.949***	2.457***	1.613	11.333**	6.177***	5.891**	3.639	9.985***	2.833	3.503	5.542
	(0.775)	(2.540)	(2.027)	(3.070)	(2.227)	(2.345)	(0.608)	(1.070)	(5.102)	(1.424)	(2.922)	(2.463)	(2.754)	(2.268)	(2.728)	(5.205)
Labor market status (Reference Person) [Base: Employee]																
Self-employed	0.506	3.751**	1.005	-0.930	-1.257	0.907	2.120***	0.997	0.361	1.855**	1.908	2.315	1.913	1.997	-0.713	2.037
	(0.524)	(1.903)	(2.134)	(1.570)	(1.587)	(1.489)	(0.350)	(0.747)	(3.296)	(0.923)	(1.812)	(1.696)	(3.092)	(1.992)	(3.683)	(2.832)
Unemployed	-2.719**	2.627	-0.718	-0.957	-2.461	-2.787	-2.150***	-4.364***	-95.092***	2.300	1.569	3.289	-3.203	-0.130	-0.049	-5.179
	(1.226)	(4.085)	(2.437)	(2.326)	(3.638)	(1.739)	(0.778)	(1.367)	(4.770)	(3.061)	(34.584)	(4.254)	(6.046)	(3.527)	(2.670)	(10.341)
Retired	1.790***	3.638*	3.080*	-0.273	-0.299	2.257	1.822***	-0.028	-3.010	6.701***	0.680	2.484	-4.525*	1.748	0.224	-4.668
	(0.525)	(1.933)	(1.803)	(2.735)	(1.755)	(1.877)	(0.584)	(0.764)	(4.432)	(0.839)	(2.358)	(2.108)	(2.388)	(2.077)	(2.180)	(4.238)
Other	2.287*	2.834	-2.887	-3.572	2.567	-1.167	0.417	-1.902	1.747	8.190**	2.464	-0.563	1.135	-3.875	-8.592***	1.728
	(1.169)	(4.444)	(3.577)	(10.144)	(2.456)	(2.720)	(0.615)	(1.767)	(46.765)	(4.140)	(5.998)	(3.212)	(2.457)	(26.106)	(3.137)	(9.149)
Missing	-0.280		-2.774	6.662									0.780	-59.551		-70.652***
	(2.032)		(13.539)	(13.001)									(2.081)	(41.165)		(3.718)
Education (Reference Person) [Base: Low (ISCED 1 and 2)]																
Middle (ISCED 3)	3.180***	8.235***	4.130***	1.540	5.318**	6.813***	1.566***	1.762***	8.236***	2.775***	6.226***	1.269	2.689	8.340***	7.353***	0.226
	(0.379)	(2.536)	(1.172)	(1.304)	(2.518)	(1.195)	(0.375)	(0.563)	(3.171)	(0.644)	(1.514)	(1.370)	(1.800)	(1.738)	(2.473)	(11.224)
High (ISCED 4-6)	6.681***	11.813***	7.080***	2.771**	10.706***	10.804***	3.820***	3.863***	10.748***	2.989***	10.092***	2.635*	4.359**	13.258***	14.786***	8.654
	(0.500)	(2.870)	(1.209)	(1.341)	(2.600)	(1.095)	(0.359)	(0.646)	(3.214)	(0.953)	(1.695)	(1.522)	(1.783)	(1.607)	(2.532)	(11.410)
Inheritance																
Dummy	3.878***	5.790***	4.346***	2.261**	2.941***	4.693***	x2	4.391***	-1.160	x3	2.950**	6.533***	6.696***	5.912***	0.875	-0.372
	(0.408)	(1.245)	(0.873)	(0.972)	(0.818)	(0.984)		(0.410)	(2.199)		(1.313)	(1.132)	(1.658)	(1.240)	(1.446)	(2.146)
Income Distribution [Base: First Quintile]																
Second Quintile	4.039***	4.369	5.636***	3.230*	2.007	4.285**	2.893***	5.432***	0.925	10.111***	4.858	3.765*	1.956	0.196	-0.000	-0.005
	(0.768)	(3.194)	(1.563)	(1.927)	(2.290)	(1.759)	(0.675)	(1.121)	(11.013)	(1.376)	(3.411)	(2.059)	(2.616)	(2.942)	(2.783)	(4.293)
Third Quintile	8.222***	8.673***	8.959***	3.067	8.448***	3.177	5.236***	9.628***	3.022	16.478***	10.512***	4.129*	2.276	4.699	3.880	0.881
	(0.902)	(3.023)	(1.654)	(2.181)	(2.321)	(2.056)	(0.672)	(1.145)	(11.144)	(1.583)	(2.940)	(2.140)	(2.367)	(3.083)	(2.510)	(3.707)
Fourth Quintile	11.349***	13.543***	10.047***	5.872***	10.729***	5.767***	7.138***	13.501***	7.756	22.015***	14.216***	7.062***	5.397**	7.723***	-1.248	-4.499
	(0.790)	(3.237)	(1.525)	(1.951)	(2.136)	(1.905)	(0.731)	(1.128)	(10.946)	(1.862)	(2.840)	(2.110)	(2.642)	(2.875)	(2.821)	(4.017)
Fifth Quintile	16.394***	16.111***	11.413***	9.127***	16.028***	12.236***	10.688***	19.026***	13.395	28.238***	20.150***	8.328***	6.596***	17.235***	0.603	-2.366
	(0.792)	(3.274)	(1.677)	(1.958)	(2.197)	(1.879)	(0.799)	(1.215)	(10.875)	(1.839)	(2.981)	(2.562)	(2.345)	(3.132)	(3.229)	(4.331)
Constant	-27.027***	-36.920***	-23.164***	-13.619***	-21.364***	-30.694***	-10.257***	-22.090***	-54.706***	-34.435***	-25.493***	-14.430***	-17.655***	-40.546***	-24.024***	-32.368**
	(0.998)	(3.600)	(1.950)	(2.173)	(3.139)	(2.256)	(0.670)	(1.074)	(10.623)	(1.806)	(2.824)	(2.464)	(3.577)	(3.092)	(4.384)	(12.770)
Sigma	12.657***	14.599***	11.649***	8.371***	12.224***	14.035***	8.850***	11.304***	19.112***	13.205***	11.043***	11.434***	12.554***	15.344***	11.024***	16.954***
	(0.122)	(0.510)	(0.279)	(0.383)	(0.342)	(0.340)	(0.082)	(0.146)	(0.839)	(0.203)	(0.434)	(0.376)	(0.387)	(0.506)	(0.573)	(0.581)

