EUROPEAN CENTRAL BANK

EUROSYSTEM

The Household Finance and Consumption Survey

Cross-country metadata information

Wave 2017 (Wave 3)

Introduction

The Household Finance and Consumption Survey (HFCS), a joint project of central banks and national statistical institutes of the European Union, provides detailed household-level data on various aspects of household balance sheets and related economic and demographic variables, including income, pensions, employment, gifts and measures of consumption. A key distinguishing feature of the HFCS is that it provides country-representative data. For its third wave, conducted mostly in 2017, data have been collected in a harmonised way in 22 European Union member states.

This metadata document for wave 2017 provides information from all countries included in the HFCS research dataset (UDB version 3.2). It complements the information provided in the HFCS methodological report for wave 2017, available at the Household Finance and Consumption Network website (https://www.ecb.europa.eu/pub/economic-research/research-networks/html/researcher_hfcn.en.html). For many countries, further and more detailed information is available also from national methodological reports, which are listed in the section “Disclosure control and national data dissemination”.

The metadata information presented in this document was collected from participating national central banks and national statistical institutes in charge of producing the data. For this purpose a common metadata template was circulated by the ECB and filled in by the responsible organisations. The information is presented mostly as provided by the members of the Household Finance and Consumption Network. While the ECB checked the completeness of the metadata templates and requested clarifications for individual items, the level of detail of the metadata has not been harmonised. For some items, e.g. the effective oversampling rate of the top 10% or the sum of weights, the data are based on ECB calculations from the HFCS data. In addition, the list of national releases in Table F1 has been updated by the ECB.

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A. Main features

Table A1 Overview of main features of the HFCS country surveys (1)

Country	Net sample size	Sum of weights (HW0010)	Response rate (%)[1]	Over-sampling the wealthy	Effective over-sampling rate of the wealthiest 10 %	Multiple imputation	% of CAPI interviews	Median interview duration (minutes)	Survey has a panel component
Belgium	2329	4,884,911	28.9 (37.6)	X	45.6	X	100	72	X
Germany	4942	40,351,000	16.1 (31.5)	X	140	X	100	71	X
Estonia	2679	590,739	60.7 (72.8)	X	34.7	X	100	47	X
Ireland	4793	1,808,254	38.5	X	72.2	X	100	42	
Greece	3007	4,162,442	39.4	X	-8.3	X	100	62	
Spain	6413	18,536,404	34.4	X	224	X	100	-	X
France	13685	29,327,561	64.2 (68.1)	X	158		100	75	X
Croatia	1357	1,495,082	35.8	X	15.8	X	100		
Italy	7420	25,522,082	36.6 (50.3)		5.0		94.7	47	X
Cyprus	1303	303,242	(n/a) 60.8	X	57.9	X	100	67	X
Latvia	1249	836,810	(n/a) 45.3	X	69.4	X	95.4	40	X
Lithuania	1664	1,286,924	45.3	X	32.5	X	97.3	39	
Luxembourg	1616	226,378	24.6	X	45.3	X	100	45	
Hungary	5968	4,004,215	44.2	X	69.1	X	100	35	
Malta	1004	168,467	53.5 (64.8)		-6.4		99.9	44	X
Netherlands	2556	7,794,075	(n/a) 68.0		26.3	X	0	--	X
Austria	3072	3,933,967	49.8		-15	X	100	55	
Poland	5858	13,374,992	45.7 (52.5)	X	-4.8	X	0	70	X
Portugal	5924	4,117,770	85.5	X	80.9	X	100	59	
Slovenia	2014	824,618	37.7		-1.6	X	100	37	
Slovakia	2179	1,852,059	(n/a) 56.1	X	-17	X	100	65	X
Finland	10210	2,677,100	60.1 (77.4)	X	82.6		1.8	32	X

All samples are probability samples.

[1] Households interviewed for the first time. For countries having a panel component, response rate for total sample shown in brackets. Response rate computed from the sample register (S-file), if available. N/a = information not available. X = yes.

Table A2 Main features: fieldwork and reference periods

		Reference periods			
Country	**Fieldwork period**	**Balance sheet**	**Income**	**Consumption**	**Demographic and employment**
Belgium	January-2017 - September-2017	2017	2016	2016	2017
Germany	March 12, 2017 - October 27, 2017	Time of interview	Last calendar year	Typical month, some questions last 12 months	Time of interview
Estonia	March 2017 - June 2017	Time of interview, for register data 30.04.2017	2016	Typical month	
Ireland	April 9, 2018 - January 12, 2019	Time of interview	Last 12 months	Last 12 months	Time of interview
Greece	February 1, 2018 - September 1, 2018	Time of interview	Last 12 months	2018	2018
Spain	October 2017 - June 2018	31/12/2017	2016	Expenditure does not include a reference period ("how much do you spend on average?")	Time of interview
France	September 25, 2017 - January 31, 2018	Time of interview	2016	2017-2018	2017
Croatia	March 18, 2017 - June 21, 2017	Time of interview	2016	Typical month	Time of interview
Italy	January 2017 - September 2017	31/12/2016, at the exception of the value of dwellings which refers to the time of interview	2016	2016	31/12/2016 for demographics, 2016 for employment
Cyprus	February, 2017 - September, 2017	Time of interview	2016	Typical month	Time of interview
Latvia	September 15, 2017 - November 30, 2017	Time of interview	2016	Average of last 12 months	Time of interview
Lithuania	December 2017 - May 2018	31/12/2016	2016	2016	2016
Luxembourg	March 26, 2018 - November 30, 2018	Time of interview	2017	Typical month, some questions last 12 months	Time of interview
Hungary	October, 2 2017 - December, 31 2017	Time of interview	Last 12 months	Typical month	Time of interview
Malta	January 1, 2017 - April 1, 2017	End 2016	2016	Typical month	End 2016
Netherlands	May 2017 - July 2017	Time of interview	Last calendar year: 2016	Food: month/quarter/half year/year, Utilities: month, Holidays: past 12 months, Total consumption: month	Time of interview
Austria	November 2016 - July 2017	Time of interview	2016	Typical month	Time of interview
Poland	September 19, 2016 - November 28, 2016	Time of interview	Last 12 months	Last 12 months	Time of interview
Portugal	May 2, 2017 - September 5, 2017	Time of interview	2016	Typical month (in the last 12 months)	Time of interview
Slovenia	April 1, 2017 - October 1, 2017	Time of interview	2016	Last 12 months	Time of interview
Slovakia	February 2017 - April 2017	Time of interview	2016	Last 12 months	Time of interview
Finland	January 2017 - June 2017	31/12/2016	2016	2016	End of year 2016

B. Sampling

Table B1 Sampling frames

		Excluded groups		
Country	**Description of the sampling frame(s)**	**Population in institutions**	**Homeless**	**Other?**
Belgium	Source: Population register 2017 Units: Households identified by an address and a reference person in the Population Register	X	X	Residents in homes for the elderly were included in the sampling frame
Germany	First stage: List of equal-sized clusters of addresses (assembled by infas - for municipalities with less than 100,000 inhabitants one address clusters corresponds to one municipality) Second stage : List of street sections for large cities (private register maintained by infas Geodata, available at infas GmbH; stratified by wealth-related parameters such as share of luxury dwellings, wealthy street sections oversampled). Third stage : Register of local residents from municipalities	X	X	
Estonia	Statistical Population Register: covers the whole population of residents	X		
Ireland	2016 Census of Population	X	X	
Greece	For the first stage: List of cities, villages, and municipalities and building blocks within cities taken from Census in 2011. For the last stage (selection of dwellings) systematic sampling was used.	X	X	
Spain	Statistical Population Register: covers the whole population of residents	X		
France	The sampling frame of new-entry households contains all the main residences known by the tax administration on 1st January 2016.	X	X	All the people who don't live in a main residence. The reference population doesn't include people in institutions, homeless, etc.
Croatia	The 2011 Census data	X	X	
Italy	All the Italian municipalities have a register of all the persons legally resident within their boundaries. This information is updated on a regular basis and it is than provided (at least twice a year) to ISTAT. ISTAT uses it to create a centralized archive of about 60 millions of persons. This archive is used for all the household surveys done by ISTAT. In theory it provides the more complete list of all the persons that are legally resident in Italy.	X	X	Individuals not in the population register (i.e. illegal immigrants).
Cyprus	List of customers of Electricity Authority of Cyprus. All the households with electricity consumption below 600KW were removed from the sampling frame, as they were considered summerhouses or secondary residences.	X	X	
Latvia	Population census data, Population Register, List of Addresses, Tax Register	X	X	
Lithuania	The list of municipalities is publicly available. The population register was obtained from "Center of registers". It contains information about persons, their demographic characteristics and addresses of registration, and data on real assets.	X	X	

		Excluded groups		
Country	**Description of the sampling frame(s)**	**Population in institutions**	**Homeless**	**Other?**
Luxembourg	Individuals who are residents of Luxembourg and are subscribed to the national social security system (IGSS, Inspection Générale de la Sécurité Sociale)	X	X	Households with workers in international institutions and no other household member registered at the IGSS.
Hungary	The register of addresses is based on the 2011 census which is updated by the construction and demolition reports every year and occasionally by other registers and surveys.	X	X	Population of municipalities with less than 30 inhabitants
Malta	The current sampling frame for persons and private households is based on the 2011 Census of Population and Housing and is updated annually by the NSI.	X	X	Collective living quarters (i.e. institutions) are excluded, along with private households who are already selected to participate in other household surveys, so as to reduce their burden of response.
Netherlands	The questionnaire is administered to a random sample of households that participate in the LISS panel. This panel is based on a true probability sample of households drawn from the population register.	X	X	
Austria	Up to date mail box register of private households.	X	X	
Poland	The samples for household surveys conducted by Central Statistical Office are selected from the sampling frame based on the TERYT system, i.e. the Domestic Territorial Division Register. Two kinds of primary sampling units (PSUs) are distinguished in the sampling frame: - about 178 000 CEA – census enumeration areas including about 68 dwellings each, - about 33 000 ESD – enumeration statistical districts including about 377 dwellings each. Elementary units in the frame are dwellings. The whole territory of Poland is divided into enumeration statistical districts and census enumeration areas. In surveys census enumeration areas or enumeration statistical districts are used as primary sampling units. The secondary sampling units are dwellings. The TERYT system is updated annually with respect to the territorial division into statistical districts and census enumeration areas. The lists of dwellings, names of towns, villages and streets are updated. Other changes due to new constructions, dismantle of buildings and administrative division modifications are also introduced quarterly.	X	X	
Portugal	National Dwellings Register (NDR) The National Dwellings Register (NDR) comprises all the private dwellings (and their buildings) registered in the Census 2011.The update is based mainly on information from fieldwork (from other surveys) and from the Indicators System of Urban Operations (building permits), which is the main source of information on new buildings/dwellings and demolitions.	X	X	
Slovenia	Source: Central Population Registry, updating simultaneously	X	X	Some people do not report to authorities their current main residence on time, there is no temporarily registered foreigners.
Slovakia	Database of occupied households units based on the 2011 Census. No updates available	X	X	

		Excluded groups		
Country	**Description of the sampling frame(s)**	**Population in institutions**	**Homeless**	**Other?**
Finland	Source: Population Information System of Statistics Finland. Units: Individuals and dwelling-units (register-based households). Frame is continuously updated. Frame includes also institutionalised population (excluded in sampling).	X	X	

Table B2 Sampling designs: an overview

	Sampling						
Country	Probability sample	Stratified sample	Number of strata	Total number of sampling stages	Final sampling units	Substitutions allowed	If substitutions allowed, total number of substituted households in the sample
Belgium	X	X	24	1	Household		
Germany	X	X	4	3	Individual		
Estonia	X	X	10	1	Household		
Ireland	X	X	157	2	Household		
Greece	X	X	13	2	Household		
Spain	X	X	All except Basque Country and Navarre: 5 strata by municipality size and 7 strata by taxable wealth. Basque Country and Navarre: 6 strata by municipality size.	1 for municipalities with >100.000 inhabitants, 2 for the rest.	Household	X	-
France	X	X	9	2	Address		
Croatia	X	X	16	2	Address		
Italy	X	X	58	2	Household	X	2065
Cyprus	X	X	8	1	Household	X	320
Latvia	X	X	9	2	Household		
Lithuania	X	X	34	2	Address		
Luxembourg	X	X	20	1	Fiscal household		
Hungary	X	X	626	2	Address		
Malta	X			1	Household		
Netherlands	X			1	Household		
Austria	X	X	180	2	Household		
Poland	X	X	195	2	Address		
Portugal	X	X	18	2	Address		
Slovenia	X	X	6	2	Address		
Slovakia	X	X	48	2	Household		
Finland	X	X	49	1	Individual		

