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THE EUROSYSTEM HOUSEHOLD FINANCE AND CONSUMPTION SURVEY

RESULTS FROM THE FIRST WAVE

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EUROSYSTEM HOUSEHOLD FINANCE AND CONSUMPTION NETWORK

Eurosystem Household Finance and Consumption Network
This report has been prepared by the participants of the Eurosystem Household Finance and Consumption Network (see Annex II for the list of participants). You can reach us at: hfcs@ecb.europa.eu

Address Kaiserstrasse 29, 60311 Frankfurt am Main, Germany
Postal address Postfach 16 03 19, 60066 Frankfurt am Main, Germany
Telephone +49 69 1344 0
Internet http://www.ecb.europa.eu

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ABSTRACT

This report summarises key stylised facts from the first wave of the Eurosystem Household Finance and Consumption Survey, which provides household-level data collected in a harmonised way in 15 euro area countries for a sample of more than 62,000 households. The report presents results on household assets and liabilities, income, and indicators of consumption and credit constraints.

Keywords

Household-level data, assets, liabilities, wealth, financial pressure, consumption

JEL-codes

D12, D14, D31

EXECUTIVE SUMMARY

This report summarises key stylised facts from the Eurosystem Household Finance and Consumption Survey (HFCS) about household assets and liabilities, income, and indicators of consumption and credit constraints. A key distinguishing feature of the HFCS is that it provides individual household data collected in a harmonised way in 15 euro area countries for a sample of more than 62,000 households. The reference year for most country surveys is 2010.

The survey focuses principally on household wealth and its components. Household-level data on balance sheets can provide insights into a number of areas relevant for policy. For instance, they allow studying how various households groups (e.g., the indebted, low-wealth, credit-constrained, or unemployed) respond to shocks depending on the structure of their balance sheets, as well as identifying the groups of households that may be subject to increased debt burden and financial vulnerability, to detect threats to households' financial soundness and to model the response of such households to interest rate shocks.

Wealth measurement presents a number of challenges exposed in **Chapter 1**. The HFCS data were carefully cross-checked with national accounts and with other surveys (in particular EU-SILC). Doing so requires keeping in mind differences in definitions and measurement, which makes comparisons not immediately straightforward (see Box 1.2). It is also important to keep in mind that the structure of households varies quite considerably across countries (see Section 1.2), with implications for cross-country comparisons of the results. Moreover, any work on the measurement of wealth is subject to the fact that the variation of wealth is affected by the institutions and macroeconomic dynamics, which have recently differed substantially across various households, regions and countries both within the euro area and elsewhere. Also, differences across euro area countries emanate to a large extent from historical, cultural and institutional factors (such as household composition, land ownership, inheritances/intergenerational transfers and allocation of household wealth between real and financial assets).

In sum, the HFCS has recognised a broad range of issues that may affect the comparability of the data and has used the best available means to address them. In addition, the data have been examined closely from a variety of perspectives in an attempt to uncover errors and distortions.

The figures provided in this report incorporate the best judgement available at this time. Nonetheless, caveats remain. The data for Cyprus appear not to be comparable with those for other euro area countries in a number of dimensions and should therefore be interpreted with caution. However, once the above mentioned factors are accounted for, the net wealth figures for Cyprus appear less of an outlier.

At this stage, further investigations are warranted. The HFCS is committed to an on-going effort to evaluate the survey more deeply, both to uncover unrecognised errors and to help improve of future waves of the survey. Even so, the dataset already permits structural cross-country comparative analyses of household finance-related topics (some of which are outlined in Section 1.1).

Chapter 2 describes the **asset** side of household balance sheets:

- Besides vehicles, the most prevalent *real* asset is the household main residence; 60.1% of households in the euro area own their main residence, 40.7% outright and 19.4% with a mortgage. The median value of the owner-occupied main residence is €180,300.
- There are clear differences in household main residence ownership rates. For instance, while a "median household" in Germany and Austria is a "renter" household, in the other euro area countries it is a "homeowner" household.
- 23.1% of households own real estate property other than the household main residence; 11.1% own a self-employment business; 75.7% own vehicles. The median value of real estate property other than the household main residence is €103,400; of self-employment business €30,000; of vehicles, €7,000.
- The most prevalent *financial* assets are deposits (sight or saving accounts), which are owned by 96.4% of households; voluntary private pensions/whole life insurance is held by 33.0% of households; all other financial assets are owned by less than 15% of households. The median values of deposits and voluntary private pensions/whole life insurance, conditional on ownership, are €6,100 and €11,900, respectively.
- Real assets make up almost 85% of the value of total gross assets. Among the *real assets*, 60.8% of the value is made up by the household main residence, 22.7% by other real estate property and 11.5% by self-employment business. *Financial assets* consist of deposits (42.9%), voluntary private pensions/whole life insurance (26.3%), mutual funds (8.7%), shares (7.9%), bonds (6.6%) and other financial assets (5.3%).

Chapter 3 describes the **liability** side of the balance sheets and reports selected indicators of **debt burden and financial fragility**:

- More than half of all euro area households have no debt. In fact, only 43.7% of households in the euro area have (some type of) debt; 23.1% have mortgage debt, while 29.3% have non-mortgage debt. Conditional on ownership, the median value of mortgage debt (€68,400) substantially exceeds the median value of non-mortgage debt (€5,000).
- Debt prevalence (i.e. the percentage of indebted households) varies across countries, ranging from around 25% to above 60%. The heterogeneity in the prevalence of mortgage loans is higher than in the prevalence of non-mortgage debt.
- When comparing home ownership and the prevalence of mortgage debt, very different patterns emerge across the euro area countries. These differences are likely to reflect, for instance, historical factors, the development of mortgage markets, as well as the tax incentives to take out mortgage debt.
- As for indicators of *debt burden*, the median debt-asset ratio among households having debt is 21.8%, the median debt-income ratio is 62.0%, the median debt service-income ratio is 13.9% and the median loan-value ratio of the household main residence is 37.3%.
- The debt-asset ratio and the debt service-income ratio suggest that low-income households may be particularly financially vulnerable to economic shocks. For these households, an adverse shock to labour income or to interest payments is more likely to lead to an unsustainable debt burden and economic distress.

Chapter 4 documents the findings regarding **net wealth**, i.e. the sum of real and financial assets net of total liabilities:

- The median and mean net wealth of euro area households are, respectively, €109,200 and €230,800. The substantial difference between these two numbers reflects the well-

known fact that net wealth is distributed much more unevenly than many other economic variables, such as income or consumption.

- In particular, the top 10% of wealthiest households own 50.4% of total net wealth.
- Like many other components of household balance sheets, net wealth follows a hump-shaped profile over the age of the households' reference persons, rising roughly until the age of 60 and then gradually declining.
- For homeowners, the dominant components of net wealth are housing assets and associated debts; financial assets and liabilities (excluding mortgages) have only limited impact on net wealth.
- Unconditional[1] mean real assets of all euro area households amount to €214,300, mean financial assets add up to €43,100 and mean liabilities amount to €26,600.
- Household net wealth varies substantially across euro area countries, ranging from €51,400 to €397,800 in the case of the median and from €79,700 to €710,100 in the case of the mean. This considerable dispersion is likely the result of a complex interplay of many factors, including income, household structure, home ownership, house prices, household leverage to buy property, the provision of public housing, expected public pensions, inter-generational transfers/inheritances, taxation of housing and cultural aspects.

Chapter 5 reports on the distribution of **income**:

- The median total gross annual household income in the euro area is €28,600, and the mean, €37,800.
- Income is thus more evenly distributed and less concentrated across households than wealth. The top 10% of income earners have 31.0% of the total income.[2]

Chapter 6 provides an overview of the indicators of **consumption and credit constraints**:

- The HFCS contains information on food consumption: households in the euro area annually spend €6,400 on average on food (median: €5,400).
- The median share of food consumption in (gross) income is 18.4%.

[1] Meaning for all euro area households, regardless whether or not they own any real estate properties, financial assets, or have any liabilities, respectively.

[2] As previously noted, the top 10% of wealthiest households own 50% of total net wealth.

1 INTRODUCTION

1.1 THE SURVEY AND ITS PURPOSE

The Eurosystem Household Finance and Consumption Survey (HFCS),[3] a joint project of all of the central banks of the Eurosystem and three National Statistical Institutes, provides detailed household-level data on various aspects of household balance sheets and related economic and demographic variables, including income, private pensions, employment and measures of consumption.[4] A key distinguishing feature of the HFCS is that it provides individual household data, which have been collected in a harmonised way in 15 euro area members for a sample of more than 62,000 households.

Although there have been earlier efforts to survey wealth in some euro area countries, the HFCS represents the first attempt to gather detailed wealth data on a consistent basis across the euro area. All surveys face difficult challenges, but a survey of wealth faces particular obstacles: wealth is often considered a sensitive topic not discussed with strangers, and unusually wealthy people may be even more reluctant. Some people may have a poor understanding of their own finances and cross-country surveys, in particular, face problems as a result of cultural and institutional differences.

In addition, carrying out such a large survey presents significant conceptual and practical challenges. One difficulty, in particular, is that the survey fieldwork could not be carried out at the same period of time in all countries and, thus, wealth (and income) sometimes refers to different years. Some differences also exist, for example, in the sample selection. Additionally, some structural country differences are not captured in the survey, for example concerning the statutory pension systems. As a result, cross-country comparisons should be made with care and sources of differences should be carefully examined

The HFCS has recognised a very broad range of such issues and used the best available means to address them. In addition, the data have been examined closely from a variety of perspectives in an attempt to uncover errors and distortions. The figures provided in this report incorporate the best judgement available at this time. Nonetheless, caveats may remain. The HFCS is committed to an on-going effort to evaluate the survey more deeply, both to uncover unrecognised errors and to support improvement of future waves of the survey.

Household-level data on balance sheets can provide insights into a number of areas relevant for policy (see HFCN, 2009, for a detailed overview). A sizable amount analysis exists for countries with a tradition of collecting these data, such as the United States, Italy or Spain. In contrast, little cross-country comparative work and few results on the euro area are available.[5] Without being exhaustive, the following areas of research can be conducted with this type of data.

Recent macroeconomic developments highlight the importance of understanding of household indebtedness and de-leveraging. For example, Dynan and Kohn (2007) provide evidence on the

[3] See the survey web site, http://www.ecb.int/home/html/researcher_hfcn.en.html, for detailed documentation of the HFCS, including a set of additional descriptive statistics, and for access to the data.

[4] The HFCS also collects information on gifts and inheritances, but we refer to this area only briefly in chapter 3 below.

[5] An exception is Christelis et al. (2013), who investigate differences in ownership and holdings of various asset and debt types across 13 countries (among households aged 50 or more).

determinants of household indebtedness in the United States, identifying real estate prices as the key driver behind the pre-Great Recession increase in debt. Dynan (2012) analyses the response of US households to the recent adverse shocks and finds that highly leveraged homeowners had larger declines in spending between 2007 and 2009 than other homeowners, despite experiencing smaller changes in net wealth. This result suggests that leverage weighs on consumption above and beyond what is predicted by wealth effects alone.

The riskiness of the asset side of balance sheets and the extent of homeownership may also affect the macroeconomic response to shocks. Guiso et al. (1996) report that income risk and borrowing constraints reduce the share of risky assets in household portfolios. Chiuri and Jappelli (2003) find that the availability of mortgage finance – as measured by down payment ratios – affects homeownership.

Balance sheet structure affects the response of consumer spending to shocks. Bover (2005) and Paiella (2007) estimate a relatively small effect of housing wealth on spending in Spain and Italy, respectively (a marginal propensity to consume of around 1.5 to 3 cents per euro). The recent work by Christelis et al. (2011) finds similar estimates for the United States, with the effect of financial wealth exceeding the effect of housing wealth.

Micro-datasets on household wealth also allow study of the distributional effects of inflation. As argued by Doepke and Schneider (2006), an unexpected increase in inflation will hurt savers and benefit borrowers, while it will also hurt households that tend to hold relatively more currency (Albanesi, 2007). In that context, Easterly and Fischer (2001) have shown that the poor are more likely than the rich to mention inflation as a top national concern.

All in all, micro-datasets on household wealth have – where available – provided useful insights into how various households (e.g., the indebted, low-wealth, credit-constrained, or unemployed) respond to shocks depending on the structure of their balance sheets. These datasets have also been used at central banks to identify the groups of households that may be subject to increased debt burden and financial vulnerability, to detect threats to households' financial soundness and to model the response of such households to interest rate shocks. [6]

This document provides a descriptive summary of the main stylised facts documented in the survey, focusing primarily on household assets and liabilities, but also covering income, consumption and credit constraints. It is intended to provide a broad overview of the dataset, documenting numerous aspects of wealth heterogeneity across socio-demographic and cross-country dimensions.[7] A companion document, "The Eurosystem Household Finance and Consumption Survey – Methodological Report for the First Wave", provides complementary information about the main methodological features of the survey, with special emphasis on those having an effect on cross-country comparability.

The document is structured as follows. Chapters 2 and 3 document the structure of the asset and liability sides of household balance sheets, covering participation rates, median values and

[6] Quite a bit of work has already been done with the existing/predecessor wealth surveys; see HFCN (2009) for examples of the use of the data in Greece, Spain, Italy, the Netherlands, Austria and Portugal. See also Box 1.3 below.

[7] With regard to the socio-demographic criteria, the household is classified by the characteristics of a reference person chosen according to the international standards of the so-called Canberra Group (defined in detail in Annex I). It is important to note here that all results presented in the report are based on breakdowns by one characteristic at a time, and therefore do not take into account the complex nature of the relationships in the dataset.

portfolio shares of various components. Chapter 4 summarises key features of the distribution of net wealth. Chapter 5 discusses the distribution of household income and its parts due to financial investments, and compares the distribution of income and net wealth. Chapter 6 provides indicators of consumption spending and documents the extent of credit constraints.[8]

Box 1.1 About the Eurosystem Household Finance and Consumption Survey

The Eurosystem Household Finance and Consumption Survey (HFCS) is a joint project of all of the central banks of the Eurosystem and the National Statistical Institutes of France, Finland and Portugal, and covers all countries in the euro area excluding Ireland and Estonia (in the first wave).

The companion report, "The Eurosystem Household Finance and Consumption Survey – Methodological Report for the First Wave", provides a detailed overview of the main methodological features of the survey. It describes the survey mode, fieldwork, questionnaire, sample design, unit and item non-response and weighting, multiple imputation, variance estimation, statistical disclosure control, and comparability issues of the HFCS. With a view to enhancing understanding of the results presented in this report, a summary of the HFCS Methodological Report is provided herewith.

The total sample size of the HFCS is over 62,000 households, with achieved sample sizes in each country between 340 and 15,000 households. All statistics in this report are calculated using the final estimation weights, which allow all figures to be representative of the population of households in the respective country. Within each country, the sum of the estimation weights equals the total number of households in the country, so that the sum of weights in the whole dataset equals the total number of households in the 15 countries participating in the first wave of the survey. Within each country, the weights also reflect the proportions of the different types of households.

The surveys in each country were carried out between end-2008 and mid-2011, though the bulk of them were carried out with reference year in 2010. The reference year for each country is indicated in brackets in each table. Differences in reference years can be particularly relevant for the values of financial and real assets, many of which have declined substantially during the financial and economic crisis. The data have been aggregated considering neither price adjustments for the differences in reference years across countries, nor purchasing-power parity adjustments across countries.[9]

The HFCS uses advanced sampling and survey methods to ensure the best possible coverage of the assets and liabilities of households. When relevant data were available, an attempt was made to oversample relatively wealthy households. This is because assets, especially financial assets, are not equally distributed and the share of the highest percentiles of the distribution in total wealth can be very substantial. Liabilities are also highly concentrated. Consequently, if a small sub-population holding a large part of assets and/or liabilities is not sufficiently captured in the

[8] Additional detailed statistical tables with the results from the first wave are available at: http://www.ecb.int/home/pdf/research/hfcn/HFCS_Statistical_Tables_Wave1.pdf.

[9] This is analysed in more detail in the above-mentioned Methodological Report.

sample, the wealth totals and means will be disproportionately affected. The effect on the most important indicators produced by the survey for other parts of the wealth distribution should be limited. In general, means and totals are less robust than medians and quantiles, and will be used sparingly in this report.

How effective oversampling is depends on the availability of administrative or other information necessary for oversampling any particular household subgroups, and on cultural differences affecting households' willingness to cooperate.

All questions referring to households' income, consumption and wealth that households could not or did not want to answer have been imputed. Imputation is the process of assigning a value to an observation that was not (or not correctly) collected. For the HFCS, a multiple imputation technique has been chosen, whereby a distribution of possible values is estimated. This technique allows the uncertainty in the imputation to be reflected. The standard errors reported in the tables are estimates based on both sampling and imputation variability.

The reported estimates and standard errors are not adjusted for possible variation in respondents' cooperation or errors in response. As in other surveys, and notwithstanding the care that has been taken with the HFCS, there is always a possibility that such measurement issues may have perturbed the data. To address such response errors, each participating institution checked its own data and the data were further extensively checked at the ECB (see Box 1.1 in the HFCS Methodological report for more information). Each variable was checked against its definition, and implausible values were flagged and analysed. Although such validation procedures are unable to identify and address all errors, they tend to remove the most obvious distortions.

To get a sense of the comparability of the HFCS data with external sources, the data have been compared with aggregate information from national accounts and other surveys. Section 1.4 below gives an overview of the main findings, and Section 10.4 of the HFCS Methodological report provides a thorough conceptual comparison of national accounts and the HFCS concepts, as well as some results.

More work is needed and is under way to get a better sense of how the HFCS compares to other existing survey datasets and other data sources. The wide range of validation and plausibility checks carried out so far strongly suggest that the HFCS data are fit for the purpose for which they were collected, namely a detailed and thorough microdata analysis of the distribution of debts and assets. Such concentration is of paramount importance to both financial stability and monetary policy. At the same time, the confrontation of HFCS data with other sources also suggests that the HFCS is not (and is not meant to be) a substitute for good National Accounts information, the emphasis of which is on aggregate figures. The next section provides a brief overview of some comparisons with aggregates from the National Accounts and other surveys.

Finally, the microdata of the HFCS and the associated documentation are available for scientific, non-commercial research through the website of the ECB. Additionally, a set of statistical tables is available for downloading from the ECB website.

1.2 HOUSEHOLDS IN THE EURO AREA

The statistical level of analysis of this report is the household, which is defined in detail in appendix 10.1 of the HFCS Methodological report. The target reference population is all private households; it therefore excludes people living in collective households and in institutions, such as the elderly living in institutionalised households.[10] A household is defined as a person living alone or a group of people who live together and share expenditures; for example, roommates and employees of other residents are considered separate households.

The assets and liabilities of a household vary significantly with the composition (number of members) of the household, and with the age, education, employment status, inheritances, etc. of its members. Variations between countries can be significant; Tables 1.1and 1.2 document some general socio-demographic statistics of households in the euro area.

To clarify the differences between households, the concept of "household reference person" is used throughout the report and is loosely defined as the highest income earner in the household (it is defined in detail in Annex I of this report). Table 1.2 documents clear differences between the characteristics of the reference persons across countries: for instance, 3.7% of household reference persons are self-employed in the Netherlands, compared with 18.9% in Greece (and 9.0% at the euro area level); 36.4% of household reference persons are retired in Austria, compared with 20.9% in the Netherlands.

Educational achievements also vary widely.[11] Over 75% of household reference persons have not completed secondary education in Portugal, compared with 5.9% in Slovakia; in Belgium 38.5% of household reference persons have completed tertiary education, compared with 10.8% and 11.7%, respectively, in Portugal and Italy.

[10] This should be kept in mind when comparing the HFCS data with national accounts, e.g. below in section 1.4.

[11] Education defined below as "primary or no education" corresponds to the ISCED levels 0-1 (pre-primary, primary and lower secondary education as labelled by the Eurostat), "secondary" corresponds to the ISCED levels 3 and 4 (upper secondary and post-secondary non-tertiary education as labelled by the Eurostat) and "tertiary" corresponds to the ISCED levels 5 and 6 (first and second stage of tertiary education).

Table 1.1 Household size

	Average number of household members…		
	overall	**aged 16 or older**	**in employment**
Euro area	2.32	1.93	0.97
Belgium (2010)	2.31	1.89	0.92
Germany (2010)	2.04	1.72	0.95
Greece (2009)	2.64	2.22	1.05
Spain (2008)	2.68	2.26	1.12
France (2010)	2.24	1.78	0.88
Italy (2010)	2.53	2.13	0.95
Cyprus (2010)	2.76	2.32	1.27
Luxembourg (2010)	2.48	2.00	1.08
Malta (2010)	2.85	2.37	1.14
Netherlands (2009)	2.22	1.80	0.96
Austria (2010)	2.13	2.27	1.11
Portugal (2010)	2.71	1.82	0.99
Slovenia (2010)	2.57	2.17	1.05
Slovakia (2010)	2.83	2.42	1.36
Finland (2009)	2.08	1.71	0.86

Source: HFCS.

Table 1.2 Household structure by country

(fraction of households, %)

	All	BE	DE	GR	ES	FR	IT	CY	LU	MT	NL	AT	PT	SI	SK	FI
Euro area	100.0	3.4	28.7	3.0	12.3	20.2	17.2	0.2	0.1	0.1	5.3	2.7	2.8	0.6	1.4	1.8
Household size																
1	31.6	33.8	39.6	20.1	18.4	35.3	24.9	20.8	30.0	18.8	35.8	38.7	17.7	27.0	23.1	39.6
2	32.1	31.7	34.5	28.3	29.5	32.5	30.4	30.9	28.0	25.7	33.4	34.7	30.6	26.5	23.8	34.7
3	16.6	15.1	12.8	24.2	25.3	13.8	19.5	18.2	17.0	22.3	12.8	11.3	25.9	18.7	20.4	11.0
4	14.1	12.6	9.4	23.3	21.4	12.0	18.7	17.5	16.0	22.1	11.2	8.9	18.6	20.5	21.5	9.6
5 and More	5.6	6.8	3.8	4.1	5.4	6.4	6.5	12.6	9.0	11.1	6.9	6.5	7.3	7.4	11.2	5.1
Housing status																
Owner-Outright	40.7	41.2	26.2	58.5	55.9	38.3	59.1	41.7	34.3	65.7	13.2	31.1	47.0	69.3	80.6	36.4
Owner-with Mortgage	19.4	28.5	18.0	13.9	26.8	17.0	9.6	35.0	32.8	12.1	43.9	16.7	24.5	12.5	9.3	32.8
Renter or Other	39.9	30.4	55.8	27.6	17.3	44.7	31.3	23.3	32.9	22.3	42.9	52.3	28.5	18.2	10.1	30.8
Age of Reference Person																
16-34	15.7	17.1	18.0	15.2	14.9	19.4	8.6	18.1	16.8	8.7	13.8	17.2	11.6	13.0	16.1	22.2
35-44	19.6	19.6	18.1	20.7	22.5	19.1	20.4	18.2	22.6	22.5	21.0	18.4	21.2	16.7	19.7	15.6
45-54	19.9	20.3	20.3	17.7	20.8	16.9	21.1	23.8	22.7	21.5	21.9	20.6	19.5	27.5	24.7	18.8
55-64	17.1	16.8	14.9	18.6	16.0	18.4	17.5	16.6	15.8	21.9	20.8	19.4	18.4	19.3	19.1	19.2
65-74	14.5	12.3	16.1	15.5	13.4	11.7	16.2	13.9	13.8	13.7	14.6	14.4	15.5	12.8	16.4	12.2
75+	13.2	14.2	12.7	12.4	12.6	14.5	16.2	9.4	8.3	11.7	7.8	9.9	13.8	10.7	4.1	12.0
Work Status of Reference Person																
Employee	47.9	46.8	51.3	39.7	47.2	47.3	38.7	56.9	59.0	46.6	47.2	47.9	46.0	46.3	58.0	49.3
Self-Employed	9.0	5.1	7.4	18.9	10.7	7.4	13.1	11.0	5.8	11.7	3.7	9.4	10.1	6.6	10.6	6.4
Retired	31.7	32.4	30.6	34.7	23.8	34.5	32.0	24.5	27.2	29.2	20.9	36.4	34.3	38.3	26.4	27.4
Other Not Working	10.7	14.0	10.8	6.6	18.2	11.0	3.9	6.7	8.0	12.6	16.0	6.3	9.4	8.7	4.9	17.0
Education of Reference Person																
Primary or No Education	34.3	25.4	12.7	45.7	54.0	37.8	53.3	21.2	35.6	63.6	27.9	15.5	75.8	21.2	5.9	26.4
Secondary	41.3	36.1	56.1	33.4	19.7	38.6	35.0	25.6	38.2	21.1	38.8	70.5	13.4	57.1	78.4	41.0
Tertiary	24.4	38.5	31.2	20.8	26.3	23.6	11.7	29.7	26.3	15.3	33.3	14.0	10.8	21.7	15.7	31.4

Notes: This table reports the percentage of various groups of households in the population in the euro area and across countries. The first panel distinguishes households by household size. The second panel distinguishes households by housing status, differentiating owners of the household main residence without a mortgage on the household main residence ("Owner - Outright"), owners of the household main residence with a mortgage on the household main residence ("Owner - with Mortgage"), and renters. The third panel distinguishes households by age of the reference person. The fourth panel distinguishes households by work status (where the category "Other Not Working" includes households where the reference person is unemployed, a student, permanently disabled, doing compulsory military service, fulfilling domestic tasks or not working for pay in other ways), the fifth panel, by education of reference person (referring to the highest education level completed). The breakdowns for age, work status and education of the reference person were calculated for a single person for each household (see Annex I for the definition of the reference person).

1.3 CROSS-COUNTRY COMPARABILITY OF THE HFCS RESULTS

This section discusses a range of issues that are relevant for the cross-country comparability of the HFCS results. In addition to the methodological and measurement caveats, these considerations should be borne in mind when reading the statistics reported in the chapters below, as they are likely to affect the observed structure of household wealth and its components across countries. Broadly, they can be related to institutional factors and to macroeconomic dynamics.

1.3.1 THE ROLE OF INSTITUTIONS

A number of institutional features – including the structure of the pension system, taxation, the availability of particular country-specific financial products, etc. – shape the distribution of wealth, and the different structure of household portfolios across countries. Different assets and liabilities in the household portfolios can have an important impact on overall wealth, in particular in periods of significant asset price movements.

As will be further detailed in box 1.2 and section 2.2.3, the definitions of net wealth and financial assets adopted in this report include voluntary private pensions and whole life insurance, but do not include public and occupational pensions. While some information on these items is collected in the HFCS, their value in general can be difficult for respondents to evaluate, especially in regard to unfunded pension schemes. This is important not only because a part of the total pension wealth is not recorded in the HFCS, but also because public and occupational wealth may affect the choices households make for their portfolio of assets and liabilities. A more generous provision of public pensions reduces the necessity for households to accumulate other forms of wealth and affects the share of risky or liquid assets in their portfolios. Also, public and occupational wealth affects the overall distribution of wealth in a country as it tends to be more evenly distributed than private wealth.

External sources suggest that the value of public pensions varies substantially across countries. In particular, OECD (2011) covers 13 of the 15 HFCS countries and estimates that the average public pension wealth in Luxembourg and the Netherlands substantially exceeds the values for the remaining countries. For example, the average public pension wealth for men is estimated to be US$1,542,000 for Luxembourg and US$1,145,000 for the Netherlands, while for the other HFCS countries it does not exceed US$557,000 (see OECD, 2011, p. 143).

Other factors that may affect portfolio choices, are various forms of public wealth (e.g. public housing or medical coverage) as well as taxation, for example of housing. The latter varies substantially across euro area member states. Many governments encourage investment in housing through, e.g., the structure of inheritance and capital gains taxes (in some countries financial and housing assets have different tax treatment[12]) or tax-deductible mortgage interest and/or amortisation re-payments. In particular, while in most euro area member states interest payments on mortgages are tax-deductible, this is not the case in Germany, Cyprus, Malta and Slovenia (see section 3.3 of Eurosystem, 2009, for a detailed overview).

Cross-country differences in the availability of various financial products also affect the size and structure of household assets and liabilities. For example, in the Netherlands, more than half of the outstanding mortgage debt is composed of interest-only mortgages.[13] For these mortgages, no repayments are made during the life of the mortgage. At the same time, borrowers may accumulate assets for future mortgage redemption at insurers and banks. While the capital accumulated in such mortgage-related products may not be properly captured in the

[12] In some countries, capital gains on the household main residence may be exempted from the capital gains tax, especially if the owner has lived in the residence for several years before the sale. Capital gains on housing are treated more or less the same as other capital gains in only a few euro area countries.

[13] See De Nederlandsche Bank (2011), p. 18.

HFCS, aggregate data suggest that the value of these assets is very limited in relation to the total associated debt.[14]

Differences in household portfolios mean that the impact of asset price changes, for example of fast rising housing prices, may affect households' wealth very differently in different countries and for different sub-populations. In countries with low home-ownership rates, a larger part of the housing stock tends to be concentrated among households in the top quantiles of the distribution of assets. These households therefore see their wealth change most when house prices change. In addition, a large stock of housing in countries with low homeownership rates may be owned by entities not covered by the HFCS, e.g. by governments, cities, or non-profit institutions.

1.3.2 THE ROLE OF MACROECONOMIC DYNAMICS

The structure of household wealth and of its components also depends on the overall macroeconomic environment and, in particular, asset price dynamics. Much of the dynamics of net wealth is indeed driven by capital gains/losses on real and financial assets rather than the accumulation of active saving by households.[15] Consequently, the relationship between the historical (aggregate) saving rates and the level of net wealth across countries is often quite noisy.

The euro area has witnessed a very heterogeneous development of house prices in the early 2000s, with some countries (notably Germany, the Netherlands, Portugal and Austria) experiencing flat house price developments, and other countries (notably Belgium, Cyprus, Spain, France and Luxembourg) being subject to substantial house price booms. Because real estate makes up the bulk of assets (see e.g. Chart 2.1 below), these divergent house price developments are likely to have contributed substantially to cross-country differences in reported wealth. Similarly, the dynamics in prices of various types of financial assets affect the value and the participation rates in these assets. In addition, steep increases in house prices may have contributed to the accumulation of household debt.[16]

Of course, the downward correction in house price values that has been observed in a number of countries after the conduct of the HFCS (for instance by more than 10% in Slovakia, Spain or Cyprus) is likely to have modified the level and distribution of household wealth within and across countries in very different ways. Moreover, investment in housing financed by a mortgage can be a commitment device for saving, inducing homeowners to gradually accumulate more wealth than renters. This effect is bound to be particularly strong in periods of house price booms, where mortgage owners benefit from the increased values of the underlying asset that was bought via a leveraged transaction. Consequently, in such a situation households that do not acquire a house may accumulate less wealth than homeowners.

To summarise, there is a multitude of factors that shape the current structure of household wealth and its components, especially when comparing across countries. Again, when studying

[14] See De Nederlandsche Bank (2012), p. 22.

[15] See Christelis et al. (2011) for evidence on the United States.

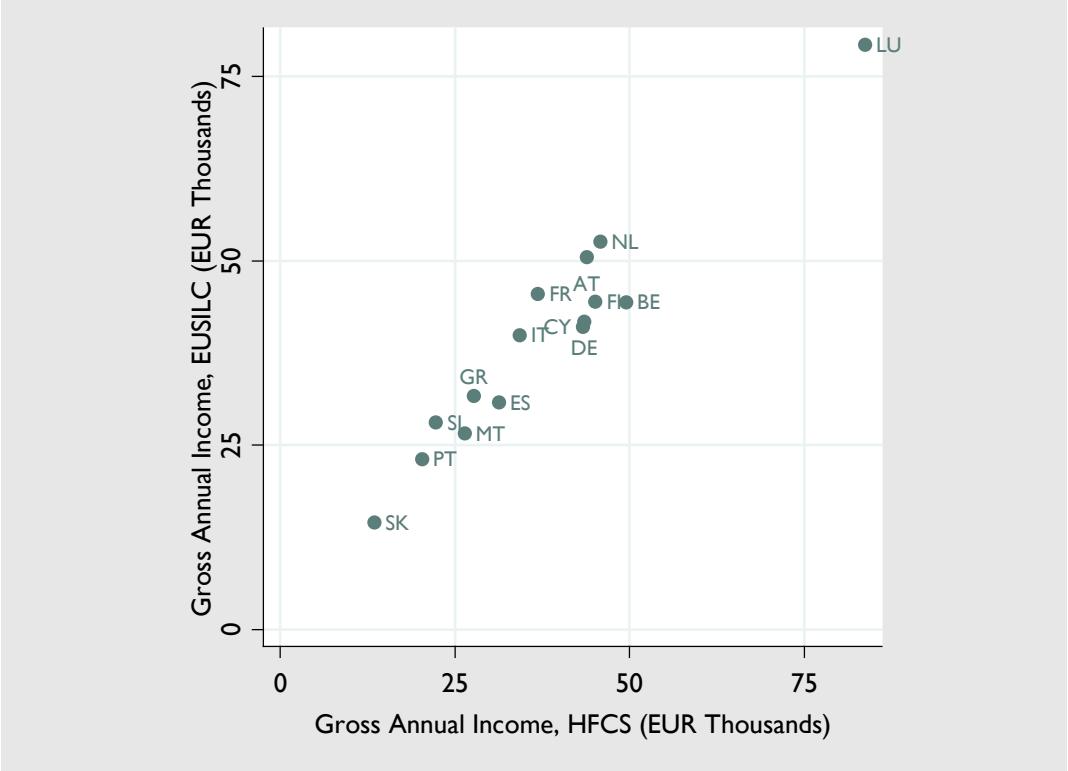
[16] See Dynan and Kohn (2007) for evidence from the United States.

the results of this report, it is essential to keep in mind that the definition of wealth assumed in this report relates to the wealth of private households, which is only one part of the overall economic wealth of a country. However, the data on household wealth and its structure are – in connection with other data collected in the HFCS, such as income, demographics and consumption indicators – useful for analyses of topics in household finance.

1.4 COMPARING THE HFCS WITH NATIONAL ACCOUNTS AND OTHER SURVEYS: BRIEF OVERVIEW

Even though income is not a primary variable in the HFCS, it is an essential classification and analysis variable. A natural comparator for the income figures measured by the HFCS is EU-SILC (Statistics on Income and Living Conditions), a survey conducted every year in all EU countries that provides (ex-post) harmonised information on household income. Both surveys share to a large extent identical concepts and definitions of the target population and of income. Some general, as well as some country-specific differences in concepts and methodologies are nevertheless presented in annex 10.5 of the HFCS Methodological report. In order to provide an idea of how the HFCS and EU-SILC compare, Chart 1.1 below plots the country means of total household income in the two surveys using comparable definitions (total gross income).

Chart 1.1 Mean income per household in EU-SILC and the HFCS



Source: Eurostat, HFCS. ECB calculations (results available in annex 10.5 of the HFCS Methodological Report)

Ideally, and subject to comparable methodologies in the two surveys, observations would be on the 45-degree line. The actual results are very close to that line, suggesting that the surveys provide reasonably similar estimates of gross income. This conclusion is further corroborated when comparing median total household income figures across the two surveys (not shown here).

Turning next to a comparison of wealth with the available National Accounts (NA) data, it should first be said that there are important conceptual and methodological issues, as well as measurement differences between the HFCS and wealth in the NA. Box 1.2 summarises some of the main issues.

Box 1.2 Wealth measurement and concepts

Capturing wealth presents challenges in terms of measurement issues, the concepts of wealth that are to be described and the links between various forms of wealth.

MEASUREMENT ISSUES

Important methodological differences arise between the measurement of wealth in National Accounts (NA) data and in the HFCS. Chapter 10.4 of the HFCS Methodological Report analyses in detail the main differences, in particular, with respect to the boundaries of the household sector, the existence and definitions of items to be included in the measures of wealth and the valuation of assets and reference periods. Without repeating the detailed analysis here, some main differences are nevertheless worth bearing in mind when comparing aggregate figures.

The reference population is different, as NA include all households and non-profit institutions serving households (e.g. churches, political parties, and non-profit universities), the wealth holdings of which may be substantial, while the HFCS only includes so-called private households, excluding persons living in group quarters e.g. the elderly living in institutionalised households. Also, the HFCS and NA differ in their treatment of business wealth and the delineation of self-employment business. In the HFCS, businesses where at least a member of the household is employed are classified as real assets, whereas in NA, the net value of the business should be recorded either as equity participations (i.e. as financial assets of the household) or, when they are considered to be an integral part of the household, assets and liabilities of the business are recorded (gross) as part of the household's balance sheet.

Apart from business wealth, there are also differences in other items, for example pensions. The NA concept of insurance technical reserves appears to be the functional equivalent of pension wealth in the HFCS. However, the HFCS net wealth concept includes only the current termination value of private pension plans, i.e. excluding public and occupational pension plans and social security funds, while part of these assets (namely participations in plans other than social security schemes) are included in the NA. Concerning real assets, the value of land is often missing in NA (and is therefore estimated in the comparisons undertaken below), while it is included in the real assets of the HFCS.

With regard to the valuation of some assets (real estate and self-employment businesses in particular), the HFCS is based on self-assessment of the responding households, which is arguably what determines their economic and financial decisions, while National Accounts data are typically at an estimated market value. While such different valuation methods should theoretically lead to very similar outcomes, potential differences regarding real assets should be taken into account, particularly during periods of significant volatility in the markets or during times when markets are thin and market prices are difficult to gauge.

The different structure of household portfolios may also raise some measurement issues for the survey. Home owners may be more likely to report more accurately about their wealth in their main residence and the mortgage debt tied to it, if for not other reason than because these make up a very big part of their portfolio. Financial wealth or other assets including rented houses may be less accurately reported. Indeed, even taking account of different methodological differences, financial wealth in the HFCS tends to be lower than what one would expect looking at NA data. If this is systematic, its means that home ownership may have an effect on how accurately wealth can be measured in a survey. Finally, methodological issues, such as the reference years, some approaches to data processing, and other survey characteristics can vary somewhat across countries.

In view of these methodological differences, one should expect to find that the relationship between HFCS and NA results on wealth is less tight than that of gross income in the HFCS and EU SILC considered above. As can be seen from Charts 1.2 and 1.3 below, this is indeed the case, though again the comparison provides a reasonable picture and thus further reassurance about the HFCS results.