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: HFCS 2013

Notes:

- 1) The model for the euro area includes country fixed effects for which the estimates are not reported.
- 2) Dummy for inheritance for Finland is dropped from the model due no recorded inheritances.
- 3) Italy does not collect information on inheritance.

Table A5.3: Tobit model for the value of other real estate

	EA ¹	AT	BE	CY	DE	ES	FI	FR	GR	IT	LU	MT	NL	PT	SI	SK
Household Type [Base: Single]																
Couple	2.034***	0.588	0.580	3.785**	0.406	2.459***	5.783***	1.755**	2.322**	3.584***	0.352	-0.336	6.580	1.497	4.865*	-1.392
w/o children	(0.561)	(1.845)	(1.895)	(1.534)	(1.674)	(0.830)	(0.595)	(0.844)	(0.977)	(0.913)	(2.650)	(2.234)	(4.340)	(1.216)	(2.915)	(2.357)
>=3 adults	1.878**	1.821	-1.196	6.401***	-0.249	1.009	8.962***	1.581	4.161***	5.021***	1.892	0.762	4.661	1.207	7.191**	3.315
w/o children	(0.749)	(3.414)	(3.366)	(2.014)	(2.446)	(1.129)	(0.932)	(1.527)	(1.097)	(1.070)	(3.143)	(2.744)	(7.572)	(1.310)	(3.224)	(2.728)
Single Parent	-0.209	0.200	2.458	-1.278	2.693	0.871	0.210	-0.649	2.643	-4.263*	5.517	0.082	-2.431	-4.189*	-10.062***	1.041
w/o children	(1.128)	(5.472)	(3.929)	(2.759)	(4.226)	(2.067)	(1.401)	(1.491)	(2.031)	(2.550)	(4.149)	(8.107)	(24.261)	(2.216)	(3.749)	(3.461)
Couple	1.583**	0.125	0.589	3.365**	0.019	2.068**	4.070***	0.858	2.699**	4.293***	-1.199	3.821	7.841	0.544	3.677	1.650
with children	(0.701)	(2.283)	(2.688)	(1.504)	(1.998)	(1.018)	(0.680)	(0.855)	(1.207)	(1.185)	(2.795)	(2.521)	(5.669)	(1.362)	(3.480)	(2.172)
>=3 adults	1.619*	0.049	1.606	1.886	-0.405	2.780**	6.599***	0.393	3.303**	4.338***	1.427	3.199	-16.848	0.639	8.690**	0.041
with children	(0.871)	(3.075)	(5.178)	(1.955)	(3.062)	(1.417)	(1.292)	(1.783)	(1.534)	(1.392)	(3.603)	(2.958)	(30.957)	(1.600)	(3.715)	(2.897)
Gender (Reference Person)																
Male	0.189	-0.407	3.267**	1.574	-0.788	-0.496	1.892***	-0.267	1.188	0.238	2.847	-1.712	2.151	0.866	-3.192**	-0.256
	(0.483)	(1.495)	(1.504)	(1.113)	(1.540)	(0.776)	(0.379)	(0.567)	(0.907)	(0.796)	(1.898)	(1.774)	(3.244)	(0.664)	(1.479)	(1.421)
Age (Reference Person) [Base: Below 40 years]																
40-64 years	5.820***	5.040***	7.493***	3.113**	3.747**	4.831***	9.196***	5.931***	3.303***	8.644***	4.886**	4.746**	14.827***	4.004***	12.010***	3.164**
	(0.528)	(1.651)	(2.404)	(1.390)	(1.774)	(0.951)	(0.549)	(0.900)	(0.879)	(1.228)	(2.097)	(2.193)	(4.886)	(1.069)	(2.023)	(1.543)
65 years and over	6.059***	5.229*	6.326*	-0.818	5.542*	3.485***	10.689***	5.652***	3.899***	10.022***	8.453**	5.612*	9.128	5.722***	16.270***	1.663
	(0.759)	(2.900)	(3.639)	(2.855)	(3.135)	(1.223)	(0.926)	(1.491)	(1.389)	(1.577)	(3.423)	(3.281)	(7.037)	(1.216)	(2.887)	(2.710)
Labor market status (Reference Person) [Base: Employee]																
Self-employed	6.566***	6.778***	11.308***	3.843***	4.949***	4.762***	6.671***	9.385***	3.946***	7.582***	6.491***	8.766***	11.930	6.394***	3.599	4.785**
	(0.553)	(2.062)	(2.639)	(1.209)	(1.854)	(0.987)	(0.564)	(0.781)	(0.915)	(1.017)	(2.076)	(1.523)	(9.427)	(0.953)	(2.637)	(2.029)
Unemployed	-2.551***	2.976	-4.496	0.629	-10.695*	-0.085	-2.481**	-4.612***	-2.638	-2.043	-56.407	-2.416	13.432	-1.378	-3.311	1.639
	(0.947)	(5.824)	(3.993)	(2.393)	(5.778)	(1.468)	(1.104)	(1.371)	(4.057)	(2.803)	(57.349)	(10.870)	(13.203)	(1.949)	(3.145)	(5.696)