Table B3 Sampling frame, sampling unit, number of selected units, selection method (first, second and third stages)

		First stage				Second stage			
Country	Total number of sampling stage	Sampling frame	Sampling unit	Number of selected units	Sampling method	Sampling frame	Sampling unit	Number of selected units	Sampling method
Belgium	1	National Register of Population	Address	7613	stratified sampling				
Germany	3	List of municipalities and number of inhabitants	Geographical area	159	probability proportional to size	List of street sections for large cities (private register maintained by infas Geodata)	Geographical area	767	Probability proportional to size
Estonia	1	Statistical Population Register	Persons who are at least 14 years old by 1.1.2017	1439 (new sample)	stratified sampling				
Ireland	2	2016 Census of Population	Geographical area	900	probability proportional to size	2016 Census of Population	address	10800	Simple random sampling
Greece	2	List of municipalities, cities, villages and building blocks within cities taken from census 2011.	Geographical area	670	stratified sampling / probability proportional to size	Dwellings	household address	3007	Probability proportional to size / Systematic sampling
Spain	1 for municipalities with >100.000 inhabitants, 2 for the rest.	In large municipalities except BC and N: Population Register supplemented with tax record information.In small municipalities and BC and N: Population register	Geographical area Address	-	stratified sampling / probability proportional to size / systematic sampling	Population Register	Address	3482	Simple random sampling
France	2	Master sample	Geographical area	567 units + 22 in overseas territories (DOM)	probability proportional to size	Fiscal sources within Master sample		21584	Stratified sampling / Probability proportional to size

		First stage				Second stage			
Country	**Total number of sampling stage**	**Sampling frame**	**Sampling unit**	**Number of selected units**	**Sampling method**	**Sampling frame**	**Sampling unit**	**Number of selected units**	**Sampling method**
Croatia	2	The 2011 Census data	Geographical area	800	probability proportional to size / systematic sampling	The 2011 Census data	household	4000	Simple random sampling
Italy	2	Italian municipalities	Municipalities	387	stratified sampling / probability proportional to size+ self-representing municipalities	Italian population registers	Household	7420	Simple random sampling
Cyprus	1	List of customers of Electricity Authority of Cyprus	Address	2576	stratified sampling / probability proportional to size / systematic sampling				
Latvia	2	Prepared for HFCS using Population Register and Tax Register data	Address	620	stratified sampling / probability proportional to size / systematic sampling	List of all addresses of PSU	Address	2894	Simple random sampling
Lithuania	2	List of municipalities	Geographical area	17	probability proportional to size	Population register	Household	10000	stratified sampling probability proportional to size
Luxembourg	1	National social security system (IGSS, Inspection Générale de la Sécurité Sociale)	Fiscal household	7100; 900 reserve batch (not used)	stratified sampling / probability proportional to size				
Hungary	2	Register of addresses	Geographical area	345	stratified sampling / probability proportional to size	Register of addresses	Household	15006	Simple random stratified sampling
Malta	1	Population and dwellings register	Address	1500	systematic sampling				

		First stage				Second stage			
Country	**Total number of sampling stage**	**Sampling frame**	**Sampling unit**	**Number of selected units**	**Sampling method**	**Sampling frame**	**Sampling unit**	**Number of selected units**	**Sampling method**
Netherlands	1	A random sample of households was drawn from households that participate in the LISS panel.	Address	3760	Simple random sampling				
Austria	2	List of enumeration districts	Geographical area	614	stratified sampling / probability proportional to size	Register of post box addresses	Address	6280	Simple random sampling
Poland	2	Local Data Bank, CSO	Geographical area	2680	stratified sampling / probability proportional to size	National Population and Housing Census	Household	12038	Simple random sampling
Portugal	2	National Dwellings Register (NDR)	Geographical area	677	stratified sampling / probability proportional to size	National Dwellings Register (NDR)	Address	8000	Systematic sampling
Slovenia	2	Register of spatial units	Geographical area	367	stratified sampling / probability proportional to size / systematic sampling	Central population register	Person	5505	Simple random sampling / systematic sampling
Slovakia	2	The database of household units based on 2011 Census	geographical area	1387	probability proportional to size	Database of occupied households units	address	4011	Simple random sampling
Finland	1	Population Information System of Statistics Finland	Persons aged 16 and over at the end of year 2015	5000 (new sample)	stratified sampling / probability proportional to size / systematic sampling				

	Third stage			
Country	**Sampling frame**	**Sampling unit**	**Number of selected unit**	**Sampling method**
Belgium				
Germany	Register of local residents from municipalities ("Einwohnermeldeamtsregister")	household	11052	systematic random sampling
Estonia				
Ireland				
Greece				
Spain				
France				
Croatia				
Italy				
Cyprus				
Latvia				
Lithuania				
Luxembourg				
Hungary				
Malta				
Netherlands				
Austria				
Poland				
Portugal				
Slovenia				
Slovakia				
Finland				

Table B4 Stratification criteria

Country	Stratified sample	Stratification criteria
Belgium	X	Region, average taxable income by statistical sector and median dwelling price by municipality
Germany	X	Municipality size, anticipated wealth
Estonia	X	Five NUTS3 regions and two income groups, the highest decile and the rest
Ireland	X	The sampling frame of the occupied private dwellings in the 2016 Census of Population were divided into strata by the 8 NUTS3 regions and 5 quintiles of deprivation/affluence.
Greece	X	NUTS II region, Degree of Urbanization
Spain	X	Taxable wealth, municipality size
France	X	Geographic area and common property
Croatia	X	Floor space of dwellings, NUTS-3, type of municipality
Italy	X	Stratification of municipalities by region and demographic size
Cyprus	X	5 counties, urban or rural areas
Latvia	X	Degree of urbanization (3 groups), and income (from TAX Register, 3 groups)
Lithuania	X	Estimated wealth
Luxembourg	X	Nationality (Luxembourgish, other), employment status (self-employed, private-sector employee, public-sector employee, other, retired), individual gross mean income (less or equal than 9th decile; higher than 9th decile)
Hungary	X	Geographical regions, income tax base per capita, size of municipalities, estimated value of dwelling
Malta		
Netherlands		
Austria	X	Region (NUTS 3) and Community Size Classes
Poland	X	Voivodeships (NUTS-2), size of places, wealth (tax income and size of properties)
Portugal	X	Region and classes of useful area of the dwelling. Strata resulting from the intersection of nine subdivisions or divisions of NUTS 2 and classes of useful area of the dwellings: <100sqm and ≥100 sqm for the subdivion "Municipalities of Cascais, Lisboa, Loures, Mafra, Oeiras, Sintra, Vila Franca de Xira, Amadora, Odivelas"; 120sqm and ≥120 sqm for the subdivions "Municipality of Porto" and "Municipalities of Alcochete, Almada, Barreiro, Moita, Montijo, Palmela, Seixal, Sesimbra, Setúbal"and divisions "Algarve" and "R.A. Madeira"; <150sqm e ≥150 sqm for the subdision "Norte (except minicipality of Porto)" and for the divisions "Centro", "Alentejo" and "R.A. Açores".
Slovenia	X	According to the type of settlement, criteria: demographic size of municipality
Slovakia		Regions (NUTS3 level) and municipality size
Finland	X	Income data based on taxation records of the previous year (2015 in the 3rd wave HFCS). Sources of income: wages and salaries (4 groups), self-employment income (2 groups), farming and forestry (2 groups), pensions (2 groups), other source (2 groups).

Table B5 Over-sampling the wealthy

Country	Over-sampling the wealthy	Effective over-sampling rate of the wealthiest 10 %	Effective over-sampling rate of the wealthiest 5 %	Criteria for oversampling	Auxiliary source(s)
Belgium	X	45.6	56.3	Income / Dwelling characteristic / Geographical area	National Statistical institute (fiscal sources and housing market sources)
Germany	X	140	174	Income / Geographical area In cities with 100,000 or more adult inhabitants, wealthy street sections are oversampled. Among the smaller municipalities, those with a high share of taxpayers with a total taxable income above a threshold were oversampled.	Tables based on tax register, micro-geographic information on street section level (infas geodata)
Estonia	X	34.7	42.3	Income	The division into two income groups is based on the total net income for 2016 taken from the whole population records of the Estonian Tax and Customs Board (includes income from employment, benefits, gain or loss from transfer of securities and some other types of income).
Ireland	X	72.2	71.6	The primary sampling units were chosen from geographical areas that scored highly on a wealth index based on homeownership rates and 'local property tax' bands. The oversample consisted of an additional 100 geographical areas chosen using probability proportional to size based on a wealth index.	Local Property Tax from Irish Tax office, Homeownership rates from Census.
Greece	X	-8.3	-14	Income Geographical area	We have used various definitions of income and property by municipality and tax code obtained from the Ministry of Finance. We also have used the average and median real estate prices by municipality and tax code obtained from the Bank of Greece Real Estate Prices database.
Spain	X	224	415	Households filing a wealth tax return. Define 7 wealth strata covering the distribution of taxable wealth	2014 Wealth and Income Tax returns
France	X	158	278	Wealth	Fiscal sources
Croatia	X	15.8	20	Dwelling characteristic	The 2011 Census data about dwellings
Italy		5.0	3.2		
Cyprus	X	57.9	65.8	Electricity consumption	
Latvia	X	69.4	75.5	Income	Tax Register data on person income
Lithuania	X	32.5	9.6	Wealth based on administrative data about the real assets.	A combination of the population register and the real property register obtained from "Center of registers".
Luxembourg	X	45.4	58.4	Income	Residents of Luxembourg subscribed to the national social security system (IGSS, Inspection Générale de la Sécurité Sociale)

Country	Over-sampling the wealthy	Effective over-sampling rate of the wealthiest 10 %	Effective over-sampling rate of the wealthiest 5 %	Criteria for oversampling	Auxiliary source(s)
Hungary	X	69.1	92.6	Dwelling characteristic, estimated value of the dwelling	Database of real estate transactions 2013-2016 (DRET), Census (2011), "Tstar" database
Malta		-6.4	-12		
Netherlands		26.3	29.9		
Austria		-15	-15		
Poland	X	-4.8	0.4	Income / Dwelling characteristic	
Portugal	X	80.9	90.2	Geographical area and classes of useful area of the dwellings	National dwelling register.
Slovenia		-1.6	-3.5		
Slovakia	X	-17	-19	Geographical area	Fiscal sources. Slovak Tax Office made the list of streets with residents whose income falls in the top 5% of the income distribution in the region (based on income tax files from 2015). The over-sampling was focused on the streets with the highest density of wealthy people.
Finland	X	82.6	96.5	Income	Tax register, register of household-dwelling units. See stratification.

Table B6 Methods for oversampling

Country	Method to determine the over-sampling rate
Belgium	Neyman allocation based on income dispersion
Germany	A fixed oversampling rate was chosen, based on the distribution of wealth municipalities and street sections
Estonia	The oversampling rate is chosen as a compromise between achieving two aims. The first aim is to have a sufficiently large subsample of wealthier households and the second is to have a nationally representative sample.
Ireland	Based on resources, number of interviewers available.
Greece	The oversampling rate is determined in the 90th percentile of median equivalized disposable income and the 90th percentile of median per capita taxable value of property.
Spain	Progressively higher in strata with higher taxable wealth.
France	Households with high wealth have been oversampled in order to improve the measure of high-concentrated wealth in the top of the distribution. Formally a Neyman allocation for the wealthy sample would have given the same results in terms of sample size. The sample size has also been set in order to get enough observations about this part of the population so every computed estimate is consistent. Criteria or oversampling: Within each selected primary unit, two samples were selected. The first one targeted wealthy households and the second one the other households named here "standard households". For the standard sample, five strata have been defined: older people, self-employed with high income, managers, wealth income and others. For the wealthy sample, 3 strata oversampled: city dwellers with more than 3 million euros of net assets declared; rural dwellers with more than 3 million euros of net assets declared; other households declaring between 1.3 and 3 million euros of net assets. For each primary unit and each stratum, an allocation proportional to main residences has been computed. Then a systematic selection was made within each couple stratum-primary unit.
Croatia	Occupied dwellings with floor space over 120 m2
Italy	No oversampling.
Cyprus	Electricity consumption is considered our proxy for wealth. A fixed oversampling rate was applied, by taking the top 10% of the distribution of the annual domestic electricity consumption.
Latvia	By choice of different sampling fraction for different strata
Lithuania	20% of the gross sample was drawn from the top income decile according to wealth from registers.
Luxembourg	20% of households with mean gross income over 9th decile were oversampled
Hungary	We used an allocation scheme which was 50% Neyman-allocation and 50% proportional allocation. As the strata of households with higher dwelling values has much higher dispersion the Neyman-allocation resulted in a pronounced oversampling of the wealthy.
Malta	No oversampling.
Netherlands	No oversampling.
Austria	No oversampling.
Poland	There have been selected 4 groups of wealthy households. The weights of the first group (the wealthiest) was multiplied by 5, the second one by 2, the third by 1 and the last one by 0.98.
Portugal	Dwellings with a useful floor space (sqm) above a predefined threshold, similar to the one adopted in the previous edition.
Slovenia	No oversampling.
Slovakia	(PSUs) for high-income group are streets with at least two people with income greater than 95% quantile in the region.
Finland	Follows from the non-proportional allocation of EU-SILC sample, not explicitly determined for the HFCS.