CONCEPTS OF WEALTH

Total wealth of each country consists of several components. Beside the wealth of the household sector, which is in the focus of the HFCS, total wealth also includes the wealth of other sectors, particularly that of the government (public wealth) sector – consisting further of the wealth of national/federal government and local governments – and the firm sector (business wealth). The HFCS collects information on neither of these sectors. Like household wealth, public and business (net) wealth is further composed of real and financial assets net of total liabilities.

Complex links exist between public wealth and household wealth. In particular, public wealth in the form of the provision of public goods, infrastructure, health-care systems, and systems of social benefits and pensions, can serve as a substitute for household wealth. In countries with more generous and stable social benefits, pensions and health insurance, households tend to have a less urgent need to accumulate assets for life-cycle and precautionary motives, as insurance against adverse income and health shocks.

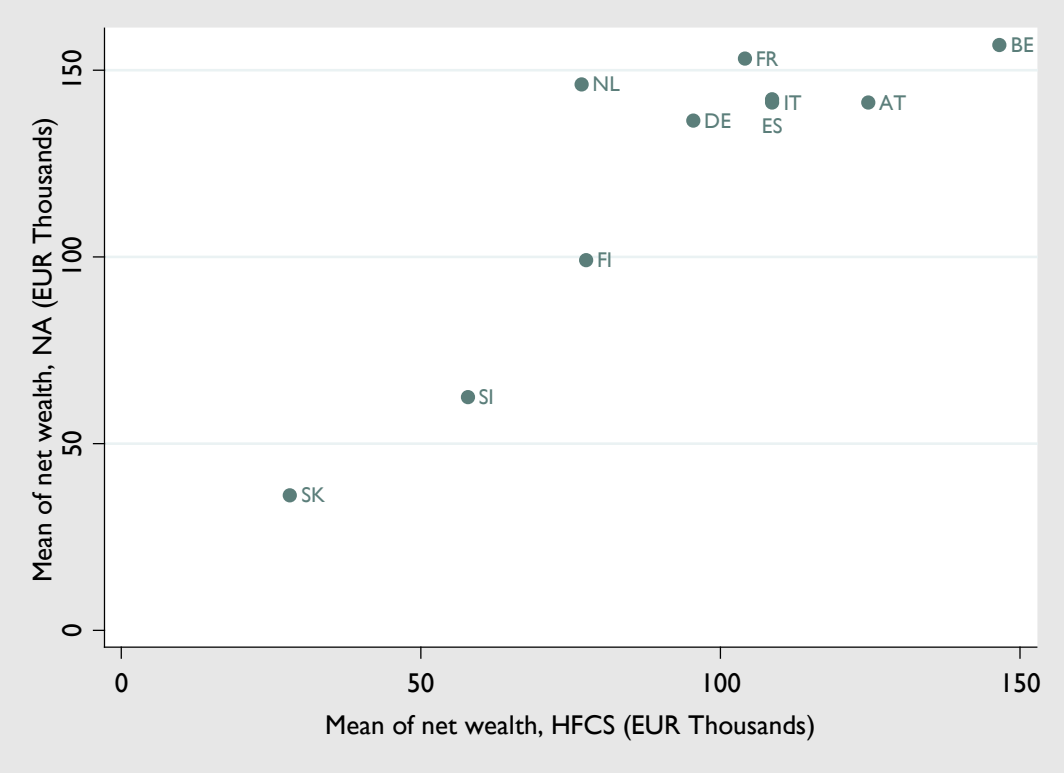
In addition, in some countries governments own (for institutional, cultural or historical reasons) a substantial part of the housing stock, so that a larger fraction of households rent rather than own their residence. Consequently, real household wealth in these countries tends to be lower than in countries with high home-ownership rates.

This report only considers the structure of household wealth. Because the information on other

forms of wealth is not collected in the survey, household wealth is described very much in isolation and remarks related to substitutability between household and public wealth are only rarely mentioned (e.g. in sections 1.3.1 and 4.3.4) although the links should be kept in mind when interpreting the results.

Charts 1.2 and 1.3 plot the comparison of *per person* means of net wealth and total assets, respectively, in the HFCS and in the NA for ten countries for which comparable NA data are available from Eurostat or directly from national sources.[17]

Chart 1.2 Mean net wealth per person in national accounts and in the HFCS



Source: Eurostat, HFCS. ECB calculations. Partial information on land holdings has been estimated from available countries (results available in chapter 10.4 of the HFCS Methodological Report). For Greece, Luxembourg, Cyprus, Malta and Portugal, no relevant national accounts data are publicly available.

As might be expected, all observations in both charts lie above the 45-degree line, i.e. gross and net wealth per person are lower in the HFCS than in the NA. Contributing factors may include the non-coverage of public and occupational pensions and the more limited definition of the household sector in the HFCS, as explained above. Of course, it cannot be excluded that part of the difference is also due to insufficient coverage of the wealthiest households, as mentioned in Box 1.1, as well as to some possible underreporting of financial or other assets in the HFCS.

[17] Some components of non-financial wealth are available in additional countries, but have not been included here, as comparable aggregate figures cannot be constructed.

Some of the other methodological differences mentioned above (for instance, the treatment of business wealth) may have offsetting effects on the HFCS and NA data.

Chart 1.3 Mean gross wealth per person in national accounts and in the HFCS

Source: Eurostat, HFCS. ECB calculations. Partial information on land holdings has been estimated from available countries. (Results available in chapter 10.4 of the HFCS Methodological Report). For Greece, Luxembourg, Cyprus, Malta and Portugal no relevant national accounts data are publicly available.

The breakdown of net wealth into its main components is illustrative of the difficulties in the comparison, and is only roughly sketched here. In terms of real assets, the treatment of business wealth in the HFCS could give rise to a comparatively higher real wealth than in the NA, all other things being equal, with a similar but opposite difference in financial assets; there may also be a relative understatement of financial liabilities in the HFCS. For example, in Belgium, Italy, Austria, Slovenia and Finland, the HFCS provides a relatively higher amount of real assets than the NA, but, correspondingly, a relatively lower value of financial assets. Other methodological differences, such as the self-valuation of real estate in the HFCS, may have a perceptible impact on overall net and gross wealth, particularly as countries have had different house price dynamics and home ownership ratios (see Chapter 4).

Though comparable NA information is not readily available for the other countries contributing to the HFCS, the available figures, for example on NA financial wealth, tend to confirm the above comparisons. In particular, the data for Cyprus appear to be an "outlier" and not readily comparable with those for other euro area countries in a number of dimensions. They should therefore be interpreted with caution at this stage. Differences between Cyprus and other euro

area countries, but also across euro area countries more generally, emanate to a large extent from historical, cultural and institutional factors (such as inheritances/intergenerational transfers, household composition, land ownership and allocation of household wealth between real and financial assets). A closer investigation of these factors is needed to understand and analyse heterogeneity across countries.

In addition to the comparison with NA data, checks were carried out using other sources of information where necessary, or where possible due to the availability of the relevant data. One example is the comparison with SHARE, the Survey on Health, Ageing, and Retirement in Europe. This survey is the only other harmonised cross-country survey in Europe with extensive information on household balance sheet items. However, it is limited to respondents aged 50 or older. The results of this comparison are not reported here, but confirm the overall picture.

All in all, the extensive validation and plausibility checks of the HFCS data suggest that in certain cases specific sub-populations may have not been sufficiently covered. Questions of coverage usually regard the tails of the wealth distribution, i.e. the very poor and the very rich. In some countries, a comparison of the income from financial assets from HFCN and EU-SILC, as well as comparisons of household wealth in other properties and business compared with the wealth in primary residence, may suggest that the survey may have better covered the wealthier households than the poorer ones. In other countries, the opposite may be more of a problem; households at the very top 1% of the wealth distribution may have not been sufficiently covered. These are issues that warrant further detailed micro-analysis and evaluation, but are also important to bear in mind when considering summary statistics, such as mean and aggregate wealth per country.

Notwithstanding the above caveats, the comparison of the HFCS data with information from alternative sources tends to confirm the reliability and usefulness of the rich micro-information in the HFCS. The emphasis in the HFCS is on microdata and analysing the distribution of certain types of debt and assets across various groups of the household population. At the same time, the above comparisons highlight that the HFCS is no substitute for reliable NA information when it comes to analysis of aggregate figures. The differences between the HFCS aggregate asset and liability figures and those of the NA, though well within what would usually be expected for surveys, underscore the necessity of examining the broad composition of household portfolios, rather than focusing on simple “rankings”. Differences between the HFCS and NA estimates and other aspects of reliability of HFCS data will be the focus of future research.

2 ASSETS

Household assets consist of real assets and financial assets. (See Annex 1 for the structure of real and financial assets). This chapter discusses three aspects of the asset side of the household balance sheet: first, the extensive margin, i.e., whether a household owns a particular asset type or not (the participation rate); second, the intensive margin, i.e. the value of a particular asset type that households own (for households that have reported to own this asset type); finally, it also considers the composition of assets, i.e., the fraction of the value of total assets that is accounted for by the various asset types. The composition of assets is driven by the participation rates and by the values of the assets that households hold. The chapter first discusses real asset holdings before proceeding to financial assets, and finally puts both of them in perspective by studying their relative importance in households' asset portfolios.

2.1 REAL ASSETS

When analysing real assets, five different categories can be usefully distinguished: the household main residence, other real estate property, vehicles,[18] valuables[19] and self-employment businesses.[20]

Table 2.1 shows the participation rates for various real assets – i.e. the fraction of households owning the asset – and their breakdowns by demographic characteristics and by country. [21] Table 2.2 displays the median value of the asset type, conditional on holding the asset.

The most prevalent real asset types (i.e. types that are owned by a relatively large fraction of households) in the euro area are the household main residence (owned by 60.1% of all euro area households) and vehicles (75.7% of all euro area households report owning at least one vehicle). Much less prevalent are holdings of other real estate property (i.e. real estate other than the household main residence, with a participation rate of 23.1%), valuables (44.4%) and self-employment businesses (11.1%).

[18] The HFCS only collects information on households' possession of cars and other vehicles such as boats and motorbikes, but not of other durables (such as washing machines, Hi-Fi systems or TV sets). Cars and vehicles generally have active second-hand markets in which these assets can be made liquid, which makes them proper assets for wealth research. The inclusion of vehicles follows other household wealth surveys (e.g. the Survey of Consumer Finances) and the definition of household wealth in the forthcoming Manual on Micro Statistics on Household Wealth, which is in contrast to the national accounts, where they are often considered durable goods and thus excluded from household real assets.

[19] Valuables are defined as valuable jewellery, antique or art.

[20] A self-employment business is a business in which at least one member of the household works as self-employed or has an active role in running the business.

[21] The statistics in this table and in the rest of the report are based on the raw values directly reported in each country survey. This means that despite different reference years across countries, they are not adjusted for CPI inflation and variation in purchasing power parities (PPP).

Table 2.1 Participation in real assets by demographic and country characteristics

(in percent)

	Real Assets					
	(Any) Real Assets	**Household Main Residence (HMR)**	**Other Real Estate Property**	**Vehicles**	**Valuables**	**Self-Employment Business Wealth**
Euro Area	91.1	60.1	23.1	75.7	44.4	11.1
S.E.	*(0.3)*	*(0.2)*	*(0.4)*	*(0.4)*	*(0.6)*	*(0.2)*
Household Size						
1	81.4	43.8	14.3	50.5	42.2	4.6
2	94.6	65.7	26.6	82.1	45.5	10.4
3	95.3	66.9	26.6	89.1	43.9	14.8
4	98.1	73.3	29.5	93.2	46.2	19.3
5 and More	96.3	66.3	25.8	90.7	47.5	19.3
Housing Status						
Owner-Outright	100.0	100.0	34.8	80.0	51.2	12.3
Owner-with Mortgage	100.0	100.0	24.0	89.5	37.4	16.1
Renter or Other	77.8	0.0	10.7	64.0	40.8	7.3
Percentile of EA Income						
Less than 20	78.6	47.0	12.9	44.1	36.0	4.1
20-39	87.8	50.6	16.4	69.5	45.2	6.6
40-59	93.8	58.7	20.4	83.8	45.4	8.6
60-79	96.8	66.5	25.9	90.0	49.4	12.8
80-100	98.6	77.6	39.7	92.8	46.1	23.1
Percentile of EA Net Wealth						
Less than 20	66.2	4.8	1.9	48.7	34.8	2.3
20-39	90.7	28.6	8.3	73.2	39.2	7.3
40-59	98.9	78.9	19.1	79.4	39.6	8.5
60-79	99.9	93.4	26.9	86.0	51.8	10.3
80-100	99.9	94.6	59.1	90.3	56.4	26.9
Age of Reference Person						
16-34	84.3	31.9	9.9	71.4	39.7	8.6
35-44	93.2	57.1	19.0	85.5	42.4	15.1
45-54	94.0	64.3	27.3	85.3	43.0	16.4
55-64	93.7	71.3	32.4	83.2	48.8	14.4
65-74	92.2	71.0	29.3	71.9	44.9	5.4
75+	87.5	65.2	19.5	45.1	48.6	1.8
Work Status of Reference Person						
Employee	93.5	56.9	20.3	85.7	42.4	5.6
Self-Employed	98.5	71.1	43.9	89.8	51.3	79.9
Retired	90.9	69.5	25.9	64.4	49.7	3.1
Other Not Working	74.9	37.3	10.8	50.1	33.5	1.7
Education of Reference Person						
Primary or No Education	90.9	61.9	21.5	66.5	50.1	8.1
Secondary	89.3	55.4	19.2	78.6	40.7	11.0
Tertiary	94.6	65.4	31.6	83.1	42.7	15.3

Table 2.1 Participation in real assets by demographic and country characteristics

(in percent)

		Real Assets				
	(Any) Real Assets	Household Main Residence (HMR)	Other Real Estate Property	Vehicles	Valuables	Self-Employment Business Wealth
Country						
Belgium (2010)	89.8	69.6	16.4	77.2	15.4	6.6
S.E.	*(0.9)*	*(1.2)*	*(0.9)*	*(1.1)*	*(1.0)*	*(0.7)*
Germany (2010)	80.2	44.2	17.8	70.9	13.2	9.1
S.E.	*(0.9)*	*(0.0)*	*(1.0)*	*(0.9)*	*(0.9)*	*(0.5)*
Greece (2009)	92.2	72.4	37.9	73.0	3.4	9.8
S.E.	*(0.7)*	*(0.0)*	*(1.6)*	*(1.2)*	*(0.7)*	*(0.8)*
Spain (2008)	95.3	82.7	36.2	77.3	17.2	14.2
S.E.	*(0.5)*	*(0.9)*	*(1.2)*	*(0.8)*	*(0.9)*	*(0.8)*
France (2010)[1]	100.0	55.3	24.7	M	100.0	8.9
S.E.	*(0.0)*	*(0.6)*	*(0.6)*			*(0.3)*
Italy (2010)	97.7	68.7	24.9	83.3	85.6	18.0
S.E.	*(0.2)*	*(0.8)*	*(0.6)*	*(0.5)*	*(0.7)*	*(0.6)*
Cyprus (2010)	95.8	76.7	51.6	88.9	9.9	19.5
S.E.	*(0.8)*	*(1.6)*	*(1.8)*	*(1.1)*	*(1.1)*	*(1.4)*
Luxembourg (2010)	93.6	67.1	28.2	86.7	23.8	5.2
S.E.	*(0.9)*	*(1.5)*	*(1.6)*	*(1.3)*	*(1.6)*	*(0.6)*
Malta (2010)	94.8	77.7	31.4	84.9	19.1	11.5
S.E.	*(0.7)*	*(1.4)*	*(1.7)*	*(1.0)*	*(1.3)*	*(0.9)*
Netherlands (2009)	89.8	57.1	6.1	81.3	15.5	4.8
S.E.	*(1.3)*	*(0.0)*	*(0.7)*	*(1.6)*	*(1.3)*	*(0.8)*
Austria (2010)	84.8	47.7	13.4	74.9	23.6	9.4
S.E.	*(1.0)*	*(1.3)*	*(1.0)*	*(1.2)*	*(1.3)*	*(0.8)*
Portugal (2010)	90.1	71.5	27.1	72.3	8.4	7.7
S.E.	*(0.6)*	*(1.2)*	*(1.1)*	*(0.8)*	*(1.0)*	*(0.6)*
Slovenia (2010)	96.2	81.8	23.2	80.4	1.5	11.6
S.E.	*(1.0)*	*(2.2)*	*(2.3)*	*(2.5)*	*(0.4)*	*(1.7)*
Slovakia (2010)	96.0	89.9	15.3	61.2	22.4	10.7
S.E.	*(0.4)*	*(0.0)*	*(1.1)*	*(1.2)*	*(1.0)*	*(0.7)*
Finland (2009)	84.3	67.8	29.8	67.9	M	13.8
S.E.	*(0.4)*	*(0.5)*	*(0.5)*	*(0.5)*		*(0.3)*

Notes: This table reports statistics for household participation rates in real assets. M stands for a missing value. N stands for "not calculated" because less than 25 observations are available.
The first panel contains figures for all households in the sample obtained as described in Section 1.2. The second panel distinguishes households by household size. The third panel distinguishes households by housing status, differentiating owners of the household main residence without a mortgage on the household main residence ("Owner - Outright"), owners of the household main residence with a mortgage on the household main residence ("Owner - with Mortgage"), and renters. The fourth and fifth panels distinguish households by income and net wealth, where percentiles (quintiles) of income and net wealth are constructed using all households in the sample. The breakdowns for age, work status and education of the reference person were calculated for a single person for each household (see Annex I for the definition of the reference person). The sixth panel distinguishes households by age of the reference person. The seventh panel distinguishes households by work status (where the category "Other Not Working" includes households where the reference person is unemployed, a student, permanently disabled, doing compulsory military service, fulfilling domestic tasks or not working for pay in other ways), the eighth panel, by education of reference person (referring to the highest education level completed). The last panel presents a breakdown by country.
For a description of definitions of the variables, see also the document HFCN (2011).
In Finland, self-employment business wealth includes all unlisted shares. The data are based on tax registers and no distinction can be made between self-employment and non-self-employment private businesses. Data on valuables are not collected for Finland.
The rows labelled as "S.E." show standard errors, which were calculated with the Rao-Wu rescaled bootstrap method using replicate weights provided by the countries (1,000 replicates; see chapter 7 of the HFCS Methodological Report for details).
1: In France, data on vehicles and valuables have not been collected separately; both types are included in valuables. Note that this implies that the value of these variables is set to zero for France when aggregating to the euro area figures.

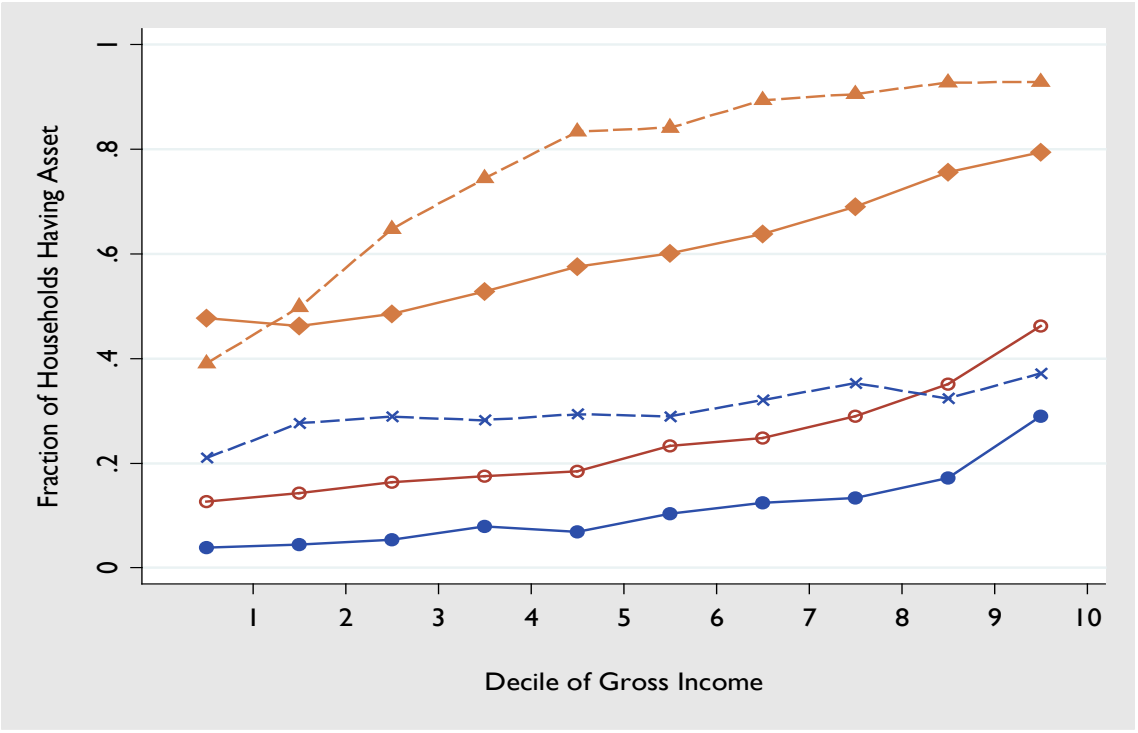
2.1.1 REAL ESTATE PROPERTY

This section discusses real estate property. It starts with the household main residence, and subsequently reports results for other real estate property. 60.1% of euro area households own their main residence. Household size does not substantially affect the ownership rate, except for single-person households, whose home-ownership rate is, at 43.8%, about 16 percentage points lower than the average of all euro area households.

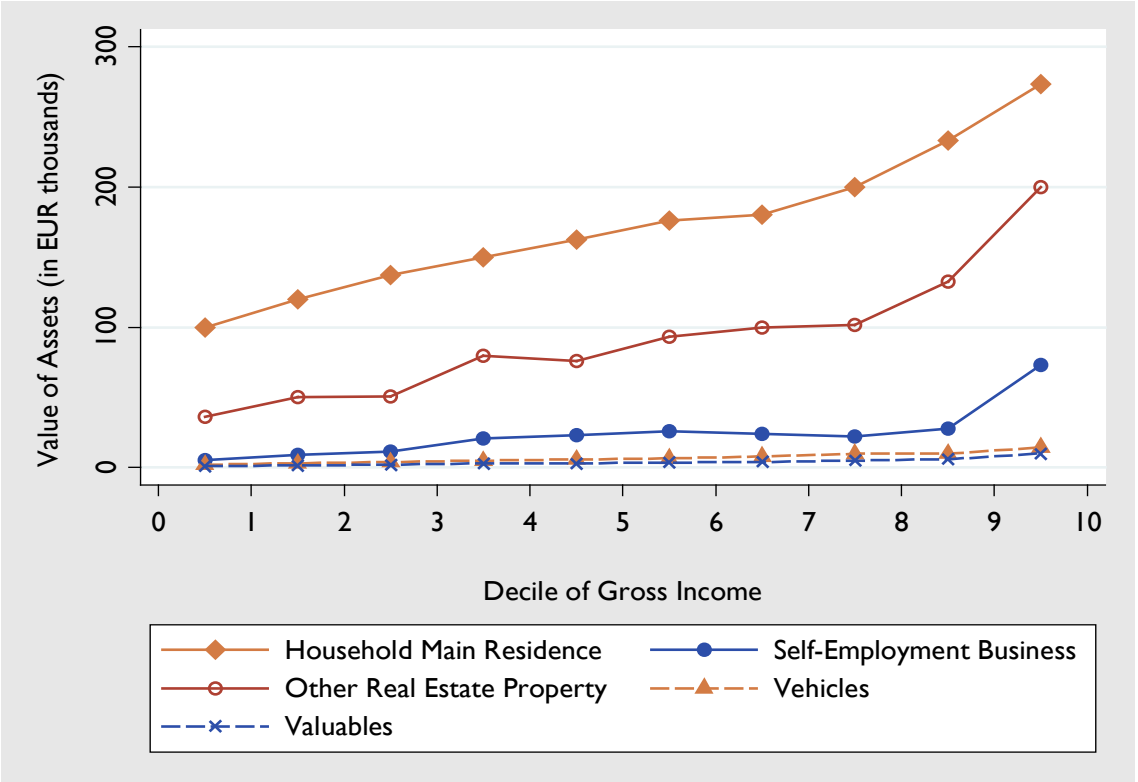
Home-ownership rates increase with income: households in the top quintile of the income distribution have an ownership rate of 77.6%, whereas the ownership rate in the lowest quintile stands at 47.0%. Ownership rates that increase with income are not unique to the household main residence, as is shown in Chart 2.1, and reflect the tendency that ownership of the various asset types is more affordable for households with higher income.

Chart 2.1 Participation and median value of real assets

Panel A: Participation in Real Assets by Income



Panel B: Median Value of Real Assets by Income, Conditional on Participation



Notes: The horizontal axis shows percentiles 10, 20, … , 100 of gross income. See the notes to table 5.1 for the composition of gross income. The percentiles were calculated for the whole sample using household weights.

Table 2.2 Median value of real assets conditional on participation

by demographic and country characteristics (EUR, thousands)

		Real Assets				
	(Any) Real Assets	Household Main Residence (HMR)	Other Real Estate Property	Vehicles	Valuables	Self-Employment Business Wealth
Euro Area	144.8	180.3	103.4	7.0	3.4	30.0
S.E.	*(2.8)*	*(0.3)*	*(3.6)*	*(0.1)*	*(0.1)*	*(1.8)*
Household Size						
1	65.4	141.5	94.4	4.1	2.7	7.7
2	160.5	189.6	110.4	6.4	4.0	24.5
3	167.9	180.3	101.7	8.0	3.7	30.0
4	206.4	200.0	113.8	9.7	3.7	49.6
5 and More	183.0	204.0	107.6	8.0	4.0	30.1
Housing Status						
Owner-Outright	211.5	175.2	104.0	8.0	4.4	43.1
Owner-with Mortgage	230.0	200.0	119.9	8.9	5.0	32.7
Renter or Other	5.1	M	91.6	5.0	2.0	10.7
Percentile of EA Income						
Less than 20	57.1	102.1	46.4	3.0	1.3	7.2
20-39	80.8	150.0	69.2	4.5	2.4	18.0
40-59	126.0	170.0	90.0	6.0	3.0	25.1
60-79	180.5	199.3	109.3	8.4	4.7	23.3
80-100	288.3	250.0	177.8	12.0	8.0	52.0
Percentile of EA Net Wealth						
Less than 20	2.0	131.3	54.8	2.0	1.0	1.7
20-39	13.8	50.0	17.6	6.0	2.7	2.9
40-59	111.7	112.3	44.2	6.0	2.7	13.3
60-79	217.9	200.0	75.7	8.8	4.0	30.0
80-100	456.5	300.3	200.0	11.9	8.8	100.0
Age of Reference Person						
16-34	15.0	167.5	99.4	6.0	2.5	14.8
35-44	143.1	193.8	106.4	7.4	3.1	30.1
45-54	173.3	200.0	111.2	8.0	3.8	32.9
55-64	189.2	199.0	119.7	8.0	4.5	33.2
65-74	162.3	168.0	101.3	6.0	4.0	15.3
75+	126.0	150.1	86.6	3.5	3.0	9.6
Work Status of Reference Person						
Employee	134.6	187.8	100.0	7.5	3.3	20.0
Self-Employed	276.4	203.0	149.4	10.0	5.1	38.7
Retired	152.5	166.6	99.6	5.2	3.5	15.2
Other Not Working	39.9	150.1	88.8	4.0	1.5	20.0
Education of Reference Person						
Primary or No Education	119.9	150.0	71.8	5.4	2.2	30.0
Secondary	128.7	180.6	105.1	7.0	3.9	30.0
Tertiary	210.4	225.7	150.0	8.0	6.0	26.0

Table 2.2 Median value of real assets conditional on participation

by demographic and country characteristics (EUR, thousands)

		Real Assets				
	(Any) Real Assets	Household Main Residence (HMR)	Other Real Estate Property	Vehicles	Valuables	Self-Employment Business Wealth
Country						
Belgium (2010)	220.0	250.0	174.0	6.2	5.0	50.0
S.E.	*(7.1)*	*(4.4)*	*(14.4)*	*(0.5)*	*(1.2)*	*(15.9)*
Germany (2010)	89.2	168.0	115.0	7.0	7.2	19.4
S.E.	*(5.2)*	*(9.8)*	*(12.9)*	*(0.4)*	*(1.2)*	*(4.5)*
Greece (2009)	114.3	100.0	61.9	6.0	4.0	36.2
S.E.	*(3.9)*	*(0.5)*	*(5.8)*	*(0.3)*	*(1.3)*	*(9.2)*
Spain (2008)	201.7	180.3	120.2	6.1	3.0	50.8
S.E.	*(5.1)*	*(0.3)*	*(4.4)*	*(0.5)*	*(0.1)*	*(9.5)*
France (2010)[1]	124.1	193.8	115.9	M	4.3	53.1
S.E.	*(3.7)*	*(2.6)*	*(3.8)*		*(0.1)*	*(4.9)*
Italy (2010)	176.0	200.0	100.0	8.0	2.0	15.0
S.E.	*(5.0)*	*(0.0)*	*(6.3)*	*(0.4)*	*(0.2)*	*(3.9)*
Cyprus (2010)	313.8	240.3	202.2	10.0	10.0	98.8
S.E.	*(14.0)*	*(12.2)*	*(17.1)*	*(0.3)*	*(2.8)*	*(30.4)*
Luxembourg (2010)	470.5	500.0	300.0	16.1	12.3	97.6
S.E.	*(15.6)*	*(8.4)*	*(28.2)*	*(0.9)*	*(2.7)*	*(28.9)*
Malta (2010)	201.1	186.6	120.1	6.7	4.0	136.5
S.E.	*(8.1)*	*(5.4)*	*(12.0)*	*(0.5)*	*(1.2)*	*(64.4)*
Netherlands (2009)	198.8	240.0	165.5	6.0	3.5	51.7
S.E.	*(6.0)*	*(4.1)*	*(21.9)*	*(0.2)*	*(0.4)*	*(43.5)*
Austria (2010)	107.0	200.0	94.0	8.0	3.9	180.6
S.E.	*(7.5)*	*(3.9)*	*(11.8)*	*(0.3)*	*(0.6)*	*(89.8)*
Portugal (2010)	91.9	90.0	53.5	5.0	2.0	47.1
S.E.	*(3.5)*	*(3.9)*	*(5.4)*	*(0.1)*	*(0.4)*	*(4.6)*
Slovenia (2010)	105.9	110.9	52.4	3.0	N	25.5
S.E.	*(10.4)*	*(12.0)*	*(10.1)*	*(0.6)*		*(46.5)*
Slovakia (2010)	61.8	55.9	16.4	5.0	1.0	4.6
S.E.	*(1.7)*	*(2.0)*	*(3.4)*	*(0.3)*	*(0.1)*	*(1.5)*
Finland (2009)	144.2	129.7	107.6	9.3	M	0.9
S.E.	*(1.8)*	*(1.3)*	*(2.2)*	*(0.2)*		*(0.0)*

Notes: This table reports median values of holdings of real assets by households. M stands for a missing value. N stands for "not calculated" because less than 25 observations are available.
In Finland, self-employment business wealth includes all unlisted shares. The data are based on tax registers and no distinction can be made between self-employment and non-self-employment private businesses. Data on valuables are not collected for Finland.
For a definition of the classification variables, see the notes to Table 2.1. For a description of definitions of the variables, see also the document HFCN (2011).
The rows labelled as "S.E." show standard errors, which were calculated with the Rao-Wu rescaled bootstrap method using replicate weights provided by the countries (1,000 replicates; see chapter 7 of the HFCS Methodological Report for details).
1: In France, data on vehicles and valuables have not been collected separately; both types are included in valuables. Note that this

The association between ownership of the main residence and net wealth is considerably stronger than the one for income. 94.6% of households in the upper quintile of the net wealth

distribution own their main residence, whereas the bottom quintile in the net wealth distribution has an ownership rate of 4.8%. This is not surprising, as the value of the house typically dominates the value of other assets; as a result, households without a house also tend to have low net wealth (see also section 3.3 below).

With regard to the breakdown by age groups, it turns out that older households tend to own the main residence more often: whereas 31.9% of young households (where the reference person is below the age of 35) own the main residence, possibly due to the absence of savings for initial down payments, ownership rates peak at 71.3% for households in the 55-64 age bracket, and subsequently drop slightly to 65.2% for households with a reference person over age 75.

Looking at the work status of the reference person, the home ownership rates of the self-employed (at 71.1%) exceed those of employees (at 56.9%). It is also quite high for the retired (69.5%). The biggest difference in home ownership rates is with the households in the "Other not working" category, i.e. the unemployed and the inactive (where the ownership rate amounts to 37.3%). Finally, education has relatively little effect on ownership rates.

There are clear differences in household main residence ownership rates across countries. The data suggest that home ownership is highest in Slovakia, Spain and Slovenia (over 80%) and lowest in Germany and Austria (44.2% and 47.7%, respectively). Low ownership rates in Germany can be explained by historical (WWII), taxation and institutional reasons. A more detailed discussion of the low ownership rates and of the high prevalence of renter households can be found in Eurosystem (2009). Since the HMR is in most cases the most valuable asset category, low ownership rates translate into substantially lower values for net wealth, as is discussed in Chapter 4 below. When comparing numbers across countries, it has to be kept in mind that, while a 'median' household in Germany and Austria is a "renter" household, in other euro area countries it is a "home-owner" household.

Turning to Table 2.2, which reports the values of assets conditional on ownership, the median value of households' main residences in the euro area is €180,300. As with participation rates there is substantial heterogeneity across household groups, in particular with regard to household income and net wealth.

Chart 2.1 depicts how the value of the main residence, but also the various other types of real assets held by households, increases with the income of the household. While the ranking of the values remains the same across income classes, i.e. household main residence, other real estate property, self-employment business, vehicles and finally valuables – the gradient varies across asset types. For the main residence, for households in the lowest income quintile, the median value is €102,100, for the top quintile it is more than double that value, namely €250,000. The relationship of the value of the main residence with the quintiles of net wealth is more complex. The lowest quintile of net wealth does not have the lowest median value of the main residence. The reason is that, as discussed above, only 4.8% of the households in the lowest quintile own their main residence. The few low-wealth households that are home-owners do generally also have large mortgages, the value of which is either close to or greater than the value of the house. The lowest value of the house is held by the second quintile of net wealth. As could be expected, the top quintile owns the most valuable main residences (€300,300). There is generally not much difference in the value of the household main residence between households that own their main residence outright and those that own it with a mortgage.

The relationship between the value of the household main residence and age of the reference person is hump-shaped. The value first increases with age, until about age 54, after which it declines. The increase early in life can, inter alia, be due to households moving up the property ladder, first owning smaller and cheaper properties when younger, and moving into larger and more expensive properties as the family gets older (and larger). By analogy, the drop after the age of 54 can partially be explained by households moving into smaller homes as children move out of the house. Moving on to the cross-country variations, differences in the value of the main residence are sizeable, with for instance a median value of €500,000 in Luxembourg exceeding the median for the euro area of €180,300 more than 2.5 times. The country with the lowest reported values is Slovakia, with a median of €55,900. Finally, it is interesting to note that 27.7% of euro area households report having received either gifts or inheritances over their lifetime, with the median value being €28,000. Some households might have either inherited their main residence or partially financed their house using gifts or inheritances.

Around a quarter of households own real estate property other than their main residence, such as holiday homes, rental homes, land or other real estate property held for investment purposes (e.g. office space rented out to businesses). Ownership of other real estate rises strongly with income and wealth, and is furthermore dependent on the work status of the household's reference person (the self-employed hold other real estate property around twice as frequently as employees, 43.9% vs. 20.3%). The considerable heterogeneity across countries can to some extent be explained by geography: households in (summer) holiday destinations are more likely to have more holiday home ownership. For instance, while other real estate property ownership is highest among Cyprus, Greek and Spanish households (with more than one-third of households owning other real estate property), it is lowest in the Netherlands, with 6.1%.

The median value of the other real estate property in the euro area, at €103,400, is significantly lower than the median value of the household main residence (€180,300). As with ownership rates, the median values are positively correlated with income and net wealth. The cross-country variation in values of other real estate properties closely mirrors that of household main residence values: it is highest in Luxemburg (€300,000) and lowest in Slovakia (€16,400).

2.1.2 SELF-EMPLOYMENT BUSINESS WEALTH

11.1% of euro area households own a self-employment business. As seen in Chart 2.1, this share rises strongly with income (from 4.1% to 23.1%), but also with net wealth (from 2.3% to 26.9%). It is highest in Cyprus and Italy (19.5% and 18.0% respectively) and lowest in Luxembourg and the Netherlands (5.2% and 4.8% respectively). The median value of self-employment businesses (understood as the market value of all business assets including property and intangibles minus the value of liabilities) in the euro area is €30,000. This median value increases with household size up to four persons, and drops thereafter. The median value as a function of the age of the reference person shows a hump shape, increasing with age until around age 64, then declining sharply, as the young tend to have small self-employment businesses, whereas the elderly gradually reduce their activity, transfer some of their business assets to the next generation and sometimes even sell off their businesses. As shown in Chart 2.1, business wealth is positively associated with income; furthermore, it rises with net wealth, and is strongly skewed towards wealthy households (the median value of business wealth in the

top quintile of the net wealth distribution is €100,000), whereas it is substantially smaller already for the quintile beneath, at €30,000. Across countries, there is large heterogeneity, with the most valuable self-employment businesses reported in Austria (€180,600) and Malta (€136,500), whereas Slovakia and Finland show figures substantially below those for the euro area.[22]

2.1.3 OTHER REAL ASSETS

This section discusses other real asset holdings, which can be divided into holdings of vehicles and of valuables. As mentioned previously, vehicles are among the most prevalent asset types in the euro area, with 75.7% of households reporting ownership. Also the variations across household groups are substantially smaller than for assets that are held less frequently (like other real estate or self-employment businesses). Still, there are noticeable differences across a number of dimensions: vehicle ownership increases with household size: whereas 50.5% of single households own a vehicle, ownership rates, at 93.2%, are highest for four-person households. Income also matters for vehicle ownership rates, which increases with income from 44.1% in the first quintile to 92.8% in the last. A slightly smaller dispersion is found for net wealth, where 48.7% of households in the lowest quintile own a vehicle, as opposed to 90.3% in the top quintile. The breakdown by age shows a hump-shape, with ownership rates increasing from 71.4% for the youngest age bracket up to 85.5% for those in the 35-44 bracket, and subsequently falling to 45.1% of those age 75 or over. With regard to work status, ownership rates are rather similar for households where the reference person is employed or self-employed (85.7% and 89.8%), but substantially smaller for those with retired and other not working reference persons (64.4% and 50.1%). Also, there is some, albeit moderate, dependence on education, with more educated households owning vehicles relatively more frequently. Finally, ownership is also not evenly spread across euro area countries: it ranges from 61.2% in Slovakia to 88.9% in Cyprus.

