ARTICLES

THE EUROSYSTEM HOUSEHOLD FINANCE AND CONSUMPTION SURVEY: DESCRIPTION AND MAIN RESULTS OF THE FIRST WAVE

The Eurosystem Household Finance and Consumption Survey (HFCS) is a new dataset that provides detailed information on household balance sheets in the euro area. Based on a sample of more than 62,000 households, the HFCS collects harmonised data that make it possible to undertake cross-country analyses of issues related to household wealth and its components, allowing specific sub-populations, e.g. the indebted or the credit constrained, to be examined in closer detail. This article gives an overview of the distribution of household net wealth, assets and liabilities with a particular focus on heterogeneity across specific household groups. In addition, it reports selected indicators of financial pressure and briefly compares the results for the euro area with similar data for the United States.

1 INTRODUCTION

This article provides a descriptive summary of the main stylised facts that result from the first wave of the Eurosystem Household Finance and Consumption Survey (HFCS), a joint project of all the central banks of the Eurosystem. It focuses on the distribution of household liabilities and indicators of financial pressure, before going on to examine household assets and the distribution of net wealth in the euro area. To put these new results into perspective, a brief comparison with those obtained from the US Survey of Consumer Finances is also provided. In addition, the article describes the survey methods, explains how information about uncertainty underlying the resulting figures is calculated and compares the HFCS results with national accounts.[1]

A key distinguishing feature of the HFCS is that it provides country-representative data which have been collected in a harmonised way in 15 euro area Member States from a sample of more than 62,000 households out of a total of more than 138 million households (for a description of the survey methods, see Box 1). The HFCS is the only European cross-country harmonised wealth survey for the whole population and offers comprehensive information not usually found in administrative data.[2]

The dataset provides information that permits economic and monetary analyses to focus on particular sub-populations of interest, such as wealthy/poor households, high/low-income households, highly indebted households and credit-constrained households. In particular, the implications of the distribution of wealth and debt across households can only be understood with micro-level data, which make it possible to determine which categories of households are over-indebted. This in turn enables risks to household consumption and to financial stability to be detected. Besides the effects of over-indebtedness and the role of credit constraints, numerous other topics can be analysed using the HFCS data, such as wealth effects on consumption, the adequacy of accumulated assets for retirement, and the effects of financial innovation on portfolio decisions and consumer spending.

It is important to keep in mind that a survey as large as the HFCS inevitably presents significant conceptual and practical challenges. One difficulty, in particular, stems from the fact that the survey fieldwork could not be carried out in the same period of time in all countries and, thus, wealth and income data sometimes refers to different years. Some differences also exist in the sample selection.

1 See the survey website, http://www.ecb.int/home/html/researcher_hfcn.en.html, for detailed documentation of the HFCS, a set of additional descriptive statistics, and for access to the data. More detail is provided in two reports accompanying the public release of the HFCS dataset: HFCN (2013a): "Report on the results of the first wave", and HFCN (2013b): "Methodological report on the first wave", Eurosystem Household Finance and Consumption Survey Reports, ECB, both of which are also available at the website.

2 The survey also includes information on indicators of consumption and household characteristics, which is typically not recorded in administrative datasets.

Additionally, some structural country differences, for example, concerning statutory pension systems, are not captured in the survey. As a result, cross-country comparisons in particular should be made with care and the sources of differences should be carefully examined. Even with these caveats, the HFCS initiative is distinctive in its focus on providing ex-ante harmonised wealth data from a large number of countries.

Section 2 provides information about household debt and indicators of financial pressure. Three groups of households that are subject to higher financial pressure are identified: low-income households, young households and the unemployed/inactive. Section 3 summarises the key facts about the asset side of balance sheets and its two main components, real and financial assets. Section 4 describes net wealth distribution in the euro area.

Box 1

GENERAL FEATURES OF THE HFCS

The Eurosystem Household Finance and Consumption Survey (HFCS) is a joint project of all the central banks of the Eurosystem, and covers all countries in the euro area (currently excluding Ireland and Estonia, which will be conducting the HFCS as of the second wave). This box summarises the main issues contained in the accompanying report, HFCN (2013b, op. cit.), which 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.

A total of 62,000 households were interviewed for the survey, with achieved sample sizes in each country of between 340 and 15,000 households. All the resulting statistics have been calculated using the final estimation weights, which allow all figures to be representative of the population of households. Most of the survey questions are factual and refer to amounts paid or received, ownership of assets or liabilities, and their value. The values of some of these assets are self-assessed, for example, the current value of the household's main residence, self-employment business, cars or valuables, and as such may not fully reflect their possible market value.

The surveys were carried out in a decentralised fashion in each participating country. The fieldwork was conducted between end-2008 and mid-2011. Flow variables (e.g. income) refer to a period of 12 months, either the 12 months preceding the interview or a calendar year, while stock variables (e.g. assets and liabilities) refer to one particular date, either 31 December or the day of the interview. Most surveys were carried out with 2010 as the reference year for assets and liabilities, and 2009 as the reference year for income variables (with the notable exception of the survey in Spain, conducted mostly in 2009 with 2007 as the income reference year). 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 without considering price adjustments for the differences in reference years across countries or purchasing-power parity adjustments across countries. As reported in HFCN (2013b), such adjustments do not change the overall results in a substantive way.