Table B7 Panel component

Country	First year of the panel component	Number of households which have been re-contacted at wave 2017?	Number of households which have been re-contacted (% of all contacted households)	Mean attrition rate from one wave to the next	Sample structure over time	Panel duration in rotating designs	Panel tracing rules
Belgium	2014	1720	28.8	36.7	Pure Panel with refresher sample		Tracing is only based on the dwelling address
Germany	2009	4906 (+99 Split households from wave 2)	31.2		Pure Panel with refresher sample		If a person moves out of a panel household, the person forms a new household (split) and will be interviewed at the new location, including people living with him/her.
Estonia	2013	2061	58.7	17.9	Pure Panel with refresher sample		Only households that responded in the previous wave have been traced. Split-offs would also be traced.
Spain	2008	4832	38.4	25	Rotating design	4 waves (4*3=12 years)	A household considered panel if any of the adult members in the previous wave still present.
France	2014	5565	31.3	17.8	Rotating design	The units will stay 9 years (4 interrogations in total)	First interrogation: A "panel" household is interrogated and all household members acquire the status "panel". Next waves: households with at least an individual "panel" are re-interrogated as well as all its members.
Italy	1989	4572	38.2	21.7	Pure panel with refresher sample		Panel households who have moved and persons who separated from original panel household in the next waves are traced. The interviewer collects information about the new address from neighbours or from the remaining household members.
Cyprus	2014	1303	62.4	.	Pure Panel with refresher sample		The existing households were asked to provide the contact details of the persons who moved to new households since the 1st wave.
Latvia	2014	668	34.3	.	Rotating design	9 years / 3 survey waves	Eligible addresses of the previous survey wave have been included in the sample of the current survey wave.
Malta	2014	638	45.1	18.6	Pure Panel with refresher sample		All members in the sampled household were followed (i.e. if one member within the household had moved out, an attempt was made to contact this person, given that the necessary information was provided by the original household).

Country	First year of the panel component	Number of households which have been re-contacted at wave 2017?	Number of households which have been re-contacted (% of all contacted households)	Mean attrition rate from one wave to the next	Sample structure over time	Panel duration in rotating designs	Panel tracing rules
Netherlands	The LISS panel is set up since 2007. In general, there is at least one survey every month in the LISS panel. This is the first time the HFCS is administered in the LISS panel.	.	.	.	Pure Panel		Panel members who leave the household (but still want to participate) receive a new household number if they are original sample members (i.e., they were part of the household when the household was selected to join the panel). If they are not OSM and leave the household they are stopped as panel members. In general, information on panel members who leave the panel remains available in the database.
Poland	2014	3178	29.1	29.9	Pure Panel		The panel component was introduced for the first time in wave 2017 (i.e. the same households are linked between wave 2017 and the previous wave).Panel tracing rules will be discussed before the next wave.
Slovakia	2014	706	21.8	.	Pure Panel		Households who are not on the same address are not followed
Finland	2013	2371	18.9	28.9	Rotating design	4 years / 1 survey wave	Only the initially selected/sampled person is followed, other household members are "co-residents" and splits are not followed. So-called "selected respondent" design of EU-SILC.

Table B8 Sampling: any other information

Country	Any other information about the sampling design
Germany	Stratification is based on municipality size (small and medium municipalities with less than 100 000 inhabitants vs. large municipalities). Small and medium municipalities are further stratified based on income tax statistics into rich and other small and medium municipalities. Large cities are divided in two strata based on micro-geographic information. Type of stage 1 sampling units: List of equal-sized clusters of addresses (assembled by infas - for municipalities with less than 100,000 inhabitants one address clusters corresponds to one municipality). Stage 2 sampling frame: List of street sections for large cities , stratified by wealth-related parameters such as share of luxury dwellings, wealthy street sections oversampled.
Greece	Stratification: We have 13 regions and three categories of the degree of urbanization (urban, semi-urban, rural). Athens and Thessaloniki are separate strata.
Spain	Sampling. For all 52 provincial capitals and municipalities over 100,000 inhabitants, fresh oversampling was designed to supplement the panel sample by wealth stratum taking into account the updated wealth strata of panel households. Within each of the seven wealth strata the sampling was random, closely following the sampling procedure used in previous waves for municipalities of that size. For municipalities with 100,000 or fewer inhabitants there was no fresh oversampling. The sampling was a two stage cluster design in which the primary sampling units (PSUs or 'secciones censales') were the same as those used in previous waves of the EFF. Within each PSU, households were randomly selected to supplement the panel households belonging to it, up to an overall number of nine households per PSU. Sampling for Navarre and the Basque Country was similar to that for the group of smaller municipalities but with a finer stratification by municipality size for small municipalities. Specifically, the panel sample was supplemented up to a total of nine households within each of the PSUs used in the previous waves. Substitutions. To try and preserve as much as possible the oversampling scheme devised for large municipalities and all provincial capitals, tightly controlled replacements were chosen . The use of controlled replacements is similar to post-stratification and weight adjustments within cells when data collection is completed. An important reason in our case for having controlled replacements was the fact that we do not have any indication of the wealth stratum to which the sample households belong, thus ruling out the possibility of a 'directed' effort during the field work should it be found that the response rate of certain strata was particularly low. In particular, in large cities and provincial capitals up to four replacements were provided for each original household in the sample that would serve as replacements of that household only. These replacements were the two households immediately before and the two immediately after the household in a list ranked by income quartile (for non-filers of wealth tax), wealth stratum, and per capita household income. Replacements had to belong to the same income quartile (for non-filers of wealth tax returns) or the same wealth stratum as the sample household. This was done within municipalities to keep replacements geographically not too distant from the original sample household. In the case of smaller municipalities, Navarre, and the Basque country, four replacement households were drawn for each refreshment sample household from the same PSU. As with the previous wave, no replacements were provided for panel households. This allowed for a larger refreshment sample.
Italy	Since 1989 the SHIW has a split panel design that is a combination of cross-section and panel samples at each wave The panel sample has two components: 1) the "old panel" component and 2) the "new panel" component. The old panel households are households that have participated in the last wave and at least in an earlier one. They are all eligible for the new interview. The new panel households are selected randomly from among those interviewed in the previous survey only. Their role is to compensate for the attrition of the other component and to refresh the panel. Stage 1 selection method: Municipalities are stratified by region and demographic size. Within each stratum, the municipalities in which interviews are to be conducted are selected to include all those with a population of more than 40,000 inhabitants and those with panel households (self-representing municipalities), while the smaller towns are selected on the basis of probability proportional to size (PPS). Stage 2 selection method: Households are selected randomly from population registers. The number of households to be interviewed is fixed and depends on the size of the municipality (about 20 households for cities with less than 350,000 inhabitants and 120 households for bigger cities). Substitutions are only allowed under a strict protocol. For instance the interviewers have to make at least 4 contact attempts in different days and in different hours. Any contact attempt can be subject to control by the survey agency. Interviewers have no say in the substitution process.

Country	Any other information about the sampling design
Latvia	The sample of the previous survey wave (2014) is used for Latvian HFCS in 2017. In 2014, building of the first stage sampling units and their subdivision in 9 strata was made in several steps: (1) All addresses of private dwellings were subdivided in 3 groups according to degree of urbanisation (Riga; 8 other big cities; rural areas including small towns); (2) Each Population census enumeration area of each urbanisation group was subdivided in three parts serving as primary sampling units (PSU) - (a) households with total income from the highest 10 decile of corresponding urbanisation group; (b) households with total income from 7-9 deciles of corresponding urbanisation group; (c) households with total income from 1-6 deciles of corresponding urbanisation group; (3) PSU were subdivided in 9 strata (11, 21, 31, 12, 22, 32, 13, 23, 33). First digit of stratum code corresponds to urbanisation level, and second - to income level. For example, stratum 11 contains PSU with households from the highest income decile located in Riga; stratum 12 contains PSU with households from the7 to 9 income decile located in Riga; stratum 13 contains PSU with households from the 1 to 6 income decile located in Riga; stratum 21 contains PSU with households from the highest income decile located in 8 large cities; etc. If number of households in some PSU was small it was merged with some neighbouring PSU from the same territorial unit or administrative territory. Before the first stage of sampling additional indirect stratification was made. Within each stratum PSU were ordered so that perimeter of polygon with polygon's vertices in mass centres of PSUs has the smallest possible value. In 2014, for Latvian HFCS stratified two stage probability sample consisting of 4000 dwellings was prepared, and only 2400 of sample units were distributed to interviewers. In August 2017 the sampling frame and the sample were updated using Population Register data as of April 28, 2017, and data on persons, who died or emigrated from Latvia before June 30, 2017. Dwellings without declared persons and non-eligible dwellings were excluded from the frame. On the other side, a dwelling, which did not belong to frame in HFCS_2014, was included in the frame if for that dwelling there was at least one person, who declared that he/she is living in that dwelling. In 2017, within each stratum design weights are calculated as a ratio of the updated stratum size and the number of responded households. In addition, information on the total income in 2015 and 2016 of persons declared in each dwelling was obtained from Tax Register. These data as well as demographic data on number of persons by sex and age groups for Riga, eight large cities and other territories was used to obtain calibrated survey weights.
Luxembourg	Indirect sampling is applied as follows: households (target units) are selected through their fiscal households (sampling units) but several fiscal households may correspond to a same household. To solve this problem of multiple selection probabilities (or duplication) at the estimation stage, the Generalised Weight Share Method provides a final weight for every surveyed household (see LAVALLEE (2007), Indirect sampling, Springer Science & Business media).
Netherlands	Stratification: for practical purposes it can be assumed that there are no strata and no stratification criterion (in reality various stratifications and various criteria have been used for the respective additions to correct for panel attrition). Information on the LISS panel (Longitudinal Internet Studies for the Social Sciences) available at: https://www.lissdata.nl/about-panel
Poland	Further details in the Methodological Annex to the 2016 Survey Report, available at: https://www.nbp.pl/en/publikacje/inne/bzgd/bzgd_2016_metodology_en.pdf
Portugal	The sample comprises two random subsamples of equal size (4000 units each): a representative sample and a supplementary sample to cover the more affluent households. Regional Strata (1) "Norte" excluding the municipality of "Porto"; (2) Municipality of "Porto"; (3) "Centro"; (4) Municipalities of "Cascais, Lisboa, Loures, Mafra, Oeiras, Sintra, Vila Franca de Xira, Amadora, Odivelas"; (5) Municipalities of "Alcochete, Almada, Barreiro, Moita, Montijo, Palmela, Seixal, Sesimbra, Setúbal"; (6) "Alentejo"; (7) "Algarve"; (8) "Região Autónoma dos Açores" and (9) "Região Autónoma da Madeira". Clusters: composed by one or contiguous cells of the European GRID 1Km*1Km with a minimum of 150 dwellings of usual residence. Over-sampling: Dwellings with an useful floor space (sqm) above a predefined threshold. At least 150sqm in strata (1), (3), (6) and (8); at least 120 sqm in strata (2), (5), (7) and (9); at least 100sqm in stratum (4).