In contrast to vehicles, ownership of valuables is much less prevalent: only 44.4% of all euro area households report owning valuables.[23] At the same time, a very similar picture emerges as to the distribution of holdings across the various subgroups. As with vehicles, ownership of valuables increases with household size, increases with income and even more with net wealth, and is largest for the self-employed.

[22] The very low median value of €900 for self-employed business assets in Finland might to some extent be explained by the use of administrative data to collect this information, which is a different method from the other countries.

[23] The heterogeneity across countries, with a particularly high percentage of ownership for France and Italy, can to some extent be attributed to a different emphasis on this item by interviewers in the field.

Table 2.3 Share of real assets components in total real assets

by demographic and country characteristics (%)

		Real Assets				
	(Any) Real Assets	Household Main Residence (HMR)	Other Real Estate Property	Vehicles	Valuables	Self-Employment Business Wealth
Euro Area	100.0	60.8	22.7	2.9	2.0	11.5
S.E.		*(1.0)*	*(0.6)*	*(0.1)*	*(0.1)*	*(1.1)*
Household Size						
1	100.0	66.6	22.6	2.3	3.2	5.3
2	100.0	60.0	25.4	2.7	2.1	9.8
3	100.0	60.8	21.7	3.6	1.6	12.4
4	100.0	61.0	20.1	3.5	1.5	13.9
5 and More	100.0	52.2	19.2	2.7	1.5	24.4
Housing Status						
Owner-Outright	100.0	62.1	22.2	2.3	1.8	11.6
Owner-with Mortgage	100.0	70.1	16.4	2.7	1.3	9.5
Renter or Other	100.0	0.0	60.3	11.7	7.7	20.3
Percentile of EA Income						
Less than 20	100.0	76.8	15.9	2.2	1.8	3.4
20-39	100.0	72.8	16.8	2.9	2.2	5.3
40-59	100.0	70.1	18.3	3.4	2.2	6.0
60-79	100.0	67.6	19.8	3.5	2.2	6.8
80-100	100.0	49.0	28.1	2.7	1.9	18.3
Percentile of EA Net Wealth						
Less than 20	100.0	63.5	15.6	11.9	5.9	3.1
20-39	100.0	67.3	10.4	14.3	6.1	1.9
40-59	100.0	81.4	9.5	4.8	2.3	2.0
60-79	100.0	81.6	10.8	3.4	1.9	2.4
80-100	100.0	50.0	29.6	1.8	1.8	16.8
Age of Reference Person						
16-34	100.0	65.9	17.3	5.1	2.6	9.0
35-44	100.0	61.2	16.7	3.5	1.6	17.0
45-54	100.0	59.0	22.7	3.4	1.7	13.2
55-64	100.0	54.9	26.0	2.7	2.0	14.4
65-74	100.0	61.5	28.2	2.3	2.4	5.7
75+	100.0	73.1	20.7	1.3	2.8	2.2
Work Status of Reference Person						
Employee	100.0	68.4	19.1	4.0	1.9	6.6
Self-Employed	100.0	35.1	27.1	2.3	1.4	34.1
Retired	100.0	68.3	24.7	2.1	2.7	2.2
Other Not Working	100.0	72.6	20.2	3.0	2.1	2.2
Education of Reference Person						
Primary or No Education	100.0	69.2	19.4	2.9	2.0	6.6
Secondary	100.0	61.6	19.1	3.4	2.0	13.8
Tertiary	100.0	54.5	28.4	2.5	2.2	12.4

Table 2.3 Share of real assets components in total real assets

by demographic and country characteristics (%)

		Real Assets				
	(Any) Real Assets	Household Main Residence (HMR)	Other Real Estate Property	Vehicles	Valuables	Self-Employment Business Wealth
Country						
Belgium (2010)	100.0	72.7	16.8	3.3	1.1	6.1
S.E.		*(1.5)*	*(1.1)*	*(0.2)*	*(0.2)*	*(1.1)*
Germany (2010)	100.0	52.0	26.1	4.1	1.3	16.5
S.E.		*(3.0)*	*(2.0)*	*(0.3)*	*(0.2)*	*(3.3)*
Greece (2009)	100.0	60.1	29.8	4.6	0.3	5.1
S.E.		*(1.3)*	*(1.2)*	*(0.2)*	*(0.1)*	*(0.7)*
Spain (2008)	100.0	60.1	26.4	2.9	0.5	10.0
S.E.		*(1.3)*	*(1.0)*	*(0.1)*	*(0.1)*	*(1.1)*
France (2010)[1]	100.0	59.0	24.7	M	5.8	10.5
S.E.		*(1.5)*	*(0.9)*		*(0.2)*	*(2.0)*
Italy (2010)	100.0	67.6	18.2	3.4	1.7	9.2
S.E.		*(1.5)*	*(0.8)*	*(0.1)*	*(0.1)*	*(1.4)*
Cyprus (2010)	100.0	35.7	38.7	1.9	0.3	23.3
S.E.		*(2.7)*	*(2.7)*	*(0.2)*	*(0.1)*	*(4.4)*
Luxembourg (2010)	100.0	58.4	34.0	3.0	1.3	3.3
S.E.		*(3.8)*	*(3.9)*	*(0.3)*	*(0.2)*	*(0.9)*
Malta (2010)	100.0	51.0	19.3	2.8	0.9	25.9
S.E.		*(7.1)*	*(2.5)*	*(0.4)*	*(0.2)*	*(9.5)*
Netherlands (2009)	100.0	83.4	8.8	4.0	0.8	3.0
S.E.		*(1.8)*	*(1.9)*	*(0.2)*	*(0.1)*	*(0.7)*
Austria (2010)	100.0	53.5	13.0	4.2	1.3	27.5
S.E.		*(9.0)*	*(3.7)*	*(1.0)*	*(0.3)*	*(12.4)*
Portugal (2010)	100.0	54.6	26.3	4.5	1.0	13.6
S.E.		*(2.2)*	*(1.6)*	*(0.2)*	*(0.1)*	*(3.0)*
Slovenia (2010)	100.0	71.3	14.8	3.9	N	9.8
S.E.		*(3.4)*	*(2.6)*	*(0.4)*		*(4.4)*
Slovakia (2010)	100.0	81.1	7.3	6.0	0.6	4.9
S.E.		*(1.2)*	*(0.8)*	*(0.3)*	*(0.1)*	*(0.9)*
Finland (2009)	100.0	64.3	26.4	5.5	M	3.9
S.E.		*(0.5)*	*(0.4)*	*(0.1)*		*(0.4)*

Notes: This table reports shares of holdings of real assets by households. M stands for a missing value. N stands for "not calculated" because less than 25 observations are available. NC stands for non-comparable.
In Finland, self-employment business wealth includes all unlisted shares. The data are based on tax registers and no distinction can be made between self-employment and non-self-employment private businesses. Data on valuables are not collected for Finland.
For a definition of the classification variables, see the notes to Table 2.1. For a description of definitions of the variables, see also the document HFCN (2011).
The rows labelled as "S.E." show standard errors, which were calculated with the Rao-Wu rescaled bootstrap method using replicate weights provided by the countries (1,000 replicates; see chapter 7 of the HFCS Methodological Report for details).
1: In France, data on vehicles and valuables have not been collected separately; both types are included in valuables. Note that this

Turning to values, the median value of vehicles owned by euro area households is €7,000, while that of valuables amounts to €3,400. It is important to note that variation in the values of

vehicles across household groups can come about due to a difference in the number of vehicles as well as due to a difference in the value of each individual vehicle. Generally, however, variations in values are relatively small and follow the same relationships as variations in ownership rates – for instance, the median value of vehicles increases from €3,000 for low-income households to €12,000 for the highest income group, and similarly ranges from €2,000 to €11,900 along the wealth distribution. The median value of valuables increases from €1,300 (€1,000) to €8,000 (€8,800) from the lowest to the highest income (wealth) group. Even across countries, only relatively small variations in absolute magnitudes are recorded, with the exception of Luxembourg, where the median value of vehicles is €16,100 and the median value of valuables €12,300, both substantially above the euro area figures.

2.1.4 THE COMPOSITION OF REAL ASSETS

Table 2.3 considers the composition of real assets, i.e., the fraction of the value of total real assets that is accounted for by the various asset types. The composition of assets is driven by the participation rates and by the values of the assets that households hold. This has to be kept in mind when interpreting the numbers. For instance, a high share of certain real asset types for a group of households is entirely consistent with a low participation rate if the value of the asset conditional on ownership is high. Shares of value of total assets accounted for by various asset types should therefore not directly be interpreted as being representative of a 'typical' household.

Considering all households jointly, the household main residence has the largest share of all types of real assets: the value of the main residence of those who are owners of their home accounts for 60.8% of total real assets for all households (note that all households are composed of home owners and renters). However, this share varies substantially across various groups of households. It is remarkably high for one-person households, home-owners with a mortgage and households with reference persons aged 75 and above. The share of value of the HMR is also considerably lower for the households in the highest income and net wealth quintiles, as these households are more likely to hold other real assets (e.g. second homes or homes for investment purposes).

Other real estate assets have the second largest share in the real asset portfolio of all households (22.7%). The share of other real assets is considerably higher for renter households (60.3%), although only 10.7% of renter households own other real estate. The third largest share in the real assets portfolio consists of self-employment businesses, namely 11.5%; conditional on being a self-employed household, the share increases to 34.1%.

Vehicles and valuables do generally constitute a low share of the real asset portfolio, with a few notable exceptions. For renter households, vehicles represent 11.7% of real asset wealth. Also, for households in the lowest two quintiles of net wealth, vehicles represent a non-negligible part of real assets.

2.2 FINANCIAL ASSETS

Financial assets, with the possible exception of sight accounts that often are held for transaction purposes, are generally the result of pure portfolio allocation decisions. Different financial assets have different risk profiles and transaction costs, and certain financial assets are traditionally more widely known by a broader public. To analyse financial asset holdings it is useful to distinguish between traditional bank products such as deposits (sight and saving accounts), and financial investment products such as bonds, shares and mutual funds. A separate class of financial products are insurance-type products such as voluntary private pension plans and whole life insurance.[24]

Table 2.4 shows the participation rates for various financial assets and their breakdowns by demographic characteristics and by country, distinguishing between deposits, mutual funds, bonds, publicly traded shares, money owed to the household, voluntary private pension assets and whole life insurance policies, and finally other financial assets.[25]

Table 2.5 displays the median values of the various asset types, conditional on holding the asset. The most prevalent financial asset types in the euro area are deposits and voluntary private pensions/whole life insurance. All other financial products are owned by only a small fraction of households.

[24] See Annex I for a complete definition of financial assets.

[25] "Other financial assets" is a residual category combining the sum of all other types of financial assets. It contains the following financial assets: non-self-employment private business assets (such as non-listed share ownership as an investor or silent partner), managed accounts, other financial assets such as options, futures, index certificates, precious metals, oil and gas leases, future proceeds from a lawsuit or estate that is being settled, royalties or any other. Occupational pension funds are not included in other financial assets.

Table 2.4 Participation in financial assets by demographic and country characteristics

(in percent)

	Financial Assets							
	Financial Assets	Deposits	Mutual Funds	Bonds	Shares (Publicly Traded)	Money Owed to Household	Voluntary Private Pensions/ Whole Life Insurance	Other Financial Assets
Euro Area	96.8	96.4	11.4	5.3	10.1	7.6	33.0	6.0
S.E.	*(0.1)*	*(0.1)*	*(0.3)*	*(0.2)*	*(0.3)*	*(0.3)*	*(0.4)*	*(0.3)*
Household Size								
1	96.2	95.8	10.2	4.2	7.8	9.4	25.0	5.6
2	97.5	97.1	12.5	6.8	11.8	7.7	33.4	7.3
3	97.0	96.6	11.5	5.0	9.6	6.3	36.5	4.9
4	97.2	96.6	12.5	5.1	11.9	5.6	43.9	5.9
5 and More	95.3	94.9	7.7	3.8	9.7	6.5	39.1	4.9
Housing Status								
Owner-Outright	96.6	96.3	11.9	8.9	12.4	5.1	28.9	6.3
Owner-with Mortgage	98.7	98.1	16.2	3.7	13.6	7.8	47.8	7.4
Renter or Other	96.2	95.7	8.5	2.4	6.0	10.1	30.1	5.2
Percentile of EA Income								
Less than 20	90.5	89.9	3.4	1.5	2.2	6.7	13.2	2.7
20-39	96.8	96.5	4.6	3.0	4.2	6.5	20.4	2.6
40-59	98.5	98.2	8.9	4.6	7.2	8.3	31.1	5.4
60-79	99.0	98.6	13.2	6.2	12.3	7.4	41.9	7.3
80-100	99.4	99.0	26.5	11.1	24.4	9.2	58.3	12.2
Percentile of EA Net Wealth								
Less than 20	93.2	92.5	2.0	0.2	1.2	7.8	15.9	1.7
20-39	96.7	96.3	8.1	1.7	5.0	10.2	32.7	4.6
40-59	96.4	96.1	10.4	3.9	8.0	5.9	31.5	4.7
60-79	98.4	98.1	12.4	6.6	11.0	5.7	35.8	5.4
80-100	99.5	99.1	23.8	14.0	25.2	8.6	49.1	13.8
Age of Reference Person								
16-34	97.4	97.1	9.7	1.7	6.7	10.3	33.7	4.8
35-44	97.5	97.0	12.9	3.4	10.1	9.0	41.1	6.3
45-54	97.0	96.7	13.0	5.0	11.2	8.0	43.7	5.4
55-64	97.2	96.4	13.1	7.6	13.3	7.5	37.7	7.4
65-74	96.4	96.1	10.9	8.1	10.4	5.8	19.4	7.3
75+	95.0	94.7	6.9	6.6	7.6	4.2	12.8	4.9
Work Status of Reference Person								
Employee	97.9	97.6	13.3	4.2	11.4	7.9	42.3	5.7
Self-Employed	96.9	96.6	12.7	7.9	12.5	12.6	44.7	10.4
Retired	95.9	95.6	9.4	7.5	9.3	5.5	19.0	6.4
Other Not Working	94.9	94.1	6.8	1.5	3.8	8.6	21.9	3.0
Education of Reference Person								
Primary or No Education	93.6	93.1	4.0	4.0	4.2	4.5	19.0	2.4
Secondary	98.2	97.9	10.8	5.2	9.2	8.9	36.4	6.1
Tertiary	99.0	98.7	22.6	7.2	19.6	9.9	46.8	11.1

Table 2.4 Participation in financial assets by demographic and country characteristics

(in percent)

		Financial Assets						
	Financial Assets	Deposits	Mutual Funds	Bonds	Shares (Publicly Traded)	Money Owed to Household	Voluntary Private Pensions/ Whole Life Insurance	Other Financial Assets
Country								
Belgium (2010)	98.0	97.7	17.6	7.5	14.7	7.7	43.3	3.5
S.E.	*(0.3)*	*(0.4)*	*(1.0)*	*(0.7)*	*(0.9)*	*(0.8)*	*(1.3)*	*(0.4)*
Germany (2010)	99.3	99.0	16.9	5.2	10.6	13.7	46.5	11.3
S.E.	*(0.2)*	*(0.3)*	*(0.9)*	*(0.4)*	*(0.8)*	*(0.9)*	*(1.3)*	*(0.8)*
Greece (2009)	74.5	73.4	1.2	0.5	2.7	3.9	3.8	0.2
S.E.	*(1.6)*	*(1.7)*	*(0.3)*	*(0.2)*	*(0.5)*	*(0.5)*	*(0.7)*	*(0.1)*
Spain (2008)	98.3	98.1	5.6	1.4	10.4	6.3	23.6	1.9
S.E.	*(0.3)*	*(0.3)*	*(0.5)*	*(0.2)*	*(0.7)*	*(0.5)*	*(0.9)*	*(0.3)*
France (2010)	99.6	99.6	10.7	1.7	14.7	5.0	37.5	7.8
S.E.	*(0.1)*	*(0.1)*	*(0.4)*	*(0.1)*	*(0.4)*	*(0.3)*	*(0.6)*	*(0.4)*
Italy (2010)	92.0	91.8	6.3	14.6	4.6	1.3	18.0	3.7
S.E.	*(0.4)*	*(0.4)*	*(0.4)*	*(0.5)*	*(0.3)*	*(0.2)*	*(0.6)*	*(0.3)*
Cyprus (2010)	87.9	81.2	1.0	3.2	34.6	9.2	45.7	1.1
S.E.	*(1.3)*	*(1.5)*	*(0.4)*	*(0.6)*	*(1.6)*	*(1.1)*	*(1.7)*	*(0.4)*
Luxembourg (2010)	98.4	98.0	19.0	4.4	10.0	7.1	34.3	2.2
S.E.	*(0.5)*	*(0.5)*	*(1.3)*	*(0.7)*	*(1.0)*	*(0.9)*	*(1.6)*	*(0.4)*
Malta (2010)	97.2	96.9	8.0	21.6	13.4	4.6	24.2	1.5
S.E.	*(0.6)*	*(0.6)*	*(1.1)*	*(1.4)*	*(1.2)*	*(0.8)*	*(1.5)*	*(0.5)*
Netherlands (2009)	97.8	94.2	17.7	6.0	10.4	8.5	49.8	2.7
S.E.	*(0.5)*	*(0.9)*	*(1.4)*	*(0.7)*	*(1.1)*	*(1.0)*	*(1.9)*	*(0.6)*
Austria (2010)	99.5	99.4	10.0	3.5	5.3	10.3	17.7	1.6
S.E.	*(0.1)*	*(0.2)*	*(0.8)*	*(0.4)*	*(0.6)*	*(0.8)*	*(1.0)*	*(0.3)*
Portugal (2010)	94.5	94.3	2.8	0.4	4.4	8.2	14.1	0.4
S.E.	*(0.5)*	*(0.5)*	*(0.3)*	*(0.1)*	*(0.4)*	*(0.5)*	*(0.7)*	*(0.1)*
Slovenia (2010)	93.9	93.6	12.0	0.7	10.0	5.8	18.3	1.0
S.E.	*(1.3)*	*(1.3)*	*(1.8)*	*(0.3)*	*(1.4)*	*(1.1)*	*(2.1)*	*(0.5)*
Slovakia (2010)	91.7	91.2	2.7	1.0	0.8	9.7	15.0	0.9
S.E.	*(0.7)*	*(0.8)*	*(0.4)*	*(0.2)*	*(0.2)*	*(0.7)*	*(1.0)*	*(0.2)*
Finland (2009)	100.0	100.0	27.4	0.8	22.2	M	23.7	M
S.E.	*(0.0)*	*(0.0)*	*(0.5)*	*(0.1)*	*(0.4)*		*(0.4)*	

Notes: This table reports shares of asset types on value of real assets by households. For a definition of the classification variables, see the notes to Table 2.1. For a description of definitions of the variables, see also the document HFCN (2011). M stands for a missing value. Data on money owed to households are not collected in Finland.
The rows labelled as "S.E." show standard errors, which were calculated with the Rao-Wu rescaled bootstrap method using replicate weights provided by the countries (1,000 replicates; see chapter 7 of the HFCS Methodological Report for details).

2.2.1 DEPOSITS

96.4% of households in the euro area hold deposits (sight accounts and saving accounts). Ownership rates are uniformly high across all euro area countries (above 90%), with the exception of Cyprus (81.2%) and Greece (73.4%). The relationship between ownership rates and income is depicted in Chart 2.2, which shows that ownership rates for deposits increase with income; this also holds for all other types of financial assets, just as with real assets.

As illustrated in Chart 2.2, the difference between the participation rate in the lowest and highest income decile varies substantially across financial asset types. While for deposits and bonds the difference is around 10 percentage points, the highest difference can be found for voluntary private pensions and whole life insurance (around 45 percentage points). Similarly, participation rates increase with net wealth across all financial asset types.

Turning to Table 2.5, which reports the values of financial assets conditional on ownership, the median value of deposits is €6,100.

Chart 2.2 depicts how the value of deposits, but also of various other types of financial assets held by households, increases with the income of the household. Chart 2.2 also reveals that, for all asset types, the median value is notably higher for the highest income decile.[26]

As shown in Table 2.5, the values held in deposits differ substantially with households' net wealth: household in the lowest quintile hold less than €2,000 in deposits, whereas those at the top of the distribution hold €19,100 in deposits. The amounts held in these accounts are furthermore affected substantially by several other household characteristics. Home owners have substantially higher median values on deposits than renters.

[26] The relationship between asset values and income is not completely monotonic for all asset types. For example, the relatively high median values for mutual funds at low income deciles seem to be driven by small-sample issues because for these groups participation rates lie below 5 percent (see panel A).

Table 2.5 Median value of financial assets conditional on participation

by demographic and country characteristics (EUR thousands)

		Financial Assets						
	Financial Assets	Deposits	Mutual Funds	Bonds	Shares(Publicly Traded)	Money Owed to Household	Voluntary Private Pensions /Whole Life Insurance	Other Financial Assets
Euro Area	11.4	6.1	10.0	18.3	7.0	3.0	11.9	4.1
S.E.	*(0.4)*	*(0.2)*	*(0.2)*	*(1.4)*	*(0.6)*	*(0.2)*	*(0.4)*	*(0.6)*
Household Size								
1	7.3	4.9	11.3	18.4	7.5	2.5	9.6	2.8
2	15.9	8.3	10.0	19.2	8.6	3.4	14.9	4.9
3	11.6	6.0	8.2	20.0	6.8	4.0	10.8	3.3
4	13.4	6.9	9.3	15.0	5.1	4.0	11.9	6.0
5 and More	10.0	5.0	7.1	20.0	5.2	4.8	10.2	3.9
Housing Status								
Owner-Outright	17.7	10.0	15.0	20.0	10.0	5.3	16.1	6.0
Owner-with Mortgage	16.8	7.6	6.6	10.0	4.8	5.4	15.0	4.0
Renter or Other	5.4	3.1	7.4	14.6	5.1	2.0	6.6	2.4
Percentile of EA Income								
Less than 20	2.5	1.7	10.5	18.2	5.4	1.8	4.4	1.4
20-39	5.0	3.4	5.3	15.1	4.2	2.3	5.1	2.0
40-59	10.5	5.8	8.1	15.0	4.1	2.6	8.6	1.7
60-79	18.1	9.4	7.9	15.7	5.0	3.0	11.8	4.8
80-100	49.9	19.1	12.5	20.0	10.0	5.5	23.0	6.5
Percentile of EA Net Wealth								
Less than 20	1.2	0.8	1.6	N	1.4	1.0	1.6	0.9
20-39	10.4	6.0	4.8	8.6	3.1	2.2	6.4	1.4
40-59	11.3	6.3	7.3	10.0	4.3	3.0	11.8	3.1
60-79	19.4	10.0	9.1	15.0	4.7	4.7	14.2	3.2
80-100	60.1	22.0	20.3	26.2	13.9	10.0	29.1	10.0
Age of Reference Person								
16-34	5.0	3.1	3.5	4.4	2.9	1.0	4.0	1.3
35-44	10.3	5.0	6.2	11.5	5.0	3.0	9.8	4.8
45-54	14.0	6.3	11.0	16.1	6.0	3.8	15.0	6.0
55-64	18.6	8.2	14.8	20.0	10.0	3.9	20.0	5.1
65-74	13.9	8.1	20.0	20.4	12.7	6.5	15.1	3.1
75+	12.0	8.3	24.0	25.0	10.0	3.8	23.4	5.6
Work Status of Reference Person								
Employee	11.5	6.0	7.1	11.0	5.0	2.2	10.0	3.5
Self-Employed	22.6	9.5	15.5	20.0	12.2	4.3	17.8	9.7
Retired	14.0	8.5	19.8	21.1	11.9	5.0	18.1	4.3
Other Not Working	2.0	1.1	6.5	16.6	5.2	1.2	6.1	1.4
Education of Reference Person								
Primary or No Education	5.3	3.8	12.1	16.8	6.1	3.0	9.2	4.8
Secondary	10.9	6.0	7.8	15.3	5.4	2.5	10.1	3.0
Tertiary	29.4	12.5	11.5	20.1	8.8	4.4	17.5	5.0

Table 2.5 Median value of financial assets conditional on participation

by demographic and country characteristics (EUR thousands)

		Financial Assets						
	Financial Assets	Deposits	Mutual Funds	Bonds	Shares(Publicly Traded)	Money Owed to Household	Voluntary Private Pensions /Whole Life Insurance	Other Financial Assets
Country								
Belgium (2010)	26.5	10.0	20.4	30.8	5.1	2.3	19.9	21.0
S.E.	*(1.6)*	*(0.5)*	*(2.5)*	*(8.9)*	*(1.7)*	*(0.8)*	*(1.5)*	*(13.5)*
Germany (2010)	17.1	7.9	10.0	16.0	8.6	2.7	11.4	2.1
S.E.	*(1.1)*	*(0.4)*	*(0.5)*	*(3.2)*	*(1.8)*	*(0.4)*	*(1.1)*	*(0.5)*
Greece (2009)	4.4	3.6	8.8	N	5.7	2.5	10.5	N
S.E.	*(0.6)*	*(0.6)*	*(5.3)*		*(3.1)*	*(0.7)*	*(3.1)*	
Spain (2008)	6.0	3.5	13.9	19.2	6.1	6.0	7.4	12.0
S.E.	*(0.3)*	*(0.3)*	*(2.3)*	*(9.7)*	*(1.1)*	*(0.8)*	*(0.6)*	*(3.4)*
France (2010)	10.7	6.5	6.9	12.0	6.9	3.0	10.6	5.0
S.E.	*(0.4)*	*(0.2)*	*(0.6)*	*(1.7)*	*(0.5)*	*(0.3)*	*(0.6)*	*(0.7)*
Italy (2010)	10.0	5.9	20.0	20.0	10.9	4.0	10.1	10.4
S.E.	*(0.2)*	*(0.3)*	*(2.4)*	*(0.6)*	*(1.5)*	*(0.8)*	*(0.3)*	*(1.5)*
Cyprus (2010)	22.1	5.8	N	22.5	1.9	7.6	15.5	N
S.E.	*(2.0)*	*(0.9)*		*(16.5)*	*(0.4)*	*(1.7)*	*(1.3)*	
Luxembourg (2010)	27.9	14.3	26.9	45.8	10.8	3.6	27.8	16.5
S.E.	*(3.3)*	*(1.4)*	*(6.4)*	*(13.1)*	*(3.9)*	*(1.4)*	*(3.3)*	*(11.8)*
Malta (2010)	26.2	13.2	16.9	20.4	10.3	5.0	20.3	N
S.E.	*(2.3)*	*(0.8)*	*(7.1)*	*(3.1)*	*(2.9)*	*(5.1)*	*(3.9)*	
Netherlands (2009)	34.7	10.1	7.1	15.5	5.6	2.0	53.2	5.5
S.E.	*(5.0)*	*(0.9)*	*(1.3)*	*(4.7)*	*(1.2)*	*(0.6)*	*(5.5)*	*(5.0)*
Austria (2010)	13.5	10.6	11.2	13.8	7.1	2.6	8.1	7.7
S.E.	*(0.9)*	*(0.8)*	*(2.2)*	*(7.0)*	*(3.6)*	*(0.6)*	*(1.2)*	*(5.5)*
Portugal (2010)	4.3	3.4	15.0	N	5.0	4.0	5.9	N
S.E.	*(0.4)*	*(0.3)*	*(3.7)*		*(0.7)*	*(0.6)*	*(0.7)*	
Slovenia (2010)	1.7	0.8	4.8	N	1.2	7.0	3.4	N
S.E.	*(0.5)*	*(0.2)*	*(0.7)*		*(0.6)*	*(3.2)*	*(1.1)*	
Slovakia (2010)	2.5	2.0	2.5	N	N	1.1	3.2	N
S.E.	*(0.2)*	*(0.1)*	*(1.0)*			*(0.2)*	*(0.4)*	
Finland (2009)	7.4	4.5	2.6	10.0	3.8	M	4.3	M
S.E.	*(0.2)*	*(0.0)*	*(0.2)*	*(2.7)*	*(0.2)*		*(0.2)*	

Notes: This table reports the median values of holdings of financial assets by households. For a definition of the classification variables, see the notes to Table 2.1. For a description of definitions of the variables, see also the document HFCN (2011). M stands for a missing value. N stands for "not calculated" because less than 25 observations are available.
Data on sight and saving accounts are not separately collected in Finland. Data on non-self-employment private business wealth, managed accounts and money owed to households are not collected in Finland. Data on other assets are not collected for Finland, and no such case is collected for Slovakia. Data for managed accounts for Greece are included in other assets.
The rows labelled as "S.E." show standard errors, which were calculated with the Rao-Wu rescaled bootstrap method using replicate weights provided by the countries (1,000 replicates; see chapter 7 of the HFCS Methodological Report for details).

The deposits amounts are also very much affected by the age of the reference person in the household. The youngest age bracket has the lowest value (€3,100). All the age brackets starting from 55-64 and above have a considerably higher value. Also. work status and education affect the values held in sight and saving accounts. The highest values are found among the self-employed, retired and those with tertiary education. Low values for deposits are found among the group of "other not working" households.

Finally, looking at the variation across countries, Slovenia shows relatively small amounts held on deposits (€800), whereas Luxembourg households have the largest deposits (namely €14,300).

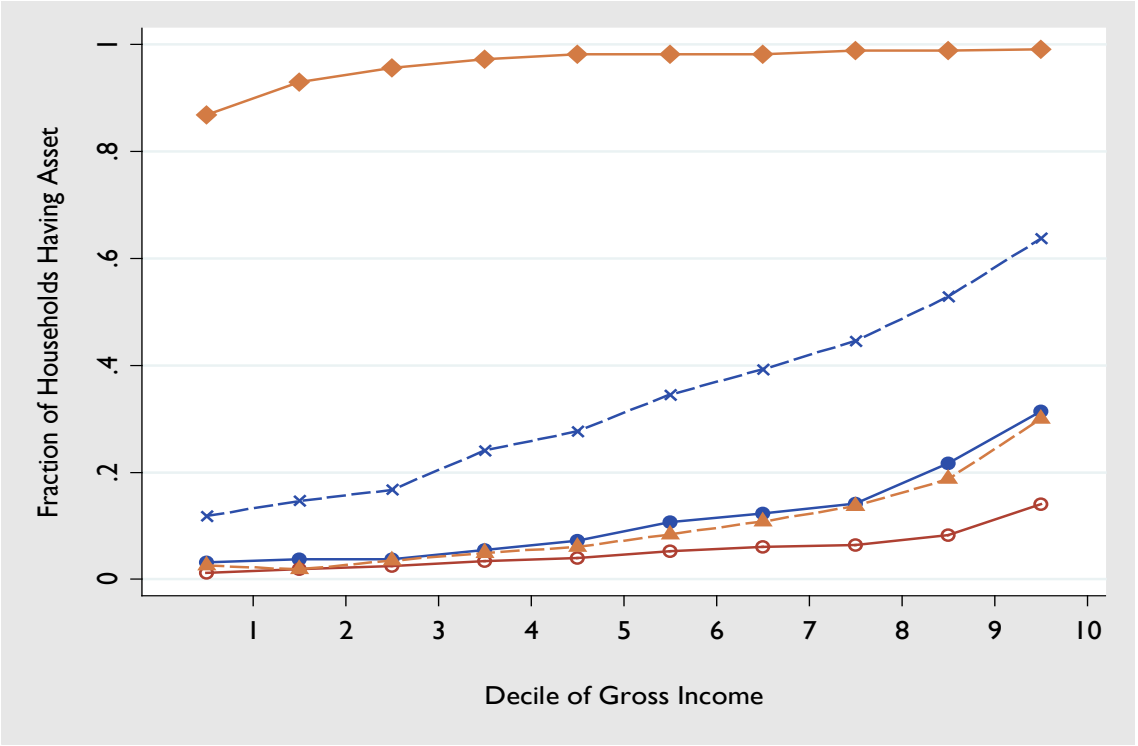
2.2.2 SHARES, MUTUAL FUNDS AND BONDS

Table 2.4 shows that only a small fraction of households – between 5% and 12% – own bonds, publicly traded shares or mutual funds. Participation in the stock market is therefore clearly below what is suggested by economic theory, namely that *all* households with positive net wealth should hold at least *some* publicly traded shares, for diversification reasons and because of the higher expected return on stocks compared to other investments. This finding is therefore consistent with what has been dubbed the "stock market participation puzzle" in the economic literature.[27]

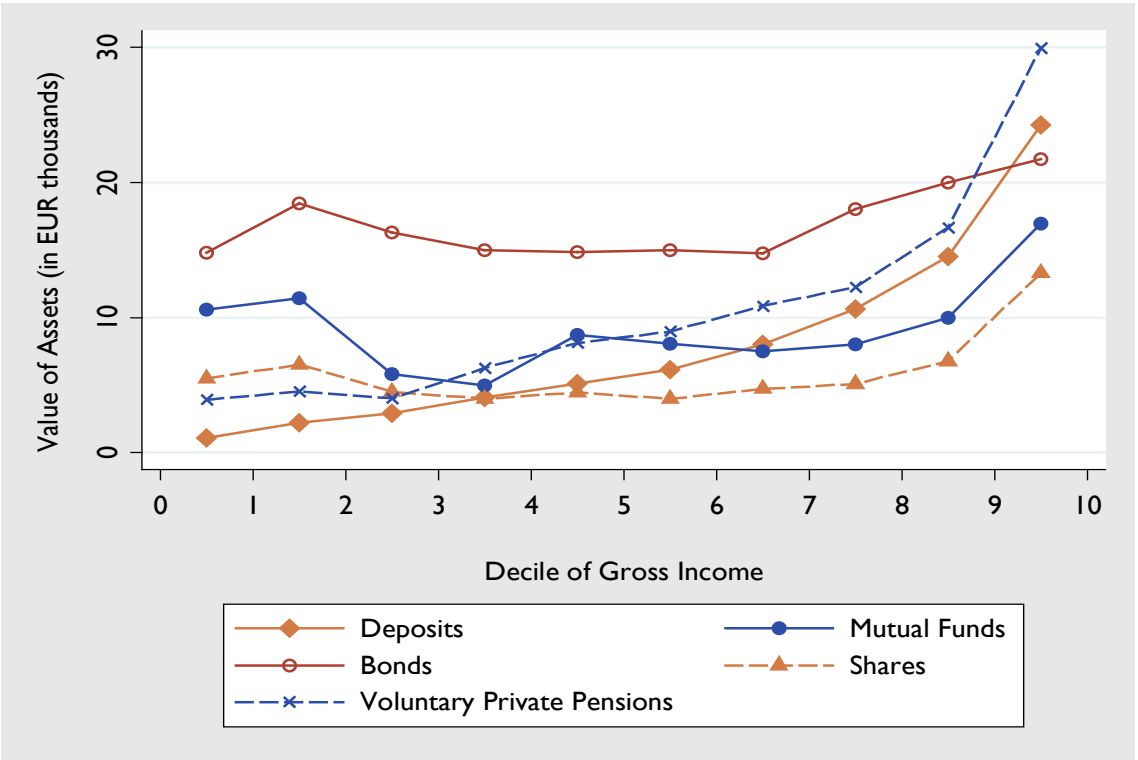
[27] For a seminal paper, see Mankiw and Zeldes (1991).

Chart 2.2 Participation and median value of financial assets

Panel A: Participation in Selected Financial Assets by Income



Panel B: Median Value of Financial Assets by Income, Conditional on Participation



Notes: The horizontal axis shows percentiles 10, 20, … , 100 of gross income. See notes to Table 5.1 for the composition of gross income. The percentiles were calculated for the whole sample using household weights.

Stock market participation is also very much related to income and net wealth. Among households in the lowest quintile of the income distribution, only 2.2% own publicly traded shares, in contrast to 24.4% in the top quintile. This difference is very similar to the one observed along the wealth distribution, where around 1 out of 4 households in the top quintile own publicly traded shares, in contrast with around 1 out of 83 households in the bottom quintile. With regard to age, holdings of publicly traded shares also show a hump shape, initially increasing with age and then declining, a pattern that is in line with a life-cycle behaviour of accumulating savings over working-life, while spending savings after retirement. Note also that as different cohorts might have different education levels, age and education might jointly explain the hump-shaped holding of shares. Indeed, ownership rates differ substantially by education (only 4.2% of households with a reference person with primary or no completed education participate in stock markets, as opposed to 19.6% of households where the reference person has received tertiary education). Differences across countries are particularly pronounced, ranging from 34.6% in Cyprus to 0.8% in Slovakia.

The ownership rates of mutual funds follow a broadly similar pattern to that of traded shares, with participation being very much related to income and net wealth, age of the reference person, education and work status. Also, the cross-country variations are similarly large, ranging from 27.4% in Finland to 1.2% in Greece.

Of the three assets discussed in this section, bonds are held least frequently, namely by only 5.3% of euro area households. The diversity across household groups is closely related to that of stocks and mutual funds, with the most important determinants being income, net wealth and age. Also, the cross-country differences resemble those seen for stocks and mutual funds, with ownership rates below 1% for Greece, Portugal, Slovenia and Finland at the low end, and 21.6% for Malta at the high end.

Turning to Table 2.5, the median value of mutual funds and bonds is higher than that of publicly traded shares, and amounts to €10,000, €18,300 and €7,000 respectively. The values reported for the three types of assets vary substantially with income: in the highest quintile of the income distribution, these values are considerably larger (€10,000 for publicly traded shares, €12,500 for mutual funds and €20,000 for bonds). However, as shown in Chart 2.2, the median value of shares, mutual funds and bonds is not a monotonic function of the percentile of income. The variation across the wealth distribution is even more pronounced, as the values held by the wealthiest households are considerably higher (€13,900 for publicly traded shares, €20,300 for mutual funds and €26,200 for bonds).