Retired	3.138***	1.280	7.737***	0.317	2.601	4.909***	3.745***	3.015***	2.926***	2.716***	2.491	4.289*	4.480	2.168*	-2.224	6.430***
	(0.631)	(2.098)	(2.648)	(2.423)	(2.342)	(0.982)	(0.767)	(1.135)	(0.955)	(0.870)	(2.229)	(2.245)	(4.379)	(1.126)	(2.361)	(2.088)
Other	0.162	-55.457	-4.815	-1.337	-0.553	3.271***	0.194	-1.702	-0.813	1.933	-11.903	-3.480	-5.850	4.276*	-4.956	5.408
	(0.988)	(53.870)	(8.763)	(3.042)	(4.124)	(1.261)	(0.765)	(1.489)	(2.546)	(2.753)	(10.240)	(3.628)	(5.490)	(2.462)	(4.398)	(4.260)
Missing	1.063		1.640	5.203									0.510	8.394		-67.288***
	(2.598)		(19.255)	(9.483)									(4.767)	(37.538)		(3.669)
Education (Reference Person) [Base: Low (ISCED 1 and 2)]																
Middle (ISCED 3)	0.821**	-1.310	1.925	3.316***	5.997**	0.896	0.855	0.778	-0.165	2.171***	-1.988	3.651***	-0.340	0.568	0.285	-7.513**
	(0.363)	(2.186)	(2.254)	(1.142)	(2.456)	(1.023)	(0.567)	(0.601)	(0.935)	(0.754)	(1.889)	(1.251)	(4.097)	(1.125)	(2.014)	(3.585)
High (ISCED 4-6)	3.715***	3.749	2.955	2.042	10.367***	1.652**	1.837***	1.882**	1.091	6.296***	3.318	4.768**	8.697**	4.239***	3.076	1.420
	(0.559)	(2.525)	(1.971)	(1.288)	(2.959)	(0.809)	(0.580)	(0.767)	(0.929)	(1.036)	(2.146)	(2.021)	(3.816)	(1.063)	(2.809)	(3.938)
Inheritance																
Dummy	8.619***	13.575***	6.369***	7.484***	7.968***	9.706***	x2	9.329***	2.289***	x3	5.600***	6.388***	7.366*	9.769***	5.473***	3.121***
	(0.453)	(1.278)	(1.305)	(1.011)	(1.116)	(0.554)		(0.590)	(0.814)		(1.571)	(1.381)	(4.455)	(0.699)	(1.447)	(1.134)
Income Distribution [Base: First Quintile]																
Second Quintile	2.014***	6.144*	-0.169	1.442	-2.121	5.227***	2.638***	3.036***	1.248	1.311	1.926	2.132	1.246	0.907	11.100***	2.893
	(0.686)	(3.331)	(2.763)	(1.980)	(2.921)	(1.039)	(0.946)	(0.945)	(1.213)	(1.260)	(3.773)	(2.458)	(6.799)	(1.279)	(3.249)	(2.566)
Third Quintile	4.652***	8.028***	0.800	1.254	5.469*	6.698***	5.429***	4.689***	5.148***	3.202**	5.695	3.722	-8.608	2.668*	12.594***	8.427***
	(0.821)	(2.930)	(3.008)	(1.998)	(3.082)	(0.894)	(0.976)	(1.254)	(1.344)	(1.365)	(3.521)	(2.726)	(7.881)	(1.415)	(3.450)	(3.058)
Fourth Quintile	7.527***	11.257***	6.769**	3.226	11.600***	9.344***	7.221***	6.077***	4.469***	4.440***	8.276**	4.505*	-1.503	4.635***	8.660**	10.540***
	(0.839)	(3.049)	(3.199)	(2.163)	(2.983)	(1.121)	(1.034)	(1.182)	(1.388)	(1.318)	(3.415)	(2.324)	(6.481)	(1.310)	(3.596)	(3.136)
Fifth Quintile	11.415***	17.139***	10.828***	7.528***	14.842***	12.415***	9.379***	11.427***	8.135***	8.758***	12.091***	6.809**	0.137	8.978**	16.355***	12.800***
	(0.892)	(2.810)	(3.176)	(2.115)	(3.398)	(1.254)	(1.062)	(1.161)	(1.369)	(1.393)	(3.722)	(2.765)	(6.312)	(1.222)	(3.560)	(3.471)
Constant	-33.627***	-39.163***	-36.551***	-10.735***	-35.540***	-20.163***	-24.964***	-25.793***	-14.766***	-27.708***	-22.726***	-19.061***	-55.844***	-21.083***	-35.040***	-23.783***
	(1.071)	(3.546)	(3.892)	(2.162)	(3.478)	(1.472)	(0.888)	(1.286)	(1.703)	(1.466)	(3.428)	(3.359)	(7.552)	(1.693)	(3.715)	(3.903)
Sigma	14.165***	16.393***	17.477***	9.097***	15.283***	11.550***	12.882***	13.716***	11.946***	14.582***	14.530***	13.326***	23.250***	12.881***	13.482***	15.093***
	(0.112)	(0.588)	(0.471)	(0.354)	(0.416)	(0.238)	(0.114)	(0.169)	(0.289)	(0.193)	(0.514)	(0.445)	(0.872)	(0.314)	(0.698)	(0.492)

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: HFCS 2013

Notes:

1) The model for the euro area includes country fixed effects for which the estimates are not reported.