The statistical unit of analysis of this report is the "household", which, for the purpose of this survey, is defined as a person living alone or a group of people living together in the same private dwelling and sharing expenditures, including the joint provision of the essentials of living. Employees, roommates and other persons without attachments living in the same dwelling are considered separate households. The target reference population is all private households; it therefore excludes people living in collective households or institutions.

The uncertainty of estimates and multiple imputation

The HFCS uses advanced sampling and survey methods to ensure the best possible coverage of the assets and liabilities of households. One source of uncertainty in the estimates derives from the randomness of the sample selection. The selection of a household is a random process, and different sets of households participating in the survey could lead to different estimates, though their average is unbiased. Sampling variance is an estimate of this variability, and depends on the specifics of the sample selection and size. In the HFCS, sampling variance estimates are provided through bootstrap replicate weights (see HFCN (2013b) for definition and details). In several country surveys, particular care has been taken to oversample the wealthiest households to achieve higher precision. Since ownership of many assets is concentrated in a relatively small share of the population, it is indeed effective for the analysis of the behaviour of households to increase their share in the sample. The use of estimation weights corrects, in the presentation of results, the overrepresentation of these households in the sample.

All questions referring to household income, consumption and wealth that households did not know the answer to or did not wish to answer have been imputed. Imputation is the process of assigning a value to an observation that was either not collected or not collected correctly. For the HFCS, a multiple imputation technique[1] has been used, whereby the missing data are imputed several times independently, to produce five "implicates", which are complete datasets that can be analysed separately using standard complete-data techniques, and then combined to produce one result. This allows the uncertainty in the imputation to be reflected. The imputation variance is then combined with the sampling variance, and the resulting standard errors reflect both sampling and imputation variability.[2]

1 Rubin, Donald B., "Multiple Imputation After 18+ Years", *Journal of the American Statistical Association*, Vol. 91, No 434, June 1996, pp. 473-489.
2 For example, the estimate of the mean of net wealth by household in the euro area is €230,800 (see Table 5 below), with an associated standard error of €4,200, implying that, under a normality assumption, the 95% confidence interval of mean assets per household is [222,400; 239,200]. This standard error combines both a sampling uncertainty estimated at €4,100 and an imputation uncertainty of €1,100. As an additional example involving participation rates, the standard error for the percentage of households with mortgage debt (see Table 1 below) is 0.3%, for an estimate of 23.1%.

2 LIABILITIES AND FINANCIAL PRESSURE

This section examines the liability side of household balance sheets, focusing on the mortgage and non-mortgage debt components from two angles: the participation rates (i.e., what fraction of households own a given debt type) and the median values of that debt. The second part summarises key indicators of financial pressure on households and identifies which groups of households are particularly financially vulnerable.

2.1 LIABILITIES

Total debt consists of two key components (see Table 1): mortgage debt, which is collateralised by the household main residence or other property, and non-mortgage debt, which includes credit lines/overdraft debt, credit card debt and other non-mortgage debt.

Overall, 43.7% of euro area households hold debt. Mortgage debt is less prevalent (23.1% of households have mortgage debt compared to 29.3% for non-mortgage debt) but considerably more sizeable when it is held: the median value of mortgage debt for euro area households is €68,400, while for non-mortgage debt it is €5,000. In terms of the participation in components of mortgage debt, more weight is on mortgages on the household main residence, which are more prevalent than mortgages on other real estate property (19.4% compared with 5.6%), and also somewhat larger in terms of the median value. In terms of volume, mortgage debt makes up 82.8% of total debt, of which 76.2% constitutes mortgages on the household main residence and 23.8% mortgages on other real estate property.

Households in the top quintile of the income distribution tend to have mortgage debt more often and to take up a larger amount. In particular, more than one third of the highest-earning 20% of households have a household main residence (HMR) mortgage, with a median value of

Table 1 Participation in debt (percentage) and median values of debt held (EUR thousands) by demographic characteristics

	Participation rate (percentage)				Median values (EUR thousands)			
		Mortgage debt				Mortgage debt		
	Mortgage debt	HMR mortgage[1]	Other property mortgage	Non-mortgage debt	Mortgage debt	HMR mortgage	Other property mortgage	Non-mortgage debt
Euro area	**23.1**	**19.4**	**5.6**	**29.3**	**68.4**	**65.2**	**56.8**	**5.0**
Household size								
1	10.7	8.5	3.1	21.0	65.8	61.5	49.7	3.3
2 or more	28.9	24.4	6.8	33.0	69.0	65.2	58.2	5.0
Housing status								
Owner	36.5	32.2	7.4	26.2	67.4	65.2	50.0	6.0
Renter or other	3.0	0.0	3.0	33.9	72.4	M	72.4	3.8
Percentile of income[2]								
Less than 20	6.6	5.8	1.0	18.4	42.6	43.2	40.1	2.9
20-79	21.9	18.6	4.7	31.5	58.0	56.7	46.8	4.7
80-100	43.4	35.1	13.0	33.9	92.8	89.2	72.5	7.0
Age of reference person								
16-34	22.3	20.1	3.6	41.8	99.4	97.1	76.5	5.0
35-64	31.1	26.0	7.6	35.1	63.9	60.1	53.5	5.0
65+	7.4	5.4	2.7	10.6	38.5	36.1	49.4	3.0
Work status of reference person								
Employee	32.6	28.3	6.7	38.3	71.0	70.1	57.2	5.0
Self-employed	35.2	27.1	12.8	35.1	80.8	67.6	70.0	8.0
Retired	8.9	6.3	3.2	12.9	34.3	35.0	32.3	3.3
Other not working	11.5	10.1	1.9	31.8	56.4	55.0	52.0	3.5
Education of reference person								
Primary or no education	13.7	11.3	3.0	21.9	48.0	48.8	37.0	4.8
Secondary	23.2	19.8	5.3	34.4	65.2	64.3	49.6	4.2
Tertiary	36.3	30.0	9.8	31.2	86.9	80.2	70.3	6.4