Household size does not seem to be much related to the values reported for the three asset types, whereas housing status, work status, and age of the reference person affect the values considerably. Outright owners hold around twice the value in mutual funds compared with renters and owners with a mortgage, and a similarly higher value of publicly traded shares and bonds. Households with a self-employed reference person hold more than twice as much in publicly traded shares as those with an employee, a higher value in bonds and in mutual funds. The highest values of publicly traded shares are held by the age bracket 65-74, the highest value of mutual funds and bonds by those 75+.

Across countries, there is large heterogeneity, with the most valuable portfolio of publicly traded shares reported in Italy, Luxembourg and Malta (all above €10,000), whereas Finland,

Cyprus and Slovenia shows figures substantially below those for the euro area. Also with respect to mutual funds and bonds, the heterogeneity is considerable.

2.2.3 VOLUNTARY PRIVATE PENSIONS/WHOLE LIFE INSURANCE

This section shows how households save for retirement using voluntary private pension[28] plans and/or whole life insurance contracts. Public pensions[29] and occupational pension plans[30] are not considered in this report, as the value of some public pensions and occupational pension plans can be difficult for households to evaluate. Cross-country comparisons are challenging in the sense that institutional arrangements across countries with respect to the different modes of retirement savings, such as voluntary private versus public or occupational, can be quite substantial. A deeper analysis of these differences falls outside the scope of this report. Table 2.4 reports that 33.0% of euro area households own voluntary private pension plans or whole life insurance policies. The participation rate increases strongly with income and net wealth: 58.3% of the highest income quintile and 49.1% of the highest net wealth quintile own voluntary private pension plans or whole life insurance policies. This contrasts with only 13.2% and 15.90% of households in the lowest quintiles of the income and net wealth distributions, respectively. Other household characteristics also strongly affect the participation rates. Housing status, for instance, matters: with a participation of 47.8%, owners with a mortgage hold voluntary private pensions or whole life insurance policies more often than owners without a mortgage (28.9%) or renters (30.1%). With respect to age, the common hump shape is also observed here: participation increases with age, peaks for the age bracket 45-54, and subsequently declines, down to 12.8% for households with a reference person aged 75+. Education also seems to be an important determinant as households with a reference person with primary or no completed education are less than half as likely to hold voluntary private pensions or whole life insurance as those with tertiary education.[31]

There is quite some heterogeneity across countries, which might be related to institutional differences in the organisation of retirement savings schemes and, e.g., how savings in those products are treated by the tax law. Participation rates are higher in Germany, the Netherlands, Cyprus and Belgium (all over 40%), and much lower in Greece (3.8 %).

Table 2.6 reports that the median value of voluntary private pensions and whole life insurance policies is around €11,900. The median value is highest for households with a reference person aged 75+ (€23,400) and lowest for the age bracket 16-34 (€4,000). The age of the household reference person therefore strongly affects the value. This can be explained by the fact that pension plans usually accumulate value over time, as the individuals contribute money to the plan.

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[28] Although while certain occupational pension plans can be voluntary in some countries, in this report voluntary private pensions plans refer to pensions plans with a voluntary character that are not public pension plans or occupational pensions plans.

[29] Public pensions are pensions that are part of the social security scheme, where the general government usually administers the payment of the pension.

[30] Occupational pensions are part of an employer-employee relationship and can be established by employers or groups of employers (e.g. industry associations), sometimes in conjunction with labour associations (e.g. a trade union). Generally, the plan sponsor is responsible for making contributions to occupational pension plans, but employees may be also required to contribute.

[31] A large economics literature has shown that retirement planning is linked to financial literacy. See e.g. van Rooij, Lusardi and Alessie (2012).

The heterogeneity across countries is very large, with the Netherlands having a high median value of €53,200 and Slovakia having the lowest value at €3,200.

2.2.4 THE COMPOSITION OF FINANCIAL ASSETS AND TOTAL ASSETS

Table 2.6 shows the composition of financial assets, i.e., the fraction of the value of total assets that is accounted for by the various asset types. The composition of financial assets is driven by the participation rates and by the values of the assets that households hold.

Deposits (sight accounts and saving accounts) form the largest share of household financial portfolios. Together they amount to a share of 42.9% of total financial assets. This share is higher for households with lower income, lower net wealth and households with a young reference person.

The second most important financial asset is voluntary private pensions and whole life insurance, with a share of 26.3%. As one would expect, this share is considerably lower for households with a retired reference person. This reflects that voluntary private pension wealth is accumulated over a lifetime and gradually consumed upon retirement.

Table 2.6 Share of financial assets components in total financial assets

by demographic and country characteristics (%)

		Financial Assets						
	Financial Assets	Deposits	Mutual Funds	Bonds	Shares(Publicly Traded)	Money Owed to Household	Voluntary Pensions/Whole Life Insurance	Other Financial Assets
Euro Area	100.0	42.9	8.7	6.6	7.9	2.2	26.3	5.3
S.E.		*(0.8)*	*(0.5)*	*(0.7)*	*(0.4)*	*(0.2)*	*(0.6)*	*(0.8)*
Household Size								
1	100.0	44.6	10.2	7.8	6.4	2.1	25.4	3.6
2	100.0	41.2	9.4	6.5	9.1	2.2	25.0	6.5
3	100.0	44.9	7.7	6.4	8.2	2.3	26.8	3.6
4	100.0	44.6	6.4	5.4	6.6	2.4	29.2	5.3
5 and More	100.0	39.1	5.4	4.6	8.7	2.4	31.5	8.3
Housing Status								
Owner-Outright	100.0	43.5	8.7	8.6	9.1	1.7	22.4	6.0
Owner-with Mortgage	100.0	40.3	7.8	2.7	6.4	2.9	35.9	4.0
Renter or Other	100.0	43.8	9.7	4.6	6.3	3.1	27.8	4.7
Percentile of EA Income								
Less than 20	100.0	57.2	8.5	6.2	3.7	3.9	18.5	2.0
20-39	100.0	58.9	5.6	6.0	3.7	3.2	19.4	3.2
40-59	100.0	53.7	7.8	6.4	4.3	2.8	22.7	2.3
60-79	100.0	48.5	6.8	5.6	5.9	2.1	27.3	3.9
80-100	100.0	34.5	10.1	7.1	10.6	1.9	28.6	7.2
Percentile of EA Net Wealth								
Less than 20	100.0	65.7	1.8	N	1.2	4.4	26.1	0.6
20-39	100.0	62.3	5.4	1.4	1.7	3.9	23.9	1.3
40-59	100.0	55.4	5.5	2.5	2.9	1.9	30.1	1.7
60-79	100.0	53.5	6.7	4.0	4.1	1.8	28.2	1.7
80-100	100.0	35.4	10.4	8.6	10.6	2.2	25.4	7.4
Age of Reference Person								
16-34	100.0	56.6	5.1	1.1	4.6	1.7	26.3	4.3
35-44	100.0	43.3	6.8	3.5	7.0	2.9	30.0	6.4
45-54	100.0	40.4	8.8	3.9	6.7	2.8	32.7	4.7
55-64	100.0	39.0	9.9	7.1	7.7	2.0	27.9	6.3
65-74	100.0	44.0	10.7	10.0	10.4	2.2	18.3	4.4
75+	100.0	46.0	7.6	10.6	9.4	1.3	20.2	4.8
Work Status of Reference Person								
Employee	100.0	44.4	8.2	3.8	7.1	1.7	30.3	4.4
Self-Employed	100.0	34.0	8.3	6.6	8.8	3.8	27.4	11.2
Retired	100.0	45.2	9.4	9.8	9.0	2.0	20.5	4.2
Other Not Working	100.0	46.4	11.0	4.3	4.9	3.5	27.6	2.4
Education of Reference Person								
Primary or No Education	100.0	51.3	5.1	7.1	4.7	2.5	26.1	3.1
Secondary	100.0	45.6	7.1	6.3	6.6	2.0	27.9	4.5
Tertiary	100.0	37.7	11.4	6.5	10.1	2.3	25.2	6.7

Table 2.6 Share of financial assets components in total financial assets

by demographic and country characteristics (%)

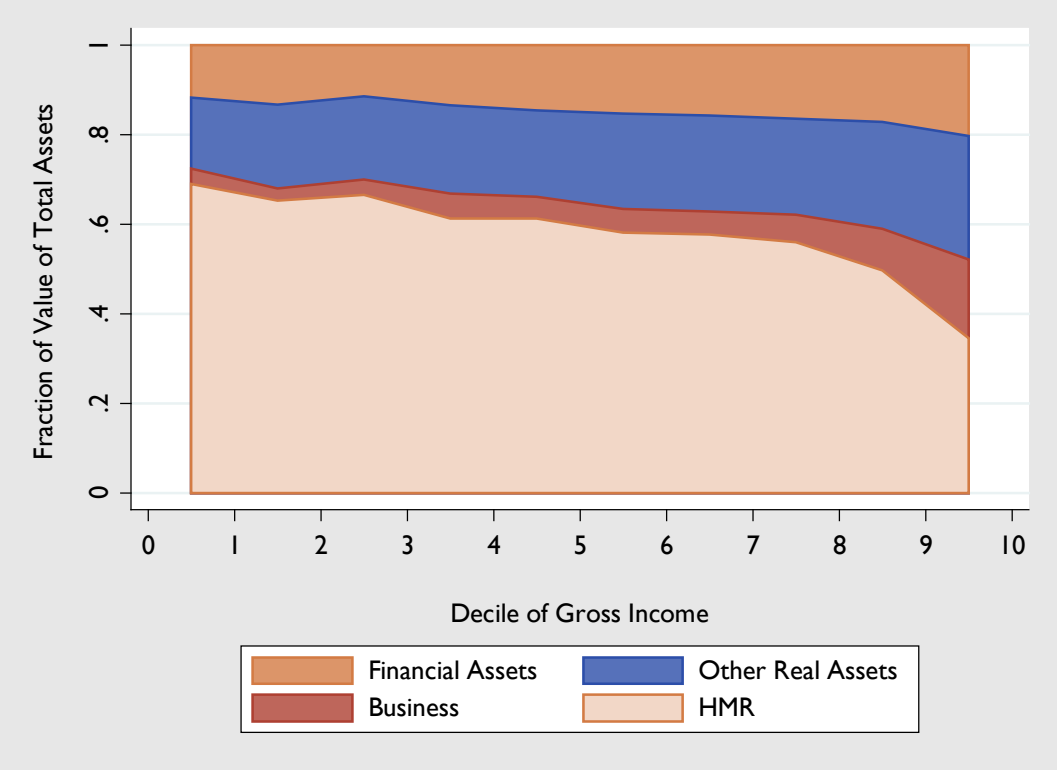
		Financial Assets						
	Financial Assets	Deposits	Mutual Funds	Bonds	Shares(Publicly Traded)	Money Owed to Household	Voluntary Pensions/Whole Life Insurance	Other Financial Assets
Country								
Belgium (2010)	100.0	39.1	13.0	14.8	10.4	1.5	16.7	4.5
S.E.		*(3.7)*	*(1.5)*	*(3.7)*	*(2.1)*	*(0.5)*	*(1.6)*	*(1.1)*
Germany (2010)	100.0	44.4	10.4	5.6	6.5	2.7	26.8	3.6
S.E.		*(1.8)*	*(1.3)*	*(1.0)*	*(0.9)*	*(0.3)*	*(1.3)*	*(0.6)*
Greece (2009)	100.0	80.7	2.5	N	3.5	2.5	7.7	N
S.E.		*(2.7)*	*(0.9)*		*(1.1)*	*(0.7)*	*(1.8)*	
Spain (2008)	100.0	51.4	7.7	1.9	9.1	6.4	15.1	8.4
S.E.		*(3.3)*	*(1.2)*	*(0.5)*	*(1.0)*	*(1.3)*	*(1.5)*	*(4.1)*
France (2010)	100.0	33.8	5.8	1.4	11.6	1.0	39.0	7.4
S.E.		*(1.1)*	*(0.5)*	*(0.2)*	*(0.9)*	*(0.1)*	*(1.3)*	*(2.0)*
Italy (2010)	100.0	46.9	9.6	20.4	4.5	0.5	8.8	9.3
S.E.		*(2.1)*	*(1.7)*	*(1.9)*	*(0.7)*	*(0.1)*	*(0.6)*	*(2.5)*
Cyprus (2010)	100.0	42.9	N	3.5	9.4	3.4	31.4	N
S.E.		*(3.9)*		*(1.6)*	*(2.7)*	*(0.8)*	*(3.9)*	
Luxembourg (2010)	100.0	43.7	20.5	6.1	7.2	2.2	19.1	1.2
S.E.		*(3.2)*	*(3.2)*	*(2.4)*	*(1.8)*	*(0.9)*	*(2.5)*	*(0.4)*
Malta (2010)	100.0	51.2	3.9	15.0	7.6	1.8	16.8	N
S.E.		*(2.3)*	*(0.7)*	*(1.5)*	*(1.2)*	*(0.6)*	*(1.8)*	
Netherlands (2009)	100.0	33.9	6.4	4.3	3.5	1.7	49.3	0.9
S.E.		*(2.0)*	*(0.7)*	*(1.3)*	*(0.8)*	*(0.4)*	*(1.9)*	*(0.3)*
Austria (2010)	100.0	63.5	11.8	6.9	3.1	3.5	8.9	2.2
S.E.		*(10.0)*	*(5.9)*	*(11.3)*	*(1.3)*	*(1.0)*	*(1.8)*	*(1.1)*
Portugal (2010)	100.0	70.6	4.2	N	6.7	6.0	10.4	N
S.E.		*(2.1)*	*(0.7)*		*(1.8)*	*(0.8)*	*(0.9)*	
Slovenia (2010)	100.0	61.9	8.3	N	3.5	8.6	16.1	N
S.E.		*(3.9)*	*(1.5)*		*(0.9)*	*(2.4)*	*(2.8)*	
Slovakia (2010)	100.0	75.1	2.8	N	N	4.4	11.2	N
S.E.		*(3.5)*	*(0.8)*			*(1.0)*	*(1.0)*	
Finland (2009)	100.0	51.9	11.5	1.0	26.1	M	9.5	M
S.E.		*(2.0)*	*(0.8)*	*(0.2)*	*(2.2)*		*(0.4)*	

Notes: This table reports shares of asset types on value of financial assets by households. For a definition of the classification variables, see the notes to Table 2.1. For a description of definitions of the variables, see also the document HFCN (2011). M stands for a missing value. N stands for "not calculated" because less than 25 observations are available.
Data on money owed to households are not collected in Finland.
The rows labelled as "S.E." show standard errors, which were calculated with the Rao-Wu rescaled bootstrap method using replicate weights provided by the countries (1,000 replicates; see chapter 7 of the HFCS Methodological Report for details).

Mutual funds, bonds and publicly traded shares each have a share of less than 10% in the total portfolio of all households. However, here there are significant differences depending on which

subpopulation of households one considers. These types of assets are generally held mostly by the upper wealth quintile. In the quintiles below, they typically form only a small share of the portfolio. For instance, for the households in the lowest wealth quintile, mutual funds make up 1.8% of their portfolio, in contrast to the upper quintile, where they take up around 10.4%.

Chart 2.3 Composition of assets by income



Notes: See Annex 1 for further details on the composition of financial assets.
The horizontal axis shows percentiles 10, 20, … , 100 of gross income. See the notes to Table 5.1 for the composition of gross income. The percentiles were calculated for the whole sample using household weights.

Other financial assets together make up 5.3% of the financial assets portfolio of all households. When the findings on financial assets are combined with those on real assets, a diverse picture emerges. Households hold both real and financial assets. The household main residence is clearly the most prevalent real asset, and deposits are the most common financial assets. For households with higher income or higher net wealth, portfolios become more diverse and include more risky assets, with an increased likelihood of owning self-employment business wealth, publicly traded shares, mutual funds and bonds.

Chart 2.3 shows the relative importance of several types of real assets, as well as the sum of financial assets for the value of households' total assets and how this varies with household income. The share of real assets makes up roughly 85% of total gross assets, diminishing only slowly with income, as higher-income households invest more in more risky financial assets.

Among real assets, the share of the main residence is gradually crowded out by other real assets (especially other real estate) and by self-employment business, declining below 40% for the top income decile.

From the findings above, it is clear that a "typical household" in terms of the composition of the asset portfolio does not exist. It emerges that a number of characteristics of the households can be identified to be strongly correlated with the composition of the household portfolio. Of these characteristics, those that influence composition the most are whether the household owns or rents the residence it lives in, whether the household is 'young' or 'old', whether the household has self-employed members or not, and finally whether the household has high or low net wealth or high or low income. Work status, education level and household size also matter, albeit to a lesser extent. The factors that have an influence on the composition of the household portfolio are therefore numerous. As these factors are also interdependent, the reader should be warned of simple univariate interpretations of the statistics presented above.

3 DEBT

This chapter discusses the liability side of households' balance sheets in terms of the prevalence of debt (i.e. how many and which types of households have debts), the corresponding outstanding balances, and the composition of debt holdings among various debt types. All outstanding values are calculated conditional on the household having a particular type of debt. Since household debt comes in very different forms that might have rather distinct implications, the chapter separates mortgage debt (collateralised by the household main residence and to other properties) from other debt like credit lines or overdraft debt, credit card debt, and other non-mortgage debt, i.e. debt without a real estate collateral (which includes car loans, consumer loans, instalment loans, private loans from relatives, friends, employers, etc., and other loans). Note that the definition of debt includes household debt held for business purposes.

To assess the extent to which a given level of indebtedness might generate sustainability concerns, it is important to put the outstanding balances and the related debt service payments into perspective, e.g. by comparing them to the income or the asset holdings of a household. Such indicators of debt burden will therefore be discussed in the final part of this chapter.

3.1 TOTAL DEBT

The first columns of Tables 3.1 and 3.2 report the prevalence and the value of total debt, respectively. Especially when thinking about implications of indebtedness for financial stability, it is important to understand which households hold debt, and which households tend not to. As a matter of fact, more than half of all euro area households are not indebted at all – as can be seen in Table 3.1, only 43.7% of euro area households participate in the credit market. Furthermore, similar to most other variables considered in this report, there is also a lot of heterogeneity across household groups. There are several groups of households that are less likely to have debts, namely i) smaller households, ii) those in the bottom of the income distribution, iii) the retired and iv) those where the reference person is above age 65 (where the last two groups largely overlap).

Table 3.1 Participation in debt components by demographic and country characteristics

(in percent)

	Total Debt							
		Mortgage Debt			Non-Mortgage Debt			
	Total Debt	Mortgage Debt	HMR Mortgage	Other Property Mortgage	Non-Mortgage Debt	Credit Line/ Overdraft Debt	Credit Card Debt	Non-Mortgage Loans
Euro Area	43.7	23.1	19.4	5.6	29.3	10.2	4.3	22.4
S.E.	*(0.4)*	*(0.3)*	*(0.3)*	*(0.2)*	*(0.5)*	*(0.4)*	*(0.2)*	*(0.4)*
Household Size								
1	29.2	10.7	8.5	3.1	21.3	9.2	2.7	15.1
2	39.7	20.7	16.7	5.6	26.0	9.3	3.7	19.4
3	55.6	31.2	26.8	6.6	37.0	11.8	6.0	29.7
4	63.6	40.9	35.3	8.7	39.4	10.9	6.1	32.1
5 and More	64.0	38.7	33.4	9.2	44.4	15.1	6.4	34.5
Housing Status								
Owner-Outright	24.6	6.4	0.0	6.5	20.1	4.3	3.0	16.3
Owner-with Mortgage	100.0	100.0	100.0	9.3	39.4	14.3	8.7	29.3
Renter or Other	35.9	3.0	0.0	3.0	33.9	14.3	3.5	25.2
Percentile of EA Income								
Less than 20	22.9	6.6	5.8	1.0	18.4	6.5	1.8	13.5
20-39	35.0	12.5	10.6	2.3	26.7	9.4	2.9	19.9
40-59	43.7	20.4	17.8	4.3	31.0	9.8	4.3	25.2
60-79	55.8	32.9	27.5	7.6	36.8	12.4	6.1	28.7
80-100	61.3	43.4	35.1	13.0	33.9	13.1	6.4	24.6
Percentile of EA Net Wealth								
Less than 20	44.1	5.6	4.5	1.5	41.9	17.8	3.2	33.5
20-39	38.0	15.0	13.6	2.0	29.9	12.8	4.2	21.5
40-59	46.1	32.4	29.4	4.7	27.2	8.3	5.6	20.3
60-79	45.1	31.0	27.2	5.9	24.4	6.4	4.3	19.0
80-100	45.3	31.7	22.2	13.9	23.3	6.0	4.2	17.6
Age of Reference Person								
16-34	55.3	22.3	20.1	3.6	41.8	13.5	5.1	34.5
35-44	61.8	37.2	33.6	6.7	40.1	13.1	6.6	31.3
45-54	55.8	32.4	26.5	8.7	36.8	13.2	5.4	27.7
55-64	43.1	22.5	16.8	7.5	27.3	10.0	4.2	20.1
65-74	23.7	11.7	8.7	4.2	15.3	6.2	1.9	9.9
75+	7.7	2.7	1.9	1.0	5.5	2.4	1.0	3.1
Work Status of Reference Person								
Employee	57.9	32.6	28.3	6.7	38.3	13.2	5.7	29.9
Self-Employed	56.8	35.2	27.1	12.8	35.1	11.7	7.0	26.2
Retired	19.5	8.9	6.3	3.2	12.9	4.9	1.7	8.8
Other Not Working	39.5	11.5	10.1	1.9	31.8	10.6	2.7	25.4
Education of Reference Person								
Primary or No Education	30.3	13.7	11.3	3.0	21.9	5.6	2.8	17.8
Secondary	48.7	23.2	19.8	5.3	34.4	14.8	4.3	25.0
Tertiary	54.1	36.3	30.0	9.8	31.2	9.0	6.4	24.3

Table 3.1 Participation in debt components by demographic and country characteristics

(in percent)

	Total Debt	Mortgage Debt			Non-Mortgage Debt			
	Total Debt	Mortgage Debt	HMR Mortgage	Other Property Mortgage	Non-Mortgage Debt	Credit Line/ Overdraft Debt	Credit Card Debt	Non-Mortgage Loans
Country								
Belgium (2010)	44.8	30.5	28.5	3.2	24.2	6.2	6.3	17.9
S.E.	*(1.2)*	*(1.1)*	*(1.1)*	*(0.5)*	*(1.2)*	*(0.6)*	*(0.7)*	*(1.1)*
Germany (2010)	47.4	21.5	18.0	6.0	34.6	19.8	3.4	21.7
S.E.	*(1.3)*	*(0.7)*	*(0.6)*	*(0.6)*	*(1.3)*	*(1.2)*	*(0.5)*	*(1.0)*
Greece (2009)	36.6	17.5	13.9	3.9	26.1	5.7	13.7	12.6
S.E.	*(1.6)*	*(1.1)*	*(1.0)*	*(0.4)*	*(1.6)*	*(0.7)*	*(1.3)*	*(1.0)*
Spain (2008)	50.0	32.5	26.8	7.3	30.7	0.6	7.3	27.2
S.E.	*(1.2)*	*(1.1)*	*(1.1)*	*(0.6)*	*(1.1)*	*(0.1)*	*(0.6)*	*(1.0)*
France (2010)	46.9	24.4	16.9	10.1	32.8	7.0	M	28.7
S.E.	*(0.6)*	*(0.5)*	*(0.5)*	*(0.4)*	*(0.6)*	*(0.4)*		*(0.6)*
Italy (2010)	25.2	10.8	9.6	1.6	17.8	3.6	1.4	15.3
S.E.	*(0.8)*	*(0.5)*	*(0.5)*	*(0.2)*	*(0.6)*	*(0.4)*	*(0.3)*	*(0.6)*
Cyprus (2010)	65.4	44.8	35.0	15.4	47.9	24.3	18.8	29.3
S.E.	*(1.6)*	*(1.7)*	*(1.6)*	*(1.3)*	*(1.7)*	*(1.6)*	*(1.4)*	*(1.6)*
Luxembourg (2010)	58.3	38.8	32.8	8.4	36.9	7.4	6.3	30.8
S.E.	*(1.6)*	*(1.6)*	*(1.5)*	*(0.9)*	*(1.8)*	*(0.9)*	*(0.9)*	*(1.7)*
Malta (2010)	34.1	15.6	12.1	4.5	25.2	6.0	13.1	13.7
S.E.	*(1.7)*	*(1.3)*	*(1.1)*	*(0.8)*	*(1.6)*	*(0.9)*	*(1.3)*	*(1.3)*
Netherlands (2009)	65.7	44.7	43.9	2.5	37.3	20.8	4.6	24.6
S.E.	*(1.6)*	*(0.9)*	*(0.9)*	*(0.5)*	*(1.9)*	*(1.6)*	*(0.8)*	*(1.7)*
Austria (2010)	35.6	18.4	16.6	2.4	21.4	13.6	1.5	11.1
S.E.	*(1.4)*	*(1.0)*	*(1.0)*	*(0.4)*	*(1.2)*	*(0.9)*	*(0.3)*	*(0.9)*
Portugal (2010)	37.7	26.7	24.5	3.3	18.3	3.0	5.8	13.3
S.E.	*(1.1)*	*(1.1)*	*(1.0)*	*(0.3)*	*(0.9)*	*(0.3)*	*(0.4)*	*(0.8)*
Slovenia (2010)	44.5	14.1	12.5	1.6	38.9	24.0	3.0	27.1
S.E.	*(2.8)*	*(2.3)*	*(2.2)*	*(0.8)*	*(2.9)*	*(2.6)*	*(0.9)*	*(2.7)*
Slovakia (2010)	26.8	9.6	9.3	0.6	19.9	8.0	5.1	12.6
S.E.	*(1.1)*	*(0.6)*	*(0.6)*	*(0.2)*	*(1.1)*	*(0.7)*	*(0.8)*	*(0.8)*
Finland (2009)	59.8	M	32.8	M	M	M	M	51.2
S.E.	*(0.5)*		*(0.4)*					*(0.5)*

Notes: This table reports percentage of households holding various types of debt. Non-mortgage debt includes credit lines or accounts with an overdraft facility, credit card debt and other non-mortgage debt. Other non-mortgage debt includes car loans, consumer loans, instalment loans, private loans from relatives, friends, employers, etc., and other loans.
For a definition of the classification variables, see the notes to Table 2.1. For a description of the definitions of the variables, see also the document HFCN (2011). M stands for a missing value. N stands for "not calculated" because less than 25 observations are available.
In Finland, liabilities are classified by the purpose of the loan, as it is recorded in the tax register. Loans are classified either as HMR mortgages or other loans. Loans taken to purchase other properties cannot be separated and they are included in Non-mortgage loans.
The rows labelled as "S.E." show standard errors, which were calculated with the Rao-Wu rescaled bootstrap method using replicate weights provided by the countries (1,000 replicates; see chapter 7 of the HFCS Methodological Report for details).

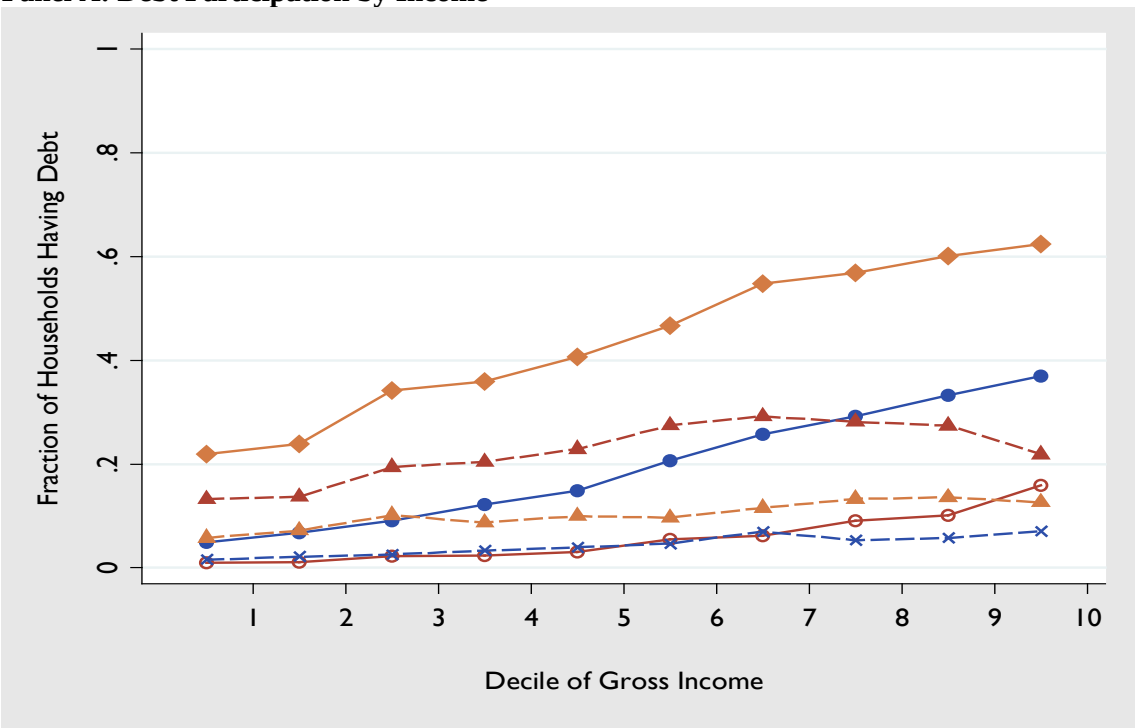
Taking a closer look, it turns out that, for several characteristics, the relationship is monotonic (or close to monotonic). This is the case for household size, for instance: the larger the household, the more likely it is to participate in the credit markets. Whereas 29.2% of single households report having debt, this number increases to 64.0% for households with five or more members. A similar relationship is found for income – whereas 22.9% of those in the lowest quintile hold debt, 61.3% of households in the top quintile have taken on some debt (see Panel A of Chart 3.1); the relationship is particularly strong for mortgage debt. This is in contrast to the variation of indebtedness across the net wealth distribution, where the variation is very small.

The age distribution is particularly pronounced. As can be seen in Chart 3.2, indebtedness initially rises with the age of the reference person. It peaks in the age bracket 35-44, and falls subsequently, with a particularly steep decline from age 65, a pattern mirrored in the low number of indebted households with a retired reference person, reflecting the large overlap across the two groups. The age profile of debt is consistent with the notion of consumption smoothing under a hump-shaped income profile (see also Chapter 5, Chart. 5.1). The prevalence of debt, furthermore, rises with education, which may be related to the fact that more highly educated households have better access to credit markets and face steeper income growth early in life.

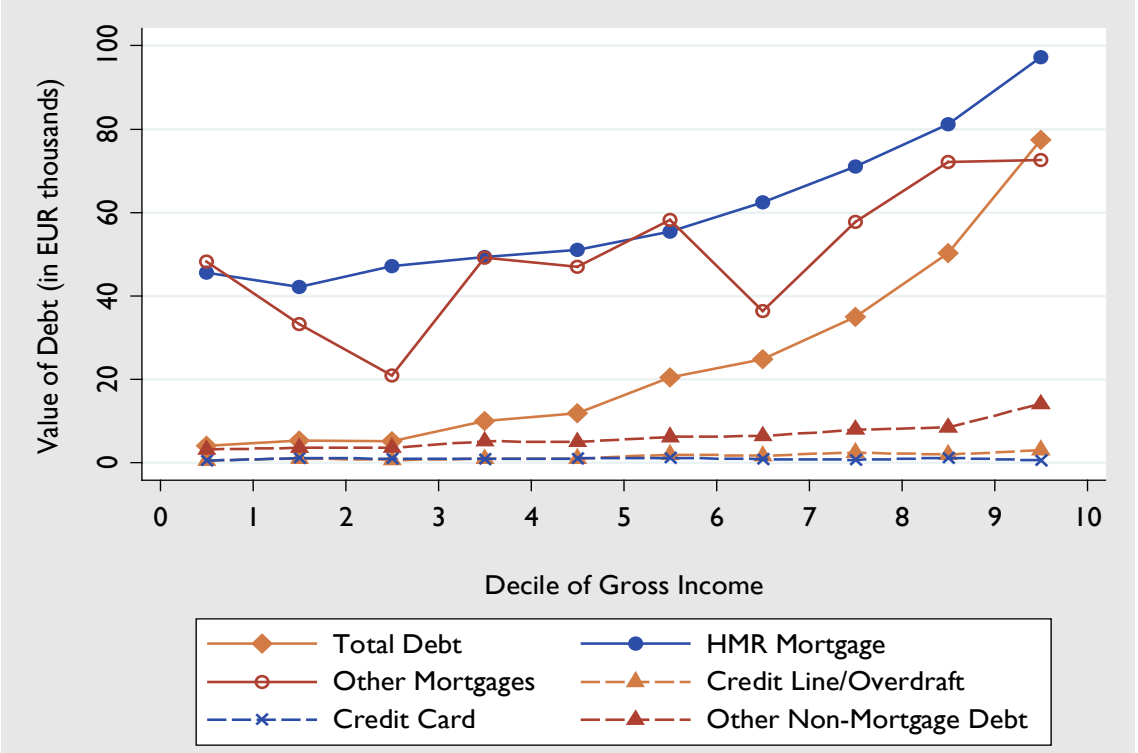
Debt prevalence (i.e. the percentage of indebted households) also varies across countries, ranging from around 25% reported in Italy and Slovakia to around or even above 60% in Cyprus, Luxembourg, the Netherlands and Finland.

Chart 3.1 Participation and median value of debt

Panel A: Debt Participation by Income



Panel B: Median Value of Debt by Income, Conditional on Participation



Notes: The horizontal axis shows percentiles 10, 20, … , 100 of gross income. See notes to Table 5.1 for the composition of gross income. The percentiles were calculated for the whole sample using household weights.