2) Dummy for inheritance for Finland is dropped from the model due to no recorded inheritances.

3) Italy does not collect information on inheritance.

Table A5.4: Tobit model for the value of business assets

	EA ¹	AT	BE	CY	DE	ES	FI	FR	GR	IT	LU	MT	NL	PT	SI	SK
Household Type [Base: Single]																
Couple	4.497***	6.886***	5.556**	0.913	4.890**	2.942	2.959***	6.348***	6.556**	3.008**	6.314	-1.226	0.847	4.506**	42.266***	-1.281
w/o children	(0.744)	(2.447)	(2.286)	(4.006)	(2.247)	(1.827)	(0.647)	(1.054)	(2.671)	(1.175)	(4.274)	(3.278)	(4.669)	(2.283)	(5.635)	(1.423)
>=3 adults	8.166***	13.769***	5.552	3.586	7.053***	5.402***	2.197*	7.608***	12.180***	8.419***	3.309	-0.731	-107.382***	6.623**	52.119***	1.651
w/o children	(0.867)	(3.014)	(4.743)	(4.981)	(2.659)	(1.879)	(1.227)	(1.495)	(3.263)	(1.500)	(5.842)	(4.504)	(14.978)	(2.699)	(6.872)	(1.665)
Single Parent	1.264	-3.713	4.617	0.604	3.477	-4.761	0.371	-1.262	-5.105	2.596	2.066	-3.997	-2.386	4.368	-2.717	-0.554
(1.355)	(11.606)	(12.452)	(11.546)	(4.807)	(3.441)	(1.551)	(1.410)	(17.084)	(1.983)	(27.889)	(11.955)	(16.967)	(5.014)	(2.202)	(1.713)	
Couple	5.715***	5.954**	4.429*	-0.378	5.162*	3.689**	3.156***	7.854***	10.911***	6.124***	3.363	-4.064	-4.356	5.187**	53.196***	-0.390
with children	(0.793)	(2.781)	(2.654)	(3.601)	(2.640)	(1.740)	(0.769)	(1.061)	(2.734)	(1.100)	(3.991)	(4.007)	(4.866)	(2.371)	(6.673)	(1.281)
>=3 adults	6.788***	10.542***	1.858	-0.565	8.468***	3.928*	-3.405**	9.386***	11.253***	6.654***	7.455	-1.320	3.183	3.833	50.911***	-1.316
with children	(1.048)	(2.995)	(5.589)	(4.922)	(3.554)	(2.254)	(1.576)	(1.374)	(3.640)	(1.534)	(4.800)	(4.467)	(15.865)	(3.030)	(6.963)	(2.703)
Gender (Reference Person)																
Male	-1.701***	-2.599	-1.953	4.983**	-0.834	-1.650	-0.592	-3.189***	-3.489**	-1.931***	-3.036	-3.620	2.580	-0.406	-4.704**	0.031
(0.453)	(1.968)	(2.099)	(2.379)	(1.596)	(1.136)	(0.457)	(0.739)	(1.652)	(0.716)	(4.113)	(3.270)	(3.204)	(1.824)	(2.066)	(1.187)	
Age (Reference Person) [Base: Below 40 years]																
40-64 years	0.973*	4.936**	2.089	1.728	5.220***	-1.177	5.650***	0.353	-2.787	0.228	0.485	-1.180	-4.353	-0.447	-0.370	-0.100
(0.545)	(2.103)	(2.113)	(2.400)	(1.863)	(1.185)	(0.661)	(0.729)	(1.701)	(0.850)	(3.694)	(2.945)	(4.357)	(1.639)	(1.549)	(0.971)	
65 years and over	-1.935**	1.629	-2.783	-2.294	-1.931	-2.997	7.181***	-1.944	-3.667	-0.520	-4.002	-9.228	-13.254	2.029	-4.792	-0.166
(0.792)	(3.495)	(4.360)	(10.203)	(2.618)	(2.482)	(1.173)	(1.619)	(3.854)	(1.319)	(6.394)	(6.039)	(12.852)	(3.128)	(3.882)	(3.034)	
Labor market status (Reference Person) [Base: Employee]																
Self-employed	25.014***	24.223***	27.512***	16.233***	23.240***	24.878***	9.195***	27.151***	23.872***	23.007***	29.216***	27.338***	35.986***	23.471***	22.291***	19.921***
(0.299)	(2.083)	(1.705)	(2.156)	(0.926)	(0.928)	(0.632)	(0.502)	(1.433)	(0.590)	(2.695)	(1.615)	(4.113)	(1.251)	(2.279)	(1.089)	
Unemployed	-5.451***	1.769	-2.686	-8.410	-54.661*	-8.315	-1.124	-3.678	3.212	-4.209	-82.438***	4.957	-14.483	-5.738*	-3.547	-32.100***
(1.289)	(10.280)	(33.157)	(39.288)	(33.009)	(6.242)	(1.437)	(2.438)	(34.574)	(15.539)	(9.157)	(13.986)	(45.398)	(3.237)	(4.069)	(3.759)	
Retired	0.112	-2.784	0.359	-6.837	-0.097	2.756	2.398**	-1.440	5.184	0.354	3.849	5.484	-1.143	-4.180	2.456	1.613
(0.811)	(2.137)	(3.606)	(10.640)	(2.241)	(2.405)	(1.001)	(1.346)	(3.831)	(1.368)	(4.435)	(4.070)	(14.014)	(2.643)	(3.822)	(1.989)	
Other	-0.808	1.224	3.571	-78.853***	-4.899	-1.205	-1.332	-4.672**	8.837	-1.090	-78.274***	-69.932***	9.767	-75.687***	-51.394***	5.199
(1.608)	(11.458)	(13.156)	(6.683)	(18.577)	(3.684)	(1.014)	(2.195)	(16.444)	(16.186)	(8.339)	(6.500)	(10.821)	(4.015)	(6.422)	(4.493)	
Missing	5.525*		-10.836	-11.161									11.674**	23.053		-25.202***
(2.881)		(27.921)	(36.905)										(4.618)	(46.524)		(3.300)
Education (Reference Person) [Base: Low (ISCED 1 and 2)]																
Middle (ISCED 3)	0.942*	-2.043	4.774	2.559	2.902	2.441**	-0.008	1.820**	-1.602	-0.024	2.966	1.280	3.918	3.495*	-0.449	-2.178
(0.512)	(2.576)	(3.114)	(2.767)	(2.642)	(1.177)	(0.620)	(0.775)	(1.739)	(0.643)	(3.684)	(2.757)	(6.361)	(2.110)	(2.119)	(3.376)	
High (ISCED 4-6)	1.385**	-2.826	7.179**	-1.947	4.271	1.654	0.023	1.626	-5.152**	-3.170***	2.688	1.978	12.072*	1.259	-0.076	2.107
(0.616)	(3.264)	(3.284)	(2.933)	(2.656)	(1.243)	(0.621)	(1.076)	(2.069)	(1.090)	(4.520)	(3.151)	(6.623)	(2.106)	(2.498)	(3.652)	
Inheritance																
Dummy	3.333***	6.081***	3.570**	0.494	3.636***	3.512***	x2	2.506***	-0.145	x3	3.913	3.862	11.555**	5.193***	-0.675	-1.068
(0.585)	(1.165)	(1.743)	(2.199)	(1.377)	(0.904)		(0.584)	(1.194)			(2.511)	(2.508)	(4.681)	(1.526)	(1.646)	(0.924)
Income Distribution [Base: First Quintile]																
Second Quintile	1.281	0.481	4.435	3.976	-1.001	5.262**	1.009	-0.224	1.563	3.629**	2.181	6.530	-1.822	4.961*	4.093	1.322
(1.060)	(3.710)	(14.723)	(4.558)	(4.854)	(2.277)	(0.851)	(1.373)	(1.988)	(1.483)	(6.927)	(7.244)	(11.855)	(2.949)	(3.707)	(3.230)	
Third Quintile	3.138***	4.584	12.109	10.203**	1.069	7.647***	1.445	-1.362	4.717*	5.278***	5.379	5.029	6.572	6.708**	7.525**	4.456
(1.042)	(4.674)	(14.295)	(4.184)	(3.919)	(2.188)	(0.922)	(1.361)	(2.594)	(1.601)	(6.057)	(7.396)	(6.791)	(3.355)	(2.994)	(3.347)	
Fourth Quintile	4.011***	6.085	10.558	10.905**	2.128	9.269***	3.141***	-1.440	6.942***	7.268***	7.487	9.130	-0.992	6.172*	5.173	5.444
(0.922)	(4.135)	(14.105)	(4.621)	(3.458)	(2.281)	(0.958)	(1.434)	(2.272)	(1.488)	(5.694)	(7.348)	(7.447)	(3.504)	(3.965)	(3.362)	
Fifth Quintile	6.843***	8.698**	11.796	15.316***	7.677**	9.716***	7.175***	0.577	10.835***	8.702***	11.987**	13.639*	4.289	10.968***	9.664***	8.267**
(0.977)	(3.567)	(14.161)	(4.382)	(3.745)	(2.148)	(1.030)	(1.266)	(2.148)	(1.665)	(6.075)	(7.023)	(7.177)	(3.272)	(3.364)	(3.562)	
Constant	-30.298***	-36.305***	-43.730***	-27.406***	-36.482***	-28.597***	-23.409***	-24.627***	-36.321***	-26.070***	-45.721***	-27.246***	-45.224***	-39.959***	-66.278***	-18.890***
(1.175)	(4.924)	(15.400)	(6.188)	(4.701)	(2.797)	(1.227)	(1.504)	(3.971)	(2.136)	(7.087)	(7.868)	(8.693)	(3.413)	(7.495)	(5.229)	
Sigma	12.379***	14.185***	13.655***	14.901***	12.902***	10.998***	12.265***	11.630***	13.993***	10.069***	17.855***	13.951***	16.852***	16.001***	9.578***	7.523***
(0.246)	(1.116)	(0.976)	(0.899)	(0.619)	(0.623)	(0.139)	(0.344)	(0.732)	(0.309)	(1.357)	(1.066)	(2.184)	(0.610)	(1.129)	(0.550)	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: HFCS 2013