Notes: This table reports the percentage of households holding various types of debt (left panel) and the median values of the various types of debt held by those households (right panel). 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. See Box 1 for the definition of households and HFCS (2013b) for the definition of the "household reference person".
"M" stands for missing value.
1) Household main residence mortgage.
2) Percentiles of income calculated at the euro area level.

€89,200, while just 5.8% of the lowest-earning 20% of households have an HMR mortgage, with a median value of €43,200. The age pattern of ownership of mortgage debt is hump-shaped, so that middle-aged households hold mortgages most frequently, both for the HMR and for other real estate property (26.0% of this group has an HMR mortgage; 7.6% has a mortgage on other real estate property). In terms of work status, the self-employed and employees are more likely to hold mortgage debt and to hold higher values. Households with tertiary education hold mortgage debt substantially more often (36.3% compared with 23.2% for households with secondary education and 13.7% for households with primary education).

The picture for non-mortgage debt differs from that for mortgage debt in several important ways. First, participation in non-mortgage debt is more concentrated among the "renter or other" group (33.9% compared with 26.2% for homeowners). Second, while non-mortgage debt is more prevalent for income-rich households, the difference in participation and in median values between the top and bottom income quintile is substantially lower than for mortgage debt.[3] Third, non-mortgage debt declines with age (rather than having a hump-shaped pattern), possibly reflecting the diminishing need to use this type of debt for consumption-smoothing purposes at a later stage in life. Fourth, in terms of work status, non-mortgage debt is quite widespread among the "other not working" category (with a participation rate of 31.8%), some of whom may have been subject to adverse transitory income shocks.

2.2 FINANCIAL PRESSURE

While the statistics presented so far provide some information about financial distress in specific sub-populations, the HFCS can be used to construct more specific indicators – such as those shown in Table 2 – which aim to capture debt burden and financial fragility from several angles. In addition to the socio-demographic breakdowns reported so far, the section looks at how the distributional aspects of debt burden can be interpreted and Box 2 reports on the distribution of financial pressure across countries.

Column 1 shows the median ratio of total debt to total assets, which provides information about the existing stock of resources available to manage debt. The median value for the euro area households stands at 21.8%, meaning that the median indebted household in the euro area has assets to cover around five times its outstanding debts. While this ratio is relatively low in the aggregate (and also lies considerably below the value for the United States – 41% according to the 2010 US Survey of Consumer Finances), it is unevenly distributed across the indebted households, so that specific groups of indebted households are more exposed to debt pressure. For example, households with rather high debt-to-asset ratios are single member households (33.7%), non-homeowners (41.5%), households in the lowest quintile of income distribution (36.2%), households with a reference person aged below 35 (46.4%), and not working (other than retired; 42.8%), i.e. household groups that – as Section 3 below documents – tend to own less assets. When interpreting these figures, it is important to note that this ratio includes all assets irrespective of their liquidity – for instance, it includes housing and other less liquid assets. This implies that even if the total assets of a household are in principle adequate to cover total debt, having to liquidate them, e.g. by selling the household main residence, might result in substantial economic distress for the household.

Column 2 shows the median ratio of debt to annual income (for households that reported having debt), which illustrates how long it would in principle take for a household to pay off its total debt if it devoted its entire current annual income to this. The median for the euro area of 62.0% implies that

3 In particular, for mortgage debt the difference in participation rates between the top and the bottom income quintile is 36.8 percentage points, while for non-mortgage debt the difference is 15.5 percentage points.

Table 2 Indicators of debt burden and financial fragility by demographic characteristics (median, percentages)

	Debt-to-asset ratio[1]	Debt-to-income ratio[2]	Debt service-to-income ratio[3]	Net liquid assets-to-income ratio[4]
Euro area	**21.8**	**62.0**	**13.9**	**18.6**
Household size				
1	33.7	42.8	14.2	24.0
2 or more	19.9	66.5	13.9	16.9
Housing status				
Owner	17.5	117.5	16.4	27.6
Renter or other	41.5	16.2	8.0	8.8
Percentile of income[5]				
Less than 20	36.2	67.8	26.5	10.8
20-79	22.4	54.4	14.8	17.4
80-100	17.7	75.6	11.2	30.6
Age of reference person				
16-34	46.4	64.3	15.4	7.7
35-64	19.6	66.7	13.9	14.8
65+	8.1	31.5	11.4	42.9
Work status of reference person				
Employee	26.6	68.7	13.9	13.0
Self-employed	13.6	91.0	16.7	19.0
Retired	7.9	30.7	11.3	41.0
Other not working	42.8	43.5	15.1	4.2
Education of reference person				
Primary or no education	18.8	49.8	15.1	13.4
Secondary	23.1	47.0	12.8	17.2
Tertiary	22.4	104.1	15.2	31.2