Country	Any other information about the sampling design
Finland	HFCS sample is the same as in EU-SILC 2017. For more details about the sampling see EU-SILC quality report:https://circabc.europa.eu/sd/a/df1e1d55-b525-4cac-a064-2965c090ab72/SILC_ESQRS_FI_2017.zip Cross-sectional sample has 4 rotational groups. Sample of new group drawn November 2016 and contact data updated January 2017 (fieldwork of 1st wave February-June 2017). The selection scheme is consistent between all rotational groups. The old rotational groups (3 groups) are included in the set of responded households from the previous year to be interviewed (gross sample). The new sample is selected with two-phase stratified sampling design. In the first phase, a master sample of persons (50,000) is selected with systematic sampling from the population register data. In the second phase, a sample of persons (5,000) in the household-dwelling units is selected from the stratified master sample with simple random sampling without replacement within every stratum and using non-proportional allocation. For the formulation of the strata the 1st phase sample is merged with the most recent taxation records. The aggregate taxable income is then used to define whether the people living in the household-dwelling unit are wage earners, entrepreneurs, farmers, pensioners or other non-active people. The socio-economic group, i.e. the strata, of a household-dwelling unit is then formulated using the information about the socio-economic status of people living in the household-dwelling unit. Strata of farmers, entrepreneurs and high-income wage-earners have the largest sampling fractions.

Table B9 Survey outcome indicators: sample size, response rate and other rates

Country	Gross sample size	Net sample size	Net sample size - panel component	Response rate (%) – total sample	Response rate (%) - panel component	Response rate (%) - non-panel component	Contact rate (%)	Cooperation rate (%)	Refusal rate (%)
Belgium	7613	2329	1034	37.6	60	28.9	96.5	38.9	46.6
Germany	16375 (Panel: 4906, 11469 Refresher + Split)	4942	3243	31.5	69.9 Split: 25.9	16.1	Total: 85.5 Panel: 95.6 Split 96.1 Refresher 92.1	Total: 31.5 Panel: 73.1 Split: 31.7 Refresher: 18.5	Total :48 Panel: 22.4 Split: 46.4 Refresher: 63.3
Estonia	3816	2679	1722	72.8	81.8	60.7	95.4	76.3	17.8
Ireland	13200	4793		38.5			67.9	56.8	26.2
Greece	7980	3007		39.4			94.3	41.8	50.5
Spain	14456	6413	3634	48.7	71.4	34.4	95.5	51	40.2
France	21484	13685	4668	68.1	77.1	64.2	88.6	76.9	11.3
Croatia	4055	1357		35.8			85.7	41.7	49.2
Italy	15739	7420	3804	50.3	77.8	36.6	81	62.1	28.6
Cyprus	2218	1303	N/A	60.8	N/A	N/A	97.4	62.6	28.9
Latvia	2894	1249	668	45.3	N/A	N/A	70.7	64.1	24.7
Lithuania	3774	1664		45.3			80.2	56.5	26.3
Luxembourg	7100	1616		24.7			86.0	28.7	53.7
Hungary	15006	5968		44.2			73.9	59.8	25
Malta	1590	1004	537	64.8	79.5	53.5	91.3	71.2	25.3
Netherlands	3760	2556		68.0			100	68.0	28.9
Austria	6280	3072		49.8			98.5	50.6	45.3
Poland	12038	5858	2217	52.5	69.5	45.7	98	53.6	31.8
Portugal	8000	5924		85.5			91.4	93.5	3.5
Slovenia	5505	2014		37.7			88.3	42.7	45.5
Slovakia	4017	2179	706	56.1	N/A	N/A	83.5	67.2	26.4
Finland	13396	10210	2 241	77.4	93.2	60.1	94.9	81.6	15.3

C. Data collection

Table C1 Fieldwork

		Organisation responsible for...		Mode of interview				Interview duration in min			
Country	**Fieldwork period**	**Fieldwork**	**Reviewing and editing**	**% of CAPI**	**% of CATI**	**% of CAWI**	**% of PAPI**	**Median**	**Mean**	**Language version(s)**	**Households re-contacted in case of potential errors or inconsistencies?**
Belgium	January-2017 - September-2017	Survey company	National Central Bank	100	0	0	0	72	82	French, Dutch, English, German	X
Germany	March 12, 2017 - October 27, 2017	Survey company	National Central Bank Survey company	100	0	0	0	71	76	German	Possible, but not used
Estonia	March 2017 - June 2017	National Statistics Institute	National Central Bank / National Statistics Institute	100	0	0	0	47	56	Estonian and Russian	
Ireland	April 9, 2018 - January 12, 2019	National Statistics Institute	National Statistics Institute	100	0	0	0	42	61	English	
Greece	February 1, 2018 - September 1, 2018	Survey company	National Central Bank Survey company	100	0	0	0	62	63.7	Greek	X
Spain	October 2017 - June 2018	Survey company	National Central Bank Survey company	100	0	0	0	-	-	Spanish	X
France	September 25, 2017 - January 31, 2018	National Statistics Institute	National Statistics Institute	100	0	0	0	75	81	French.	X
Croatia	March 18, 2016 - June 21, 2016	Survey company	National Central Bank Survey company	100	0	0	0			Croatian	X
Italy	January 2017 - September 2017	Survey company	National Central Bank / Survey company	94.7	0	0	5.3	47	52	Italian, English	X
Cyprus	February, 2017 - September, 2017	National Central Bank	National Central Bank	100	0	0	0	67	71	Greek and English	X

		Survey company									
Latvia	September 15, 2017 - November 30, 2017	National Statistics Institute	National Central Bank	95.4	4.4	0	0.2	40	42	Latvian English, Russian	
Lithuania	December 2017 - May 2018	Survey company	National Central Bank	97.3	0	0	0.9	38.75	44.79	Lithuanian	
Luxembourg	March 26, 2018 - November 30, 2018	Survey company	Survey company / National Central Bank	100	0	0	0	45	52.8	French, German, English	X
Hungary	2st October 2017 - 31st December 2017	National Statistics Institute	National Statistics Institute	100	0	0	0	35	43	Hungarian, English	
Malta	January 1, 2017 - April 1, 2017	National Statistics Institute	National Statistics Institute	99.9	0	0	0.1	44	48	English, Maltese	X
Netherlands	May 2017 - July 2017	Survey company	Survey company	0	0	100	0	-	-	Dutch.	X
Austria	November 2016 - July 2017	Survey company	National Central Bank	100	0	0	0	55	59	German	X
Poland	September 19, 2016 - November 28, 2016	National Statistics Institute	National Central Bank	0	0	0	100	70	73	Polish, English	X
Portugal	May 2, 2017 - September 5, 2017	National Statistics Institute	National Central Bank National Statistics Institute	100	0	0	0	59	65	Portuguese	X
Slovenia	April 1, 2017 - October 1, 2017	Survey company	National Central Bank	100	0	0	0	36.5	40.1	Slovenian	X
Slovakia	February 2017 - April 2017	National Statistics Institute	National Central Bank National Statistics Institute	100	0	0	0	65	70	Slovak	
Finland	January 2017 - June 2017	National Statistics Institute	National Statistics Institute	1.8	98.2	0	0	32.3	34.8	Finnish, Swedish, English	

Table C2 Interviewers

Country	Final number of interviewers	Organization in charge of recruitment	Training mode	Payment and incentive schemes	Employment status	Average number of training hours per interviewer
Belgium	91	survey company	Face-to-face / Remote	Per completed interview / Regular fixed salary / Bonus arrangements	Employees of the organisation / Free-lancers	8
Germany	273	survey company	Face to face	Per completed interview / Assignment fee / Regular fixed salary	Free-lancers	
Estonia	63	NSI	Face to face	Per completed interview / Regular fixed salary	Employees of the organisation / Free-lancers	All interviewers were previously trained and experienced CAPI interviewers. The HFCN specific training course lasted 2 days about 11 h.
Ireland	100	NSI	Face-to-face	Regular fixed salary / Bonus arrangements	Employees of the organisation	7
Greece	70	survey company	Face-to-face	Per completed interview	Free-lancers	6
Spain	-	survey company	Face-to-face	Per completed interview / Regular fixed salary / Bonus arrangements	Employees of the organisation / Free-lancers	Five full days
France	580	NSI	Face-to-face	Regular fixed salary	Employees of the organisation	23.5
Croatia	112	survey company	Face to Face / Remote	Per completed interview / Per visit	Employees of the organisation / Free-lancers	
Italy	236	survey company	Face to face		Free-lancers	8
Cyprus	24	NCB / survey company	Face to face	Per completed interview	Employees of the organisation / Free-lancers	
Latvia	42	NSI	Face to face	Per completed interview	Employees of the organisation	8
Lithuania	56	survey company	Face to face	Hourly rate / Per completed interview	Employees of the organisation / Free-lancers	
Luxembourg	52	survey company	Face to face	Per completed interview / Regular fixed salary	Employees of the organisation / Free-lancers / Hired through temporary work company	12
Hungary	274	NSI	Face to face	Per completed interview	Employees of the organisation / Free-lancers	3
Malta	27	NSI	Face to face	Per completed interview / Bonus arrangements	Free-lancers	2.83
Netherlands	CAWI, no interviewers					

Country	Final number of interviewers	Organization in charge of recruitment	Training mode	Payment and incentive schemes	Employment status	Average number of training hours per interviewer
Austria	70	survey company	Face to face	Per completed interview / Bonus arrangements	Free-lancers	
Poland	867	NSI	Face to face	Per completed interview / Bonus arrangements	Employees of the organisation	
Portugal	175	NSI	Face to face	Hourly rate / Per completed interview	Self-employed	14h per interviewer Issues covered (Motivation; Efforts to minimise non-response, Questionnaire and related concepts; Practical session with simulation of interviews using the CAPI program)
Slovenia	73	survey company	Face to face	Per completed interview / Bonus arrangements	Free-lancers	8 (full-day training)
Slovakia	137	NSI	Face-to-face	Hourly rate / Per completed interview	Employees of the organisation	6
Finland	120	NSI	Face-to-face / Remote	Hourly rate	Employees of the organisation	

Table C3 Questionnaire testing

Country	Pilot survey	Evaluation by an expert group	Focus groups	Cognitive testing	Behavioural coding of interviews	Other
Belgium						
Germany	X					
Estonia		X				
Ireland						Questionnaire was pre-tested in house by selected interviewers.
Greece	X					The pilot survey served to pretest the questionnaire.
Spain	X					
France	X					
Croatia	X	X				
Italy	X	X		X		
Cyprus	X	X				
Latvia		X				
Lithuania	X	X				
Luxembourg	X	X				
Hungary				X		
Malta				X	X	
Netherlands						None
Austria	X	X	X			
Poland	X	X	X			
Portugal						The questionnaire was tested by the NCB and NSI teams working on the survey
Slovenia		X		X		
Slovakia				X		
Finland						Questionnaire evaluated and tested by the team preparing the questionnaire and selected experienced interviewers.