Notes:

1) The model for the euro area includes country fixed effects for which the estimates are not reported.

2) Dummy for inheritance for Finland is dropped from the model due to no recorded inheritances.

3) Italy does not collect information on inheritance.

Table A5.5: Tobit model for the value of safe financial assets

	EA ¹	AT	BE	CY	DE	ES	FI	FR	GR	IT	LU	MT	NL	PT	SI	SK
Household Type [Base: Single]																
Couple	-0.065	0.461**	0.235	0.539	0.002	-0.395**	0.306***	-0.063	-0.554	-0.550***	-0.034	0.050	0.979***	0.385**	0.318	-0.175
w/o children	(0.075)	(0.228)	(0.185)	(0.676)	(0.162)	(0.187)	(0.071)	(0.100)	(0.402)	(0.192)	(0.268)	(0.343)	(0.377)	(0.179)	(0.783)	(0.335)
>=3 adults	-0.311**	0.648**	0.252	-0.549	-0.035	-0.714**	0.068	-0.689***	-1.265***	-1.311***	-0.550	0.337	1.627***	0.050	1.073	0.143
w/o children	(0.132)	(0.302)	(0.261)	(0.956)	(0.354)	(0.278)	(0.132)	(0.173)	(0.437)	(0.274)	(0.396)	(0.398)	(0.536)	(0.259)	(0.854)	(0.402)
Single Parent	-0.696***	0.037	-0.769**	-0.217	-0.825	-0.505	-0.414***	-0.655***	-0.132	-0.598	-0.553	-2.403**	-0.851	-0.438	-2.371**	-0.478
(0.189)	(0.280)	(0.364)	(1.046)	(0.519)	(0.349)	(0.112)	(0.122)	(0.740)	(0.454)	(0.508)	(1.052)	(0.977)	(0.313)	(1.061)	(0.428)	
Couple	-0.318***	0.655**	-0.648***	-0.093	-0.043	-0.856***	0.053	-0.423***	-1.017**	-0.652***	-0.045	0.593	0.771**	0.332	0.194	0.017
with children	(0.096)	(0.262)	(0.244)	(0.655)	(0.218)	(0.228)	(0.082)	(0.105)	(0.454)	(0.231)	(0.282)	(0.400)	(0.371)	(0.230)	(0.755)	(0.259)
>=3 adults	-0.624***	0.313	-0.282	0.587	-0.085	-1.079***	0.285*	-0.866***	-1.832**	-1.564***	-0.636	0.296	0.553	-0.341	2.148***	0.324
with children	(0.147)	(0.366)	(0.414)	(0.725)	(0.470)	(0.309)	(0.168)	(0.166)	(0.781)	(0.332)	(0.417)	(0.447)	(0.801)	(0.278)	(0.797)	(0.333)
Gender (Reference Person)																
Male	-0.044	-0.295*	-0.067	0.543	-0.076	0.171	0.020	-0.099	0.380	0.099	-0.179	-0.655**	-0.010	0.212*	-0.836*	-0.273
(0.058)	(0.161)	(0.148)	(0.500)	(0.133)	(0.200)	(0.048)	(0.063)	(0.357)	(0.163)	(0.201)	(0.281)	(0.266)	(0.127)	(0.468)	(0.183)	
Age (Reference Person) [Base: Below 40 years]																
40-64 years	0.319***	0.346**	0.355**	-0.247	-0.084	0.915***	0.817***	0.228**	0.408	0.492***	0.278	0.520**	0.425	0.552***	-0.588	0.235
(0.070)	(0.153)	(0.175)	(0.498)	(0.170)	(0.204)	(0.057)	(0.091)	(0.349)	(0.184)	(0.272)	(0.230)	(0.371)	(0.138)	(0.485)	(0.153)	
65 years and over	0.691***	0.750***	-0.317	-0.209	0.269	1.250***	1.038**	0.691***	0.838**	0.849***	0.786*	0.837**	1.320***	0.785***	0.135	-1.002*
(0.114)	(0.234)	(0.290)	(1.283)	(0.410)	(0.324)	(0.114)	(0.162)	(0.412)	(0.239)	(0.427)	(0.375)	(0.494)	(0.237)	(0.913)	(0.566)	
Labor market status (Reference Person) [Base: Employee]																
Self-employed	0.366***	0.250	0.472**	0.910*	0.191	0.370	0.585***	0.422***	1.096***	0.305	0.291	0.927***	0.373	0.440**	0.207	0.226
(0.085)	(0.213)	(0.219)	(0.522)	(0.239)	(0.285)	(0.071)	(0.142)	(0.313)	(0.207)	(0.290)	(0.199)	(0.844)	(0.173)	(0.725)	(0.174)	
Unemployed	-1.457***	-1.593***	-1.100***	-1.378	-2.446***	-1.123***	-0.467***	-0.893***	-0.592	-2.034***	-1.725*	-1.630	0.199	-0.258	-1.734**	-2.099***
(0.154)	(0.412)	(0.319)	(1.090)	(0.435)	(0.250)	(0.118)	(0.175)	(1.497)	(0.606)	(0.949)	(1.277)	(0.737)	(0.205)	(0.830)	(0.610)	