Table 3.2 Median values of debt components conditional on participation

by demographic and country characteristics (EUR thousands)

	Total Debt	Mortgage Debt			Non-Mortgage Debt			
	Total Debt	Mortgage Debt	HMR Mortgage	Other Property Mortgage	Non-Mortgage Debt	Credit Line/ Overdraft Debt	Credit Card Debt	Non-Mortgage Loans
Euro Area	21.5	68.4	65.2	56.8	5.0	1.5	0.9	6.1
S.E.	*(1.0)*	*(1.9)*	*(2.2)*	*(3.6)*	*(0.1)*	*(0.1)*	*(0.1)*	*(0.3)*
Household Size								
1	8.9	65.8	61.5	49.7	3.3	1.0	1.0	4.8
2	18.0	60.0	60.0	49.5	4.7	1.5	0.8	6.6
3	28.1	70.0	65.3	69.2	5.4	2.0	0.9	6.8
4	40.2	70.0	66.3	63.9	6.0	2.5	0.8	7.3
5 and More	40.0	81.4	81.2	50.8	5.0	2.0	0.8	6.2
Housing Status								
Owner-Outright	10.0	41.9	N.A.	41.9	6.4	2.0	0.9	9.0
Owner-with Mortgage	75.3	70.0	65.2	62.0	5.4	2.0	1.0	7.0
Renter or Other	4.3	72.4	N.A.	72.4	3.8	1.1	0.7	5.0
Percentile of EA Income								
Less than 20	5.0	42.6	43.2	40.1	2.9	0.8	0.8	3.4
20-39	7.7	46.5	48.7	30.6	3.0	0.9	1.0	4.3
40-59	14.9	54.9	53.4	55.3	4.6	1.5	1.1	5.6
60-79	29.6	66.8	66.9	48.3	6.0	2.2	0.8	7.0
80-100	63.1	92.8	89.2	72.5	7.0	2.6	0.8	10.0
Percentile of EA Net Wealth								
Less than 20	5.0	149.2	151.9	132.5	4.2	1.0	0.9	5.0
20-39	9.2	78.2	81.0	46.4	3.7	1.5	1.0	5.0
40-59	47.5	69.0	68.2	54.1	5.0	2.0	0.7	6.7
60-79	33.9	50.2	50.3	39.6	5.9	2.4	0.9	7.5
80-100	45.7	65.9	54.8	59.8	7.0	3.1	0.9	10.5
Age of Reference Person								
16-34	14.7	99.4	97.1	76.5	5.0	1.0	1.0	6.1
35-44	39.6	75.7	74.7	62.2	4.5	1.7	0.8	5.6
45-54	28.0	60.0	54.5	58.3	5.9	2.0	1.0	7.8
55-64	15.4	45.8	47.5	40.0	5.0	2.0	0.7	6.2
65-74	11.2	37.3	35.6	52.4	3.1	1.4	0.9	5.6
75+	4.3	40.0	38.4	40.0	1.7	0.8	0.9	3.6
Work Status of Reference Person								
Employee	27.7	71.0	70.1	57.2	5.0	1.8	0.8	6.2
Self-Employed	48.2	80.8	67.6	70.0	8.0	3.0	1.2	10.1
Retired	9.0	34.3	35.0	33.3	3.3	1.4	0.8	4.8
Other Not Working	6.9	56.4	55.0	52.0	3.5	0.7	0.8	4.8
Education of Reference Person								
Primary or No Education	12.4	48.0	48.8	37.0	4.8	1.5	1.0	5.4
Secondary	15.0	65.2	64.3	49.6	4.2	1.5	0.9	5.6
Tertiary	54.6	86.9	80.2	70.3	6.4	2.0	0.7	8.7

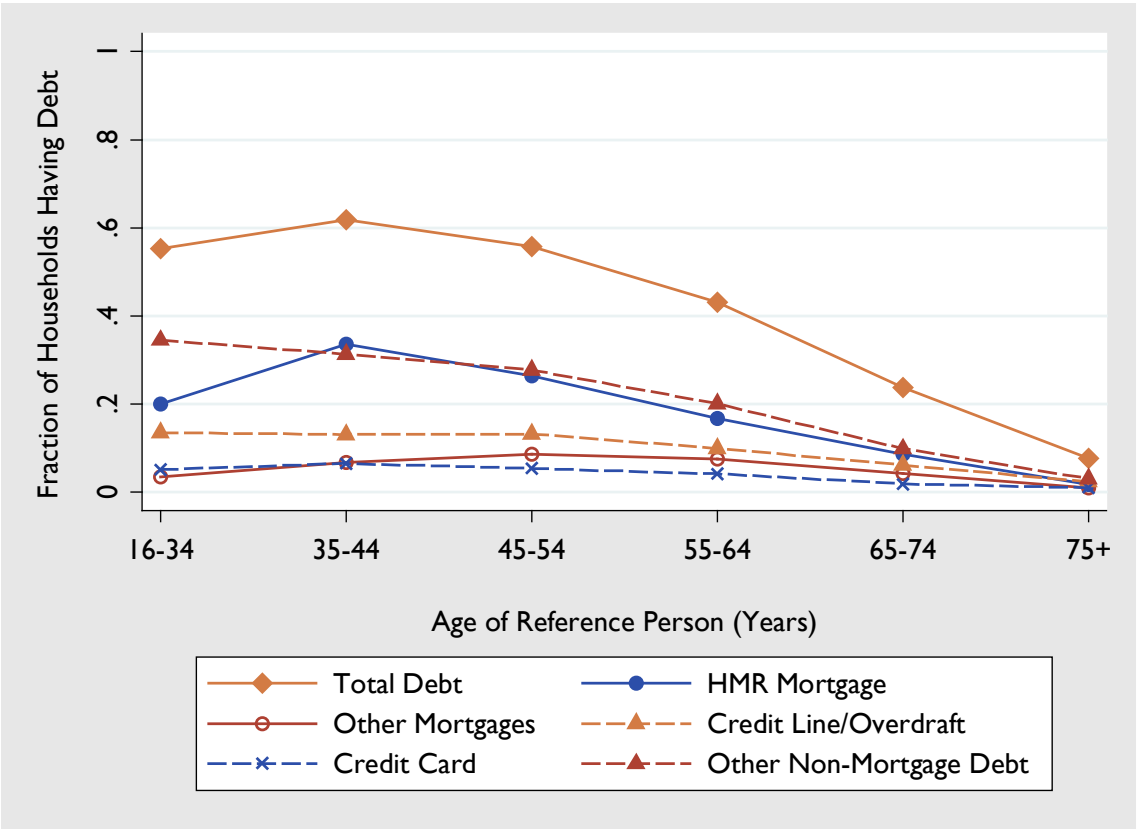
Table 3.2 Median values of debt components conditional on participation

by demographic and country characteristics (EUR thousands)

	Total Debt	Mortgage Debt			Non-Mortgage Debt			
	Total Debt	Mortgage Debt	HMR Mortgage	Other Property Mortgage	Non-Mortgage Debt	Credit Line/ Overdraft Debt	Credit Card Debt	Non-Mortgage Loans
Country								
Belgium (2010)	39.3	69.3	66.8	57.4	5.2	1.2	0.7	7.3
S.E.	*(4.1)*	*(5.3)*	*(5.1)*	*(13.0)*	*(0.6)*	*(0.2)*	*(0.2)*	*(0.8)*
Germany (2010)	12.6	80.0	67.0	81.6	3.2	1.5	0.5	4.5
S.E.	*(1.2)*	*(5.2)*	*(6.0)*	*(9.6)*	*(0.3)*	*(0.2)*	*(0.1)*	*(0.4)*
Greece (2009)	14.6	41.0	39.9	42.1	4.3	8.0	2.0	6.0
S.E.	*(1.6)*	*(4.2)*	*(4.5)*	*(7.4)*	*(0.5)*	*(1.3)*	*(0.2)*	*(0.6)*
Spain (2008)	36.0	60.0	54.3	80.0	7.2	12.0	0.8	8.0
S.E.	*(2.6)*	*(2.3)*	*(3.3)*	*(9.7)*	*(0.6)*	*(10.8)*	*(0.1)*	*(0.4)*
France (2010)	18.4	55.9	60.9	22.4	5.2	0.9	M	6.0
S.E.	*(1.1)*	*(2.4)*	*(2.9)*	*(2.1)*	*(0.3)*	*(0.1)*		*(0.3)*
Italy (2010)	15.0	60.0	65.0	25.0	5.7	2.3	1.3	6.5
S.E.	*(1.7)*	*(5.0)*	*(4.9)*	*(9.1)*	*(0.4)*	*(0.3)*	*(0.0)*	*(0.5)*
Cyprus (2010)	60.2	86.6	85.0	65.9	10.1	5.0	1.7	13.1
S.E.	*(5.4)*	*(6.0)*	*(5.8)*	*(8.4)*	*(1.0)*	*(0.5)*	*(0.3)*	*(1.4)*
Luxembourg (2010)	73.4	127.3	121.5	116.4	10.0	1.6	1.0	12.4
S.E.	*(8.8)*	*(10.9)*	*(9.8)*	*(19.5)*	*(1.0)*	*(0.4)*	*(0.2)*	*(1.1)*
Malta (2010)	15.7	35.0	34.3	37.0	4.0	4.6	0.7	7.6
S.E.	*(2.4)*	*(3.8)*	*(5.3)*	*(7.8)*	*(0.8)*	*(2.0)*	*(0.1)*	*(1.8)*
Netherlands (2009)	89.1	131.0	130.0	102.9	13.7	2.1	1.1	26.4
S.E.	*(6.1)*	*(4.4)*	*(4.6)*	*(39.7)*	*(2.4)*	*(0.6)*	*(0.5)*	*(6.8)*
Austria (2010)	13.8	37.5	37.3	36.4	3.0	1.2	0.5	8.0
S.E.	*(3.2)*	*(11.4)*	*(12.4)*	*(12.8)*	*(0.4)*	*(0.2)*	*(0.2)*	*(1.3)*
Portugal (2010)	31.7	48.8	46.1	57.7	3.3	0.8	0.7	4.9
S.E.	*(2.7)*	*(2.6)*	*(2.4)*	*(5.4)*	*(0.4)*	*(0.1)*	*(0.1)*	*(0.5)*
Slovenia (2010)	4.3	6.6	6.7	N	3.1	0.7	0.4	4.7
S.E.	*(1.4)*	*(5.8)*	*(6.2)*		*(0.5)*	*(0.2)*	*(0.1)*	*(1.3)*
Slovakia (2010)	3.2	25.0	25.0	N	1.0	0.4	0.5	2.0
S.E.	*(0.7)*	*(1.9)*	*(1.9)*		*(0.2)*	*(0.0)*	*(0.1)*	*(0.2)*
Finland (2009)	29.4	M	64.4	M	M	M	M	6.8
S.E.	*(0.9)*		*(1.2)*					*(0.2)*

Notes: This table reports outstanding balances of various types of debts held by households conditional on holding the relevant type of debt.
In Finland, liabilities are classified by the purpose of the loan, as it is recorded in the tax register. Loans are classified either as HMR mortgages or other loans. Loans taken to purchase other properties cannot be separated and they are included in Non-mortgage loans.
For a definition of the classification variables, see notes to Table 2.1. For a description of the definitions of the variables, see also the document HFCN (2011). M stands for a missing value. N stands for "not calculated" because fewer than 25 observations are available. N.A stands for not applicable.
The rows labelled as "S.E." show standard errors, which were calculated with the Rao-Wu rescaled bootstrap method using replicate weights provided by the countries (1,000 replicates; see chapter 7 of the HFCS Methodological Report for details).

Chart 3.2 Debt participation by age



Notes: The horizontal axis shows age of the household reference person grouped in the following categories: 16-24, 25-34, 35-44, 45-54, 55-64, 65-74 and 75 or more years.

Looking at the outstanding balances in Table 3.2 (which reports conditional medians), it is apparent that those 43.7% of households that have debt have a balance of €21,500.[32] In analogy to debt holdings, this amount varies with household size, income, age and education. The variations are again substantial – indebted households with primary or no completed education, for instance, reported holding around €12,400, whereas those with tertiary education have €54,600, i.e. almost four times as much. An even steeper slope is observed for income, with those in the top quintile holding twelve times as much debt (namely €63,100) than those in the lowest quintile (with €5,000; see also Panel B of Chart 3.1).[33] The age distribution is again characterised by a hump shape, peaking at a median value of €39,600.

With regard to the country breakdown, heterogeneity is (not unexpectedly) even more pronounced than for the prevalence of debt holdings. Here again, however, the same pattern holds: in countries where fewer households have debt, those that do also tend to hold less of it. At the upper end, Luxembourgish and Dutch households reported holding €73,400 and €89,100, respectively, whereas Slovenian and Slovak households are at the lower end of debt holdings

[32] The results observed for conditional means (not shown for brevity) are qualitatively very similar, while the average balances are of course larger than the median balances (for instance, mean holdings of indebted euro area households are €61,100).

[33] As for debt components, the relationship is largely driven by HMR mortgages and is much less strong for other non-mortgage debt and other debt components.

with a median figure of €4,300 and €3,200, respectively. This pattern does not apply to Finland, which saw a large number of households having debt, yet average outstanding balances of the indebted households are close to the euro area aggregate, at €29,400 – which arises because Finnish households participate in particular in non-mortgage debt markets, where outstanding amounts are generally lower than in mortgage markets.

3.2 DEBT COMPOSITION

Further to the prevalence and values of total debt, Tables 3.1 and 3.2 also provide results with regard to the different debt categories, namely mortgage debt (which itself is split into mortgages related to the household main residence and mortgages related to other property) and non-mortgage debt (consisting of credit lines/overdraft debt, credit card debt and other non-mortgage debt).

3.2.1 MORTGAGE DEBT

23.1% of households reported having mortgage debt, the bulk of which is related to the household main residence (only 5.6% have a mortgage related to other property). Much of what has been said earlier about which households have debt also applies to mortgage debt – for instance, looking back at Panel A of Chart 3.1 and Chart 3.2, it is evident that the relationships by income and age are very similar for total and for mortgage debt. An interesting difference relates to the distribution of mortgage debt holdings by net wealth, where only 5.6% of all households in the lowest net wealth quintile report having mortgage debt, a share that rises rapidly to 15.0% for the second-lowest quintile and then stabilises at around 32% for all other quintiles. The very low prevalence of mortgage debt for low net wealth households contrasts with the previous finding that 44.1% of these households hold debt, and indicates that poor households tend to mainly hold non-mortgage debt.

The prevalence of mortgage debt is by and large correlated with the ownership of the household main residence: as ownership of the household main residence becomes more likely, for instance with increasing income (see Chapter 3), so does the existence of a mortgage. The main exception to this pattern is age: whereas ownership of the household main residence increases with age until the 65-74 age bracket and then drops somewhat, the percentage of households having mortgage debt starts to fall much earlier – it peaks for the 35-44 age bracket, then starts to decline, and drops substantially after the age of 65. Of course, this pattern is consistent with relatively young households taking up a mortgage to buy a home and paying off the mortgage over subsequent years.

As a logical consequence of the weight of mortgages on total household debt, the cross-country patterns for mortgage debt resemble those for total debt: countries with large shares of indebted households also tend to have a high prevalence of mortgage debt. At the same time, when comparing home ownership and the importance of mortgage debt, three different patterns emerge: First, countries with high homeownership yet low participation in mortgage debt, like Italy, Malta, Slovenia and Slovakia – with different reasons underlying this pattern in each

country; [34] Second, countries like the Netherlands, with high mortgage debt and low homeownership; Third, the other countries, where the two variables positively correlate. The co-existence of such very different patterns in the euro area likely reflects various factors, such as historical developments, not to mention the development of mortgage markets on the one hand and the (non-)existence of tax incentives to take out mortgage debt on the other hand.

In terms of outstanding balances, reported mortgage debt tends to be substantially larger than other types of debt – whereas the median value of total debt of euro area households (conditional on them having some type of debt) is €21,500, the median value of mortgage debt (conditional on having mortgage debt) amounts to €68,400. Household size matters, albeit mainly for the largest households. Whereas the median outstanding balance for households with at least five members stands at €81,400, it varies only little (between €60,000 and €70,000) for all other size classes. This fact can only partially be explained by the increasing value of the household main residence for larger households, such that a relatively larger financing need for large households must be underlying this figure. With regard to income, the outstanding balance of households in the lowest quintile, at €42,600, is less than half of the value of €92,800 in the top quintile.

Interpreting the variation of mortgage balances along the net wealth distribution is complicated by the fact that the position of a household on the net wealth distribution is endogenous to its mortgage debt holdings (since mortgage debt enters the definition of net wealth with a negative sign). This is illustrated by the fact that the median reported mortgage debt held by the lower quintile amounts to €149,200 and drops drastically to €78,200 for the second quintile, stabilising in the order of €50,200 to €69,000 for the rest of the distribution.[35]

The age pattern of outstanding mortgage balances reflects the large financing needs of the relatively young households and the repayment patterns with increasing age. Accordingly, the reported values drop from €99,400 for households where the reference person is below age 35 to between €37,300 and €40,000 for the older households, where the reference person is over age 65. The country breakdown shows, as before, that the highest amounts are due in Luxembourg and the Netherlands, whereas the lowest values are recorded for Slovenia and Slovakia. This reflects several aspects, such as house prices, the developments of mortgage markets, income, and the tax incentives for holding mortgage debt.

3.2.2 NON-MORTGAGE DEBT

As to non-mortgage debt, Tables 3.1 and 3.2 distinguish between credit lines or overdraft debt, credit card debt and other non-mortgage debt, which includes consumer, personal and instalment loans, but also private loans from relatives, friends, employers, etc. Taken together, these types of debt are rather common, even more prevalent than mortgage debt: 29.3% of all households reported having this type of debt. It is important to note, however, that the bulk of this fraction constitutes other non-mortgage debt, which is held by 22.4% of households,

[34] For instance, the Slovak example is due to the privatisation programme in the 1990s that allowed renters in the municipal housing stock to purchase their home under very favourable conditions (see, e.g., Hüfner 2009), whereas the situation in Italy is often ascribed to an important role played by family support that reduces the need to take out bank debt.

[35] As mentioned previously, only 5.7% of households in the lowest net wealth quintile hold mortgage debt. The outstanding balances in this cell are therefore based on few observations, but are very large.

whereas credit lines and credit card debt are much less prevalent, with 10.2% and 4.3% of all households reporting such types of debt, respectively.

The holdings of these debt types are distributed across households in very similar ways as those already described for total debt and mortgage debt: the prevalence of non-mortgage debt typically increases with household size and income. The pattern with regard to education is interesting, as non-mortgage debt is most prevalent for households with reference persons with secondary education, which in particular stems from the fact that they are much more likely to hold credit lines or overdraft debt.

Across countries, there is considerably less heterogeneity than for mortgage loans, with a range of slightly below or at 20% in Austria, Italy, Portugal and Slovakia, up to around 35-40% in Germany, Luxembourg the Netherlands and Slovenia, and even up to 47.9% in Cyprus (whereas the prevalence of mortgage debt across countries varied from 9.6% to 46.0%). At the same time, the heterogeneity in credit lines and credit card debt is rather large, pointing to differences in payment habits, while at the same time reflecting the substantial differences in the institutional setup of credit card schemes across countries. Looking at credit card debt, for instance, only 1.4% and 1.5% of Italian and Austrian households report having such debt, whereas more than 13% do in Greece and Malta, as well as 18.8% in Cyprus. Much like with credit lines, there are countries where less than 1% of households make use of this type of debt (like in Spain), and other countries where credit lines are much more common (like in Germany, Cyprus, the Netherlands and Slovenia, where around 20% to 25% of all households make use of them).

Turning to the outstanding amounts, it becomes apparent that non-mortgage debt is typically taken in substantially smaller amounts than mortgage debt: the median reported holdings in the euro area amount to €5,000, with credit lines of €1,500, credit card debt of €900 and other non-mortgage debt of €6,100. Especially for credit card debt, there is generally very little variation across household groups, with most groupings showing values of around €1,000.

In terms of magnitudes, the category of "other" non-mortgage debt is obviously the most important category among the three types of non-mortgage debt. The amounts increase with household size (although with a decrease for the largest households), income, net wealth and education, and broadly show the familiar hump shape over the age distribution.

Looking at the country breakdown, it is apparent that credit card debt in Greece and Cyprus (with medians of €2,000 and €1,700) is somewhat larger than for other countries, as is the conditional amount of credit lines in Greece and Spain (where the median outstanding balances amount to €8,000 and €12,000, respectively). Regarding other non-mortgage debt, Dutch households appear to have the largest debt holdings, with a reported median of €26,400 (considerably larger than the euro area median of €6,100), followed by Cyprus and Luxembourg. All the other countries are relatively close to the euro area figure.

A final piece of information about debt holdings, provided in Table 3.3, relates to the composition of debt, i.e. how important a given type of debt is in the overall debt of a given household group. Unsurprisingly, mortgage debt takes the largest share, contributing 82.8% of all outstanding balances to all euro area households. This number is remarkably stable across nearly all household groups (with the obvious exception of renters and outright owners of the

HMR). Groups with a debt structure in which mortgages carry considerably less weight are those in the bottom of the income and wealth distributions (70.0% and 64.4%, respectively).

Table 3.3 Share of debt components in total debt

by demographic and country characteristics (%)

	Total Debt							
		Mortgage Debt			Non-Mortgage Debt			
	Total Debt	Mortgage Debt	HMR Mortgage	Other Property Mortgage	Non-Mortgage Debt	Credit Line/Overdraft Debt	Credit Card Debt	Non-Mortgage Loans
Euro Area	100.0	82.8	63.2	19.7	17.2	1.4	0.2	15.5
S.E.		*(0.7)*	*(1.1)*	*(1.1)*	*(0.7)*	*(0.1)*	*(0.0)*	*(0.6)*
Household Size								
1	100.0	78.6	59.1	19.5	21.4	2.2	0.3	18.9
2	100.0	82.5	59.3	23.3	17.5	1.5	0.2	15.8
3	100.0	82.8	65.1	17.7	17.2	1.4	0.2	15.6
4	100.0	84.6	66.6	18.0	15.4	1.0	0.2	14.2
5 and More	100.0	85.3	67.3	18.0	14.7	1.2	0.1	13.4
Housing Status								
Owner-Outright	100.0	54.1	0.0	54.1	45.9	1.8	0.4	43.7
Owner-with Mortgage	100.0	93.6	85.1	8.4	6.4	0.7	0.1	5.6
Renter or Other	100.0	48.5	0.0	48.5	51.5	6.1	0.6	44.8
Percentile of EA Income								
Less than 20	100.0	70.0	58.3	11.7	29.9	2.5	0.5	27.1
20-39	100.0	77.8	65.1	12.7	22.2	1.9	0.4	20.0
40-59	100.0	80.4	63.3	17.1	19.6	1.5	0.3	17.8
60-79	100.0	82.8	66.5	16.3	17.2	1.6	0.2	15.4
80-100	100.0	85.6	61.5	24.0	14.4	1.2	0.1	13.2
Percentile of EA Net Wealth								
Less than 20	100.0	64.4	48.5	16.0	35.6	3.1	0.3	32.2
20-39	100.0	83.5	72.9	10.6	16.5	2.1	0.3	14.1
40-59	100.0	87.8	77.2	10.6	12.2	0.9	0.2	11.0
60-79	100.0	86.3	72.4	13.9	13.7	1.1	0.2	12.5
80-100	100.0	84.0	48.2	35.8	16.0	1.1	0.1	14.8
Age of Reference Person								
16-34	100.0	81.0	67.0	14.0	19.0	1.0	0.2	17.7
35-44	100.0	85.7	71.1	14.6	14.3	0.9	0.2	13.3
45-54	100.0	81.8	60.2	21.6	18.2	1.6	0.2	16.4
55-64	100.0	80.6	53.1	27.5	19.4	2.4	0.2	16.7
65-74	100.0	82.6	46.9	35.7	17.4	2.4	0.2	14.8
75+	100.0	85.4	43.4	42.0	14.6	2.5	0.4	11.7
Work Status of Reference Person								
Employee	100.0	84.4	68.2	16.2	15.6	1.1	0.2	14.3
Self-Employed	100.0	80.3	50.6	29.8	19.7	2.0	0.3	17.4
Retired	100.0	81.7	48.3	33.5	18.3	2.4	0.3	15.5
Other Not Working	100.0	72.9	60.1	12.8	27.1	1.6	0.3	25.2

Table 3.3 Share of debt components in total debt

by demographic and country characteristics (%)

	Total Debt	Mortgage Debt			Non-Mortgage Debt			
	Total Debt	Mortgage Debt	HMR Mortgage	Other Property Mortgage	Non-Mortgage Debt	Credit Line/Overdraft Debt	Credit Card Debt	Non-Mortgage Loans
Education of Reference Person								
Primary or No Education	100.0	78.3	62.2	16.1	21.7	1.7	0.3	19.7
Secondary	100.0	82.5	63.7	18.7	17.5	1.9	0.2	15.4
Tertiary	100.0	84.7	63.0	21.6	15.3	0.9	0.1	14.3
Country								
Belgium (2010)	100.0	89.6	80.0	9.5	10.4	0.5	0.3	9.6
S.E.		*(1.4)*	*(2.0)*	*(1.6)*	*(1.4)*	*(0.1)*	*(0.1)*	*(1.4)*
Germany (2010)	100.0	87.7	58.8	29.0	12.3	2.1	0.1	10.0
S.E.		*(1.2)*	*(2.4)*	*(2.6)*	*(1.2)*	*(0.3)*	*(0.0)*	*(1.2)*
Greece (2009)	100.0	78.7	60.8	18.0	21.3	5.2	3.3	12.8
S.E.		*(1.8)*	*(2.8)*	*(2.4)*	*(1.8)*	*(0.9)*	*(0.4)*	*(1.4)*
Spain (2008)	100.0	86.3	60.6	25.7	13.7	0.6	0.4	12.8
S.E.		*(1.0)*	*(2.6)*	*(2.6)*	*(1.0)*	*(0.2)*	*(0.1)*	*(1.0)*
France (2010)	100.0	75.6	52.2	23.4	24.4	1.0	M	23.5
S.E.		*(1.7)*	*(1.7)*	*(1.3)*	*(1.7)*	*(0.1)*		*(1.7)*
Italy (2010)	100.0	73.5	66.0	7.5	26.5	1.3	0.2	25.0
S.E.		*(2.6)*	*(2.9)*	*(1.8)*	*(2.6)*	*(0.2)*	*(0.0)*	*(2.6)*
Cyprus (2010)	100.0	85.8	55.5	30.3	14.2	3.2	0.7	10.3
S.E.		*(1.4)*	*(3.1)*	*(3.2)*	*(1.4)*	*(0.4)*	*(0.1)*	*(1.2)*
Luxembourg (2010)	100.0	90.2	67.6	22.5	9.8	0.6	0.1	9.1
S.E.		*(1.2)*	*(3.4)*	*(3.4)*	*(1.2)*	*(0.2)*	*(0.0)*	*(1.1)*
Malta (2010)	100.0	76.0	50.9	25.1	24.0	4.4	1.6	18.0
S.E.		*(3.6)*	*(5.8)*	*(6.5)*	*(3.6)*	*(1.1)*	*(0.3)*	*(3.3)*
Netherlands (2009)	100.0	82.9	76.9	6.0	17.1	1.6	0.1	15.3
S.E.		*(1.9)*	*(3.0)*	*(2.7)*	*(1.9)*	*(0.3)*	*(0.1)*	*(1.8)*
Austria (2010)	100.0	83.2	71.4	11.9	16.8	2.0	0.1	14.7
S.E.		*(4.7)*	*(8.0)*	*(4.7)*	*(4.7)*	*(0.6)*	*(0.0)*	*(4.2)*
Portugal (2010)	100.0	92.1	80.3	11.9	7.9	0.7	0.6	6.6
S.E.		*(0.8)*	*(1.6)*	*(1.3)*	*(0.8)*	*(0.3)*	*(0.1)*	*(0.7)*
Slovenia (2010)	100.0	41.7	39.2	N	58.3	5.6	N	52.4
S.E.		*(7.9)*	*(8.0)*		*(7.9)*	*(1.1)*		*(7.6)*
Slovakia (2010)	100.0	81.2	77.2	N	18.8	1.3	1.3	16.2
S.E.		*(2.1)*	*(2.4)*		*(2.1)*	*(0.2)*	*(0.2)*	*(2.0)*
Finland (2009)	100.0	M	72.0	M	M	M	M	28.0
S.E.			*(0.6)*					*(0.6)*

Notes: This table reports the share that each type of debt represents over the total debt held by households. Shares are calculated by adding the total debt across households in each debt category and dividing it by the total overall debt held by households.
In Finland, liabilities are classified by the purpose of the loan, as it is recorded in the tax register. Loans are classified either as HMR mortgages or other loans. Loans taken to purchase other properties cannot be separated and they are included in Non-mortgage loans.
For the definition of the different debt components, see the notes to table 3.1. For a definition of the classification variables, see the notes to Table 2.1. For a description of the definitions of the variables, see also the document HFCN (2011). M stands for a missing value. N stands for "not calculated" because fewer than 25 observations are available.
The rows labelled as "S.E." show standard errors, which were calculated with the Rao-Wu rescaled bootstrap method using replicate weights provided by the countries (1,000 replicates; see chapter 7 of the HFCS Methodological Report for details).

3.3 DEBT BURDEN AND HOUSEHOLDS' VULNERABILITIES

The survey data can be usefully exploited for describing the distribution of financial pressure and identifying which groups of households are vulnerable to economic and financial risk. Table 3.4 provides a number of measures that shed light on this issue from different angles. All figures, except for the ratio of net liquid assets to income (in the rightmost column), are calculated for indebted household only, i.e. they are conditional on having debt.[36]

The first column reports how the outstanding balances of overall debt of households relate to their asset holdings. This indicator therefore rescales the level of debt holdings relative to an indicator of the resources that a household has available to manage its debt.

The debt-to-asset ratio for all euro area households of 21.8% masks considerable variation across household groups. Quite naturally, the home ownership status matters substantially – whereas renters report a median debt-to-asset ratio of 41.5%, the figure is much lower for owners: it stands at 29.8% for those with a mortgage and at 3.7% for those without a mortgage on the household main residence. The difference between the debt-to-asset ratio of renters and owners is likely driven to a large extent by the larger value of assets of owners due to ownership of the household main residence. The debt-to-asset ratio furthermore declines with increasing income, from 36.2% in the lowest income quintile to 17.7% in the top quintile. Understandably, a much more extreme variation occurs along the net wealth distribution, where households in the lowest quintile have a median debt-to-asset ratio of 108.2% (and thus have negative net wealth). Already in the second-lowest quintile, this number drops drastically to 27.0%, and then declines further to 7.1% for the top quintile. A decline, albeit not that steep, is also recorded for the age brackets: the youngest bracket, in which the reference person is between the ages of 16 and 24, shows a debt-to-asset ratio of 46.4%, whereas the ratio drops to 6.3% for households with a reference person over age 75. The low numbers for older households are also reflected in the breakdown by work status, where the retired show the lowest debt-to-asset ratio (of 7.9%) – consistent with the fast de-cumulation of debt and the slow de-cumulation of assets late in life – followed by the self-employed (13.6%), employees (26.6%) and finally by households where the reference person is not working for reasons other than being retired (42.8%).

The cross-country variation in debt-to-asset ratios is substantial. Clear outliers are Malta, Slovenia and Slovakia, i.e. countries that have relatively high home ownership with low levels of mortgage debt. They show very low median debt-to-asset ratios, namely 6.2%, 3.9% and 6.6%, respectively. At the other end of the spectrum are the Netherlands and Finland, with 41.3% and 34.6%, whereas the variation for all remaining countries is relatively modest (ranging from 11.7% in Italy to 28.4% in Germany).

The second column shows the total debt-to-income ratios, i.e. it contrasts the level of debt with income rather than assets. This indicator can provide information about the extent to which debt can be paid back from the flow of income rather than the stock of assets, and thereby about households' potential need to deleverage in the medium to long run. While many of the statistics qualitatively mirror those on debt-to-asset ratios, the correlation between income and assets is far from perfect. The euro area median figure stands at 62.0%. Except for households with five

[36] Households having only credit card or credit lines/overdrafts are not considered in the calculations of debt service-to-income ratios. For definitions of debt burden indicators, see Annex I and the notes to Table 2.4.

or more members, the indicator rises with household size, reflecting the fact that with increasing household size, debt tends to increase faster than income. Quite understandably, the ratio is, at 174.9%, particularly high for home-owners with a mortgage. It is highest for the middle quintile of net wealth (131.0%) and tends to fall afterwards for wealthier households (although these households still have higher debt-to-income ratios that those in the bottom two net wealth quintiles). Similar to many other indicators, it exhibits a hump-shaped pattern over age. Finally, it tends to be particularly high for the self-employed and households with tertiary education.

Substantial differences in debt-to-income ratios exist across countries. The indicator is positively related to the participation in HMR mortgages. The ratio exceeds 100% in Spain, Cyprus, the Netherlands and Portugal, whereas debt-to-income ratios are below 40% in Germany, Austria, Slovenia and Slovakia.

Table 3.4 Indicators of debt burden and financial fragility

(medians in %)

	Debt-Asset Ratio[1]	Debt-Income Ratio[2]	Debt Service-Income Ratio[3]	Mortgage Debt Service-Income Ratio[4]	Loan-Value Ratio of HMR[5]	Net Liquid Assets-Income Ratio[6]
Euro Area	21.8	62.0	13.9	15.9	37.3	18.6
S.E.	*(0.6)*	*(2.1)*	*(0.3)*	*(0.2)*	*(0.9)*	*(0.5)*
Household Size						
1	33.7	42.8	14.2	18.8	42.5	24.0
2	18.0	49.1	12.6	14.9	35.3	25.7
3	21.7	72.0	14.0	16.3	38.2	12.8
4	18.7	88.5	14.6	15.5	33.3	12.4
5 and More	25.2	78.2	15.8	16.4	40.0	5.5
Housing Status						
Owner-Outright	3.7	27.4	11.3	12.5	M	36.8
Owner-with Mortgage	29.8	174.9	18.3	16.3	37.3	15.3
Renter or Other	41.5	16.2	8.0	14.4	M	8.8
Percentile of EA Income						
Less than 20	36.2	67.8	26.5	40.0	32.9	10.8
20-39	26.1	39.6	16.5	23.2	33.9	14.4
40-59	22.2	51.7	15.0	19.6	34.2	17.7
60-79	21.1	68.8	14.0	15.8	38.0	20.3
80-100	17.7	75.6	11.2	11.4	39.5	30.6
Percentile of EA Net Wealth						
Less than 20	108.2	24.7	10.4	22.3	112.4	0.7
20-39	27.0	30.6	13.3	19.2	74.5	19.1
40-59	30.4	131.0	17.9	17.2	44.9	20.6
60-79	12.4	81.1	14.4	14.4	24.0	31.7
80-100	7.1	75.7	12.7	12.9	17.7	66.0
Age of Reference Person						
16-34	46.4	64.3	15.4	20.5	56.5	7.7
35-44	29.4	96.4	16.1	17.1	40.4	10.9
45-54	17.6	66.5	13.0	13.7	29.1	12.4
55-64	10.9	39.8	11.7	12.7	24.9	24.2
65-74	8.4	37.1	12.2	15.1	20.0	37.3
75+	6.3	15.8	8.4	11.0	19.1	49.6
Work Status of Reference Person						
Employee	26.6	68.7	13.9	15.7	40.0	13.0
Self-Employed	13.6	91.0	16.7	16.8	33.7	19.0
Retired	7.9	30.7	11.3	13.3	19.9	41.0
Other Not Working	42.8	43.5	15.1	20.0	34.4	4.2
Education of Reference Person						
Primary or No Education	18.8	49.8	15.1	17.6	31.8	13.4
Secondary	23.1	47.0	12.8	15.4	37.4	17.2
Tertiary	22.4	104.1	15.2	15.4	40.0	31.2

Table 3.4 Indicators of debt burden and financial fragility

(medians in %)

	Debt-Asset Ratio[1]	Debt-Income Ratio[2]	Debt Service-Income Ratio[3]	Mortgage Debt Service-Income Ratio[4]	Loan-Value Ratio of HMR[5]	Net Liquid Assets-Income Ratio[6]
Country						
Belgium (2010)	18.2	79.8	15.1	14.8	28.8	33.5
S.E.	*(1.5)*	*(6.3)*	*(0.6)*	*(0.5)*	*(1.7)*	*(3.3)*
Germany (2010)	28.4	37.3	10.9	12.8	41.9	22.3
S.E.	*(2.4)*	*(3.7)*	*(0.5)*	*(0.6)*	*(2.2)*	*(1.7)*
Greece (2009)	14.8	47.2	14.7	16.4	31.6	4.9
S.E.	*(1.8)*	*(5.2)*	*(0.8)*	*(0.9)*	*(3.6)*	*(0.9)*
Spain (2008)	17.9	113.5	19.9	20.5	31.0	12.3
S.E.	*(1.2)*	*(9.4)*	*(0.7)*	*(0.9)*	*(1.8)*	*(1.0)*
France (2010)	18.9	50.4	14.7	17.4	32.4	18.5
S.E.	*(0.8)*	*(2.8)*	*(0.3)*	*(0.3)*	*(1.6)*	*(0.7)*
Italy (2010)	11.7	50.3	13.2	15.5	30.0	21.9
S.E.	*(1.0)*	*(3.8)*	*(0.6)*	*(0.8)*	*(2.2)*	*(0.8)*
Cyprus (2010)	17.0	157.0	25.0	25.3	31.9	5.1
S.E.	*(1.4)*	*(15.1)*	*(1.1)*	*(1.1)*	*(2.4)*	*(1.3)*
Luxembourg (2010)	18.2	86.9	16.6	16.3	27.5	20.7
S.E.	*(2.1)*	*(11.2)*	*(0.7)*	*(0.7)*	*(2.6)*	*(2.9)*
Malta (2010)	6.2	52.0	11.5	12.8	19.9	75.7
S.E.	*(0.9)*	*(8.3)*	*(1.0)*	*(1.3)*	*(2.2)*	*(7.2)*
Netherlands (2009)	41.3	194.1	14.5	14.2	52.5	16.4
S.E.	*(2.5)*	*(15.4)*	*(0.8)*	*(0.6)*	*(3.1)*	*(2.3)*
Austria (2010)	16.7	35.6	5.6	4.6	18.7	32.9
S.E.	*(3.6)*	*(7.5)*	*(0.9)*	*(1.4)*	*(7.4)*	*(2.3)*
Portugal (2010)	25.7	134.0	17.3	16.7	41.4	15.9
S.E.	*(1.6)*	*(11.6)*	*(0.8)*	*(0.7)*	*(2.8)*	*(1.0)*
Slovenia (2010)	3.9	26.6	15.8	11.7	5.4	2.2
S.E.	*(1.0)*	*(6.1)*	*(2.9)*	*(5.0)*	*(5.0)*	*(0.8)*
Slovakia (2010)	6.6	22.7	12.5	20.4	37.3	12.1
S.E.	*(1.1)*	*(3.0)*	*(0.9)*	*(1.5)*	*(3.1)*	*(1.2)*
Finland (2009)	34.6	64.3	M	M	48.6	9.4
S.E.	*(1.0)*	*(2.2)*			*(1.4)*	*(0.4)*

Notes: This table reports different measures of financial burden. The first column reports the debt-to-asset ratio, which is calculated as the ratio between total liabilities and total gross assets for indebted households. See Annex 1 for further details on the composition of assets and liabilities. The second column reports the ratio of total debt to gross household annual income for indebted households. The third reports the debt service-to-income ratio, which is calculated as the ratio between total monthly debt payments and household gross monthly income for indebted households. The fourth column reports the mortgage debt service-to-income ratio, which is calculated for households with mortgage debt. The fifth column reports the loan-to-value ratio of the main residence, again conditional on households having mortgage debt (see Annex I for details). The sixth column reports the ratio of net liquid assets to income, for all households. Net liquid assets are calculated as the sum of value of deposits, mutual funds, bonds, non-self-employment business wealth, (publicly traded) shares and managed accounts, net of credit line/overdraft debt, credit card debt and other non-mortgage debt.
Note that the various indicators are calculated for varying groups of households:
1, 2: The debt-asset ratio and debt-income ratio are calculated for all indebted households.
3: Debt service-income ratio defined for indebted households, but excluding households that only hold credit lines/overdraft debt or credit card debt, as for these debt types no debt service information is collected.
4: The mortgage debt service-income ratio is calculated for households that report having mortgage debt.
5: The loan-to-value ratio for households that report having HMR mortgage debt.
6: The net liquid assets-income ratio is calculated for all households.
For a definition of the classification variables, see the notes to Table 2.1. For a description of the definitions of the variables, see also the document HFCN (2011). M stands for a missing value. N stands for "not calculated" because fewer than 25 observations are available. Data on debt service are not collected for Finland.
The rows labelled as "S.E." show standard errors, which were calculated with the Rao-Wu rescaled bootstrap method using replicate weights provided by the countries (1,000 replicates; see chapter 7 of the HFCS Methodological Report for details).

An alternative indicator of debt burden is reported in the third column of Table 3.4, namely the ratio of debt service, i.e. total monthly debt payments, to income (which now compares two flows). Typically, only parts of the outstanding debt balance need to be repaid over the course of a year. Beyond comparing the stock of debt to total assets or income, it is therefore also important to study the debt-service burden, e.g. in the form of debt service-to-income ratios. This measure provides an indicator for the drain that the debt holdings impose on current income, and reflects more the significance of short-term commitments. Furthermore, given that mortgage maturities and mortgage types differ across countries, debt service-income ratios in countries with longer maturities tend to be smaller, while this may not be the case for debt-income ratios. The measure also has the advantage that it not only takes into account variables related to the amount owed and household income, but also reflects the level of interest rates. The median debt service-to-income ratio across all (indebted) euro area households is 13.9%, and like the debt-to-asset ratio is characterised by a number of substantial variations across household groups.

Variations in the debt service-to-income ratio do not always mirror those observed for the debt-to-asset ratio. This is particularly the case for housing status, where renters have the largest debt-to-asset ratio, but the smallest debt service-to-income ratio (which of course reflects the fact that most renters do not have mortgage debt, and therefore have much smaller amounts of outstanding debt that needs to be serviced). Households in the lowest net wealth quintile constitute another case where the two indicators give very different messages: whereas their debt-to-asset ratio is extremely high (as discussed above), their debt service-to-income ratio is rather low. This is explained by the fact that many of these households have very low assets and some debt. When comparing debts and assets, this constellation gives the impression of a very high debt burden; at the same time, when comparing debt service and income, it turns out that the low levels of debt can typically be serviced relatively easily out of income. A similar reasoning applies to the youngest age group, which is characterised by relatively low assets and low debt levels, such that they can service their debt out of their income but show a large debt-to-asset ratio. Finally, different signals are also obtained for the breakdown by work status of the reference person, where the debt-to-asset ratio is largest for the group that is not working, whereas the debt service-to-income ratio for this group is clearly below the ratios of employees and the self-employed.