Table C4 Contact strategies and non-response prevention

Country	Provided advance information	Minimum number of required contacts	Monetary incentives	Non-monetary incentives
Belgium	Introduction letter / Link to a web page	4	X	
Germany	Introduction letter / Link to a web page	5	X	
Estonia	Introduction letter / Press release / Link to a web page	3	X	
Ireland	Introduction letter	3		
Greece	Introduction letter	5	X	
Spain	Introduction letter / Press release / Link to a web page	5		X
France	Introduction letter / Press release / Link to a web page	5		X
Croatia	Introduction letter / Press release	5		
Italy	Introduction letter / Press release	4		X
Cyprus	Introduction letter / NCB website	3	X	X
Latvia	Introduction letter / Press release	3 in urban areas, and 2 in rural areas		
Lithuania		3		
Luxembourg	Introduction letter / Brochure/ Press release / Informative web-page	5		X
Hungary	Introduction letter / Press release / Link to a web page / Television and radio interviews, press conferences	3		
Malta	Introduction letter	3	X	X
Netherlands	An email was sent to announce the survey and give extra attention to the HFCS (emphasize its importance).		X	
Austria	Introduction letter / Link to a web page	5	X	
Poland	Introduction letter / Link to a web page	3	X	
Portugal	Introduction letter / Brochure	3		
Slovenia	Introduction letter / Link to a web page	4	X	
Slovakia	Introduction letter / Press release	3		X
Finland	Introduction letter / Link to a web page	5		

Table C5 Fieldwork auditing: verification of contacts and nonresponse

Country	Organisations responsible for fieldwork auditing	No verification	Verification, no significant issues detected	Verification, significant issues detected	Description of issues
Belgium	NCB, Survey company			X	During the fieldwork, non-response was higher in some area and the number of interviewers were not optimally allocated over the territory. Measures have been taken to correct this, but the fieldwork ended with a delay of two month. Interviewers had to take a picture of the building front in to prove they went to the right address.
Germany	infas (survey company)				
Estonia	Statistics Estonia, data collection department	X			
Ireland	NSI		X		
Greece	TNS KANTAR, NCB		X		
Spain	NCB		X		
France	NSI		X		
Croatia	Survey company		X		
Italy	Survey company			X	We found incoherence in the demographics with respect to the population registers and in the contacts outcomes. After further checks, some interviews have been discarded.
Cyprus	Survey company and NCB		X		
Latvia			X		Survey management system of CSB allows keeping track of each sampling unit delivered to interviewer. According to contract, CSB checked 3% of the sample addresses to make sure that the interviewers have visited them and have correctly identified the members of the respective households
Lithuania	"Eurointegracijos projektai"		X		
Luxembourg	LISER	X			
Hungary	NSI				People are reluctant to provide information about their assets
Malta	NSI		X		In all cases, the audits conducted verified the contacts/non-responses as originally indicated by interviewers
Netherlands	CAWI: no fieldwork auditing				
Austria	NCB		X		
Poland	NSI		X		
Portugal	NSI		X		
Slovenia	Survey company		X		

Country	Organisations responsible for fieldwork auditing	No verification	Verification, no significant issues detected	Verification, significant issues detected	Description of issues
Slovakia	NSI	X			
Finland	NSI		X		

Table C6 Fieldwork auditing: verification of data authenticity

Country	No verification	Verification, no significant issues detected	Verification, significant issues detected	Description of issues
Belgium			X	Supervisors called back randomly about 5 % of contacted households. Some key questions were asked to check the validity of the interview. Fieldwork checks revealed that one interviewer tried cheating by filling out some questionnaire on his own. All suspicious interviews from this interviewer have been discarded.
Germany	X			
Estonia		X		The respondents completed and returned 754 quality verification letters to Statistics Estonia, which means 34% of the letters originally sent out. No unclear actions or falsified contacts were detected.
Ireland		X		
Greece		X		
Spain			X	Different issues related to inconsistencies, the implementation of checks in the CAPI, and programming errors were detected as a result of the monitorization process that BdE undertakes during the entire fieldwork. Corrections of those problems were implemented during the edition and post-processing process by BdE in collaboration with the survey agency. Audio records were collected for several questions during the interviews. This source of information was specially useful for supervision to detect conceptual misunderstandings, errors and deviations of interviewers.
France		X		
Croatia		X		
Italy			X	We found incoherence in the demographics with respect to the population registers and in the contacts outcomes. After further checks, some interviews have been discarded.
Cyprus	X			
Latvia			X	Data of several registers (Land Cadastre, Tax Register, Credit Register) were used during the data editing process to identify and edit items of HFCS data, which respondents did not report during interview, or did not know answer, or refused to answer. Merging of register data with HFCS data was done at CSB using as the key variable the person identification code (unique code issued to each resident person).
Lithuania	X			
Luxembourg		X		
Hungary				Random face to face as well as telephone interviews with respondents

Country	No verification	Verification, no significant issues detected	Verification, significant issues detected	Description of issues
Malta		X		Contacted around 15% of sampled households and asked: • Do you remember the name of the interviewer? • Did you participate in the Survey three years ago? (when applicable) • Did the interview last more than 45 mins? • Was the interview conducted face to face? • How many household members live there? • How many household members are 16 or over who live there? • Did any household members moved out or joined your household recently? • Did the interviewer ask you questions on income? • Did the interviewer ask you questions on other properties? • Did the interviewer ask you questions on mortgages? • Did the interviewer ask you questions on interest or dividend received? • Was the interview split in more than one session? • Did you read the HFCS advertisement on any local newspaper? • Did you receive the gift voucher or gift? • Was the survey carried out by CAPI or PAPi? In all cases the data was proven to be authentic.
Netherlands				
Austria			X	Three interviewers had to be withdrawn entirely from the survey during the fieldwork due to flaws in conducting the interviews. In these cases, the household data potentially containing quality flaws were subjected to increased scrutiny. As there was considerable doubt concerning the quality of the information collected, the interviews in question were withdrawn and the corresponding households in the gross sample were then re-assigned to other interviewers. As a result, a total of 137 households were re-interviewed by other interviewers.
Poland		X		
Portugal		X		
Slovenia		X		
Slovakia	X			X
Finland		X		

Table C7 Use of other sources than interviews for data collection

Country	No other sources used	Registers	Statistical matching	Other
Belgium	X			
Germany	X			
Estonia		X		Individual-level data collected from credit institutions, leasing and life insurance companies, the Estonian Central Securities Depository, the Land Register, the Construction Works Register, the Vehicle Register, the Tax and Customs Board, the Health Insurance Fund, the Social Insurance Board, the Unemployment Insurance Fund, etc.
Ireland		X		
Greece	X			
Spain	X			
France		X		Income is obtained in France from administrative data sources.
Croatia	X			
Italy				Gross income and income from financial assets are estimated using additional information.
Cyprus	X			
Latvia		X		Questions related to participation of household members in the 1st and 2nd level pension scheme were not included in the national questionnaire. The necessary data to construct the corresponding HFCS variables were obtained from The State Social Insurance Agency. Merging of SSIA data with HFCS data was done using as the key variable the person identification code (unique code issued to each resident person).
Lithuania		X		Loan risk database in the NCB to collect information about loans.
Luxembourg	X			SC0310 degree of urbanisation from register.
Hungary	X			
Malta	X			
Netherlands	X			
Austria	X			HW0010 was constructed using both external survey and administrative data sources.
Poland	X			
Portugal	X			
Slovenia	X			
Slovakia	X			
Finland		X	X	Register-based estimation and combinations of register and survey data. Consumption data to a large extent statistically matched from the HBS.

Table C8 Collection of income data

Country	Gross	Net of income taxes	Net of income taxes and social insurance contributions	Other form
Belgium	X		X	
Germany	X	X		The respondent is able to choose whether to provide the income figure gross or net. During imputation, net amounts are converted to gross amounts using a tax micro-simulation model.
Estonia	X	X		Respondents could state either gross or net income, whichever was more convenient. The net amounts were converted to gross incomes in the editing process.
Ireland	X			
Greece	X	X		For PG0110 PG0210 and PG0310 we enable the interviewer to -record the amount of income (net or gross) and the frequency (monthly or annual) conditional on the respondent's answer. If the respondent knows the amount on a net basis the interviewer records that the amount is net i.e., net of income taxes and social contributions. If the respondent knows the amount on a gross basis the interviewer records that the amount is gross. We include also a separate question if the amount is monthly or annual. With respect to the net monthly and net annual amounts we convert the amounts to gross by adding the estimated social contributions and the estimated applicable tax. The applicable tax rate on income is calculated on the basis of 2018 tax regime. We also included a separate question for all the income variables that refers to the number of months the income has been received if the amount of income is reported on a monthly basis. If the amount of income is reported on annual basis we assume that the number of months that the amount of income has been received is 12.
Spain	X			
France				Income is defined as “net income” as it is: net of employees’ social contribution and employers’ social contributions, but gross of income taxes, property and wealth taxes (taxe foncière, taxe d’habitation, ISF, etc..), other taxes (payroll taxes CSG, CRDS, etc.). Income is obtained in France from administrative data sources. The definition retained for income data for administrative sources is limited by the disposable variables in the files. Administrative data sources are available at household level and personal level for activity incomes and pensions. Income includes activity income (employee, self-employment, unemployment benefits); pensions, public transfers, rental income from real estate property; and other sources (including income from financial investment).
Croatia	X	X		Income variables were asked to be expressed as gross, but it was allowed to accept also answers expressed net of income taxes and social contributions, in which case the figures were grossed-up by the model created by the CNB HFCS team. At the fieldwork almost all of the responses actually related to the income net of income taxes and social contributions.
Italy			X	
Cyprus	X			
Latvia	X			Only gross income was asked as the basic option of questionnaire. If respondent did not know gross value of some of PG0x10 and HG0x10 variables, he/she could report net value, which was converted to gross income through estimation.
Lithuania	X			
Luxembourg	X		X	Total net income after taxes and social security contributions is a country specific question.
Hungary	X		X	
Malta	X			
Netherlands	X			

Country	Gross	Net of income taxes	Net of income taxes and social insurance contributions	Other form
Austria	X	X		If gross income is not known by the respondent, net income was collected. This information was used ex post to calculate gross income or ranges for gross income respectively. The calculation is based and the net-to-gross converter of the Austrian Ministry of Finance making use of the information of occupation status, household structure and region.
Poland			X	The gross income was estimated on the collected net income values. It was computed by applying the individual nominal tax calculator to mimic the annual personal tax income declaration procedure. It was calibrated for two HFCS waves for Poland (2014, 2016).
Portugal	X	X		The net income was collected only when gross income was not known by the respondent. When that occurred, gross income was estimated using a specific microsimulation model converting net income to gross income, following the national EU-SILC survey methodology.
Slovenia	X			
Slovakia	X			
Finland	X			Taxes and social contributions available in a non-core variable, so disposable income can be computed (but not e.g. net wages and salaries).

Table C9 Data collection: any other information

Country	Any other relevant information
Ireland	Option available for the English questionnaire to be given in Irish if requested.
Latvia	Permanent interviewer network of CSB was used for HFCS. Interviewers received a fixed payment per completed interview. Survey related travel expenses of interviewers were reimbursed based on travel documents, too. NCB received from CSB weekly reports on current status of field work: sample addresses given to interviewers, number of completed interviews, number of started but not finished yet interviews, number of non-participation cases (total, and by reason).
Netherlands	CAWI: collected duration statistics not very informative.
Portugal	Payment scheme: Different payment for long interviews (households with more than 3 loans) and an additional payment when achieved predefined targets (such as deadlines, and response rates). Refusal conversion: Phone contacts by internal team and a second letter, reinforcing the importance and the main targets of the survey.
Finland	For further information on data collections conducted by Statistics Finland, see: http://tilastokeskus.fi/keruu/index_en.html. Wealth data collected infrequently (1987,1988, 1994, 1998, 2004, 2009, 2013,2016), the underlying sample survey (EU-SILC) is annual.

D. Editing and imputation

Table D1 Information on data editing

			Types of editing rules applied						
Country	**Use of interviewers' comments?**	**Use of register data?**	**Logical**	**Consistency**	**Range**	**Ratio**	**Balance**	**Outliers**	**Macro editing**
Belgium	In most cases		X	X	X	X		X	
Germany	In most cases			X	X	X	X	X	X
Estonia	In most cases	X		X		X			X
Ireland	Systematically	X	X					X	
Greece	Systematically		X	X	X	X	X	X	X
Spain	Systematically		X	X	X		X	X	
France	Sporadically	X	X	X			X	X	
Croatia	In most cases		X	X					
Italy	Systematically		X	X	X		X		
Cyprus	Systematically								
Latvia	In most cases	X	X	X	X	X			
Lithuania	Sporadically	X	X	X	X	X	X	X	X
Luxembourg	In most cases		X	X	X	X	X	X	
Hungary	In most cases		X	X	X			X	
Malta	In most cases	X	X	X	X	X	X	X	
Netherlands	Never								
Austria	Systematically		X	X	X	X	X	X	
Poland	Systematically		X	X	X	X	X	X	X
Portugal	In most cases		X	X	X	X	X	X	X
Slovenia	In most cases		X	X	X	X	X	X	
Slovakia	In most cases		X	X					
Finland	Systematically	X	X	X	X	X	X	X	X

Table D2 Additional information on data editing

Country	Additional information
Spain	These rules are informative, not automatic. The fieldwork company is not authorized to edit the data. It can only propose edits, but the final decision regarding revisions and the actual implementations of the checks are conducted at BdE.
Latvia	Editing of data was started with usage of all comments and remarks made by interviewers. For persons participating in survey data from Land Cadastre (data on real estate properties that belong each person to), Credit Register (data on credits and leasings of each person) and Tax Register (income data of 2016 for each person by 50 different types of income, data on participation of household members in the third level pension scheme) were obtained. These data were used to identify missed and wrong respondents' answers and to edit values of corresponding variables.
Malta	We revised the data of the first wave for the panel households as follows: 1. The value of businesses for the second wave was much lower than for the first wave. The reason behind the drop was that in the first wave, many households that had members who were self-employed did not report any business. For the second wave, we were more strict on this condition, that is if a household had members who were self-employed, they had to report a business. From the answers provided in the second wave, we estimated the value of the first waves for the panel households which did not report a business. 2. We noticed that in the second wave, there were loans on the main household residence and other real estate properties which were reported in the second wave and were taken prior to the first wave but were not reported. We corrected the data of the first wave accordingly. 3. HB0900 variable was checked with regards to panel households to ensure that values did not change beyond reason. We compared the reported value of the household main residence for the two waves for the panel households. If we noticed a large difference, we checked the address of that particular household and selected the amount with the most likely value compared to our advertised house prices database. 4. There were cases (for various variables), which were imputed in the first/second wave but the household had given an answer in the second/first wave. If the imputed value and given answer were very different we corrected the value of the imputed value.
Poland	Data editing procedures, used in the Wave 2017, are described in the national methodological report (chapter 4.2): http://www.nbp.pl/en/publikacje/inne/bzgd/bzgd_2016_metodology_en.pdf
Finland	Data editing and processing done as part of SILC production regarding demographic, labour, and income variables.