Notes: This table reports different measures of financial burden. The first column shows the debt-to-asset ratio, which is calculated as the ratio between the total liabilities and total gross assets of indebted households. The second column shows the ratio of total debt to gross annual household income. The third shows the debt service-to-income ratio, which is calculated as the ratio between the total annual debt payments and gross annual income of indebted households. The fourth column shows the ratio of net liquid assets to gross annual income. Net liquid assets are calculated as the sum of the 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-to-asset ratio and the debt-to-income ratio are calculated for all indebted households.
3) The debt service-to-income ratio is calculated for indebted households, 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 net liquid assets-to-income ratio is calculated for all households.
5) Percentiles of income calculated at the euro area level.

total debt equals 7.5 months' worth of income. The ratio is again substantially higher for selected sub-populations, such as homeowners (117.5%) and the self-employed (91.0%).

Column 3 displays the median ratio of debt service to income (for a subpopulation of indebted households; see the notes to Table 2 for the precise definition), which reflects the extent of the drain that the servicing of debt has on current income. For various groups of households the statistic correlates quite strongly with the debt-to-income ratio because households cannot indefinitely hold debt without paying it off at some point.[4]

Finally, column 4 gives the median ratio of net liquid assets to income, which signals the amount of resources available to a household at low cost in the event that its members are affected by an adverse shock. For the euro area, the median ratio of 18.6% implies that net liquid assets

4 In the short term, some households may postpone their debt service. In addition, the difference in the underlying population of the two indicators can affect comparisons between them.

(see the notes to Table 2) make up just above two months' worth of household income, so that the buffer is typically quite low.[5]

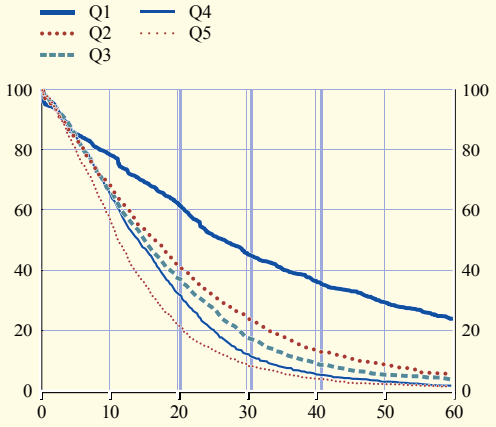
Overall, the four indicators reported so far tend to confirm that the three specific sub-populations that are more financially vulnerable are: households in the lowest income quintile, young households (below 35 years) and the unemployed/inactive (the "other not working" category).

Chart 1 illustrates how the dataset can be used to determine how financial pressure is distributed in the population and the differences across the five income quintiles. The chart plots the fraction of households that have a debt service-to-income 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 service-to-income ratio of 20%, 30% and 40%. Taking the example of a threshold of 30%, it is found that nearly 50% of indebted euro area households in the lowest income quintile have a debt service-to-income ratio above this value. For all other quintiles this fraction lies below 25%. 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 except for the lowest thresholds depicted in the chart.[6]

Chart 1 Distribution of debt service-to-income ratio, breakdown by income quintiles

(percentages)

x-axis: debt service-to-income ratio
y-axis: fraction of households with debt service-to-income exceeding the threshold on the horizontal axis



Note: The debt service-to-income ratio is calculated as the ratio of the total annual debt payments to gross annual income for indebted households.

5 Qualitatively, this result is similar in the United States, where a significant fraction of households hold almost no liquid assets; see, e.g., Hall, Robert E.,"The Long Slump", *American Economic Review* 101, 2011, pp. 431-469.
6 Qualitatively similar findings hold for the debt-to-asset ratio.

Box 2

CROSS-COUNTRY VARIATION IN INDICATORS OF FINANCIAL PRESSURE

This box summarises the variation in four indicators of financial burden and fragility across countries.

All indicators exhibit quite substantial cross-country variation; for example, the median debt-to-asset ratio ranges between 3.9% (for Slovenia) and 41.3% (for the Netherlands). The statistics on the median debt-to-income ratio in column 2 vary even more substantially, ranging between 22.7% for Slovakia and 194.1% for the Netherlands.

The debt service-to-income ratio, shown in column 3, tends to be higher for countries with higher debt-to-income ratios, such as Belgium, Spain, Cyprus, Luxembourg, the Netherlands and Portugal, where both statistics exceed the euro area median values. However, the relationship is not perfect, owing to differences in the maturity of debt products, differences in the populations

Indicators of financial burden and fragility by country (median, percentages)

	Debt-to-asset ratio[1]	Debt-to-income ratio[2]	Debt service-to-income ratio[3]	Net liquid assets-to-income ratio[4]
Country				
Belgium	18.2	79.8	15.1	33.5
Germany	28.4	37.3	10.9	22.3
Greece	14.8	47.2	14.7	4.9
Spain	17.9	113.5	19.9	12.3
France	18.9	50.4	14.7	18.5
Italy	11.7	50.3	13.2	21.9
Cyprus	17.0	157.0	25.0	5.1
Luxembourg	18.2	86.9	16.6	20.7
Malta	6.2	52.0	11.5	75.7
Netherlands	41.3	194.1	14.5	16.4
Austria	16.7	35.6	5.6	32.9
Portugal	25.7	134.0	17.3	15.9
Slovenia	3.9	26.6	15.8	2.2
Slovakia	6.6	22.7	12.5	12.1
Finland	34.6	64.3	M	8.4
Euro area	**21.8**	**62.0**	**13.9**	**18.6**

Note: See the notes to Table 2.

in respect of which the two statistics are compiled, and variation in the availability of various financial products across countries.