Also for age, the messages differ across the two indicators, with the debt-to-asset ratio declining with age, whereas the debt service-to-income ratio broadly shows a hump-shaped pattern.

With regard to cross-country variation, there is much less heterogeneity in debt service-to-income ratios than in debt-to-asset ratios. The relative position of countries also changes for the two indicators, with for instance the Netherlands showing the largest debt-to-asset ratio, but a debt service-to-income ratio that is in line with the euro area figures. The outliers with very low debt-to-asset ratios, Malta, Slovenia and Slovakia, are now much more aligned with the euro area figures, with debt service-to-income ratios of 11.5%, 15.8% and 12.5%. The country with

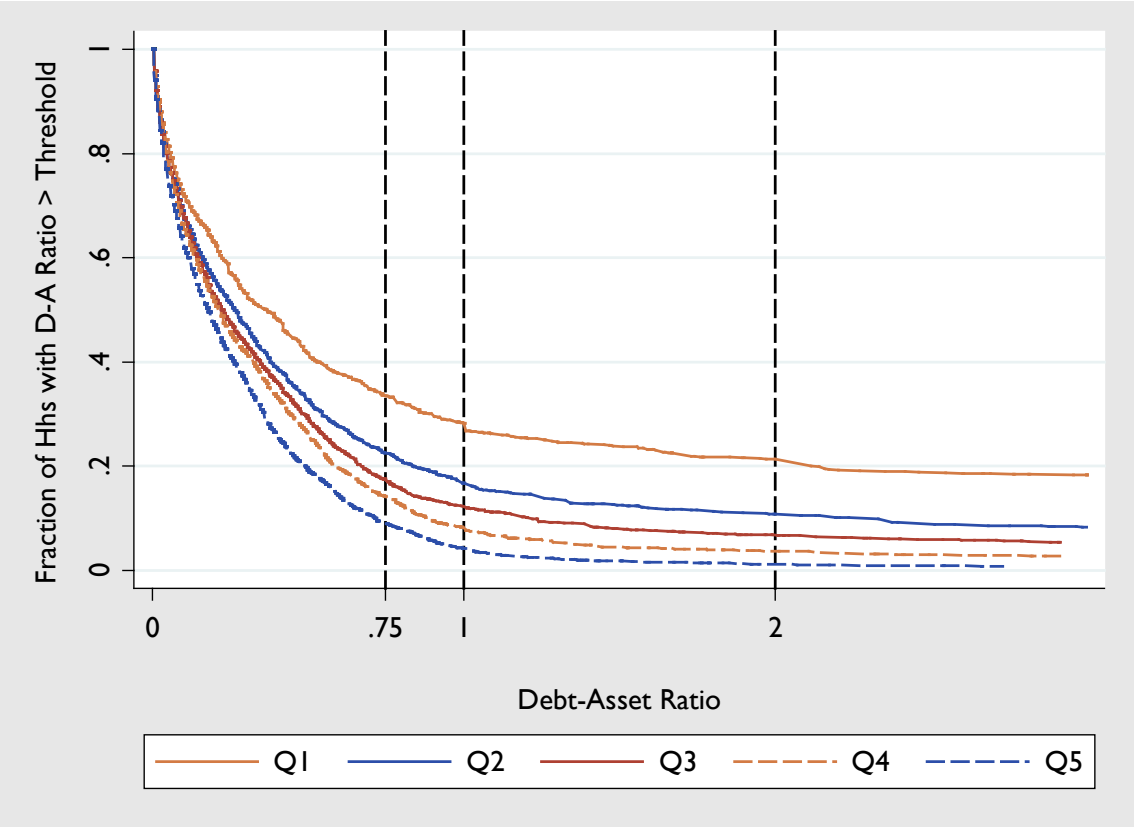
the lowest debt service-to-income ratio is now Austria (5.6%),[37] whereas the two countries with notably larger ratios (namely 19.9% and 25.0%) are Spain and Cyprus.

Given the central role of mortgage debt for households, it is interesting to further study the debt burden related to this type of debt in more detail. The next two columns of Table 3.4 get at this issue by reporting the debt service related to mortgage debt as a ratio to income, and the loan-to-value ratio of the main residence. These indicators are conditional on having mortgages, i.e. households without mortgage debt do not factor into the corresponding figures. Accordingly, the mortgage debt service-to-income ratio is not very different from the overall debt service-to-income ratio. First, the median value for euro area households is very similar (15.9% as opposed to 13.9%), and second, the variations across household groups are close to identical. The main exception relates to housing status: whereas the overall debt service-to-income ratio is lowest for renters, then followed by outright owners of the household main residence, and largest for owners with mortgage debt, the mortgage debt service-to-income ratios are nearly identical for all three groups. The country breakdown shows a somewhat different pattern: while Spain and Cyprus still are in the group of countries with relatively large mortgage debt service-to-income ratios, the same now also applies to Slovakia (all have ratios above 20%).

The next indicator, the loan-to-value ratio for the mortgage related to the household main residence, lies at 37.3% for all euro area households. The usual variations appear: considerably larger values are observed for those in the bottom of the net wealth distribution (112.4%) and for the young (56.5%), whereas considerably smaller values are found for those in the top of the net wealth distribution (17.7%), the old (around 19% to 20%) and the retired (19.9%). The country breakdown also shows familiar patterns, with particularly high loan-to-value ratios (52.5% and 48.6%) observed in the Netherlands and Finland, and rather low loan-to value-ratios (19.9%, 18.7% and 5.4%) in Malta, Austria and Slovenia.

[37] About one-third of household credit debt in Austria is denominated in foreign currency. These loans tend to be bullet loans, so that the holders make regular payments toward a repayment vehicle to save for the day when they need to pay back the loan in a single payment. Consequently, the measured debt service-income ratio is lower than in other countries.

Chart 3.3 Distribution of debt-asset ratio, breakdown by income quintiles

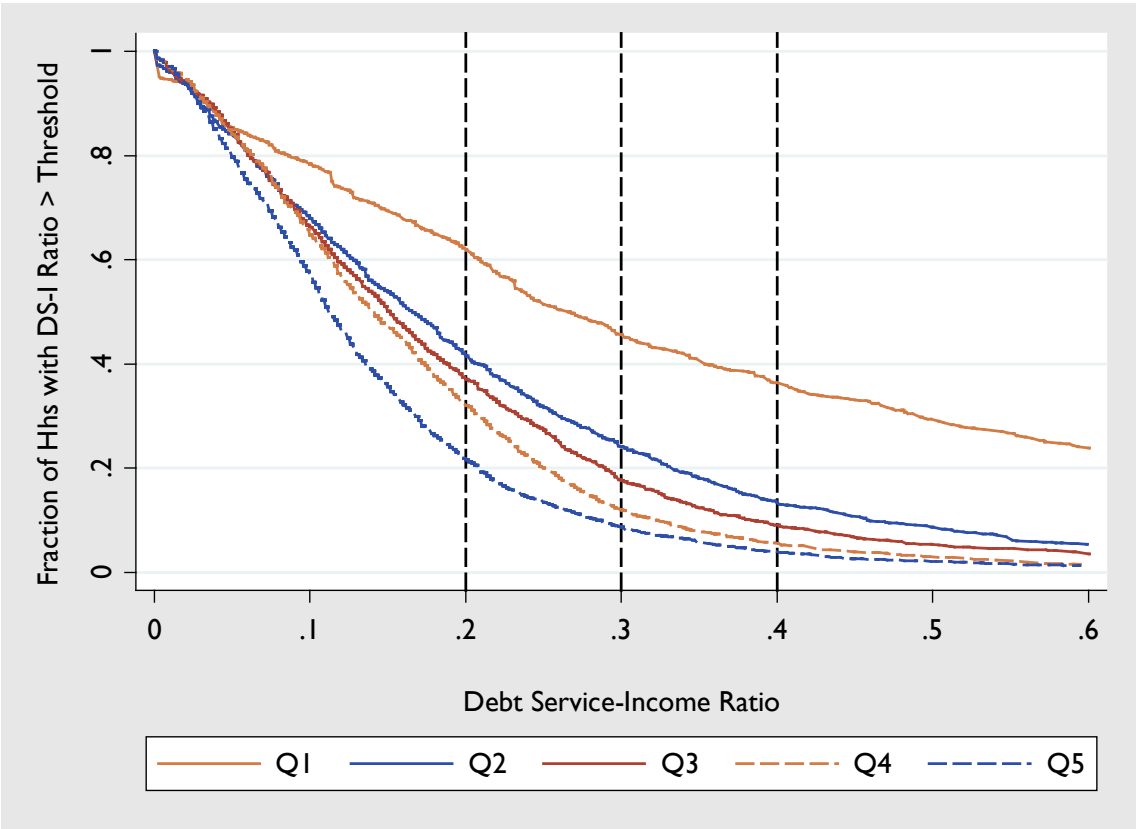


Notes: Debt-asset ratio is calculated as the ratio of total liabilities to total gross assets for indebted households. See Annex 1 for further details on the composition of assets and liabilities.
The horizontal axis shows quintiles of gross income. See the notes to Table 5.1 for the composition of gross income. The quintiles were calculated for the whole sample using household weights.

The last column shows the ratio of net liquid assets to income; the ratio is informative about the amount of resources readily available to households in the event that they have to face adverse shocks.[38] At the euro-area level, the median household has 18.6% of its annual income (equivalent to just above two months' income) available in the form of liquid assets. The indicator is higher for home-owners, suggesting that, overall, they tend to be wealthier than renters in regard to both liquid and illiquid assets. The ratio tends to grow with income and wealth, but also with age and education. The cross-country differences (with the exception of Malta) are less pronounced than those of many other indicators.

[38] Net liquid assets are calculated as the sum of value of deposits, mutual funds, bonds, non-self-employment business wealth, (publicly traded) shares and managed accounts, net of credit line/overdraft debt, credit card debt and other non-mortgage debt.

Chart 3.4 Distribution of debt service-income ratio, breakdown by income quintiles



Notes: The debt service-income ratio is calculated as the ratio of total monthly debt payments to household gross monthly income for indebted households. See notes to Table 5.1 for the composition of gross income.
The horizontal axis shows quintiles of gross income. The quintiles were calculated for the whole sample using household weights.

Charts 3.3 and 3.4 provide a more detailed insight into the distribution of debt burdens. Chart 3.3 plots the fraction of households that have a debt-to-asset ratio above a given threshold, which varies along the horizontal axis. The dashed vertical lines cut through the chart at conveniently chosen threshold values, such as a debt-to-asset ratio of three-quarters, one and two. Taking the example of a threshold of one (to the left of which households have positive net wealth, to the right of which is the territory of negative net wealth), it is found that nearly 30% of indebted euro area households in the lowest income quintile have a debt-to-asset ratio above this value. All other quintiles are below, and often substantially below, 20%. The relevance of income for debt burden is furthermore illustrated by the fact that the line for the lowest income quintile lies substantially above the lines for all other quintiles throughout the entire range of thresholds depicted in the chart.

Looking at Chart 3.4, which plots the same relationship for debt service-to-income ratios, the difference between the low-income households and all others becomes even more apparent: nearly 40% of low-income households are confronted with a debt service-to-income ratio of 40% or higher, which is in stark contrast to the numbers for all other income quintiles.

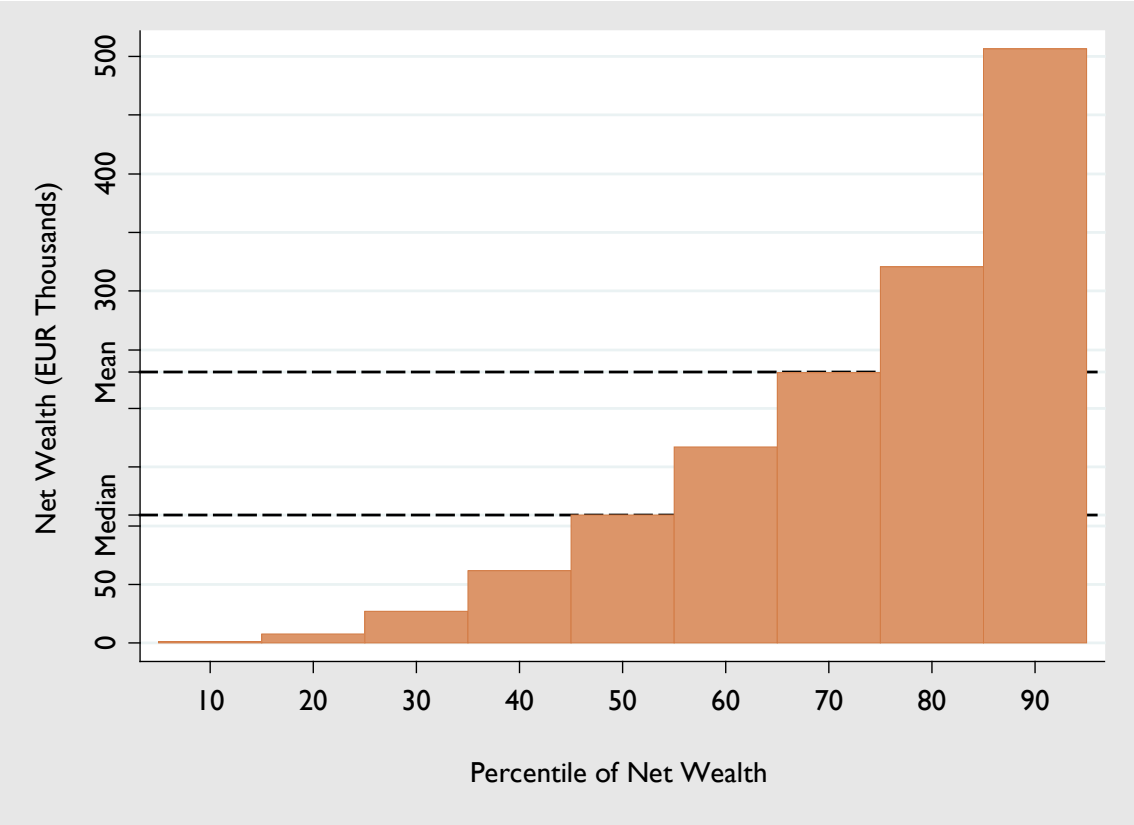
Taken together, these results identify low-income indebted households as particularly vulnerable to economic shocks. For them, an adverse shock to labour income or interest payments can much more easily lead to an unsustainable debt burden and economic distress.

4 NET WEALTH

4.1 NET WEALTH OF EURO AREA HOUSEHOLDS

Table 4.1 reports results for households' net wealth, defined as the difference between households' total assets and total liabilities.[39] The median figure stands at €109,200 in the euro area, whereas the mean of net wealth for all euro area households is found to be substantially larger, at €230,800. The large difference between the median and the mean value indicates that the distribution of net wealth across euro area households is rather uneven.

Chart 4.1 Net wealth by percentile (EUR thousands)



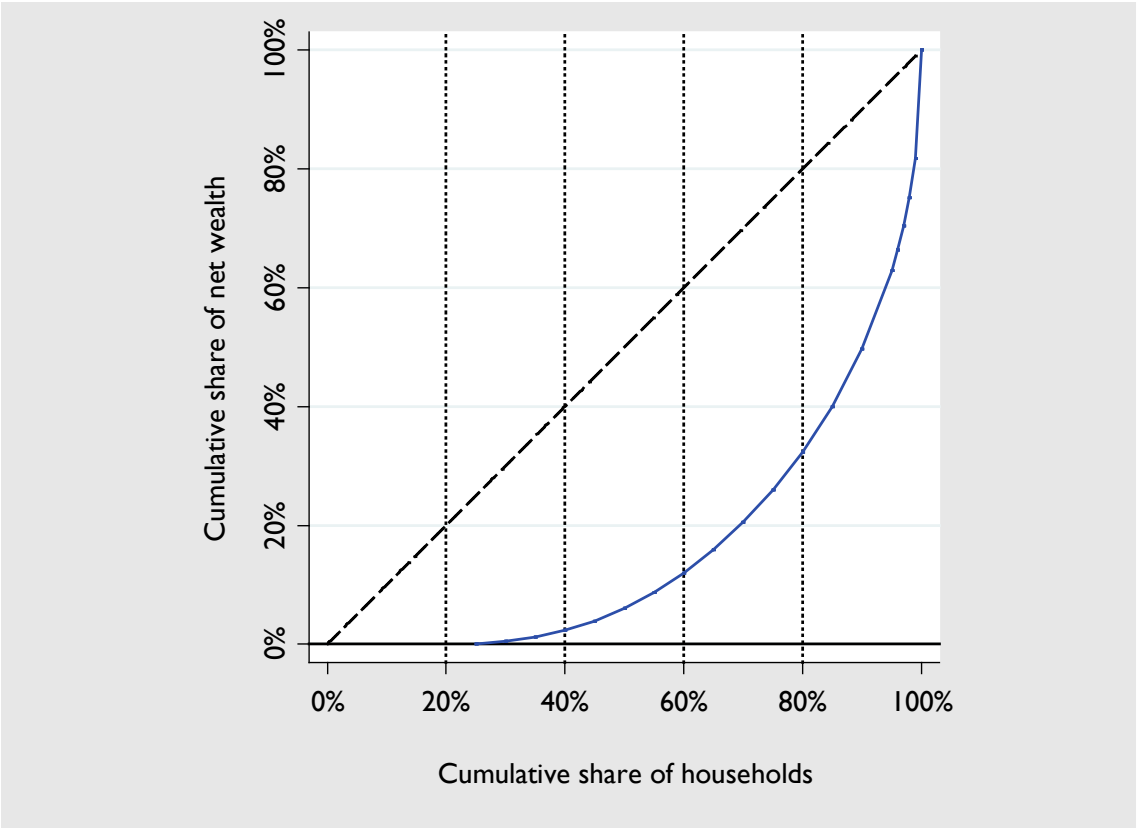
Notes: Net wealth is defined as the difference between households' total assets and total liabilities. See Annex 1 for further details on the composition of assets and liabilities. The horizontal axis shows percentiles 10, 20, …, 90 of net wealth calculated for the whole sample using household weights.

To illustrate this point, Chart 4.1 depicts the distribution of net wealth. The 10% of households at the bottom of the wealth distribution own assets that are worth at most only a bit more than the outstanding balances on their liabilities, so that their net wealth is very close to zero; 4.8% of households have negative net wealth. In contrast, the households in the 90th percentile own €506,200 worth of net wealth.

[39] See annex 1 for further details on the composition of assets and liabilities.

The large difference between the mean (illustrated by the dashed horizontal line) and the median (which is given by the height of the bar of the 50th percentile) is clearly apparent in this figure.

Chart 4.2 Fraction of net wealth held by *X* percent of households (Lorenz curve)



Notes: Net wealth is defined as the difference between households' total assets and total liabilities. See Annex 1 for further details on the composition of assets and liabilities.

Chart 4.2 further illustrates the wealth distribution, by plotting the fraction of wealth that is held by various households, the Lorenz curve. It shows that the bottom 20% of the population hold no aggregate net wealth. The top 50% of households own 94.0% of total wealth. As the slope of the curve gets steeper when moving to the right toward richer households, the wealth distribution remains uneven, with the top 20% still owning 67.6% of aggregate wealth and the top 5% of households owning 37.2% of net wealth.

4.2 NET WEALTH BY DEMOGRAPHIC GROUPS

There is also substantial heterogeneity in wealth holdings across many demographic characteristics and countries, as shown in Table 4.1. The fact that mean wealth substantially exceeds the median is preserved across most breakdowns, so that wealth is unevenly distributed even within the various subgroups.

Household wealth is substantially lower for households with one member, among other reasons because they tend to have fewer wage earners: the median wealth of single-member households of €39,600 is only a fraction of the median wealth of households with more members. For households with more than one member, wealth does not systematically rise with size.

In terms of decomposition of the aggregate net wealth by share, households with more than four members account for 7.5% of the euro area economy's net household wealth (reflecting also the small number of these households), whereas households with one, three and four members account for roughly 18% each. The largest part of total wealth, 38.9%, is owned by two-member households. These differences reflect to an important extent the frequency of households in the population (given in the last column).

Housing status is an important determinant of net wealth – among home-owners, the household main residence constitutes by far the most valuable asset (see Chapter 2), and mortgages collateralised by the household's main residence usually account for a significant proportion of the household's total debt. Owners of their household main residence without a mortgage on the household main residence have a median net wealth of €241,200, and those with a mortgage report a median figure of €171,100, while renters only have median net wealth of €9,100. Because there are fewer renters than owners, the disparity in median net wealth translates itself into an even larger disparity in wealth shares: outright owners have 69.1% of total wealth, owners with a mortgage 22.4%, and renters just 8.6%.

Net wealth is also strongly correlated with income, for instance because high earners tend to save more and consequently accumulate more wealth. There is a monotonic relationship between income and net wealth, starting with a median net wealth for households in the bottom quintile of €26,700 and reaching €295,300 for households at the top end of the income distribution. The mean figures range from €89,200 to €540,800. This is also reflected in the importance of income groups in overall net wealth: households in the bottom quintile of the income distribution account for 7.7% of the euro area's household wealth, while those in the top 20% of the income distribution own 46.8% of household wealth (compared to 67.6% for the top 20% of the net wealth distribution).

Table 4.1 Net wealth by demographic and country characteristics

	Median Net Wealth (€1,000)	Mean Net Wealth (€1,000)	Share of Total Net Wealth (%)	Share of Households (%)
Euro Area	109.2	230.8	100.0	100.0
S.E.	*(1.9)*	*(4.2)*		
Household Size				
1	39.6	134.9	18.5	31.6
2	148.2	279.4	38.9	32.1
3	135.2	246.7	17.7	16.6
4	175.4	285.4	17.5	14.1
5 and More	121.6	307.9	7.5	5.6
Housing Status				
Owner-Outright	241.2	391.3	69.1	40.7
Owner-with Mortgage	171.1	266.6	22.4	19.4
Renter or Other	9.1	49.5	8.6	39.9
Percentile of EA Income				
Less than 20	26.7	89.2	7.7	20.0
20-39	53.2	124.9	10.8	20.0
40-59	104.9	172.5	14.9	20.0
60-79	157.3	226.8	19.7	20.0
80-100	295.3	540.8	46.8	20.0
Percentile of EA Net Wealth				
Less than 20	1.2	-2.8	-0.2	20.1
20-39	27.0	29.4	2.5	19.9
40-59	109.2	111.9	9.7	20.0
60-79	230.6	235.1	20.4	20.0
80-100	506.2	780.7	67.6	20.0
Age of Reference Person				
16-34	16.1	71.3	4.9	15.7
35-44	94.5	191.3	16.2	19.6
45-54	148.3	266.6	22.9	19.9
55-64	186.6	344.4	25.5	17.1
65-74	163.9	283.6	17.8	14.5
75+	126.1	220.9	12.7	13.2
Work Status of Reference Person				
Employee	90.7	180.2	37.4	47.9
Self-Employed	269.1	585.8	22.8	9.0
Retired	152.3	252.7	34.8	31.7
Other Not Working	11.1	98.5	4.6	10.7
Education of Reference Person				
Primary or No Education	100.0	166.3	24.7	34.3
Secondary	87.7	205.1	36.7	41.3
Tertiary	179.6	363.8	38.5	24.4

Table 4.1 Net wealth by demographic and country characteristics

	Median Net Wealth (€1,000)	Mean Net Wealth (€1,000)	Share of Total Net Wealth (%)	Share of Households (%)
Country				
Belgium (2010)	206.2	338.6	5.0	3.4
S.E.	*(7.0)*	*(11.8)*		
Germany (2010)	51.4	195.2	24.3	28.7
S.E.	*(3.2)*	*(11.9)*		
Greece (2009)	101.9	147.8	1.9	3.0
S.E.	*(2.5)*	*(5.0)*		
Spain (2008)	182.7	291.4	15.6	12.3
S.E.	*(3.8)*	*(9.2)*		
France (2010)	115.8	233.4	20.4	20.2
S.E.	*(4.0)*	*(5.8)*		
Italy (2010)	173.5	275.2	20.6	17.2
S.E.	*(3.9)*	*(8.1)*		
Cyprus (2010)	266.9	670.9	0.6	0.2
S.E.	*(17.3)*	*(56.5)*		
Luxembourg (2010)	397.8	710.1	0.4	0.1
S.E.	*(17.1)*	*(58.2)*		
Malta (2010)	215.9	366.0	0.2	0.1
S.E.	*(11.1)*	*(51.8)*		
Netherlands (2009)	103.6	170.2	4.0	5.3
S.E.	*(8.1)*	*(6.2)*		
Austria (2010)	76.4	265.0	3.1	2.7
S.E.	*(11.0)*	*(47.9)*		
Portugal (2010)	75.2	152.9	1.9	2.8
S.E.	*(3.0)*	*(8.1)*		
Slovenia (2010)	100.7	148.7	0.4	0.6
S.E.	*(11.3)*	*(11.5)*		
Slovakia (2010)	61.2	79.7	0.5	1.4
S.E.	*(1.7)*	*(2.0)*		
Finland (2009)	85.8	161.5	1.3	1.8
S.E.	*(2.1)*	*(1.9)*		

Notes: This table reports statistics for household net wealth and its main components. The first two columns report median and mean values in euros; the third and fourth column show the share in total net wealth and the percentage share of various household groups in the population. Net wealth is defined as the difference between total (gross) assets and total liabilities (see Annex I for additional details on the definition of net wealth). For a description of definitions of the variables, see also HFCN (2011). Percentage shares may not sum to 100 because of rounding. See the annex of this report, as well as the document "Methodological Report of the Household Finance and Consumption Survey" for the definition of household and the household reference person.
The rows labelled as "S.E." show standard errors, which were calculated with the Rao-Wu rescaled bootstrap method using replicate weights provided by the countries (1,000 replicates; see chapter 7 of the HFCS Methodological Report for details). For a definition of the classification variables, see the notes to Table 2.1.

The correlation between household income and household wealth is not perfect, such that when households are sorted by net wealth the disparity becomes even more pronounced (see also

Charts 4.1 and 4.2 above): the bottom 20% of households have very little median or mean net wealth. Consequently, these households contribute negligibly to the total wealth. Households in the top 20%, on the other hand, own €506,200 of net wealth in the median and €780,700 in the mean, and account for more than two thirds of the euro area's household wealth.

Because the HFCS consists only of a single cross-section, it is not possible to distinguish cohort, time, and age effects. Despite this limitation, Chart 4.3 suggests a clear pattern of accumulation of net wealth across age (also reflected in Table 4.1). The profile of net wealth follows a hump-shaped pattern over age, with a peak for the households where the reference person is in between 55 and 64 years old and declining afterwards.[40] Besides the consumption smoothing motive (see Chart 5.1 below), the increasing wealth profile early in life is likely largely driven by saving for a down-payment on a house and the accumulation of a precautionary buffer of wealth. Later in life, households tend to de-cumulate part of their wealth, as they spend their savings after retirement and down-size their housing.[41]

Chart 4.3 illustrates that the composition of net wealth is primarily driven by real assets (the main component of which is owner occupied housing wealth), which also follow a pronounced hump-shaped pattern over age, as households accumulate housing until roughly the age of 60 and tend to de-cumulate it (on average) later in life.[42] A hump-shaped pattern is also present for financial assets, with a peak in the same age bracket. Liabilities, on the other hand, tend to peak much earlier, around the age of 40, when households often buy their first house, and then declines as they start paying back their mortgage.

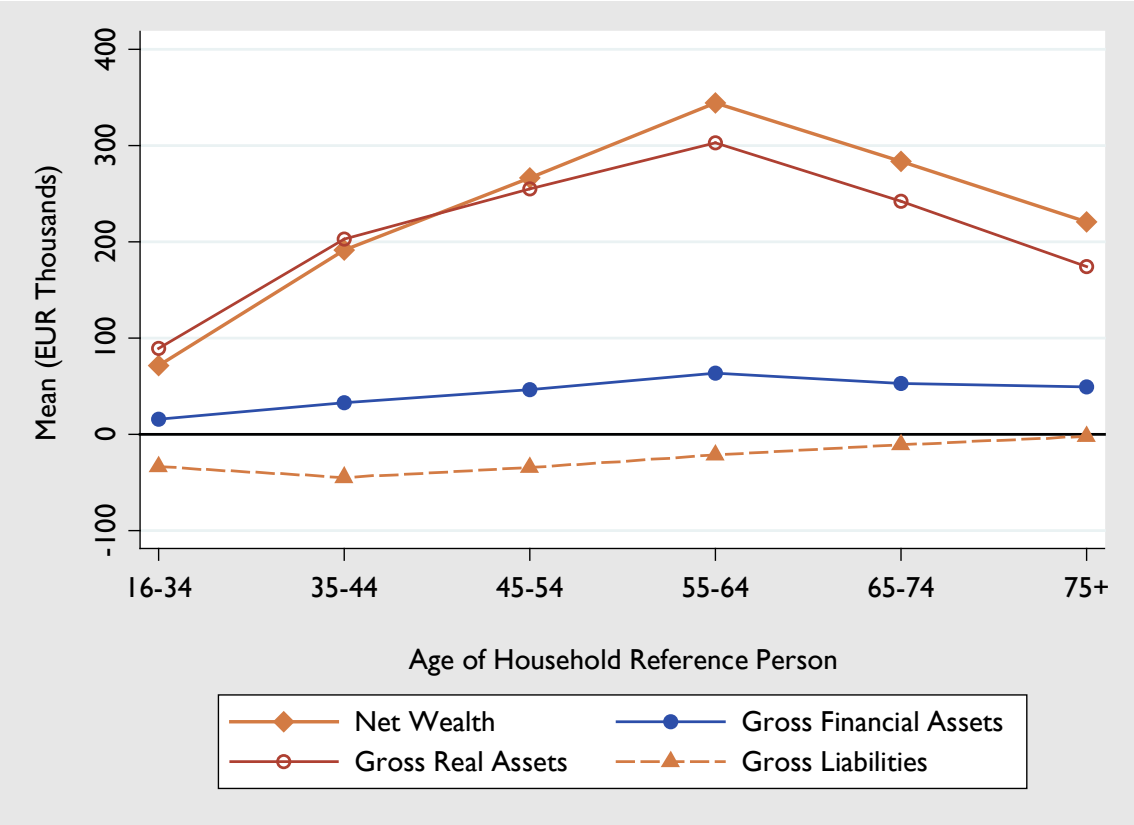
Young households under the age of 35 have a very low share of total net wealth, just 4.9%. The wealth share peaks for households in which the reference person is between the ages of 55 and 64. This group of households owns 25.5% of aggregate wealth, whereas the wealth shares of the older household groups amount to 17.8% for the age bracket 65-74, and to 12.7% for households with a reference person age 75 or older. Generally, for the older households (with reference persons between the ages of 45 and 74), the share of total net wealth exceeds their share in the population.

40 See e.g., Gourinchas and Parker (2002) and Cagetti (2003).

41 The literature has shown that often, households do not de-cumulate their wealth as fast as the baseline life-cycle theory would imply (and also change the structure of their consumption) – a stylized fact which has been labelled "the retirement consumption puzzle" – suggesting the presence of the bequest motive or of a considerable precautionary motive against health risk. See, e.g., Battistin et al. (2009), Nakajima and Telyukova (2012), and many others. The slow de-cumulation of wealth in old age is also related to the exclusion of nursing home residents in micro datasets (as is the case with the HFCS), since nursing home residents strongly dissave on average. See Ziegelmeyer (2012).

42 For some sub-populations the strength of de-cumulation of wealth late in life is weaker or non-existent.

Chart 4.3 Net wealth and its components over age



Notes: Net wealth is defined as the difference between households' total assets and total liabilities. See Annex 1 for further details on the composition of real assets, financial assets and liabilities.

The wealth breakdown by work status of the household's reference person is partly driven by a combination of income and age characteristics. The households in which the reference person is self-employed tend to earn higher income (see also Chapter 5 below) and have more wealth due to the business assets they hold for their professional activity. They are followed by households in which the reference person is retired. On the other hand, the category "Other not working" (which consists of households in which the reference person is unemployed or inactive but not retired) owns little wealth, both in absolute value and in terms of wealth share. 22.8% of total wealth is held by households in which the reference person is self-employed, while they only account for 9.0% of households. The proportion of net wealth held by retirees, 34.8%, is just above their proportion in the population, 31.7%.

Ownership of wealth rises with education. These dynamics are likely to be to a large extent driven by higher income, but possibly also by more educated households (which tend to have better access to financial markets – through higher financial literacy – and more diversified portfolios, see Chapter 2 above) making better investment decisions. The share of total net wealth of the three education groups ranges between 24.7% and 38.5%, inversely to their share in the population.

4.3 CROSS-COUNTRY VARIATION IN NET WEALTH

The country breakdowns of median and mean net wealth provided in Table 4.1 show substantial variation across the euro area members, ranging from €51,400 to €397,800 for the median and from €79,700 to €710,100 for the mean. This considerable dispersion is likely caused by a complex interplay of many factors. The main factors, including income, household composition, homeownership, leverage to buy property and house prices, are discussed here. It is important to stress, however, that the text examines only bivariate relations between net wealth and other variables, but does not investigate them in a multivariate set-up, an endeavour that is beyond the scope of the report.

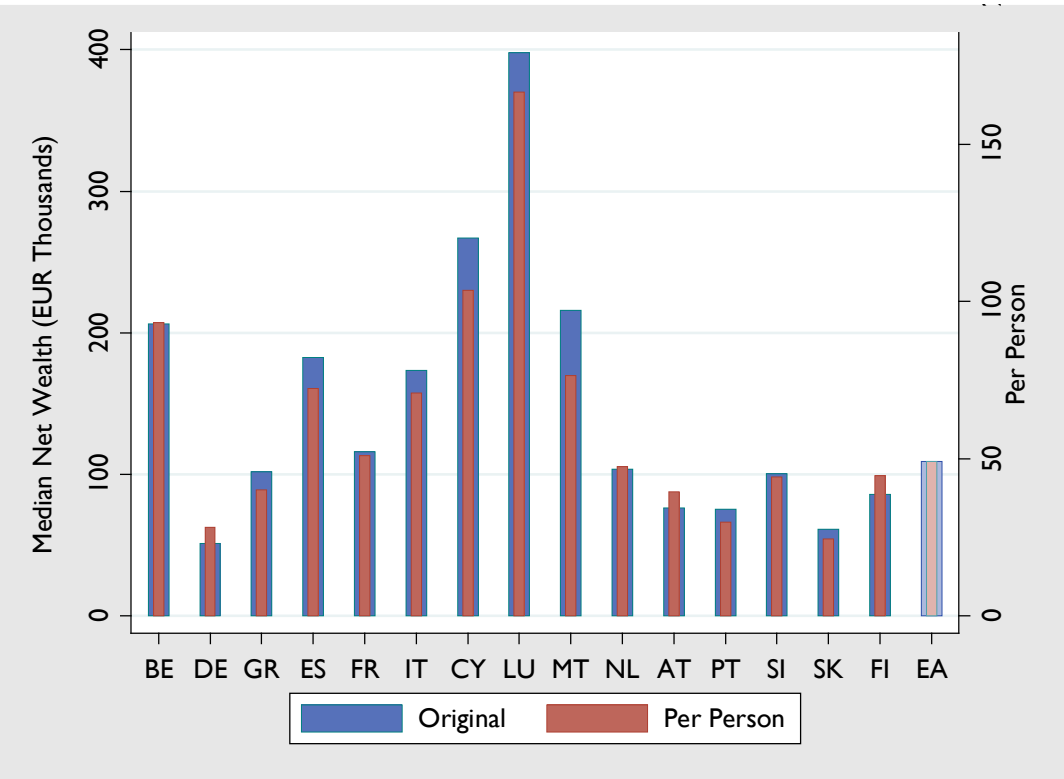
4.3.1 THE ROLE OF HOUSEHOLD COMPOSITION

As has been evident from Table 4.1, one factor that affects the distribution of household wealth across countries is differences in the demographic characteristics of households, for instance age, education or household size (see also Section 1.2). While an in-depth quantitative analysis of the effects of household structure on the wealth distribution cannot be undertaken here,[43] Chart 4.4 illustrates the size of the effect by comparing the baseline (per household) figures with per person median net wealth. Note that the scales of the two statistics differ; the baseline figures are reported on the left scale, the per-person figures on the right scale. The scales have been chosen such that they perfectly overlap for the euro area figures.

Other things being equal, larger households, and in particular households with more adults (which are more prevalent, for instance, in Cyprus, Malta or Slovakia), tend to accumulate more wealth, especially wealth related to real estate, than smaller households (which are more prevalent, for instance, in Germany, the Netherlands, Austria or Finland). Consequently, the cross-country dispersion in household wealth in the HFCS data is larger than the differences in *per person* net wealth, although the adjustment for household size contributes only marginally to explaining cross-country variation of net wealth.

[43] For such an analysis for Spain and the United States, see Bover (2010).

Chart 4.4 Median net wealth and the role of household size



Notes: This chart shows the breakdown across countries of the median value of net wealth per household and per person. The medians were calculated using household weights. The scales of the two statistics differ; they have been chosen so that they perfectly overlap for the euro area figures.