Table D3 Imputation: basic information (1)

Country	Multiple imputation	Organisation responsible for imputation	Software
Belgium	X	National Central Bank	SAS
Germany	X	National Central Bank	SAS
Estonia	X	University of Tartu	Stata
Ireland	X	National Statistics Institute	SAS
Greece	X	National Central Bank	Stata
Spain	X	National Central Bank	SAS
France	No	National Central Bank and National Statistics Institute	SAS
Croatia	X	National Statistics Institute	SAS
Italy	No	National Central Bank	SAS
Cyprus	X	National Central Bank	Stata
Latvia	X	National Central Bank	SAS
Lithuania	X	National Central Bank	R
Luxembourg	X	National Central Bank	SAS
Hungary	X	National Statistics Institute	SAS
Malta	No	National Statistics Institute	SPSS
Netherlands	X	Survey company	SAS, Stata
Austria	X	National Central Bank	Stata
Poland	X	National Statistics Institute	SAS
Portugal	X	National Central Bank and National Statistics Institute	SAS
Slovenia	X	National Central Bank	Stata
Slovakia	X	National Central Bank	Stata
Finland	No	National Statistics Institute	SAS

Table D4 Imputation: basic information (2)

Country	Selection of good predictors	Additional criteria for inclusion	How did you evaluate consistencies between individual variables?	Outlier observations excluded in the imputation model?
Belgium	Automatic pre-selection of covariates	Variables explaining non-response Variables that are good predictors of covariates used for other covariates	When variables are linked, dynamic bounds were defined in order to respect consistencies between them.	
Germany	Automatic pre-selection of covariates		Large number of such editing rules are implemented by bounding with each other	X
Estonia	Automatic selection of covariates with limited editing		During imputation, logical bounds were implemented in the software.	
Ireland	Evaluation of individual variables on a case-by-case basis	Variables explaining non-response Variables that, according to economic theory, are expected to be good predictors of the variable of interest	For groups of variables where these kind of inconsistencies occurred, the ratio of the initial to outstanding amount was calculated for the observed data and hot-deck imputation was used to impute this ratio which in turn was used to calculate the variable of interest	
Greece	Evaluation of individual variables on a case-by-case basis	Variables explaining non-response Variables that, according to economic theory, are expected to be good predictors of the variable of interest	We set the bounds in such a way as to avoid as much as possible such inconsistencies.	
Spain	Evaluation of individual variables on a case-by-case basis	Variables explaining non-response Variables that are good predictors of covariates used for other covariates Variables that, according to economic theory, are expected to be good predictors of the variable of interest	We always obtain a list of the individual variables involved in order to see if we encounter inconsistencies. If we observe some inconsistencies, we modify the part of the imputation program causing the problem or we readjust the covariates of the imputation models if the inconsistency is caused by some key covariates not considered.	
France	Evaluation of individual variables on a case-by-case basis	Variables that are good predictors of covariates used for other covariates Variables that, according to economic theory, are expected to be good predictors of the variable of interest	A lot of other variables (as total amount by type of product) exist in the French questionnaire and enables to check consistency.	
Croatia	Evaluation of individual variables on a case-by-case basis	Variables explaining non-response Variables that, according to economic theory, are expected to be good predictors of the variable of interest	With logical and arithmetic checks and with upper and lower imputation bounds.	

Country	Selection of good predictors	Additional criteria for inclusion	How did you evaluate consistencies between individual variables?	Outlier observations excluded in the imputation model?
Italy	Evaluation of individual variables on a case-by-case basis	Variables that, according to economic theory, are expected to be good predictors of the variable of interest	Observations have been manually edited when inconsistencies were detected.	
Cyprus	Automatic selection of covariates with limited editing	Variables that are good predictors of covariates used for other covariates		
Latvia	Automatic pre-selection of covariates			
Lithuania	Automatic selection of covariates with limited editing	Variables explaining non-response		
Luxembourg	Automatic selection of covariates with limited editing / and case-by-case evaluation of individual variables on a case-by-case basis	Variables explaining non-response Variables that are good predictors of covariates used for other covariates Variables that, according to economic theory, are expected to be good predictors of the variable of interest	Bounds included logical bounds. Variables used as logical bounds were updated directly after the imputation of the variables they are based on.	X
Hungary	Evaluation of individual variables on a case-by-case basis	Variables explaining non-response Variables that, according to economic theory, are expected to be good predictors of the variable of interest	We used dynamic bounds (bounds which depend on the values of other variables) when the validation showed inconsistency.	
Malta	Automatic selection of covariates with limited editing		No evaluation during the imputation process was made	
Netherlands	Selected covariates usually include individual and household characteristics (age, gender, education, household size, income), as well as specific variables likely to be good explanatory variables according to economic theory or common sense	Variables that, according to economic theory, are expected to be good predictors of the variable of interest	No elaborate consistency checks performed	

Country	Selection of good predictors	Additional criteria for inclusion	How did you evaluate consistencies between individual variables?	Outlier observations excluded in the imputation model?
Austria	Evaluation of individual variables on a case-by-case basis		On a case-by-case basis if the “inconsistent” values were imputed. If they were not imputed they were all either checked during the fieldwork or edited on a case-by-case basis during the editing process; during the imputation process no “inconsistent” values remained.	
Poland	Evaluation of individual variables on a case-by-case basis	Variables that, according to economic theory, are expected to be good predictors of the variable of interest	Consistency forced during imputation process by dependencies included in the imputation algorithm, e.g. dynamic rules of bounds determining	
Portugal	Evaluation of individual variables on a case-by-case basis	Variables explaining non-response Variables that are good predictors of covariates used for other covariates Variables that, according to economic theory, are expected to be good predictors of the variable of interest All parent variables of child variables included as covariates	Pre-imputed vs imputed incidence of the violations of the consistency checks	X
Slovenia	Automatic selection of covariates with limited editing			
Slovakia	Automatic selection of covariates with limited editing	Variables that are good predictors of covariates used for other covariates. Variables that, according to economic theory, are expected to be good predictors of the variable of interest	Initially by bounds. During imputation, no evaluation was made. Eventual inconsistencies were corrected after the imputation.	
Finland	Automatic pre-selection of covariates	Variables that, according to economic theory, are expected to be good predictors of the variable of interest	On a case-by-case basis	X

Table D5 **Imputation: use of weights and bounds**

Country	Use of weights in imputation			There is a limit for the number of collected observations below which missing values were not imputed	Regarding observations for which the respondent did not provide any point or range value, were bounds introduced and were observations imputed as the upper or lower value of the bound?
	No	Yes, as weighted regression	Yes, as covariates		
Belgium		X		X	X
Germany		X	X		X
Estonia	X			X	
Ireland			X		
Greece			X		X
Spain	X			X	
France	X	X			
Croatia		X			
Italy	X				
Cyprus	X			X	
Latvia		X	X		
Lithuania			X	X	
Luxembourg					
Hungary		X			X
Malta			X	X	
Netherlands	X			X	X
Austria			X		
Poland		X			X
Portugal			X		
Slovenia	X			X	
Slovakia			X	X	
Finland		X			

Table D6 Imputation: procedure used with low number of observations

	Procedure used in case of a low number of observations			
Country	**Values left missing**	**Values estimated**	**Variable pooled with other variables to get enough observations and then imputed**	**Other (explain)**
Belgium			X	
Germany				
Estonia		X		
Ireland				
Greece		X		
Spain	X			
France				
Croatia				
Italy				
Cyprus				Values imputed by simple regression models or at random
Latvia	X			
Lithuania	X			
Luxembourg				
Hungary		X		
Malta				
Netherlands	X			
Austria	X		X	
Poland				
Portugal				Imputation was always performed. Most cases with low number of collected observations can be found at end-of-the-cycle variables (i.e. HB34033, HB39023, HB40033). In these cases we used a model estimated previously for other variable (i.e. impute HB40013 using the coeficients estimated for HB40011)
Slovenia		X		
Slovakia		X		
Finland				

Table D7 **Imputation: value assessment (outliers and consistency)**

	Value assessment	
Country	**How did you evaluate "outlier" values?**	**How did you evaluate consistencies between individual variables?**
Belgium	For each imputed variable, graphs were drawn in order to compare distribution of observed and imputed values. The plausibility of each extreme imputed value have been analysed case by case.	When variables are linked, dynamic bounds were defined in order to respect consistencies between them.
Germany	1. Whether they cause the model overfitting; 2.Whether they are not leverage but are out of the estimated mean by some extreme degree (e.g 95% or 99%; this degree is decided by sensitivity analysis based on the criterieon	Large number of such editing rules are implemented by bounding with each other
Estonia	Prior the imputation HMR values were compared with register base calculated values and general upper limit was set as max register value +10%. Values above this limit were marked as incorrect (except one)	Before the imputation contraversial values were marked as incorrect or replaced with data from registers. During imputation logical bounds were implemented in the software.
Ireland	For variables where unusually high/low values were imputed, the influence of outliers was evaluated.	For groups of variables where these kind of inconsistencies occurred, the ratio of the initial to outstanding amount was calculated for the oberved data and hot-deck imputation was used to impute this ratio which in turn was used to calculate the variable of interest
Greece	We winsorized the outcome variables at 1% level to avoid the influence of outliers	We set the bounds in such a way as to avoid as much as possible such inconsistencies.
Spain		
France	Often there were already bounds given by other questions in the questionnaire.	A lot of other variables (as total amount by type of product) exist in the french questionnaire and enables to check consistensy.
Croatia	We detect outliers among collected observations on the base of variable distribution. Outlier values are set to missing values before the imputation process, they are imputed as other missing values and after imputation, imputed values replaced with original (outlier) values. In such way, imputation models are more stable and imputation do not give new outliers. However if we get new outliers after imputation, we change imputation model.	With logical and arithmetic checks and with upper and lower imputation bounds.
Italy	Extreme values were trimmed during the imputation process	Observations have been manually edited when inconsistencies were detected.
Cyprus		
Latvia		
Lithuania		
Luxembourg		
Hungary	We treated the outliers only at the most problematic variables without a general definition.	We used dynamic bounds (bounds which depend on the values of other variables) when the validation showed inconsistency.
Malta	No evaluation during the imputation process was made	No evaluation during the imputation process was made
Netherlands	In some cases, implausibly high imputed values were considered as outliers and limited by introducing narrower limits in the imputation syntax	No elaborate consistency checks performed
Austria	On a case-by-case basis if the "outlier" values were imputed. If they were not imputed they were all either checked during the fieldwork or edited on a case-by-case basis during the editing process; during the imputation process no "outlier" values remained.	On a case-by-case basis if the "inconsistent" values were imputed. If they were not imputed they were all either checked during the fieldwork or edited on a case-by-case basis during the editing process; during the imputation process no "inconsistent" values remained.