Finally, column 4 illustrates the extent of liquid financial assets (as a fraction of annual income) available to households. Compared to the euro area median of 18.6%, households in Belgium, Malta and Austria tend to accumulate more liquid assets, with a ratio of above 30%. On the other hand, households in Greece, Cyprus, Slovenia and Finland hold less than 10% of their annual income in the form of net liquid assets.

The table starkly highlights the fact that "financial fragility" cannot be evaluated on the basis of one indicator and for aggregate data. Being able to look at the detailed micro-information and relate this to country-specific factors (e.g. house price dynamics, tax systems, etc.) is one of the strengths of the survey.

3 ASSETS

This section focuses on statistics on the asset side of household balance sheets and its two key components: real assets and financial assets. As in Section 2, two aspects are considered: first, the extensive margin, i.e. the fraction of euro area households that own a particular asset type (the participation rate); and second, the intensive margin, i.e. the median value of a particular asset type "conditional on participation" (i.e. only for households that have reported to own this asset type).

3.1 REAL ASSETS

Table 3 provides an overview of the participation rates and median values for various real assets and their breakdowns by economic and demographic characteristics. Three asset types are considered: the household main residence, other real estate property and self-employment business wealth. Although households also hold other real assets, such as vehicles or valuables, which are also covered in the survey, these assets are not discussed here because their share in real assets is low.

Table 3 Participation in real assets (percentages) and median values of real assets (EUR thousands) by demographic characteristics

	Participation rate (percentages)			Median values (EUR thousands)		
	Household main residence	Other real estate property	Self-employment business wealth	Household main residence	Other real estate property	Self-employment business wealth
Euro area	**60.1**	**23.1**	**11.1**	**180.3**	**103.4**	**30.0**
Household size						
1	43.8	14.3	4.6	141.5	94.4	7.7
2 or more	67.6	27.1	14.0	198.5	108.8	30.0
Housing status						
Owner	100.0	31.3	13.5	180.3	108.9	40.0
Renter or other	0.0	10.7	7.3	M	91.6	10.7
Percentile of income [1]						
Less than 20	47.0	12.9	4.1	102.1	46.4	7.1
20-79	58.6	20.9	9.3	175.1	90.2	20.7
80-100	77.6	39.7	23.1	250.0	178.1	52.0
Age of reference person						
16-34	31.9	9.9	8.6	167.5	99.4	14.8
35-64	63.9	26.0	15.4	199.1	112.7	31.4
65+	68.2	24.7	3.7	159.5	99.8	15.0
Work status of reference person						
Employee	56.9	20.3	5.6	187.8	100.0	20.0
Self-employed	71.1	43.9	79.9	203.0	149.4	38.7
Retired	69.5	25.9	3.1	166.6	99.6	15.2
Other not working	37.3	10.8	1.7	150.1	88.8	20.0
Education of reference person						
Primary or no education	61.9	21.6	8.2	150.0	71.9	30.0
Secondary	55.4	19.2	11.0	180.6	105.1	30.0
Tertiary	65.4	31.6	15.3	225.6	150.0	26.0

Notes: This table reports the percentage of households holding various types of real assets (left panel) and the median values of the various types of real assets held by those households (right panel).
"M" stands for missing value.
1) Percentiles of income calculated at the euro area level.

A majority – 60.1% – of euro area households own their main residence. Socio-demographic factors such as household size and formation play a significant role in home ownership. As expected, income is an important determinant of home ownership, with lower-income households having lower ownership rates and vice versa for higher-income households. The ownership rate of the self-employed clearly exceeds that of employees, and it is also quite high for the retired, which indicates that home ownership in the euro area also functions as a precautionary saving for retirement. The median value of a main residence in the euro area is €180,300, with substantial variation across socio-economic groups.

Around a quarter of households own real estate property other than their main residence. These are holiday homes, rental homes, land, or other real estate property. Also here, ownership rises with income. The self-employed hold other real estate almost twice as frequently as employees. The median value of other real estate property owned by households in the euro area is €103,400.

Self-employment businesses are owned by 11.1% of euro area households. The median value of such businesses is €30,000. Education seems to play an important role in the decision to become self-employed, as households where the reference person has tertiary education own a self-employed business substantially more often as those where the reference person has only primary or no education.

3.2 FINANCIAL ASSETS

Table 4 gives an overview of the participation rates and median values for various financial assets and their breakdowns by demographic characteristics. The asset types under consideration are deposits, mutual funds, private pensions and whole life insurance and publicly traded shares. Other financial assets, such as bonds, derivatives and private loans are only directly held by a very small fraction of households and are not considered here.

The table shows that the most prevalent financial asset types in the euro area are deposits, as well as private pensions and whole life insurance. Almost all households in the euro area hold some deposits. As regards the work status of the reference person, the highest median values are found for the self-employed and retired. The median value of deposits for households that own their home is almost three times as high as that for renters.

The HFCS also provides information on how households save for retirement purposes. Private voluntary pension plans[7] and whole life insurance policies are held by 33.0% of households.