Retired	0.316***	0.076	0.900***	0.063	0.308	0.214	0.440***	0.427***	1.559***	0.904***	0.209	0.406	-0.765*	0.190	-1.645**	-0.310
(0.092)	(0.204)	(0.246)	(1.083)	(0.355)	(0.277)	(0.101)	(0.124)	(0.440)	(0.212)	(0.349)	(0.378)	(0.418)	(0.202)	(0.655)	(0.370)	
Other	-0.208	-0.506	-1.416***	-3.587*	-0.689*	-0.118	-0.046	-0.165	0.330	-0.070	-0.548	-1.030	-0.516	-0.602	-3.593***	-1.335**
(0.148)	(0.446)	(0.447)	(1.972)	(0.393)	(0.269)	(0.106)	(0.158)	(0.711)	(0.795)	(0.615)	(0.679)	(0.586)	(0.450)	(1.229)	(0.538)	
Missing	0.418	0.286	-0.397										0.254	0.376		-3.474
(0.402)		(0.559)	(6.501)										(0.400)	(1.583)		(5.085)
Education (Reference Person) [Base: Low (ISCED 1 and 2)]																
Middle (ISCED 3)	0.615***	0.918***	0.484***	2.068***	0.622**	0.527**	0.024	0.379***	1.576***	0.874***	0.846***	0.342*	0.361	1.004***	0.503	1.898***
(0.080)	(0.228)	(0.165)	(0.585)	(0.287)	(0.205)	(0.066)	(0.076)	(0.307)	(0.152)	(0.263)	(0.194)	(0.335)	(0.142)	(0.552)	(0.629)	
High (ISCED 4-6)	1.016***	1.308***	0.804***	2.436***	1.159***	1.175***	0.325***	0.723***	2.197***	0.970***	1.113***	0.564***	0.834***	1.371***	2.950***	2.562***
(0.086)	(0.251)	(0.170)	(0.608)	(0.302)	(0.165)	(0.069)	(0.113)	(0.370)	(0.175)	(0.299)	(0.211)	(0.323)	(0.151)	(0.616)	(0.693)	
Inheritance																
Dummy	0.768***	0.740***	0.768***	0.957**	0.893***	0.845***	x2	0.741***	0.073	x3	0.329	0.703***	0.754***	0.654***	0.527	0.294*
(0.049)	(0.100)	(0.137)	(0.414)	(0.124)	(0.116)			(0.060)	(0.246)			(0.217)	(0.172)	(0.269)	(0.120)	(0.168)
Income Distribution [Base: First Quintile]																
Second Quintile	1.267***	0.853***	0.783***	1.576*	0.972***	1.390***	0.693***	0.882***	1.710***	2.697***	1.087***	0.791*	0.571	0.990***	3.466***	1.071***
(0.114)	(0.219)	(0.280)	(0.837)	(0.321)	(0.236)	(0.091)	(0.102)	(0.471)	(0.296)	(0.374)	(0.445)	(0.480)	(0.190)	(0.818)	(0.392)	
Third Quintile	2.001***	1.083***	1.913***	2.085***	1.743***	2.058***	1.207***	1.419***	3.127***	3.961***	1.683***	1.436***	0.512	1.545***	3.560***	1.106***
(0.110)	(0.246)	(0.280)	(0.737)	(0.298)	(0.299)	(0.099)	(0.115)	(0.489)	(0.239)	(0.374)	(0.477)	(0.493)	(0.213)	(0.828)	(0.404)	
Fourth Quintile	2.533***	1.857***	2.405***	3.416***	2.234***	2.325***	1.499***	2.008***	3.779***	4.922***	2.261***	1.777***	0.476	2.103***	2.563***	1.986***
(0.123)	(0.248)	(0.269)	(0.744)	(0.365)	(0.290)	(0.103)	(0.126)	(0.510)	(0.286)	(0.378)	(0.437)	(0.508)	(0.212)	(0.928)	(0.394)	
Fifth Quintile	3.350***	2.409***	2.662***	3.882***	3.073***	3.228***	2.040***	2.848***	4.617***	5.982***	2.869***	2.050***	0.622	2.913***	4.303***	2.380***
(0.121)	(0.372)	(0.294)	(0.759)	(0.339)	(0.281)	(0.113)	(0.153)	(0.536)	(0.305)	(0.418)	(0.454)	(0.444)	(0.211)	(0.874)	(0.395)	
Constant	6.615***	6.763***	7.509***	3.784***	6.944***	5.778***	7.037***	7.322***	1.355**	3.540***	7.791***	7.962***	8.510***	5.361***	3.289***	4.486***
(0.136)	(0.282)	(0.284)	(0.938)	(0.350)	(0.308)	(0.096)	(0.136)	(0.645)	(0.274)	(0.377)	(0.512)	(0.721)	(0.254)	(0.907)	(0.683)	
Sigma	2.787***	2.274***	2.450***	4.409***	2.400***	2.798***	1.729***	1.858***	5.177***	3.937***	2.156***	2.285***	2.757***	2.720***	3.634***	2.866***
(0.036)	(0.071)	(0.082)	(0.236)	(0.098)	(0.092)	(0.017)	(0.037)	(0.187)	(0.081)	(0.115)	(0.121)	(0.155)	(0.068)	(0.170)	(0.078)	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: HFCS 2013