	Value assessment	
Country	**How did you evaluate “outlier” values?**	**How did you evaluate consistencies between individual variables?**
Poland	Default procedures of EMIR software	Consistency forced during imputation process by dependencies included in the imputation algorithm, e.g. dynamic rules of bounds determining
Portugal	Pre-imputed vs imputed incidence of the violations of consistency checks; Pre-imputed vs imputed max/min; Distribution comparisons.	Pre-imputed vs imputed incidence of the violations of the consistency checks
Slovenia		
Slovakia	No evaluation of outliers was performed during the imputation process. Imputation of outliers was limited by interval regression.	Initially by bounds. During imputation, no evaluation was made. Eventual inconsistencies were corrected after the imputation.
Finland	Comparing the distributions of the imputed and collected values.	On a case-by-case basis

Table D8 Imputation of specific variables: number of covariates used

	Number of covariates used in imputation			
Country	**Value of HMR (HB0900)**	**Amount still owed for first HMR collateralised loan (HB1701)**	**Value of savings accounts (HD1210)**	**Employee income (PG0110)**
Belgium	110 for the whole sample / 46 for the panel	111 for the whole sample / 22 for the panel	58 for the whole sample / 57 for the panel	98 for the whole sample / 110 for the panel
Germany	Information not available	Information not available	Information not available	Information not available
Estonia	68	27	Register data	77
Ireland	20	24	21	10
Greece	101	103	We split hd1210 into two variables, hd1130a and hd1130b. We used 106 regressors for the first variable and 9 regressors for the second, due to the low number of households with positive amounts for this variable.	106
Spain	250	115	169	237 (in previous waves, envisaged for the current one)
France	24	14	20	2
Croatia	25	2	No appropriate model	26
Italy	3	6	Values imputed from brackets	2
Cyprus	102	31	69	100
Latvia	28	-	14	
Lithuania	46	Register data	40	149
Luxembourg	Information not available	Information not available	Information not available	Information not available
Hungary	-	-	9	3
Malta	40	-	285	40
Netherlands	16	17	18	12
Austria	125	40	max 48 (depending on the regression)	max 69 (depending on the regression)
Poland	9	4	6	6
Portugal	125	122	98	111/110
Slovenia	35	19	19	62
Slovakia	37	37	20	69
Finland	Estimated from transaction prices	Register data	13	Register data

Table D9 Imputation: any other information

Country	Any other relevant information
Ireland	The majority of the variables were imputed using the €MIR tool but there were approximately 40 variables where the models failed to produce plausible values. In these instances, hot-deck imputation (5 donors selected using the approximate Bayesian bootstrap).
Spain	Personal and household level variables were jointly imputed using always household information and personal information of relevant household members as model covariates, in the long format (one row per person) to impute personal level variables and in the wide format (one row per household) to impute household level variables. The initial values correspond with values imputed stochastically by estimating the imputation models with the information available at the moment of imputing the survey variables sequentially, observed data and the data previously imputed, instead of using only the data imputed in the previous iteration as done in the remaining iterations of the imputation process. The initial values of variables given by intervals are missing until the variable is imputed sequentially by restricting its value to be inside the interval specified by the household. The number of covariates depends a lot on the sample size for each particular question. We also benefit from enlarged sample sizes after pooling subsamples of questions asked repeatedly for different household members, assets within a class and loans within a class.
France	Software tools: - for NSI imputations : the French questionnaire is very specific and imputation has been done on these detailed French variables, not using €mir - €mir is used in additional imputation done by the NCB to produce HFCS data Organisation responsible for imputation - NSI for the main imputations needed to built consistent French dataset : holding assets and debts and amounts for each wealth component - NCB for additional imputations not necessary in French data but asked by ECB in HFCS data Use of weights in the imputation model: - No for NSI imputations : strata were used to take into account overrepresentation of high wealth households, so we did not use weights - Yes for NBC imputations : HW0010 in €MIR, parameter WEIGHT
Malta	We recommend an automated selection of imputation models since it saves a huge amount of human resources. Variables HD0801, HD0802, HD0803 and HD0900 were imputed via a macro-economic benchmark in order to address consistency and coherence within the indicator along to national benchmarks.
Poland	In wave 2017 compared to wave 2, some qualitative variables were imputed (flag 1052/4052)
Finland	Imputation is quite limited due to extensive use of register data.

E. Weights

Table E1 Design weights

Country	Design weights constructed as an inverse of selection probability	Sum	Mean	CV (%)	Min	Max	Standard deviation
Belgium	X	9,922,327	1,303	101	67	23,392	1,315
Germany	X	39,672.000	24686.99	119	162.55	966658.74	20700.12
Estonia	X	1,800,353	472	66	124	1,240	313
Ireland	X	1,120,548	85	140	3	1,477	119
Greece	X	4,129,114	517	54	101	2,049	282
Spain	-	-	-	-	-	-	-
France	X	N/A	N/A	N/A	N/A	N/A	N/A
Croatia	X	1,510,029	372	44	82	644	162
Italy	X	24,838,079	1,578	74	475	4,653	1,173
Cyprus	X	478,038	216	26	115	335	55
Latvia	X	836,630	289	101	62	839	291
Lithuania	X	964,997	258	121	18	4,279	312
Luxembourg	X	119250	37	0.5	1	52	18
Hungary	X	4,468,675	298	68	8	3,634	203
Malta	X	272,998	172	68	57	1,023	117
Netherlands	X	7,877,882	2,095	0	2,095	2,095	0
Austria	X	4,240,550	675	22	468	1,172	149
Poland	X	21,101,320	1,753	36	1	4,007,305	501.
Portugal	X	4,007,305	501.	111.	27.	2151.	558.
Slovenia	X	824,618	150	30	36	292	45
Slovakia	X	1,852,059	461	4	435	500	19
Finland	X	10,361,100	786	78	38	3,253	609

Table E2 Unit non-response correction method

Country	Non-response adjustment?	Method	Auxiliary variables	External sources
Belgium	X	Regression-based modelling (logit, probit…)	S-file variables: SC0100, SC0200, SC0300, SC0400, SC0500, SC0600, SC0700A-SC0700G, SB0301, SC0310	Municipality variables (region, income variables, dwelling density, mortgage variables, inhabitants, wealth index, real estate price) + interviewers variables (gender, age, education level, experience level)
Germany	X	Regression-based modelling (logit, probit…)	Information from sample register file, paradata from field work, paradata from interviewer observations (SC-Variables), age, gender, nationality. For the panel households additionally variables related to the reference person's education, employment status of main income earner, household size and homeownership status in previous wave are used.	Number of households per Bundesland and number of households per municipality size class ("Politische Ortsgrößenklasse")
Estonia	X	Regression-based modelling (logit, probit…)	Household size, member's age, region, urbanisation type	
Ireland	X	Regression-based modelling (logit, probit…)	Head of household characteristics and household characteristics from the Census of population (2016). Sex, marital status, highest level of education, nationality, employment status, age group, ethnicity, social class, area type, tenure, house type, urban/rural, no. of cars	Census of Ireland 2016
Greece	No			
Spain	X	Response homogeneous cells	municipality size, wealth stratum, and municipality size and income quartile for those not filing for wealth tax of wealth tax returns.	Population register
France	X	Regression-based modelling (logit, probit…)	Calculation of analytical weights is based on the value of design weights. Total non-response is treated using reweighting procedures. Modelling non response with a logit gives relevant variables that explain non response mechanism. This variables, used to create strata for reweighting, are the following ones: design strata, region, type of dwelling, size of dwelling, age of the principal person, type of household, number of inhabitants of the household, global incomes in ranges, wealth incomes in ranges. After reponderation, a calibration procedure has been run.	No - Only sample information was used for weighting adjustments for unit non-response.
Croatia	X	Response homogeneous cells	S-file variables: SD0100, SC0100, SC0300	
Italy	X	Response homogeneous cells	The only auxiliary information available is the municipality in which respondents and non-respondents live. Within each municipality we inflate the respondents' weights to make them representative of the total population (non-respondents included)	Population size of each selected municipality; source: National Statistical Institute (Istat)

Cyprus				
Latvia	X	Response homogeneous cells	Strata	None
Lithuania				
Luxembourg	X	Response homogeneous cells	At the level of the fiscal household: fiscal household size, combination of cantons and fieldwork treatment period, and strata. At individual level: nationality groups, a combination of age groups and gender, a combination of affiliation or co-affiliation status with the health system, the retired or active labour status and the employment status.	
Hungary	X	Response homogeneous cells	The same variables which were used for stratification: Geographical regions, income tax base per capita, size of municipalities; estimated value of dwelling	The same sources that were used for stratification: Database of real estate transactions 2013-2016, Census (2011), "Tstar" database
Malta	X		Adjustment for non-response: 1) Panel Households: a. We derived the total number of household members that participated in wave 1 per district, age-groups and gender. b. The same totals were calculated for the household members that participated in the second wave as well. c. Then we derived the 'inflation factor' (the non-response factor). For example, if for instance, in wave 1 there were 100 household members in District 1, Age bracket 30-45 and Male and from these 100 household members only 60 household members participated in the second wave. These household members were assigned an inflation factor of (100/60). New household members were assigned a weight of zero. d. Then the average inflation factor of each household was calculated; it is the average inflation factor of the household members pertaining to that household. e. This inflation factor was then multiplied by the household (final) weight of the first wave. 2) Non-panel households: Adjusted for non-response as for cross-sectional data. Then the base weight was adjusted for non-response.	
Netherlands	No			
Austria	X	Regression-based modelling (logit, probit…)– applying the approach based on Beaumont and Haziza (2007) together with a logit-model.	Large set of explanatory variables including paradata, information on the sample design, information on the interviewer, information at the psu-level about living conditions	At the level of municipality: Information from the income tax register; share of primary sector workers from the Register-based Census (from Statistics Austria); information about education from the Register-based Labour Market Statistics (from Statistics Austria); unemployment and age distribution from the Register-based Census (from Statistics Austria);

				At the level of political district: mean crime cases from the crime statistics.
Poland	X	Response homogeneous cells	Design weights were adjusted with the use of the completeness indicator, estimated for each class of locality (6 classes: Warsaw, towns 500 000 – 1 000 000 inhabitants, towns 100 000 – 500 000 inhabitants, towns 20 000 – 100 000 inhabitants, towns less than 20 000 inhabitants, rural areas) and aggregated strata (3 groups).	Actually estimated demographic data, National Population and Housing Census
Portugal	X	Response homogeneous cells	Region (NUTS 2)	Labour Force Survey Q2/2017
Slovenia	X	Response homogeneous cells	N/A	N/A
Slovakia	X	Response homogeneous cells	Regions	Database of households from 2011 Census
Finland	X	Response homogeneous cells	Strata	Sampling frame

Table E3 Calibration to external sources and other post-survey weight adjustments

	Calibration			Other post-survey weight adjustments	
Country	**Method**	**Control variables**	**External sources used in the calibration**	**Other adjustments?**	**Description**
Belgium	Generalised regression	Age / Gender / Region / Household type	Official population statistics		
Germany	Cell-based post-stratification (iterative proportional fitting)	Age / Gender / Household size / Other: Main income earner: age x gender, age x education, employment/ occupational status, German/ not German, hh size, ownership HMR x size HMR, east-west x hh size, east/west x age, Number of households per “Bundesland”, Number of households per municipality	Micro-census statistics	X	Non-response adjusted weights are trimmed before being calibrated. In particular, values below the 5th percentile are set to that value and values above the 95th percentile are set to that value.
Estonia	Calibration or generalised calibration approach to external controls	Age / Gender / Region	Statistical Population Register		
Ireland	Calibration or generalised calibration approach to external controls	Age Gender Household size Region Employment Status, Deprivation quintile, Homeownership	Labour Force Survey, Q2 to Q4, 2018		
Greece	Calibration or generalised calibration approach to external controls	Household size / Region / total housing tenure	EU-SILC 2017 and LFS 2018:Q2		
Spain	Calibration or generalised calibration approach to external controls	Age / Gender / Household size Conform to the 2017 structure of the population according to gender, age by municipality size, and household size by municipality size	Population registers (Census and others)	X	Limits for weight adjustment factors in calibration
France	Calibration or generalised calibration approach to external controls	Age / Gender/ Household size/ Region / Other: total number of households,- reference person's age, urban unit bracket, reference person’s diploma, ZEAT (NUTS 1), reference person's socio-professional category, men's age brackets count, women's age brackets count, household type (single, childless couple, single parent, couple with child, …), income from activity, income from wealth	Labor Force Survey (Enquête Emploi), census data (Recensement)		
Croatia	Calibration or generalised calibration approach to external controls	Age / Gender / Region	Population estimates 2015 by the Croatian Bureau of Statistics		
Italy	Calibration or generalised calibration approach to external controls	Age/Gender/Geographical area/Size of municipality / Other: size of the municipality of residence; for panel household information on income class and work status of the head of household from the previous wave.	Population register 2016	X	Usually the final weights are not trimmed nor winsorized. The weights are windsorized only in presence of outliers that are also influential observations and which cannot be dealt with otherwise.