7 Private voluntary pension plans should be contrasted with public pensions, i.e. pensions that are part of the social security system and are usually paid out by the general government, and should also not be confused with occupational pension plans, which are part of an employee-employer relationship.

Table 4 Participation in financial assets (percentages) and median values of financial assets (EUR thousands) by demographic characteristics

	Participation rate (percentages)				Median values (EUR thousands)			
	Deposits	Mutual funds	Shares (publicly traded)	Voluntary pensions/ whole life insurance	Deposits	Mutual funds	Shares (publicly traded)	Voluntary pensions/ whole life insurance
Euro area	96.4	11.4	10.1	33.0	6.1	10.0	7.0	11.9
Household size								
1	95.8	10.2	7.8	24.9	4.9	11.3	7.5	9.6
2 or more	96.7	11.9	11.1	36.7	7.0	10.0	6.7	12.2
Housing status								
Owner	96.9	13.3	12.8	34.9	9.0	11.0	7.7	15.1
Renter or other	95.7	8.5	6.0	30.1	3.1	7.4	5.1	6.6
Percentile of income 1)								
Less than 20	89.9	3.4	2.2	13.2	1.7	10.5	5.4	4.4
20-79	97.7	8.9	7.9	31.1	5.8	7.6	4.8	8.9
80-100	99.0	26.5	24.4	58.3	19.1	12.5	10.0	23.0
Age of reference person								
16-34	97.1	9.7	6.7	33.7	3.1	3.5	2.9	4.0
35-64	96.7	13.0	11.5	41.0	6.4	10.0	7.0	14.2
65+	95.4	9.0	9.1	16.2	8.2	21.5	11.6	18.0
Work status of reference person								
Employee	97.6	13.3	11.4	42.3	6.0	7.1	5.0	10.0
Self-employed	96.6	12.7	12.5	44.7	9.5	15.5	12.2	17.8
Retired	95.6	9.4	9.3	19.0	8.5	19.8	11.9	18.1
Other not working	94.1	6.8	3.8	21.9	1.1	6.5	5.2	6.1
Education of reference person								
Primary or no education	93.1	4.0	4.2	19.0	3.8	12.1	6.1	9.2
Secondary	97.9	10.8	9.2	36.4	6.0	7.8	5.4	10.1
Tertiary	98.7	22.6	19.6	46.8	12.5	11.5	8.8	17.5

Notes: This table reports the percentage of households holding various types of financial assets (left panel) and the median values of the various types of financial assets held by those households (right panel).
"M" stands for missing value.
1) Percentiles of income calculated at the euro area level.

Excluding the retired and the "other not working" category, less than half the employee (42.3%) and self-employed (44.7%) households use this type of old age provisioning. The participation rate in private pensions and whole life insurance increases strongly with income, with the participation rate for the upper 20% of income earners being more than four times that of the lowest 20%.

Mutual funds and quoted shares are directly owned only by a small fraction of the households, in line with the "stock market participation puzzle"[8]. Household participation in risky assets, however, does not only take place through the direct holding of quoted shares and mutual fund shares/units but also indirectly through voluntary pensions/whole life insurance policies. Consistent with findings in the financial literature, education plays a strong role in the ownership of risky assets.[9] Direct stock ownership for households with a reference person with primary or no education is only 4.2 percent, almost five times lower than for households with a reference person with tertiary education. Similar differences can be found for mutual fund ownership. Not surprisingly, income is correlated strongly with the propensity to hold risky assets. However, only around one quarter of the higher-income households directly hold mutual fund shares/units (26.5%) or listed equity (24.4%). Nonetheless, they hold more risky assets relatively more frequently, suggesting that the propensity to hold risky assets increases with the ability of households to bear the implied risks.

All in all, households are very heterogeneous in the composition of their asset portfolios, so that a "typical" household does not seem to exist. Socio-demographic factors and economic and idiosyncratic factors at the household level jointly determine asset composition. Household survey data such as the HFCS may enable the main determinants of this diverse picture to be better identified.

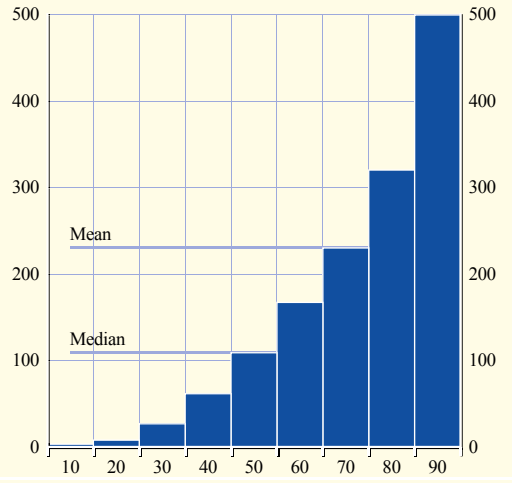
4 NET WEALTH

This section provides an overview of the distribution of net household wealth, defined as the sum of real and financial assets net of total liabilities. At the lowest end of the scale in Chart 2, more than 5% of households have negative or zero net wealth (i.e. their assets do not exceed their liabilities) and the net wealth of the households in the 10th percentile is only barely positive. The differences between the bars progressively grow when moving to the right, towards the wealthy households.