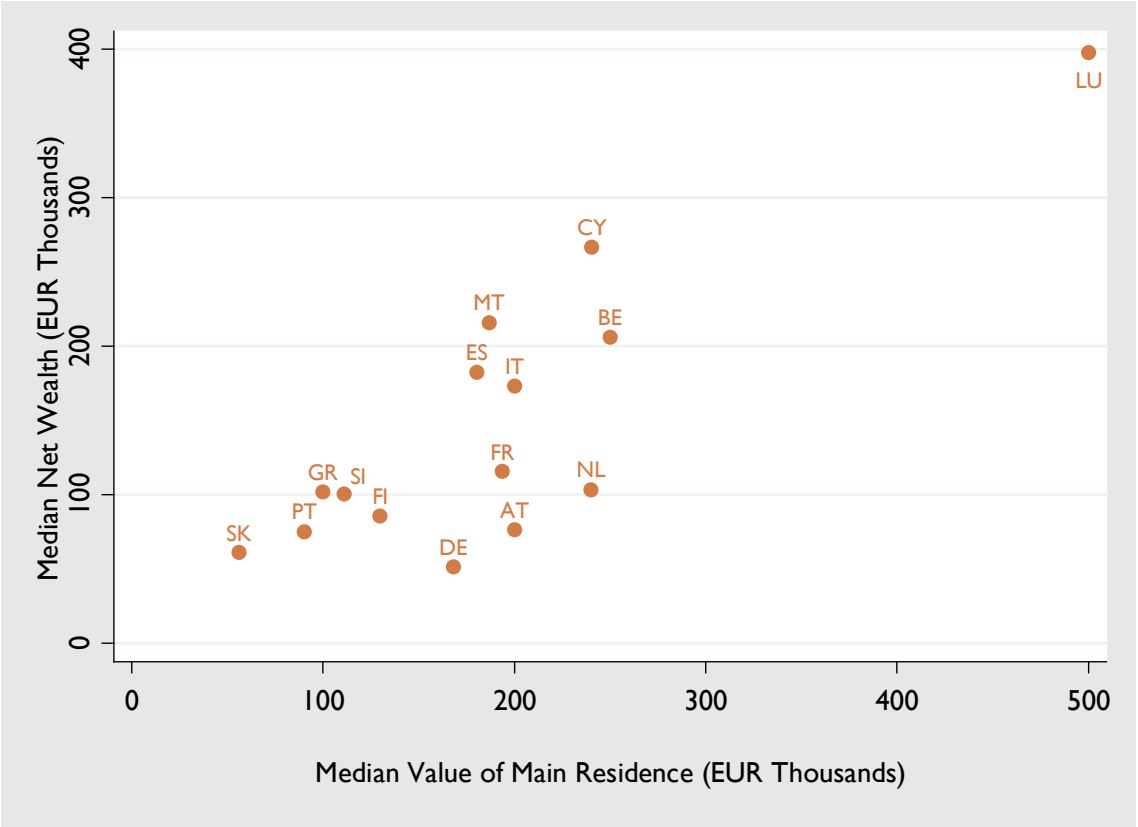
4.3.2 THE ROLE OF HOME OWNERSHIP, LEVERAGE TO BUY PROPERTY AND HOUSING PRICES

The main component of net wealth is housing wealth (see Chart 4.3 and Table 2.3). The level of mean and median household wealth in a given country is therefore affected by the extensive margin (ownership/participation) and the intensive margin (value of an asset type conditional on owning). To shed further light on this issue, Table 4.2 provides a decomposition of median net wealth between homeowners and non-homeowners. Median net wealth of homeowners in the euro area amounts to €217,600, a value that is substantially larger than the one reported for non-homeowners (€9,100). This fact is found for all countries, where the median net wealth of the homeowners ranges between €65,600 for Slovakia and €556,200 for Luxembourg. When comparing with the substantial cross-country differences in net wealth observed for all households (bottom panel of Table 4.1), it is apparent that within the groups of homeowners as well as among non-homeowners, cross-country differences are much less pronounced. This illustrates that a substantial portion of the dispersion in median net wealth across countries is due to the variation in homeownership rates (displayed in column 5 in Table 4.2). Qualitatively similar findings hold for mean net wealth shown in columns 3 and 4.

Future research has to analyse carefully the deeper causes of this relationship. Beyond participation, the value of housing also matters. Chart 4.5 illustrates the importance of the value

of the household main residence for cross-country differences in net wealth; a similar relationship holds between the values of other real estate property and net wealth.

Chart 4.5 Median net wealth and conditional median value of the household main residence



Notes: This chart shows the breakdown across countries of median value of household main residence for owners of the HMR (horizontal axis) and median net wealth (vertical axis). See Annex I for definitions of variables. The medians were calculated using household weights.

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Table 4.2 Net wealth by homeownership

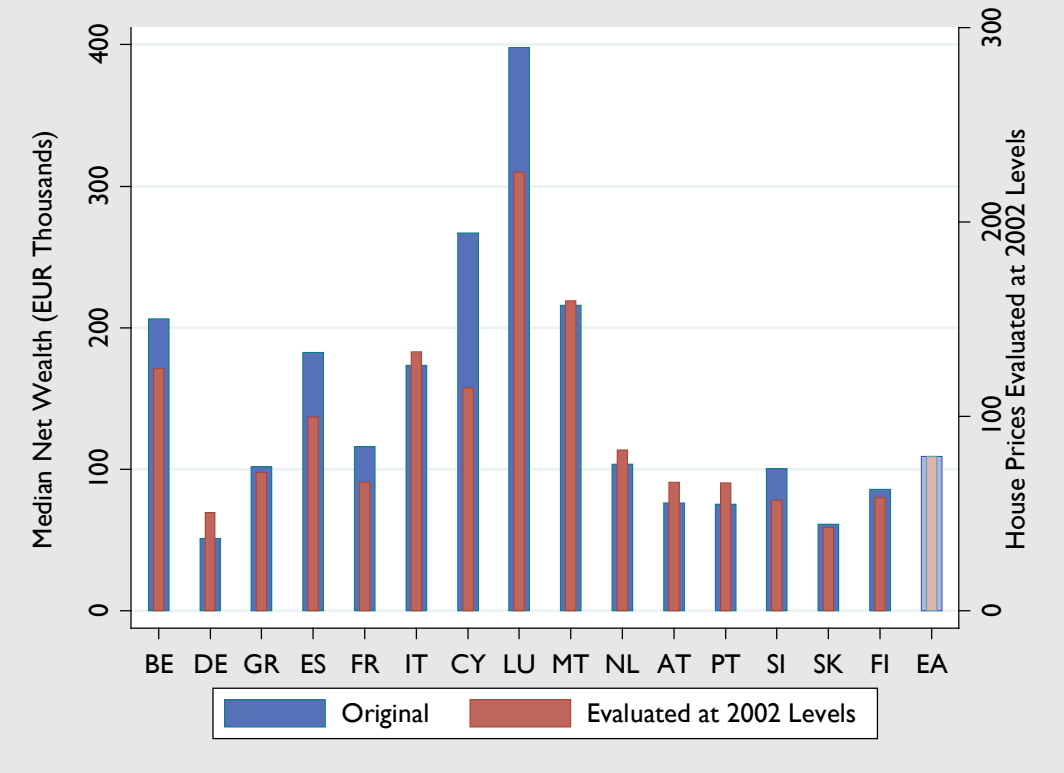
	Median (€1,000)		Mean (€1,000)		Share of Homeowners (%)
	Home-owners	Non-home-owners	Home-owners	Non-home-owners	
Euro Area	217.6	9.1	351.1	49.5	60.1
S.E.	*(2.3)*	*(0.4)*	*(6.7)*	*(2.7)*	
Country					
Belgium (2010)	304.1	7.6	454.1	73.8	69.6
S.E.	*(10.2)*	*(1.4)*	*(14.9)*	*(11.7)*	
Germany (2010)	215.5	10.3	381.2	47.7	44.2
S.E.	*(9.4)*	*(1.2)*	*(26.9)*	*(5.6)*	
Greece (2009)	136.5	5.4	190.1	36.6	72.4
S.E.	*(4.8)*	*(0.7)*	*(6.5)*	*(4.7)*	
Spain (2008)	214.3	5.1	337.9	68.9	82.7
S.E.	*(5.6)*	*(0.9)*	*(10.4)*	*(13.7)*	
France (2010)	238.4	7.8	380.6	51.5	55.3
S.E.	*(4.1)*	*(0.4)*	*(10.4)*	*(3.5)*	
Italy (2010)	250.8	10.8	380.7	43.4	68.7
S.E.	*(3.8)*	*(0.8)*	*(10.7)*	*(5.3)*	
Cyprus (2010)	349.0	16.3	829.2	150.4	76.5
S.E.	*(20.5)*	*(5.3)*	*(72.2)*	*(43.2)*	
Luxembourg (2010)	556.2	22.1	994.5	129.9	67.1
S.E.	*(19.5)*	*(4.1)*	*(85.2)*	*(21.0)*	
Malta (2010)	267.0	21.7	448.2	79.1	77.7
S.E.	*(7.4)*	*(4.4)*	*(67.0)*	*(17.5)*	
Netherlands (2009)	214.8	19.3	261.5	48.8	57.1
S.E.	*(9.1)*	*(5.3)*	*(9.4)*	*(6.5)*	
Austria (2010)	241.2	11.6	487.4	62.0	47.7
S.E.	*(9.6)*	*(0.9)*	*(101.4)*	*(14.9)*	
Portugal (2010)	106.1	4.5	199.0	37.5	71.5
S.E.	*(3.7)*	*(0.6)*	*(10.7)*	*(5.2)*	
Slovenia (2010)	134.0	3.5	177.1	21.0	81.8
S.E.	*(9.4)*	*(1.6)*	*(12.8)*	*(9.1)*	
Slovakia (2010)	65.6	2.2	87.4	10.9	89.9
S.E.	*(1.5)*	*(0.7)*	*(2.3)*	*(2.2)*	
Finland (2009)	153.1	2.8	226.3	16.4	69.2
S.E.	*(1.8)*	*(0.3)*	*(2.7)*	*(1.1)*	

Notes: This table reports statistics for household net wealth. The first four columns report median and mean values in euros; the fifth column shows the percentage of homeowners in the population. Columns 1 and 2 show medians; columns 3 and 4 show means. Net wealth is defined as the difference between total (gross) assets and total liabilities (see Annex I for additional details on the definition of net wealth). For a description of definitions of the variables, see also HFCN (2011). Percentage shares may not sum to 100 because of rounding.
The rows labelled as "S.E." show standard errors, which were calculated with the Rao-Wu rescaled bootstrap method using replicate weights provided by the countries (1,000 replicates; see chapter 7 of the HFCS Methodological Report for details).

An important factor affecting the value of real estate is, in turn, the dynamics of house prices, which varied substantially over the last two decades. House price dynamics can have a large impact on the distribution of wealth within a country. Houses tend to be domestically-traded goods, i.e. they are mainly bought (and sold in the second-hand market) by residents of a country. Therefore, when house prices and rents rise (or fall), there is a shift in the relative levels of wealth taking place inside the country from non-homeowners to homeowners and,

generally, from the younger generation (that is still saving to buy a house) to the older generation. Home ownership rates, but also other factors such as public housing and rent controls, may play a role in this respect. In addition, the amount of leverage taken by households to buy property may trigger significant shifts in the levels and distribution of household net wealth in times of substantial growth or decline in housing prices.

Chart 4.6 Median net wealth evaluated at house price levels of 2002



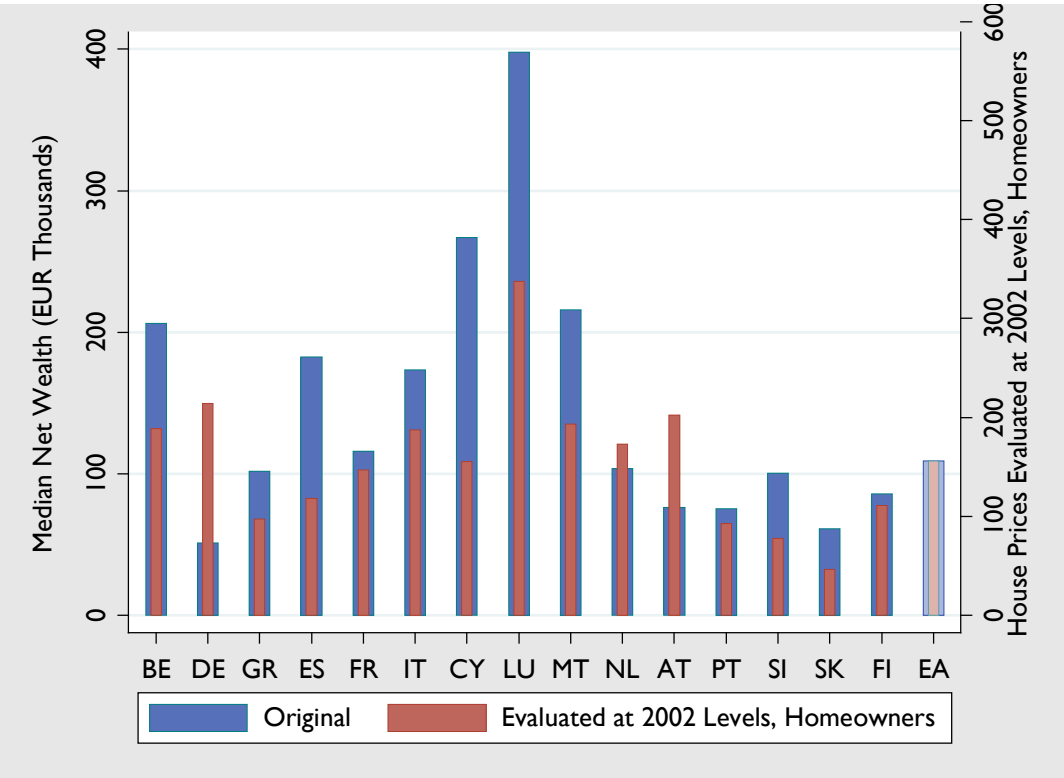
Notes: This chart shows the breakdown across countries of the median value of net wealth per household for baseline figures and for figures evaluated at (country-specific) house price levels of 2002. The medians were calculated using household weights. The scales of the two statistics differ; they have been chosen so that they perfectly overlap for the euro area figures.
Sources: HFCS, ECB, National Central Banks

To illustrate the role of recent house price developments, chart 4.6 uses a simple, indicative back-of-the-envelope calculation to compare the HFCS median net wealth numbers with statistics for which net wealth was evaluated at the level of house prices in 2002.[44] The chart implies that countries in which house prices grew more strongly than the euro area average – in particular Belgium, Cyprus, Spain, France and Luxembourg – record sizeable declines in the

[44] For the counterfactual statistics, real estate values were deflated by national house price developments between 2002 and the survey period. As in Chart 4.5, note that axes have different scales but the euro area statistics overlay each other. The house price indexes used are taken from the ECB Statistical Data Warehouse and the national central banks. See Moore and Palumbo (2009) for a related detailed work using the US Survey of Consumer Finances. Clearly, the adjustment here is only illustrative to the first order of the quantitative effect of house price dynamics between 2002 and the survey period. The calculation is in no way a substitute for a detailed micro-simulation model, or for a structural model that takes into account various behavioural responses of households to changes in house prices.

counterfactual median net wealth, while the opposite is true for countries in which house prices grew moderately (such as Germany, the Netherlands, Austria and Portugal).

Chart 4.7 Median net wealth evaluated at house price levels of 2002; homeowners



Notes: This chart shows the breakdown across countries of the median value of net wealth per household for the population and for homeowners. The chart compares the baseline figures and figures evaluated at (country-specific) house price levels of 2002. The medians were calculated using household weights. The scales of the two statistics differ; they have been chosen so that they perfectly overlap for the euro area figures.
Sources: HFCS, ECB, National Central Banks

In the two countries with a homeownership rate below 50%, namely Germany and Austria (see Table 3.1 above), the *"median"* household does not own the main residence and has substantially lower wealth than the median household in countries where the homeownership rate is above 50%, with corresponding effects on the cross-country comparisons. Within these two countries, the comparison between median and mean household wealth is strongly affected by the fact that the median household does not own the main residence, whereas mean wealth reflects home ownership among the other households in the country, thereby leading to a sizeable gap between median and mean net wealth figures. The impact of homeownership combined with the effect of the counterfactual house price levels of 2002 of Chart 4.6, is shown in Chart 4.7. Compared with Chart 4.6, it can be seen that the role of home-ownership is sizeable, in particular in Germany and Austria, whose counterfactual median net wealth in Chart 4.7 is among the largest in the euro area, exceeded only by Luxembourg's. For Cyprus and Malta on the other hand, the counterfactual net wealth lies close to that in the euro area, which

stands in a sharp contrast to the baseline statistics on median net wealth reported in the bottom panel of Table 4.1 above.

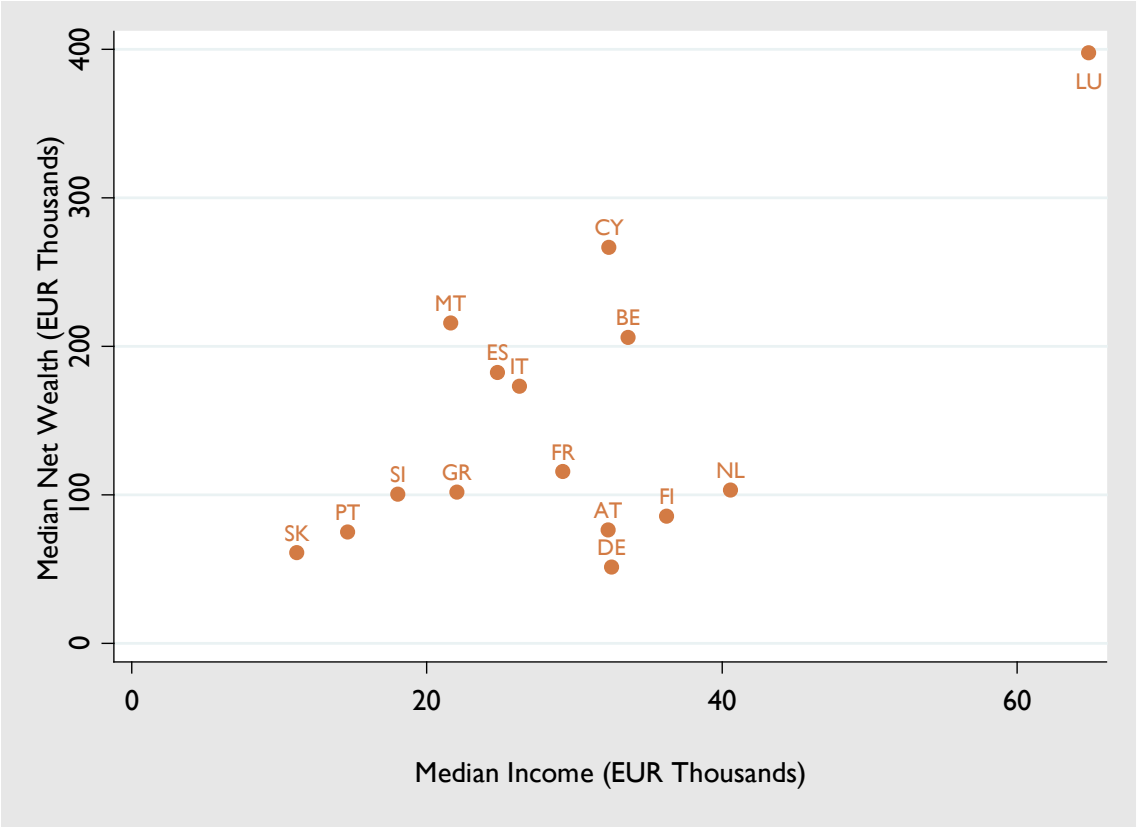
Moving on from these bi-variate explanations, multivariate decompositions, after taking into account the influence of demographics, suggest a key role of differences in home ownership and other real estate for a large part of the observed variation in net wealth across euro area countries. This role is likely to have been strengthened by differences in house price dynamics before the last recession, and differences in intergenerational transfers across countries (see Mathä et al., 2013).

4.3.3 THE ROLE OF INCOME

Because household wealth is an accumulation of household saving over time (including inheritances, i.e. savings of previous generations), it should be related to income. This is indeed the case, as Chart 4.8 illustrates. Overall, median wealth and median income across countries are positively related, so that countries with higher income tend to have higher net wealth, although the scatter plot also suggests that additional factors beyond income play a role in explaining wealth.[45]

[45] See Chapter 5 below for a detailed description of the household income distribution. Note that wealth is a function of accumulated past saved income. However, the survey only collects current income. To the extent that current income is a good proxy of past income, one should expect the positive relationship between current income and wealth. Beyond income, there are several other factors that affect household saving and as such can affect the accumulation of wealth, such as the level of interest rates, expected income growth or corporate saving.

Chart 4.8 Median net wealth and median household gross income



Notes: This chart shows the breakdown across countries of median household gross income (horizontal axis) and median net wealth (vertical axis). See Annex I for definitions of variables. The medians were calculated using household weights.

4.3.4 THE ROLE OF OTHER FACTORS

While household structure, home ownership and house prices, as well as income, likely play an important role in explaining the levels and distribution of household net wealth, the role of other factors – such as the provision of public housing, the extent of public pensions, transfers and inheritances – should not be discounted, although more work is needed to rigorously investigate their contributions.

For example, the provision of public housing is quite important in Germany, and contributes to the lower homeownership rates in both countries. Eurosystem (2009) discusses the relevance of the rented housing markets in selected countries and points out that the low homeownership rate in Germany is in part due to the construction of social housing after World War II and in part due to taxation of owner-occupied housing and the lack of tax deductibility of interest payments on mortgages.[46] The German re-unification and the depressed values of housing in East Germany also contribute to the relatively low value of mean net wealth (and to a lesser extent of median net wealth).

[46] See Eurosystem (2009), p. 36, for an overview of housing market-related taxation across various euro area member countries.

Another factor to be considered relates to (public) pension wealth, which is not included in the definition of household wealth adopted for this report; see Box 1.2 and section 1.3.1 above. Differences in expected pensions are likely to trigger substantial adjustments in the accumulation of other wealth, with larger expected pensions reducing the need to save for old-age provision. In a similar vein, differences in social security systems and perceived background risks can also affect the incentives for precautionary saving.[47] All other things being equal, countries with greater use of pay-as-you-go pensions will have lower wealth than countries that rely on the types of account-based plans measured in the HFCS.

Additional factors at play include cross-country differences in the extent of inter-generational transfers/inheritances (which can in turn affect the level of homeownership),[48] credit market imperfections,[49] differences in taxation of housing and cultural differences (such as the extent to which the family can be relied on as insurance against adverse shocks, differences in risk tolerance or history of entrepreneurship).

Also, it is important to point out that the report focuses on *household* wealth and therefore does not account for a possible substitutability between public wealth and private wealth.[50]

Finally, as pointed out in Box 1.1, it is important to keep methodological issues in mind, such as the fact that the reference years, survey response properties, some approaches to data processing and other survey characteristics can vary somewhat across countries. It is important to stress that households report self-assessed prices, and that the wealth of a household is determined by the assets and liabilities that it reports. If a survey respondent is more likely to remember and therefore report real estate property than some financial assets, cross-country differences in net wealth might be affected by the composition of household wealth – countries with a larger share of real assets will report higher wealth than countries where assets are predominantly financial. It is also likely that households' estimates during periods of rapid price appreciation or decline may exhibit some biases.[51]

As mentioned, it should be kept in mind that the survey focuses on one particular type of wealth, i.e. wealth of private households. This is an important part but certainly not an encompassing indicator for the overall economic wealth of a country. Here, other types of wealth, like net positions of the corporate sector, the quality of the public infrastructure or net foreign asset positions, also have to be taken into account. Indeed, private wealth formation can be the endogenous response in an economic environment characterised by higher general macroeconomic and political uncertainty and a low level of public good provision. Careful analysis is needed in the future to understand the underlying mechanisms fully. The survey will provide a fertile ground for future analyses in that regard.

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47 For example, Cowell et al. (2012) document that holdings of household wealth in countries with generous welfare systems tend to be lower.

48 High fractions of households receiving a substantial inheritance – around 40% – were recorded in France and Cyprus.

49 For example, inheritances may be more common in countries with less developed mortgage markets.

50 The report makes the usual implicit assumption that public wealth is not substituted by private wealth, i.e. countries with a relatively smaller public sector do not necessarily register larger private wealth.

51 In spite of these issues with self-reported asset prices, other methods to evaluate assets might be error-prone to a similar extent, especially for assets, such as real estate, which are heterogeneous and are traded only infrequently.

5 INCOME

Income is an important factor that shapes various aspects of household behaviour. According to the life-cycle/permanent income hypothesis, personal consumption depends on the discounted sum of expected future income streams. Furthermore, wealth accumulation is determined by household saving patterns, which in turn depends on income: when income is temporarily high and expected to decline in the future, households increase their saving, thereby contributing to the accumulation of wealth.

While several cross-country comparable surveys — most notably the EU Statistics on Income and Living Conditions (EU-SILC) — focus on income,[52] the HFCS is unique in providing both income and wealth for a large number of countries in a comparable fashion. It provides information on *gross income* (i.e. including any social contributions and income taxes) at the household level and a number of its components. In most cases, the reference period for income is the calendar year prior to the survey year or the 12 months preceding the survey.[53]

Given the HFCS focus on household balance sheets, this chapter primarily concentrates on total income and income from assets (rather than labour income).[54] It aims at providing an overview of income distribution in the euro area, paying specific attention to the link between income and net wealth at the household level. First, it documents the distribution of total gross income according to socio-demographic and country breakdowns. Second, the different sources of income from assets are analysed. Third, it compares income and wealth distributions and inequalities.

5.1 INCOME DISTRIBUTION

Table 5.1 reports the median values of total income. The median annual gross household income of euro area households, counting all income sources, amounts to €28,600; the mean is €37,800, exceeding the median by more than 30%.

[52] Additional cross-country comparable information on income is available in the Labour Force Survey (LFS), or the Structure of Earnings Survey (SES). For details, see for instance Brandolini, Rosolia and Torrini (2011).

[53] See the companion "Methodological Report of the Household Finance and Consumption Survey," in particular its section 3.3.1 for more information. It should be borne in mind in cross-country analysis that income information partially refers to different years across countries (mostly due to differences in fieldwork periods).

[54] Our measure of income does not include unrealised capital gains.

Table 5.1 Household income by demographic and country characteristics

	Median (€1,000)	Mean (€1,000)	Share of total income (%)	Share of Households (%)
Euro Area	28.6	37.8	100.0	100.0
S.E.	*(0.3)*	*(0.3)*		
Household Size				
1	17.7	23.1	19.3	31.6
2	31.4	41.0	34.8	32.1
3	36.0	44.4	19.4	16.6
4	41.2	50.9	19.0	14.1
5 and More	41.4	50.4	7.5	5.6
Housing Status				
Owner-Outright	28.4	38.9	41.9	40.7
Owner-with Mortgage	43.3	52.6	26.9	19.4
Renter or Other	23.1	29.6	31.2	39.9
Percentile of EA Income				
Less than 20	10.0	9.2	4.9	20.0
20-39	19.0	19.0	10.1	20.0
40-59	28.6	28.9	15.2	20.0
60-79	42.5	42.9	22.7	20.0
80-100	72.3	89.3	47.2	20.0
Percentile of EA Net Wealth				
Less than 20	17.4	21.7	11.5	20.1
20-39	25.4	30.1	15.9	19.9
40-59	27.5	33.2	17.6	20.0
60-79	33.2	39.8	21.0	20.0
80-100	50.0	64.4	34.0	20.0
Age of Reference Person				
16-34	24.9	29.7	12.4	15.7
35-44	34.3	42.3	21.9	19.6
45-54	37.0	47.3	24.8	19.9
55-64	34.0	45.1	20.3	17.1
65-74	24.2	31.5	12.0	14.5
75+	18.1	24.3	8.5	13.2
Work Status of Reference Person				
Employee	35.9	43.3	54.8	47.9
Self-Employed	41.2	60.3	14.3	9.0
Retired	22.4	29.4	24.7	31.7
Other Not Working	13.7	19.1	5.4	10.7
Education of Reference Person				
Primary or No Education	19.5	24.8	22.4	34.3
Secondary	30.2	37.1	40.5	41.3
Tertiary	45.2	57.3	37.0	24.4

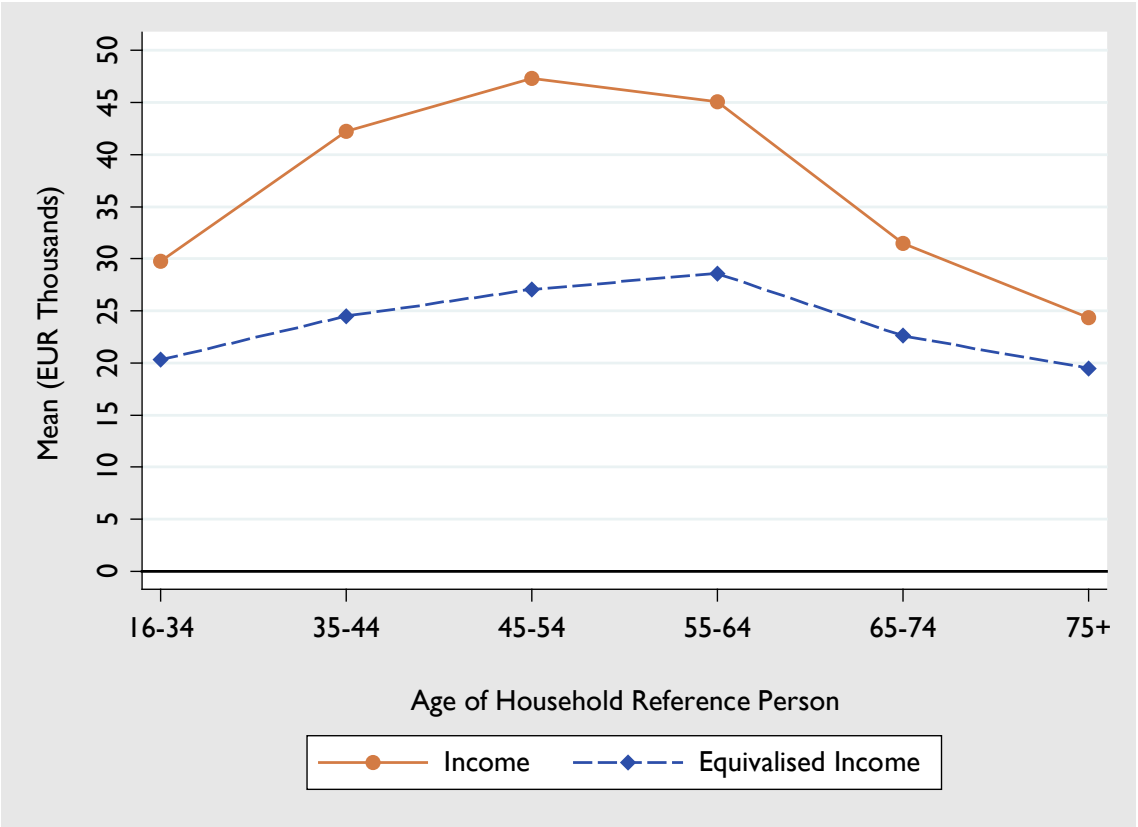
Table 5.1 Household income by demographic and country characteristics

	Median (€1,000)	Mean (€1,000)	Share of total income (%)	Share of Households (%)
Country				
Belgium (2010)	33.7	49.5	4.4	3.4
S.E.	*(0.7)*	*(1.9)*		
Germany (2010)	32.5	43.5	33.0	28.7
S.E.	*(0.7)*	*(0.7)*		
Greece (2009)	22.0	27.7	2.2	3.0
S.E.	*(0.4)*	*(0.6)*		
Spain (2008)	24.8	31.3	10.2	12.3
S.E.	*(0.5)*	*(0.8)*		
France (2010)	29.2	36.9	19.7	20.2
S.E.	*(0.3)*	*(0.3)*		
Italy (2010)	26.3	34.3	15.6	17.2
S.E.	*(0.3)*	*(0.5)*		
Cyprus (2010)	32.3	43.3	0.3	0.2
S.E.	*(0.8)*	*(1.8)*		
Luxembourg (2010)	64.8	83.7	0.3	0.1
S.E.	*(1.8)*	*(2.3)*		
Malta (2010)	21.6	26.4	0.1	0.1
S.E.	*(0.6)*	*(0.6)*		
Netherlands (2009)	40.6	45.8	6.5	5.3
S.E.	*(1.5)*	*(1.0)*		
Austria (2010)	32.3	43.9	3.2	2.7
S.E.	*(1.2)*	*(3.2)*		
Portugal (2010)	14.6	20.3	1.5	2.8
S.E.	*(0.3)*	*(0.5)*		
Slovenia (2010)	18.0	22.3	0.3	0.6
S.E.	*(1.1)*	*(1.0)*		
Slovakia (2010)	11.2	13.5	0.5	1.4
S.E.	*(0.2)*	*(0.3)*		
Finland (2009)	36.3	45.1	2.2	1.8
S.E.	*(0.3)*	*(0.1)*		

Notes: This table reports statistics on household gross income. The first two columns report median and mean values in euros, the last column reports the percentage share of various household groups in the total. For the definition of household income, see the Annex.
The income reference year is 2007 (Spain), 2010 (Italy), 2009 (Finland, Luxembourg, Netherlands, Portugal). For Malta and Slovakia the income reference period is the last 12 months preceding the survey (i.e. respectively Q4/2009 – Q1/2010 and 9/2009 – 10/2009). Thus, it should be borne in mind in cross country analysis that income information refers to different years across country (mostly due to differences in fieldwork periods).
Percentage shares may not sum to 100 because of rounding. See the document "Methodological Report of the Household Finance and Consumption Survey" for the definition of household and the household reference person.
For a definition of the classification variables, see Table 2.1. For a description of the definitions of the variables, see also the document HFCN (2011).
The rows labelled as "S.E." show standard errors, which were calculated with the Rao-Wu rescaled bootstrap method using replicate weights provided by the countries (1,000 replicates; see chapter 7 of the HFCS Methodological Report for details).

The key trends in heterogeneity across the various subpopulations tend to qualitatively mirror those for net wealth reported in Chapter 4 above – which is in line with the fact that income is strongly correlated with net wealth, as shown in Table 5.1. Larger households tend to have higher household income. Also, housing status depends crucially on family income, as households with high income can, for instance, get mortgages and buy real estate more easily. Households that own their main residence and have a corresponding mortgage earn a median income of €43,300, more than renters (€23,100), and more than households that own their main residence outright (€28,400). The difference between outright owners and owners with a mortgage is partially due to age effects: Older households are more likely to have paid their mortgage and be outright owners (see Chart 4.3 in Chapter 4). However, especially if they are over the age of 65, they tend to have lower income (see Chart 5.1).

Chart 5.1 Mean gross household income and equivalised income over age



Notes: See the notes to Table 5.1 for the composition of gross income. Equivalised income is constructed by dividing total household income by the OECD equivalence scale, which takes a value of 1 for the household reference person, of 0.5 for each additional adult member and of 0.3 for each child under 14.

There are pronounced differences in income when comparing households of different education levels: the median gross income is more than twice as high in families where the reference person has tertiary education compared to households where the reference person has only primary or no completed education. The cross-country heterogeneity shows the largest incomes in Luxembourg and the lowest incomes in Slovakia.

Chart 5.1 shows the age pattern of income and equivalised income, which takes into account household size and composition.[55] The gross (non-equivalised) income is quite strongly hump-shaped, and reflects the age pattern and the dynamics of household composition: income increases until age 50 and declines later in life. Equivalised income, in contrast, is considerably more stable, due to changes in the size of households with age.

5.2 INCOME FROM ASSETS

Table 5.2 provides more detail, by reporting how many households receive income from assets, i.e. gross rental income from real estate property (namely income received from renting a property or land after deducting costs such as *mortgage interest repayments*, minor repairs, maintenance, insurance and other charges) and income from financial investments (dividends and interest payments less expenses incurred).[56] Income from financial investments is substantially more prevalent, as it is earned by 56.5% of euro area households. Rental income from real estate property, in contrast, is less widespread, being received by only 8.8% of households. Both income types are more prevalent for high-income households: only 2.6% of households in the lowest income quintile earn rental income, and 34.7% earn income from financial investments, compared with 20.4% and 72.3% of households in the highest income quintile, respectively.

Table 5.2 furthermore shows that both income types are linked to the wealth distribution in a very similar fashion as the dependence on income, and also follow an age pattern, whereby the prevalence of both income types increases with the age of the reference person until the age bracket 65-74, after which it declines.

[55] Total household income is divided by the OECD equivalence scale, which takes a value of 1 for the household reference person, 0.5 for each additional member aged 14 and older, and 0.3 for each child under 14.

[56] Imputed rent is not included in income from assets.