Notes:

- 1) The model for the euro area includes country fixed effects for which the estimates are not reported.
- 2) Dummy for inheritance for Finland is dropped from the model due to no recorded inheritances.
- 3) Italy does not collect information on inheritance.

13 Appendix 6: Definitions

A- Definition of explanatory variables

- Household type: single [base], couples with children, three or more adults without children, single parent, couple with dependent children, three or more adults with dependent children
- Gender of the reference person: dummy equal to one for male reference person
- Age of reference person: below 40 years [base], 40-64 years, 65 years and older
- Marital status of the reference person: single [base], married (including consensual union on a legal bases), divorced, widowed
- Employment status of the reference person: employee [base], self-employed, unemployed, retired, other, missing
- Education of the reference person: low (ISCED 1 and 2) [base], middle (ISCED 3), high (ISCED 4-6)
- Inheritance: dummy equal to one if a household has inherited in the past
- Net wealth distribution: quintiles [base: first quintile]
- Income distribution: quintiles [base: first quintile]

Reference person:

- The reference person is defined in accordance with the Canberra definition, i.e. applying the following rule in the order that is given until one person is found: “one of the partners in a registered or de facto marriage, with dependent children; one of the partners in a registered or de facto marriage, without dependent children; a lone parent with dependent children; the person with the highest income; the eldest person” [see also United Nations (2011) Canberra Handbook, page 65-66].