The mean of €230,800 roughly coincides with the 70th percentile, exceeding more than twice the median of €109,200. This suggests that net wealth is unevenly distributed across households and that households in the upper tail of the

Chart 2 Net wealth by percentile

(EUR thousands)



Notes: Net wealth is defined as the difference between a household's total assets and total liabilities. The horizontal axis shows percentiles 10, 20, …, 90 of net wealth calculated for the whole sample using household weights.

8 For a seminal contribution to the literature, see Mankiw, Gregory N. and Zeldes, Stephen P., "The Consumption of Stockholders and Nonstockholders", *Journal of Financial Economics*, Elsevier, 29(1), 1991, pp. 97-112.

9 Van Rooij, Maarten, Lusardi, Annamaria and Alessie, Rob J.M., "Financial literacy, retirement planning and household wealth", *Economic Journal*, Royal Economic Society, 122(560), 2012, pp. 449-478.

wealth distribution substantially affect the mean. In fact, comparison with gross household income (not reported here) shows that wealth is substantially more unevenly distributed than income: for example, the wealthiest 10% of households hold roughly 50% of total net wealth, whereas the highest 10% of income earners receive 31% of total income.

The households in the 90th percentile in turn hold €506,200 of net wealth, 4.6 times more than the median (see Box 3 for a comparison of wealth distribution with income distribution and with the corresponding facts for the United States).

Box 3

WEALTH DISTRIBUTION IN THE EURO AREA AND THE UNITED STATES

The HFCS data make it possible to compare the structure of household balance sheets to other countries with available wealth surveys. In particular, the structure of components of net wealth in the HFCS is comparable to the Survey of Consumer Finances conducted by the US Federal Reserve with reference year 2010.

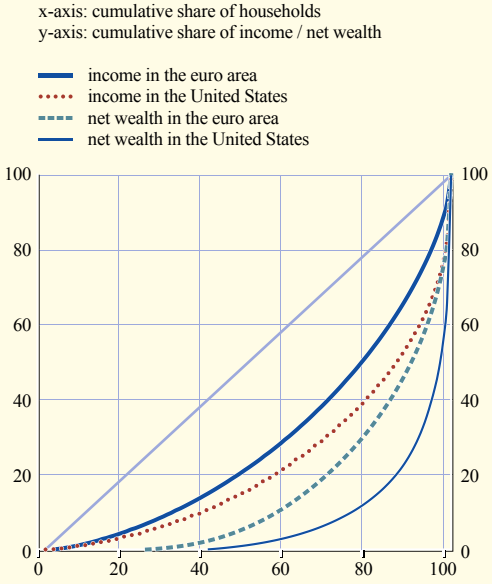
The chart compares the extent of heterogeneity in net wealth and gross income in the euro area and the United States. When studying the distribution of gross income, it is important to keep in mind that due to the redistributive effects of the system of taxes, social benefits and transfers, net income – which is not collected in the HFCS – is more evenly distributed than gross income, which is shown in the chart.[1]

The chart illustrates that heterogeneity across households is substantial, as reflected in the gap between the curves and the 45-degree line. This heterogeneity exists in both areas and for both variables. In addition, in both economic areas heterogeneity in net wealth substantially exceeds heterogeneity in income.

For example, the wealthiest 10% of households in the euro area hold just above half of total net wealth, whereas in the United States that group holds around three quarters of total net wealth. As for income, the highest-earning 10% receives 31% of total income in the euro

Distribution of net wealth and gross income in the euro area and the United States

(in percentages)



Notes: The chart uses the Lorenz curve to compare the distribution of gross household income and net wealth (net worth). Data for the United States are taken from the 2010 Survey of Consumer Finances. The percentiles were calculated using household weights.

1 In terms of levels, the median before-tax family income and net worth in the 2010 US Survey of Consumer Finances is US$ 45,800 and US$ 77,300, respectively. The respective euro area values from the HFCS are €28,600 for median gross household income and €109,200 for median net wealth.

area and 44% of total income in the United States. This comparison illustrates that both wealth and income are more evenly distributed in the euro area than in the United States. This finding may reflect differences in economic institutions (e.g. higher progressivity of the tax system in the euro area) and shocks across the two areas (for example, the variance of household-specific income shocks may be larger in the United States than in the euro area).

Table 5 provides additional insight into how net wealth and its three principal components are distributed across various demographic groups. Homeowner households have a median net wealth of €217,600, while renters report to have just €9,100. Median net wealth rises steeply with income and with age, in particular for younger households. Late in life, many households tend to de-cumulate net wealth, a fact which for the mean is apparent at the age of 65 and above, while for the median it only becomes visible when a finer breakdown is shown, e.g. for households with a reference person over 75.