Table 5.2 Participation and share of rental income and income from financial investments (%)

	Share of Population Earning Category of Income (%)		Share of Income Provided by Each Component (%, Conditional on Participation)	
	Rental Income from Real Estate Property	Income from Financial Investments	Rental Income from Real Estate Property	Income from Financial Investments
Euro Area	8.8	56.5	11.5	0.8
S.E.	*(0.3)*	*(0.6)*	*(0.5)*	*(0.0)*
Household Size				
1	7.1	54.3	14.6	1.2
2	11.2	60.2	11.9	1.1
3	8.1	54.6	10.8	0.6
4	8.5	57.0	8.4	0.5
5 and More	7.1	52.2	8.7	0.4
Housing Status				
Owner-Outright	13.0	64.8	12.3	1.2
Owner-with Mortgage	11.1	55.1	9.7	0.6
Renter or Other	3.4	48.7	11.2	0.6
Percentile of EA Income				
Less than 20	2.6	34.7	22.0	0.9
20-39	3.7	51.8	17.1	0.7
40-59	6.4	59.4	14.8	0.8
60-79	11.0	64.3	11.8	0.8
80-100	20.4	72.3	9.0	1.1
Percentile of EA Net				
Less than 20	0.9	31.9	14.6	0.2
20-39	2.2	52.1	10.3	0.6
40-59	5.3	53.7	8.1	0.8
60-79	8.5	66.9	10.7	0.9
80-100	27.0	78.1	12.3	2.0
Age of Reference Person				
16-34	2.8	50.3	9.8	0.5
35-44	6.7	54.2	8.6	0.5
45-54	9.8	55.7	9.7	0.6
55-64	11.8	60.7	11.1	1.2
65-74	12.7	59.1	15.3	1.3
75+	9.2	60.3	15.3	1.7
Work Status of Reference				
Employee	6.9	57.0	8.5	0.6
Self-Employed	17.3	60.9	12.0	1.0
Retired	11.2	62.5	14.7	1.4
Other Not Working	3.2	35.3	21.4	1.3
Education of Reference Person				
Primary or No Education	5.3	52.7	14.0	0.7
Secondary	8.5	55.2	11.8	0.8
Tertiary	14.1	64.2	10.4	1.2

Table 5.2 Participation and share of rental income and income from financial investments (%)

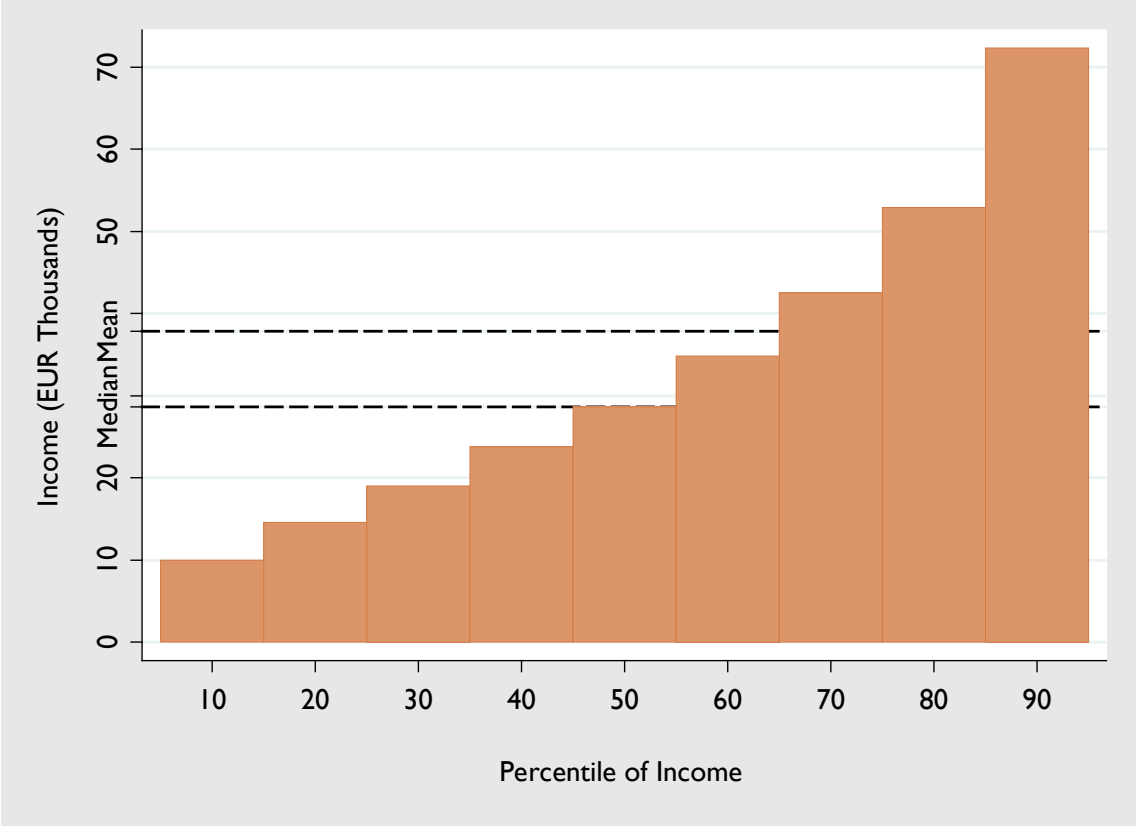
	Share of Population Earning Category of Income (%)		Share of Income Provided by Each Component (%, Conditional on Participation)	
	Rental Income from Real Estate Property	Income from Financial Investments	Rental Income from Real Estate Property	Income from Financial Investments
Country				
Belgium (2010)	7.5	39.7	13.5	1.3
S.E.	*(0.6)*	*(1.2)*	*(1.4)*	*(0.1)*
Germany (2010)	13.3	41.6	11.5	1.1
S.E.	*(0.8)*	*(1.5)*	*(0.9)*	*(0.1)*
Greece (2009)	8.4	8.1	14.2	1.5
S.E.	*(0.7)*	*(1.0)*	*(1.6)*	*(0.4)*
Spain (2008)	5.1	32.9	15.8	1.1
S.E.	*(0.5)*	*(1.1)*	*(1.4)*	*(0.1)*
France (2010)	12.2	90.8	9.8	1.6
S.E.	*(0.4)*	*(0.4)*	*(0.4)*	*(0.1)*
Italy (2010)	4.8	82.5	14.9	0.3
S.E.	*(0.3)*	*(0.6)*	*(1.1)*	*(0.0)*
Cyprus (2010)	13.0	24.9	13.0	4.6
S.E.	*(1.2)*	*(1.6)*	*(1.6)*	*(0.6)*
Luxembourg (2010)	13.3	45.2	9.6	0.5
S.E.	*(1.2)*	*(1.9)*	*(1.0)*	*(0.1)*
Malta (2010)	6.6	96.9	7.8	4.1
S.E.	*(0.8)*	*(0.6)*	*(2.1)*	*(0.6)*
Netherlands (2009)	1.1	36.7	N	2.5
S.E.	*(0.3)*	*(2.0)*		*(0.3)*
Austria (2010)	4.8	73.9	7.9	0.6
S.E.	*(0.6)*	*(1.6)*	*(3.5)*	*(0.0)*
Portugal (2010)	4.8	18.7	13.9	1.5
S.E.	*(0.4)*	*(1.1)*	*(1.4)*	*(0.2)*
Slovenia (2010)	2.6	44.5	N	0.3
S.E.	*(0.8)*	*(3.0)*		*(0.1)*
Slovakia (2010)	1.9	2.9	10.2	1.1
S.E.	*(0.4)*	*(0.5)*	*(2.9)*	*(0.4)*
Finland (2009)	7.6	75.5	6.1	0.2
S.E.	*(0.3)*	*(0.5)*	*(0.3)*	*(0.0)*

Notes: For a definition of the classification variables, see Table 2.1. For a description of the definitions of the variables, see also the document HFCN (2011).
The rows labelled as "S.E." show standard errors, which were calculated with the Rao-Wu rescaled bootstrap method using replicate weights provided by the countries (1,000 replicates; see chapter 7 of the HFCS Methodological Report for details).

Concerning work status, the percentage of households earning income from assets is higher for the self-employed and the retired than for any other group. For instance, 17.3% of the self-employed earn rental income from real estate property compared with 6.9% of employees. The share of families earning income from assets varies significantly across countries. The relevance

of rental income from real estate property is closely related to the ownership of real estate property other than the household's main residence. Therefore, countries with a low ownership of other real estate property, such as the Netherlands or Slovakia, are also found to have fewer households reporting rental income from real estate property. The cross-country heterogeneity with regard to income for financial investments is even larger, ranging from 2.9% in Slovakia to 90.8% in France and 96.9% in Malta. These differences are partially due to the ownership rates of various financial assets (for instance, Slovakia and Greece have a relatively low share of households owning a savings account), as well as whether or not sight accounts are interest bearing. Nevertheless, a large fraction of the variation in the prevalence of income from financial investments remains open for further research.

Chart 5.2 Gross annual household income by percentile (EUR thousands)



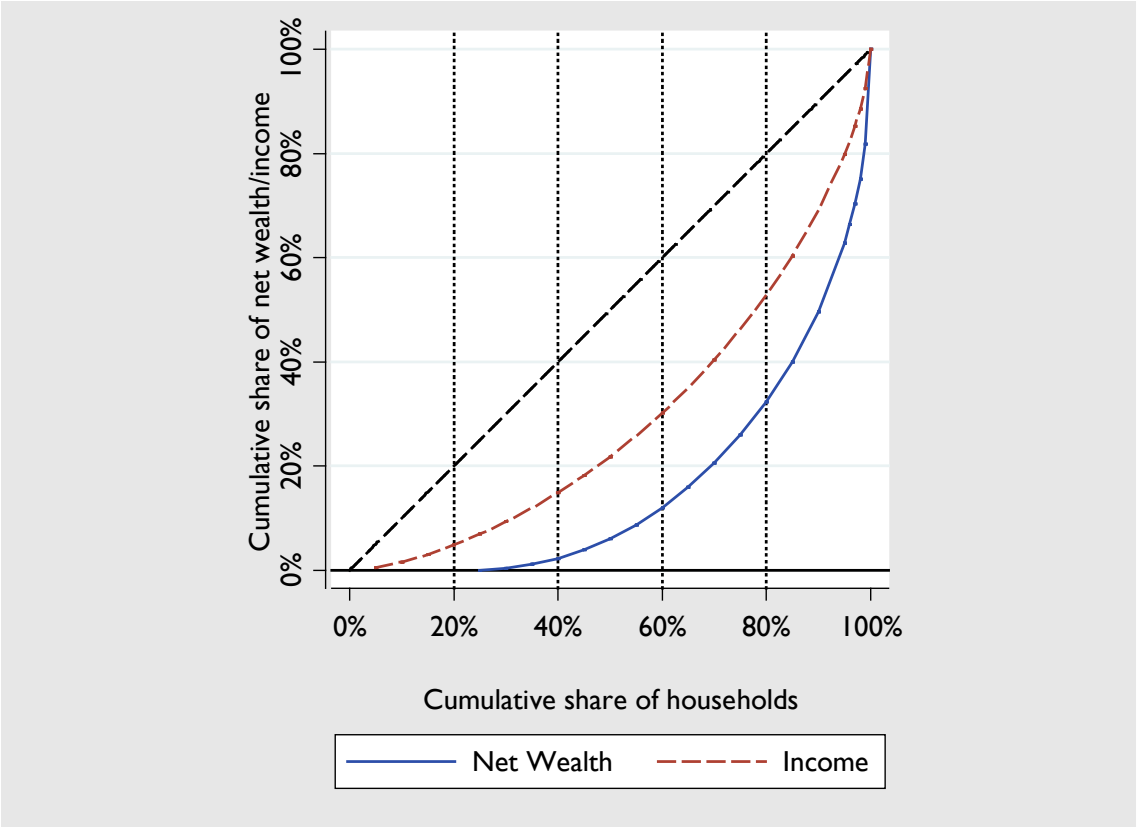
Notes: The horizontal axis shows percentiles 10, 20, … , 90 of gross income. See the notes to Table 5.1 for the composition of gross income. The percentiles were calculated for the whole sample using household weights.

5.3 THE DISTRIBUTION OF INCOME AND WEALTH

Due to its coverage of both income and wealth, the HFCS allows investigation into the relationship between income and wealth distributions in the euro area. Chart 5.2 plots the distribution of income in the same way as Chart 4.1 above reported the distribution of net wealth.

While mean net wealth in Chart 2.1 was found to be slightly larger than the seventh decile of net wealth distribution, Chart 5.2 shows that mean income is well below the seventh decile of the income distribution. This illustrates that net wealth is more unequally distributed and more concentrated in the top of the distribution than income.

Chart 5.3 Fraction of net wealth/income held/earned by *X* percent of household (Lorenz curve)



Notes: Net wealth is defined as the difference between households' total assets and total liabilities. See Annex 1 for further details on the composition of assets and liabilities. See the notes to Table 5.1 for the composition of gross income.
The horizontal axis shows % of households ordered by net wealth/income. These are calculated for the whole sample using household weights.

This finding is confirmed by Chart 5.3, which contrasts the distribution of net wealth (previously shown in Chart 2.2) with the distribution of income by showing the fraction of net wealth/income held/earned by various households ordered by their net wealth and income. The wealthiest 10% of households hold more than 50% of total wealth, and the wealthiest 5% of households have 37.2%. In contrast, the concentration is considerably lower for income where 10% of the income-richest earns 31.0% of total income, and the 5% of the income-richest earns 20.2%.

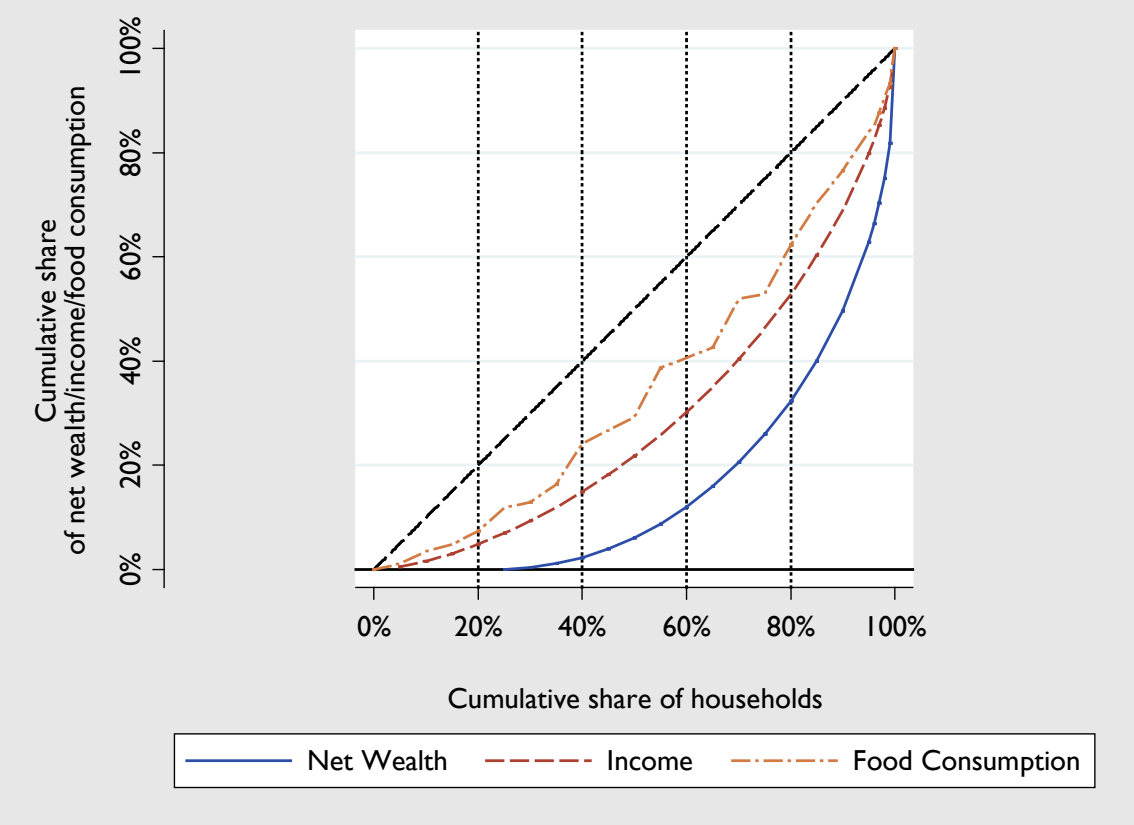
6 INDICATORS OF CONSUMPTION AND CREDIT CONSTRAINTS

While the key focus of the HFCS is on the structure of household balance sheets, it also provides some information on consumption and saving, which can help analyse the key aspects of economic behaviour of households. In particular, the survey contains data on food consumption and the extent of perceived credit constraints, the results of which this chapter reviews.

6.1 CONSUMPTION

The key indicator of consumption in the HFCS is the amount of money spent on food expenditure at home and outside home. Table 6.1 shows that households annually spend on average €6,400 (median: €5,400) on food.

Chart 6.1 Fraction of net wealth/income/food consumption held/earned/spent by percent of households (Lorenz curve)



Notes: Net wealth is defined as the difference between households' total assets and total liabilities. See Annex 1 for further details on the composition of assets and liabilities. See the notes to Table 5.1 for the composition of gross income.

Chart 6.1 follows the pattern of charts 2.2 and 5.3, illustrating the net wealth and income distribution by wealth/income percentiles, and adds a curve depicting the distribution of food consumption.[57] The key point the chart illustrates is that food consumption is more evenly distributed than income and net wealth. The fact that spending on food is relatively evenly distributed reflects the fact that households engage in consumption smoothing, so they attempt to support consumption spending even when income or wealth is subject to adverse shocks. Consumption smoothing is likely particularly strong with necessity goods, such as food consumption at home.[58]

Table 6.1 further documents that spending on food (understandably) increases with household size. The annual median food expenditure varies between €3,600 for a single person to about €7,800 for households with four or more individuals.

Consumption is positively correlated with income and wealth. For instance, the median expenditure on food consumption rises from €3,300 in the lowest income quintile to €7,800 in the top income quintile, and from about €3,600 to €7,200 along the wealth distribution.

As wealth and income are also positively correlated with education (see chapter 4 and chapter 5), it is not surprising that the median consumption is higher for more educated people (€6,000 if the reference person has tertiary education compared with €4,800 if the reference person has less education).

Like wealth or income, the age profile of consumption follows a hump shape, with food consumption increasing in the lower age brackets, peaking (at an annual median value of €6,000) for middle-aged households (with reference persons between ages 35 and 64) and decreasing subsequently. This trend partly reflects changes in household composition over time.

Similarly, the differences among work status are coherent with the previous results on age and income: households with retired reference persons or reference persons who fall into the "Other not working" category consume less than employees or self-employed people.

There is also cross-country heterogeneity in median food consumption. However, these differences remain difficult to interpret without controlling for differences in household composition, market structure or purchasing standards.

[57] The curve for food consumption is subject to heaping of respondents around rounded values.

[58] In addition, for food consumption, as for other necessity goods, the proportion of expenditure on these goods falls as income rises.

Table 6.1 Median and mean annual food consumption and median food consumption-income ratio by demographic and country characteristics

	Median (€1,000)	Mean (€1,000)	Share of Total Income (%)
Euro Area	5.4	6.4	18.4
S.E.	*(0.0)*	*(0.0)*	*(0.2)*
Household Size			
1	3.6	4.3	19.1
2	5.5	6.6	17.9
3	6.0	7.2	17.8
4	7.2	8.6	18.0
5 and More	7.8	9.4	19.6
Housing Status			
Owner-Outright	6.0	6.7	19.9
Owner-with Mortgage	6.5	7.7	14.9
Renter or Other	4.4	5.4	18.9
Percentile of EA Income			
Less than 20	3.3	3.9	35.9
20-39	4.6	5.1	23.4
40-59	5.4	6.3	18.9
60-79	6.1	7.5	15.0
80-100	7.8	9.3	10.3
Percentile of EA Net Wealth			
Less than 20	3.6	4.5	21.2
20-39	4.8	5.6	19.2
40-59	5.2	6.1	18.8
60-79	6.0	7.1	18.2
80-100	7.2	8.6	14.9
Age of Reference Person			
16-34	4.3	5.1	17.6
35-44	6.0	7.0	17.1
45-54	6.0	7.4	16.8
55-64	6.0	7.0	17.7
65-74	5.1	6.2	21.1
75+	3.9	4.9	22.1
Work Status of Reference Person			
Employee	6.0	6.9	16.3
Self-Employed	6.5	7.5	15.2
Retired	4.8	5.9	21.1
Other Not Working	3.6	4.7	26.3
Education of Reference Person			
Primary or No Education	4.8	5.7	23.5
Secondary	5.4	6.3	17.4
Tertiary	6.0	7.5	14.0

Table 6.1 Median and mean annual food consumption and median food consumption-income ratio by demographic and country characteristics

	Median (€1,000)	Mean (€1,000)	Share of Total Income (%)
Country			
Belgium (2010)	7.2	8.3	20.3
S.E.	*(0.1)*	*(0.2)*	*(0.5)*
Germany (2010)	5.4	5.9	15.6
S.E.	*(0.1)*	*(0.1)*	*(0.2)*
Greece (2009)	6.2	7.1	28.8
S.E.	*(0.2)*	*(0.1)*	*(0.7)*
Spain (2008)	6.0	6.4	24.2
S.E.	*(0.2)*	*(0.1)*	*(0.5)*
France (2010)	4.8	6.7	16.5
S.E.	*(0.1)*	*(0.2)*	*(0.3)*
Italy (2010)	6.0	6.0	20.3
S.E.	*(0.1)*	*(0.0)*	*(0.3)*
Cyprus (2010)	8.4	9.8	27.0
S.E.	*(0.2)*	*(0.2)*	*(0.9)*
Luxembourg (2010)	9.6	11.2	15.0
S.E.	*(0.2)*	*(0.2)*	*(0.4)*
Malta (2010)	5.9	6.2	27.1
S.E.	*(0.1)*	*(0.1)*	*(0.7)*
Netherlands (2009)	5.1	8.1	12.6
S.E.	*(0.2)*	*(0.4)*	*(0.5)*
Austria (2010)	5.4	6.3	16.9
S.E.	*(0.1)*	*(0.1)*	*(0.5)*
Portugal (2010)	4.2	5.6	29.8
S.E.	*(0.0)*	*(0.1)*	*(0.6)*
Slovenia (2010)	4.4	5.2	28.5
S.E.	*(0.3)*	*(0.2)*	*(1.6)*
Slovakia (2010)	3.6	3.8	29.4
S.E.	*(0.1)*	*(0.1)*	*(0.6)*
Finland (2009)	M	M	M
S.E.			

Notes: This table reports on household consumption. The first two columns report the median and the mean food expenditure at home/outside home in euros. The third column represents food expenditure as a share of euro area income (in the first panel) and for each country in the second panel. No data are available for Finland.
For a definition of the classification variables, see notes to Table 1. For a description of the definitions of the variables, see also the document HFCN (2011). M stands for a missing value. N stands for "not calculated" because fewer than 25 observations are available. Data are not collected for Finland.
The rows labelled as "S.E." show standard errors, which were calculated with the Rao-Wu rescaled bootstrap method using replicate weights provided by the countries (1,000 replicates; see chapter 7 of the HFCS Methodological Report for details).

Table 6.1 also reports the ratio of consumption to income, in order to put consumption expenditure into perspective. The median share of income devoted to food consumption is

18.4% in the euro area. It tends to decrease with household size (from 19.1% for single-person households to around 18% for households with multiple persons, except for very large households with five or more members, where it amounts to 19.6%), which is consistent with economies of scale. The ratio also diminishes with income, wealth and education. For instance, it is more than three times smaller in the top income bracket than at the bottom of the income distribution, suggesting that, with increasing income, the basic needs for food are fully satisfied, allowing for an increasing share of income to be spent on other consumption items.

The age profile of the food consumption–to-income ratio reflects the combination of the age profiles of food consumption and of income. As the impact of the latter is relatively more pronounced, the resulting age profile is U-shaped: median share of income devoted to food consumption reaches a minimum for households with a reference person in the 45-54 age bracket.

Depending on the country, the median ratio of food consumption to income varies between 12.6% and 29.8%, the figures for the Netherlands and Portugal, respectively. These variations across countries partly reflect differences in income and wealth distributions (see chapters 4 and 5): countries where households' median income or wealth are high are also characterised by lower shares of food expenditure to income.

6.2 CREDIT CONSTRAINTS

Getting a loan or credit is a way to cover the household's near-term consumption needs and to smooth consumption over time. The HFCS collects household self-assessed information on access to credit.[59] Within the last three years preceding the survey, 22.8% of households in the euro area had applied for a loan or other credit (Table 6.2). Of these, 16.6% were turned down by a lender or creditor, or not given as much credit as applied for. In addition to these directly constrained households, a broader measure of credit constraint can be defined by also considering the "discouraged" households that did not apply for credit because of perceived constraints. Indeed, 6.1% had considered applying for a loan or credit but then decided not to, thinking that the application would be rejected. Overall, the proportion of families in the euro area facing either direct or perceived credit constraints (reported in the last column of Table 6.2) therefore amounts to 8.1%.

[59] The information on credit constraints is not necessarily imputed for all countries. For countries in which the information on credit constraints was not imputed, the analysis is based exclusively on the values directly observed in the field, with no further treatment for missing values.

Table 6.2 Credit constraints by demographic and country characteristics

(fraction of households, %)

	Applied for Credit Within Last 3 Years	Not Applying for Credit Due to Perceived Credit Constraint	Refused or Only Reduced Credit (Among Those Applying in Last 3 Years)	Credit-Constrained Household
Euro Area	22.8	6.1	16.4	8.1
S.E.	*(0.5)*	*(0.3)*	*(0.9)*	*(0.3)*
Household Size				
1	14.2	6.4	22.0	8.0
2	21.9	4.4	13.9	6.2
3	29.5	7.7	17.2	10.3
4	32.4	6.0	13.7	8.5
5 and More	36.7	10.8	16.6	12.7
Housing Status				
Owner-Outright	16.9	3.2	10.7	4.2
Owner-with Mortgage	40.2	4.3	11.8	7.5
Renter or Other	19.2	9.6	25.1	11.9
Percentile of EA Income				
Less than 20	12.0	8.8	35.0	10.5
20-39	20.4	8.1	23.8	10.4
40-59	21.9	7.1	18.6	9.0
60-79	29.9	4.6	12.7	6.9
80-100	29.5	2.2	7.7	3.7
Percentile of EA Net Wealth				
Less than 20	22.8	13.5	28.0	16.2
20-39	21.5	6.9	18.9	9.1
40-59	25.5	5.1	14.8	7.2
60-79	22.5	2.5	10.1	3.9
80-100	21.7	1.7	8.6	3.1
Age of Reference Person				
16-34	31.6	8.8	18.3	12.0
35-44	32.2	8.6	16.4	11.0
45-54	27.2	6.6	17.7	9.4
55-64	20.6	5.7	15.0	7.0
65-74	12.8	3.3	8.4	4.0
75+	3.8	2.1	21.8	2.5
Work Status of Reference Person				
Employee	30.9	6.2	14.8	8.7
Self-Employed	30.6	9.0	19.4	11.6
Retired	10.5	3.0	12.4	3.7
Other Not Working	16.3	12.8	32.9	14.9
Education of Reference Person				
Primary or No Education	16.4	6.7	21.9	8.6
Secondary	25.4	7.0	17.3	9.3
Tertiary	25.8	4.1	11.2	5.6

Table 6.2 Credit constraints by demographic and country characteristics

(fraction of households, %)

	Applied for Credit Within Last 3 Years	Not Applying for Credit Due to Perceived Credit Constraint	Refused or Only Reduced Credit (Among Those Applying in Last 3 Years)	Credit-Constrained Household
Country				
Belgium (2010)	10.3	4.6	4.2	4.7
S.E.	*(0.8)*	*(0.6)*	*(2.1)*	*(0.7)*
Germany (2010)	21.4	5.7	14.4	7.6
S.E.	*(1.2)*	*(0.8)*	*(2.2)*	*(0.9)*
Greece (2009)	8.8	3.3	41.4	6.0
S.E.	*(0.7)*	*(0.6)*	*(4.1)*	*(0.7)*
Spain (2008)	21.9	6.4	14.3	8.0
S.E.	*(0.9)*	*(0.7)*	*(1.7)*	*(0.6)*
France (2010)	32.9	8.6	18.2	11.6
S.E.	*(0.6)*	*(0.4)*	*(1.0)*	*(0.4)*
Italy (2010)	M	M	M	M
S.E.				
Cyprus (2010)	44.2	4.8	8.4	7.2
S.E.	*(1.7)*	*(0.8)*	*(1.7)*	*(1.0)*
Luxembourg (2010)	41.0	4.2	22.5	13.1
S.E.	*(1.8)*	*(0.8)*	*(2.5)*	*(1.3)*
Malta (2010)	18.5	2.6	9.7	4.2
S.E.	*(1.4)*	*(0.6)*	*(2.9)*	*(0.8)*
Netherlands (2009)	12.6	0.7	14.1	1.7
S.E.	*(1.1)*	*(0.3)*	*(5.0)*	*(0.5)*
Austria (2010)	7.4	3.1	20.8	4.1
S.E.	*(0.7)*	*(0.4)*	*(4.1)*	*(0.5)*
Portugal (2010)	18.5	4.3	16.7	5.7
S.E.	*(0.8)*	*(0.4)*	*(1.9)*	*(0.5)*
Slovenia (2010)	27.9	15.8	27.1	19.2
S.E.	*(2.5)*	*(2.4)*	*(5.2)*	*(2.6)*
Slovakia (2010)	44.6	12.2	15.6	12.4
S.E.	*(1.6)*	*(1.0)*	*(4.0)*	*(1.0)*
Finland (2009)	M	M	M	M
S.E.				

Notes: This table reports households' credit constraints. The information on credit constraints is not necessarily fully imputed for all countries; remaining missing values may cause slight numerical inconsistencies between the individual components and the composite credit constrained household indicator. The first column shows the percentage of households who applied for credit in the last three years. The second column shows those not applying for credit due to a perceived credit constraint. The third column shows those who were denied credit or were offered a smaller amount than they applied for among those applying in the last year. The last column shows the percentage of credit-constrained households. A credit-constrained household is defined as a household to which one or more of the following situations apply: (i) applied for credit within the last three years and was turned down, and did not report successful later reapplication, (ii) applied for credit but were not given as much as they applied for, or (iii) did not apply for credit due to a perceived credit constraint. Households with missing information on applying for credit or on not applying for credit due to a perceived credit constraint are excluded. No data are available for Italy or Finland. Data for Spain refer to availability of credit in the last two years. Due to a slightly different implementation of the questions related to credit constraints in the Greek questionnaire, there may be an upward bias towards being refused credit/being credit constrained in the respective estimate.
For a definition of the classification variables, see notes to Table 2.1. For a description of the definitions of the variables, see also the document HFCN (2011). M stands for a missing value. N stands for "not calculated" because fewer than 25 observations are available. The rows labelled as "S.E." show standard errors, which were calculated with the Rao-Wu rescaled bootstrap method using replicate weights provided by the countries (1,000 replicates; see chapter 7 of the HFCS Methodological Report for details).

The probability of facing credit constraints depends crucially on wealth and income. 16.2% of families in the lowest wealth quintile face such financial constraints, in contrast to 3.1% at the top of the wealth distribution. These figures are confirmed by the differences among housing status. Renters are more frequently credit constrained (11.9%) than outright owners of the household main residence (4.2%). This could be explained by the role of collateral played by housing that facilitates owners' access to credit. Concerning owners with a mortgage, 7.5% of households were credit constrained; 4.8% (or 40.2%×11.8%) faced direct credit constraints and 4.3% faced perceived credit constraints. This position between outright owners and renters reflects the fact that, on the one hand, owners with a mortgage are less likely to be constrained than renters due to their home ownership, which can serve as collateral, while on the other hand, their current indebtedness could be perceived as a potential risk for lenders, especially compared with outright owners.

Another illustration of the impact of the various risks on access to credit is given by the differences in work status. Households with self-employed reference persons are more likely to be subject to credit constraints are employees. In line with this, the self-employed are more frequently credit constrained than employees (11.6% versus 8.7%). Households in the "Other not working" category are the most likely to be credit constrained, which is indeed the case (for 14.9% of these households). At the opposite end, only 3.7% of households with retired reference persons are found to be credit constrained.

The low proportion of credit-constrained retirees is also reflected in the breakdowns by age: the largest fraction of households (more than 10%) found to be credit constrained is in the age brackets of 16-34 and 35-44. This number drops with age, down to a value of 2.5% for those aged 75+. Finally, credit constraints also vary substantially across countries. The proportion of credit-constrained households ranges from 1.7% in the Netherlands to 19.2% in Slovenia.

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ANNEX I: DEFINITIONS OF KEY VARIABLES

HOUSEHOLD REFERENCE PERSON

The household reference person is chosen according to the international standards of the so-called Canberra Group (UNECE 2011), which uses the following sequential steps to determine a unique reference person in the household:

i. household type [determined by a) one of the partners in a registered or de facto marriage, with dependent children, b) one of the partners in a registered or de facto marriage, without dependent children, and c) a lone parent with dependent children],
ii. the person with the highest income,
iii. the eldest person.

NET WEALTH

Net wealth is defined as the difference between total (gross) assets and total liabilities. Total **assets** consist of real assets and financial assets.

Real assets include:

- value of the household main residence (for owners)
- value of other real estate property
- value of vehicles (cars and other vehicles, such as boats, planes or motorbikes)
- value of valuables
- value of self-employment businesses of household members.

Financial assets consist of:

- deposits (sight accounts, saving accounts)
- investments in mutual funds
- bonds
- investments held in non-self-employment private businesses
- publicly traded shares
- managed investment accounts
- money owed to households as private loans
- other financial assets: options, futures, index certificates, precious metals, oil and gas leases, future proceeds from a lawsuit or estate that is being settled, royalties or any other.
- private pension plans and whole life insurance policies.

Current value of public and occupational pension plans is not included.

Total liabilities (debt) consist of:

- outstanding amount of household main residence mortgages and other real estate property mortgages
- outstanding amount of debt on credit cards and credit lines/bank overdrafts
- outstanding amounts of other, non-collateralized, loans (including loans from commercial providers and private loans).

HOUSEHOLD INCOME

Household income is measured as gross income and is defined as the sum of labour and non-labour income for all household members. Labour income is collected for all household members aged 16 and older; other income sources are collected at the household level. In some countries, as gross income is not well known by respondents, it is computed from the net income given by the respondent.

Specifically, the measure for gross income includes the following components: employee income, self-employment income, income from pensions, regular social transfers, regular private transfers, income from real estate property (income received from renting a property or land after deducting costs such as mortgage interest repayments, minor repairs, maintenance, insurance and other charges), income from financial investments (interest and dividends received from publicly traded companies and the amount of interest from assets such as bank accounts, certificates of deposit, bonds, publicly traded shares etc. received during the income reference period, less expenses incurred), income from private business and partnerships and other non-specified sources of income. See section 9.2.4 of the HFCS Methodological Report for details on the collection of income variables in various countries.

INDICATORS OF DEBT BURDEN, FINANCIAL FRAGILITY AND CREDIT CONSTRAINTS

Debt-asset ratio: ratio of total liabilities to total gross assets. Defined for indebted households.

Debt-income ratio: ratio of total liabilities and total gross household income. Defined for indebted households.

Debt service-income ratio: ratio of total monthly debt payments to household gross monthly income. Defined for indebted households, but excluding households that only hold credit lines/overdraft debt or credit card debt, as for these debt types no debt service information is collected.

Payments for a household's total debt are the monthly payments (or the monthly equivalent of other time frequency payments) of the household to the lender to repay the loan. They include interest and repayment but exclude any required payments for taxes, insurance and other fees. The household's total payments include the payments for mortgages and the payments for other loans, such as car loans, consumer and instalment loans and loans from relatives, friends, employers etc. Payments for leasing are not included in the debt payments.

Mortgage debt service-income ratio: ratio of total monthly mortgage debt payments (i.e. payments made to repay all mortgages, for the HMR and other properties) to household gross monthly income. Defined for households with mortgage debt.

Loan-Value ratio of HMR: ratio of outstanding amount of HMR mortgage to current value of the HMR. Defined for households with HMR mortgage debt.

Net liquid assets to income: ratio of net liquid assets to household gross annual income. Net liquid assets are calculated as the sum of value of deposits, mutual funds, bonds, non-self-employment business wealth, (publicly traded) shares and managed accounts, net of credit line/overdraft debt, credit card debt and other non-mortgage debt. Defined for all households.

Credit-constrained household: household that applied for credit and was turned down and did not report successful later reapplication, or those that applied for credit but were not given as much as they applied for, or those that did not apply for credit due to a perceived credit constraint.

ANNEX II: LIST OF HFCN PARTICIPANTS

National Bank of Belgium	Philip Du Caju
	Isabelle Degreef
	Pierrick Stinglhamber
	Laurent Van Belle
Danmarks Nationalbank	Sigrid Alexandra Koob
Deutsche Bundesbank	Martin Eisele
	Julia Le Blanc
	Tobias Schmidt
	Ulf von Kalckreuth
	Junyi Zhu
Eesti Pank	Jaanika Meriküll
	Tairi Room
Statistics Estonia	Julia Aru
	Erika Taidre
Central Bank of Ireland	Mary Keeney
	Martina Lawless
	Yvonne McCarthy
	Aisling Menton
Central Statistics Office Ireland	Paul Crowley
Bank of Greece	Calliope Akantziliotou
	Antonios Loumiotis
	Theodoros Mitrakos
	Panagiota Tzamourani
Banco de España	Olympia Bover
	Ernesto Villanueva
Banque de France	Luc Arrondel
	Marc Chazelas
	Jérôme Coffinet
	Muriel Roger
	Frédérique Savignac
INSEE	Hélène Chaput
	Cédric Houdré
	Pierre Lamarche
Bank of England	Jeanne Le Roux
Banca d'Italia	Claudia Biancotti
	Andrea Brandolini
	Ivan Faiella
	Romina Gambacorta
	Stefano Iezzi
	Giuseppe Ilardi
	Andrea Neri
	Eliana Viviano
Central Bank of Cyprus	Ioanna Evangelou
	Stephan Haroutunian
Banque centrale du Luxembourg	Thomas Mathä
	Alessandro Porpiglia
	Michael Ziegelmeyer
CEPS/INSTEAD Luxembourg	Eva Sierminska
Central Bank of Malta	Karen Caruana
	Christopher Pace
De Nederlandsche Bank	Wilko Bolt
	Henriette Prast
	Federica Teppa

	Maarten van Rooij
	Corry van Renselaar[60]
Oesterreichische Nationalbank	Pirmin Fessler
	Martin Schürz
National Bank of Poland	Zbigniew Zolkiewski
Banco de Portugal	Sonia Costa
	Luisa Farinha
INE – Statistics Portugal	Carlos Marcelo
	Rita Rasquilha
Banka Slovenije	Uros Herman
	Matjaz Jeran
	Irena Komprej
	Vesna Lukovic
	Petra Ziherl
Národná banka Slovenska	Matúš Senaj
	Tibor Zavadil
Suomen Pankki	Risto Herrala
	Petri Mäki-Fränti
	Helinä Laakkonen
	Jouko Vilmunen
Statistics Finland	Olli Kannas
	Veli-Matti Törmälehto
Eurostat	Emilio Di Meglio
	Fabienne Montaigne
	Jean-Marc Museux
European Central Bank	Miguel Ampudia
	Katarzyna Bańkowska
	Frank Betz
	Robert Beyer
	Riccardo Bonci
	Dimitris Christelis
	Jeanne Commault
	Michael Ehrmann
	Ioannis Ganoulis
	Dimitris Georgarakos
	Reint Gropp
	Juha Honkkila
	Malgorzata Osiewicz
	Elena Pavlova
	Sébastien Pérez-Duarte
	Vitaliana Rondonotti
	Carlos Sánchez Muñoz
	Jiri Slacalek
	Frank Smets
	Philip Vermeulen
	Caroline Willeke
	Martin Zeleny
Goethe University Frankfurt	Michael Haliassos
Einaudi Institute for Economics and Finance, Rome	Luigi Guiso
University of Naples Federico II	Tullio Jappelli
Board of Governors, Federal Reserve System	Arthur Kennickell
University of Oxford	Peter Tufano

[60] Corry van Renselaar passed away in January 2010.

ERRATA

2 May, 2013

The following was corrected: in Table 6.1, p. 99 the rows for Slovenia were previously incorrectly labelled as Slovakia and the rows for Slovakia as Slovenia.