B- Definitions of the institutional indicators

Institutional indicators- investigating differences in the effect of explanatory variables for housing assets

Indicators	Definition	Source
Collateral	Share of mortgages used for purposes other than financing a new home	ECB (2009)
Housing price-to-rent ratio	Price of the house on annual rent; long-term average = 100; 2009	OECD Stat
Inheritance tax on HMR	yes/no - Inheritance tax on own principal home	ECB (2009)
Pension -replacement rate	Gross pension replacement rates: average earners	OECD (2011)

Institutional indicators- investigating differences in the effect of explanatory variables for risky assets

Indicators	Definition	Source
Stock capitalization	Stock market total value traded to GDP (%)	Worldbank - Financial development and Structure Dataset
Literacy	Senior business leader's evaluation of the statement "Economic literacy among the population is generally high- scale from 0 to 10	"World Competitiveness Yearbook" as seen in Figure 1 (Jappelli, 2010)
Trust	Country index of interpersonal trust (last available data 1999 for AT, BE, GR, LUX, MT, PT, SK, 2005 for DE, FI, IT, SI, 2006 for CY, FR, NL, 2007 for ES)	Values Surveys EVS/WVS, ASEP/ JDS Databank
Confidence	Consumer confidence (average 2009-2010)	Business and Consumer
Internet access	Percentage of households with access to the internet (2009)	OECD - EU Community
wealth tax	yes/no- Wealth Tax	ECB (2009)
Pension -replacement rate	Gross pension replacement rates: average earners	OECD (2011)

14 Appendix 7: Multivariate specifications - MCO estimates

Determinants of housing main residence and institutional factors

	Net wealth				Income				Age		Inheritance
	Q2	Q3	Q4	Q5	Q2	Q3	Q4	Q5	40-64	65 and over	
Mortgage market	-0.288	-0.451	-0.608	-0.676	0.030	0.054	0.144	0.181	0.032	0.003	0.088
	-0.680	-1.220	-2.100	-2.370	0.370	0.480	1.010	1.290	0.290	0.040	1.160
Housing price-to-rent ratio	0.043	-0.003	-0.039	-0.055	-0.011	0.009	0.015	0.016	-0.027	-0.032	-0.018
	0.550	-0.050	-0.740	-1.060	-0.750	0.420	0.570	0.630	-1.350	-2.190	-2.000
Inheritance tax on HMR	-8.752	-9.460	-10.983	-11.722	1.353	1.597	3.881	4.278	-0.315	-0.740	1.444
	-0.910	-1.140	-1.680	-1.820	0.720	0.630	1.210	1.350	-0.130	-0.410	0.950
Pension -replacement rate	0.088	-0.036	-0.046	-0.037	-0.006	-0.014	-0.019	-0.024	-0.007	0.009	0.000
	0.590	-0.270	-0.450	-0.370	-0.200	-0.360	-0.370	-0.480	-0.190	0.310	0.000
R-squared	0.18	0.24	0.53	0.59	0.15	0.11	0.24	0.27	0.31	0.52	0.64

Determinants of other real estate and institutional factors

	Net wealth				Income				Age		Inheritance
	Q2	Q3	Q4	Q5	Q2	Q3	Q4	Q5	40-64	65 and over	
Mortgage market	1.384	1.490	1.592	1.452	0.306	0.399	0.167	0.088	0.341	0.565	-0.207
	1.130	1.420	1.570	1.170	1.020	1.540	0.600	0.250	1.260	1.420	-0.490
Housing price-to-rent ratio	-0.049	-0.049	-0.013	0.015	-0.039	-0.129	-0.107	-0.115	-0.024	-0.107	-0.013
	-0.220	-0.260	-0.070	0.060	-0.720	-2.740	-2.100	-1.820	-0.490	-1.470	-0.260
Inheritance tax on HMR	34.258	36.461	38.240	37.069	10.176	12.539	7.816	6.761	10.463	15.743	-3.036
	1.240	1.540	1.670	1.320	1.510	2.140	1.240	0.860	1.710	1.750	-0.360
Pension -replacement rate	0.057	-0.028	-0.095	-0.104	0.074	0.090	0.063	0.061	0.007	0.002	-0.018
	0.130	-0.070	-0.260	-0.240	0.700	0.990	0.640	0.500	0.070	0.010	-0.150
R-squared	0.20	0.26	0.29	0.21	0.31	0.62	0.44	0.36	0.30	0.39	0.18

Determinants of risky asset holding and institutional factors

	Net wealth				Income				Education		Inheritance
	Q2	Q3	Q4	Q5	Q2	Q3	Q4	Q5	Middle	High	
Stock market capitalization	0.045	0.041	0.030	0.033	0.047	0.076	0.120	0.154	-0.004	-0.023	-0.017
	1.980	1.360	1.040	0.800	1.950	2.520	2.470	2.650	-0.140	-0.700	-0.810
Literacy	0.677	0.853	0.864	1.202	0.863	0.666	1.723	1.191	-0.779	-1.633	-0.013
	0.850	0.800	0.870	0.840	1.030	0.630	1.020	0.590	-0.810	-1.430	-0.020
Trust	0.114	0.113	0.106	0.129	0.044	0.057	0.143	0.149	-0.035	-0.104	-0.065
	2.900	2.140	2.150	1.830	1.050	1.100	1.700	1.480	-0.740	-1.840	-1.360
Internet access	-0.362	-0.361	-0.374	-0.447	-0.241	-0.354	-0.608	-0.710	0.116	0.282	0.235
	-2.880	-2.130	-2.370	-1.980	-1.810	-2.120	-2.260	-2.200	0.760	1.560	1.770
Pension -replacement rate	-0.055	-0.084	-0.035	0.016	-0.160	-0.328	-0.350	-0.403	0.081	0.118	0.015
	-0.770	-0.880	-0.390	0.120	-2.130	-3.490	-2.310	-2.220	0.940	1.160	0.210
R-squared	0.62	0.45	0.56	0.53	0.47	0.66	0.54	0.53	0.25	0.47	0.61