Columns 3-5 of Table 5 display the median value of the key components of net wealth – real assets, financial assets and total liabilities – among all those households that report to hold the respective asset type or that report to be indebted. These statistics illustrate how strongly the various components

Table 5 Net wealth and its components by demographic characteristics

(EUR thousands, percentages)

	Median net wealth	Mean net wealth	Median real assets	Median financial assets	Median liabilities	Share of total net wealth	Share of households
Euro area	**109.2**	**230.8**	**144.8**	**11.4**	**21.5**	**100.0**	**100.0**
Household size							
1	39.6	134.9	65.4	7.3	8.9	18.5	31.6
2 or more	149.3	275.1	175.1	14.0	27.7	81.5	68.4
Housing status							
Owner	217.6	351.1	217.7	17.3	50.0	91.4	60.1
Renter or other	9.1	49.5	5.1	5.4	4.3	8.6	39.9
Percentile of income [1]							
Less than 20	26.7	89.2	57.1	2.5	5.0	7.7	20.0
20-79	103.8	174.7	132.3	10.0	16.4	45.4	60.0
80-100	295.3	540.8	288.3	49.9	63.1	46.9	20.0
Age of reference person							
16-34	16.1	71.3	15.0	5.0	14.7	4.9	15.7
35-64	135.6	264.0	167.2	13.9	26.9	64.7	56.5
65+	142.6	253.7	150.1	12.8	9.8	30.4	27.7
Work status of reference person							
Employee	90.7	180.2	134.6	11.5	27.7	37.4	47.9
Self-employed	269.1	585.8	276.4	22.6	48.2	22.8	9.0
Retired	152.3	252.7	152.5	14.0	9.0	34.7	31.7
Other not working	11.1	98.5	39.9	2.0	6.9	4.6	10.7
Education of reference person							
Primary or no education	100.0	166.3	119.9	5.3	12.4	24.7	34.3
Secondary	87.7	205.1	128.7	10.9	15.0	36.6	41.3
Tertiary	179.6	363.8	210.4	29.4	54.6	38.5	24.4

Notes: This table reports statistics for household net wealth and its main components. The first two columns report median and mean values in euros; columns 3-5 display median real and financial assets and median liabilities, conditional on participation; the sixth and seventh columns 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 of HFCN (2013a) for additional details on the definition of net wealth). Percentage shares may not sum to 100 because of rounding.
1) Percentiles of income calculated at the euro area level.

of net wealth affect the total figures. The median value of real assets among those households that report to own them (which is the case for 91.1% of all households) is €144,800, much more than the corresponding median for financial assets of €11,400 (held by 96.8% of households[10]) and for liabilities of €21,500 (held by 43.7% of households). The fact that real assets are a relatively large component of total net wealth for most of the household groups shown in Table 5, with the notable exception of renter households, which tend to hold more financial assets than real assets, highlights the importance of real estate in the overall values reported for real assets.

Column 6 of Table 5 shows the share of the various household types of total net wealth, and column 7 shows the share each household type makes up in the overall population. Comparing across these two columns, it is apparent that the wealthy groups tend to hold substantially larger fractions of net wealth than the fraction of the population they represent. This fact holds for households with more than one member, homeowners, the highest income quintile, households with a reference person aged 35 and above, the self-employed, the retired and households with tertiary education.

10 This percentage would be much lower if holdings of deposits were excluded from financial assets.

Box 4

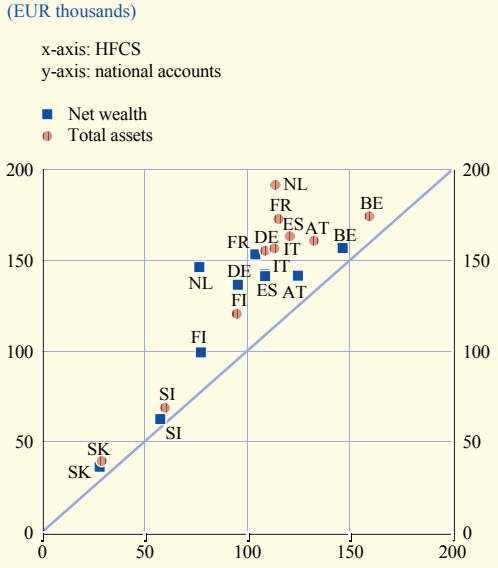
COMPARABILITY OF THE HFCS WITH NATIONAL ACCOUNTS

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 (NA) and other surveys. Such comparisons take into account that there are important methodological differences between the HFCS and NA figures, in terms of 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.

For example, the HFCS only covers "private" households (see Box 1), whereas the household sector in NA includes "non-profit institutions serving households" (NPISHs). The HFCS and NA also differ in their treatment of business wealth and the delineation of self-employment businesses. In the HFCS, businesses where members of the household are employed are classified as real assets. In NA, however, they can be equity participations (i.e. financial assets) or, when they are considered to be an integral part of the household, the assets and liabilities of the business are recorded as part of the household's balance sheet.

Mean net wealth and total assets, per capita, in the HFCS and national accounts

(EUR thousands)



Sources: Eurostat, HFCS and ECB calculations.

Nevertheless, comparisons with NA show general consistency between the HFCS and NA in relative terms, while levels may not be fully consistent for the reasons given above. The chart displays mean net wealth and total assets per capita in the HFCS and in NA, where estimates for non-financial assets are available. Partial information on land holdings has been estimated using available information from France and the Netherlands.

5 CONCLUSIONS

This article has provided a summary of the key stylised facts from the first wave of the Eurosystem Household Finance and Consumption Survey. The availability of these data (which are also released to researchers outside of the Eurosystem[11]) makes it possible to undertake analyses of issues related to household finance in the euro area and its individual countries, and to further understanding of how institutions, policies and shocks affect the economic decision-making of various households.

Further development of the HFCS and preparations for the second wave of the survey in all 17 euro area Member States are under way. Together with the first wave, the data will provide information about how household balance sheets and measures of financial fragility vary over time.

11 For futher information, please see the survey website: http://www.ecb.int/home/html/researcher_hfcn.en.html.