	Calibration			Other post-survey weight adjustments	
Country	**Method**	**Control variables**	**External sources used in the calibration**	**Other adjustments?**	**Description**
Cyprus	Calibration or generalised calibration approach to external controls	Age / Gender Household size / Region	Census 2011 figures		
Latvia	Calibration or generalised calibration approach to external controls	Age / Gender / Region / Other: total equalised household income split into 9 groups	Population statistics, tax register.		
Lithuania	Calibration or generalised calibration approach to external controls	Age / Gender/ Household size / Other: urban or rural area, values of real assets, loans for HMR purchase, and income.	The population register, the real property register, loan risk database in the NCB, and social security database.		
Luxembourg	Calibration or generalised calibration approach to external controls	Household size, nationality groups, and a combination of age and gender.	National social security system (IGSS, Inspection Générale de la Sécurité Sociale)		
Hungary	Calibration or generalised calibration approach to external controls	Age / Gender / Region / Education, activity status, type of settlement	Census projection, Labour Force Survey	X	We used bounds of 50 and 2300 during the calibration to avoid negligible and too influential households. In about 1,5% of cases at both sides these bounds were effective.
Malta	Calibration or generalised calibration approach to external controls	Age / Gender / Household / size / Region	NSI	X	Final weights trimmed for weights greater than 3*mean weight and less than 0.3* mean weight
Netherlands	Calibration or generalised calibration approach to external controls	Age / Gender / Household size / Education, homeownership	Statistics Netherlands		
Austria	Cell-based post-stratification	Household size / Region / Tenure status	Mikrozensus 2016 (from Statistics Austria).		
Poland	Calibration or generalised calibration approach to external controls	Age /Gender / Household size / Region	Current official demographic estimates based on the 2011 Census.	X	The "weights trimming" method recommended by Eurostat was used using ratio: calibrated weight for a given household divided by the mean value of such weights for all households (numerator) divided by design weight divided by the corresponding mean value (denominator) should be in the interval (1/3, 3); to obtain this extreme weights were iteratively trimmed.

	Calibration			Other post-survey weight adjustments	
Country	**Method**	**Control variables**	**External sources used in the calibration**	**Other adjustments?**	**Description**
Portugal	Calibration or generalised calibration approach to external controls	Age /Gender Household size / Region / Value of loans for house purchase in the region of residence of the household	Labour Force Survey; Population estimates ; Credit Register data	X	Weights were trimmed using cut-offs at P2.5 and P97.5, while the remaining amount was distributed among the weights between those two percentiles in order to ensure the total of households is kept unchanged. The new weights were also readjusted using CALMAR to guarantee the totals by margins.
Slovenia	Calibration or generalised calibration approach to external controls	Age / Gender / Household size / Region	Population statistics from Statistical Office RS		
Slovakia	Calibration or generalised calibration approach to external controls	Age / Gender / Household size / Region / Other: Economic activity - employed, unemployed, self-employed, retired	Demography statistics Labour force survey Social Insurance Agency 2011 Census		
Finland	Calibration or generalised calibration approach to external controls	Age / Gender / Household size / Region / Other: 1. EU-SILC calibration variables: level of education and 16 income related variables 2. HFCS-specific calibration variables: 4 wealth related variables on mutual funds and listed shares	Population information system, tax register, other income registers, register file on the values of listed shares.	X	Upper and lower bounds for weight adjustment in calibration.

Table E4 Final household weights

	Final household weights					Ratios of final and design weights			
Country	**Mean**	**Sum**	**Min**	**Max**	**Coefficient of Variation (%)**	**Mean**	**Min**	**Max**	**Weight combination in case of a panel component**
Belgium	2097	4884911	20	35472	105	1.67	0.21	24.95	Method described by Guillaume Chauvet in "Methodological Report for the Household Finance and Consumption Network", 2018 has been followed in the case of a panel tracking households. According to panel household composition changes from one wave to another (divorce, fusion ...), design weights (= sampling weights from the previous wave) have been modified taking the effect on probability of selection into account. These base weights are then merged with design weights from the refreshed part of the sample. These weights are corrected for taking non response into account and finally calibrated to population characteristics.
Germany	8165	40351000	97	65950	125	1.02	184.9	0.42	Weight share method, calibration of the combined panel and refresher samples
Estonia	221	590739	11	1460	80	0.53	0.02	2.27	
Ireland	377	1808254	1	8160	110	4.49	0.21	40.40	
Greece	1384	4162442	184	16417	88	2.70	0.44	27.33	
Spain	2890	18536404	2	53337	121	-	-	-	To obtain cross-sectional weights, the panel and non-panel components of the sample are considered as two independent samples. The two sample components are combined and their weights corrected according to the relative size of the sub-samples, this being the minimum variance estimator for two independent samples representing the same population.
France	2143	29327561	1	35986	103	N/A	N/A	N/A	After separate transformations due to different sampling designs and non-response bias correction, all weights are calibrated together in order to make the whole sampling representative of 2017 overall population. Calibration is realised at individual level, then household weights are calculated thanks to weighting share method.
Croatia	1102	1495082	84	3909	66	3.04	0.80	10.00	
Italy	3440	25522082	492	20162	104	2.11	0.19	16.79	Panel households are firstly post-stratified in order to adjust for the attrition in the panel. According to 12 frequency cells, determined by the cross-classification of 4 income classes and 3 work statuses of the head of household, weights of panel families are aligned to the distribution of the whole sample measured in the previous wave. The panel segment is then re-weighted so that its share of the total sample allows the gain in precision to be maximised: the optimum share of the panel depends on an estimate of the auto-correlation between the main survey variables (income and wealth).
Cyprus	233	303242	23	1173	108	1.07	0.20	3.51	Panel component weights: Construction of "inflation factors" for each individual in each strata of our panel sample, which were then compared to the same strata of the second wave. Based on this inflation factor we adjusted the weights of the

									previous wave (only for the panel households). For the newly selected households the weights were constructed based on the stratum information (probability to be selected in the sample).
Latvia	670	836810	44	4951	99	2.53	0.53	19.94	
Lithuania	773	1286924	66	9380	103	3.04	0.84	11.23	
Luxembourg	140	226378	1	600	71				
Hungary	671	4004215	50	2300	79	2.35	0.07	30.12	
Malta	168	168467	52	483	71	0.96	0.20	4.70	The weights of the panel and non-panel households were normalised to be equal to the total number of households in the population.
Netherlands	3049	7794075	676	9401	44	1.46	0.32	4.49	
Austria	1281	3933967	348	6971	38	1.89	0.58	9.73	
Poland	2283	13374992	10	12362	69	6.45	0.26	10000	Weighting share method. After determining weights at a level of surveyed households independently for each subsample, cross-sectional weights are obtained through dividing base weights for subsamples by coefficients arising from the quotient of the number of all surveyed households to the number of households surveyed.
Portugal	695	4117770	52	3532	115	1.39	1.93	1.64	
Slovenia	409	824618	99	1146	51	3.06	0.54	7.34	
Slovakia	850	1852059	122	2991	77	1.84	0.26	6.85	Panel component and the whole file were weighted separately to reproduce the population characteristics.
Finland	262	2677100	1	1655	88	1.31	0.03	5.51	Rotational groups are weighted separately (design weights, non-response adjustments, calibration). The final weights are panel-specific cross-sectional weights re-scaled in proportion to the sample share of the rotational group.

Table E5 Replicate weights

Country	Method used to calculate the replicate weights	Calibration margin(s)
Belgium	Rescaling bootstrap	Total number of households / Total number of persons / Number of persons by gender / Number of persons by age group / Household type (single with children, single without children, married with children, married without children, couple with children, couple without children, other)
Germany	Rescaling bootstrap	Total number of households / Other: Main income earner: age x gender, age x education, employment/ occupational status, German/ not German, hh size, ownership HMR x size HMR, east-west x hh size, east/west x age, Number of households per "Bundesland", Number of households per municipality
Estonia	Rescaling bootstrap	Total number of households / Total number of persons / Number of persons by gender / Number of persons by age group
Ireland	Rescaling bootstrap	Total number of households / Total number of persons / Number of persons by gender / Number of persons by age group Number of households by region / household composition / homeownership / deprivation quintile /labour status.
Greece	Rescaling bootstrap	Total number of households
Spain	Rescaling bootstrap	Total number of households / Total number of persons / Number of persons by gender / Number of persons by age group
France	Rescaling bootstrap	No
Croatia	Rescaling bootstrap	Number of persons by gender / Number of persons by age group
Italy	Rescaling bootstrap	Number of persons by gender / Number of persons by age group
Cyprus	Rescaling bootstrap	Total number of households / Total number of persons / Number of persons by gender / Number of persons by age group / number of households by size
Latvia	Rescaling bootstrap	Total number of households / Number of persons by gender / Number of persons by age group
Lithuania	-	-
Luxembourg	Rescaling bootstrap	Total number of households / Total number of persons / Number of persons by gender / Number of persons by age group
Hungary	Rescaling bootstrap	Total number of persons / Number of persons by gender / Number of persons by age group
Malta	Rescaling bootstrap	Total number of households / Total number of persons / Number of persons by gender / Number of persons by age group
Netherlands	Rescaling bootstrap	Total number of households / Number of persons by gender / Number of persons by age group / Education, homeownership
Austria	Rescaling bootstrap	Total number of households
Poland	Rescaling bootstrap	Total number of households / Total number of persons / Number of persons by gender / Number of persons by age group
Portugal	Rescaling bootstrap	Total number of households / Number of persons by gender / Number of persons by age group
Slovenia	Rescaling bootstrap	Total number of households / Total number of persons
Slovakia	Rescaling bootstrap	Total number of households / Number of persons by gender / Number of persons by age group
Finland	Rescaling bootstrap	Total number of households / Number of persons by gender / Number of persons by age group / All other variables of the calibration model

F. Disclosure control and national dissemination

Table F1 Disclosure control and national dissemination

Country	Description of the methods and procedure for data anonymisation at country level	First national release of results (date and type of release)
Belgium	Different methods have been used to anonymise data : random rounding, bracketing, top coding and content suppression of some variables	No national release of the micro data, only common HFCN publication. NBB Economic Review article with main results published before release of the micro data; publication date of this article not yet decided.
Germany	• Age (RA0300): top coded at 90; additional small error terms for people aged 70+ • Country of birth (RA0400): Recoded to DE/OEA/OEU/OTH. • Job description (PE0300): 2nd digit of ISCO • Employment (PE0400, HD030): 1st digit of NACE • Number of employees (HD050): recoded, 1, 2-3, 4-10, 11+ • RA0100 (relationship): We only provide categories 1,2,3,4,9,10. Category 5 (parent in law) is merged with 4 (parent); 6-8 are merged with 9 (other relative). • HB4510d: Number of planes is added to HB4510f (other vehicles), so HB4510d contains no information. • Continuous variables are random rounded to two significant digits.	Monthly bulletin article , press release English version: https://www.bundesbank.de/en/publications/reports/monthly-reports/monthly-report-april-2019-793792 Methodological report (in German) available at: https://www.bundesbank.de/resource/blob/798122/17644354b20fb4d450f7267e91444fbb/mL/methodenbericht-welle3-data.pdf
Estonia		Estonian Household Finance and Consumption Survey: Results from the 2017 Wave. Jaanika Merikull, Tairi Room. Eesti Pank Occasional Paper Series 1/2019. Available at: https://www.eestipank.ee/sites/eestipank.ee/files/publication/en/occasionalpapers/2019/ep_op_01_2019_taiendatud2.pdf Release date 1.10.2019. The Estonian Household Finance and Consumption Survey (HFCS), methodological report. Available at: http://statistika.eestipank.ee/failid/mbo/HFCS%202017_en.pdf
Ireland	Top/bottom recoding was used for variables where outliers could pose an identification risk. Global recoding was used for variables where a small number of respondents had a particular value which could pose a risk to identification. Random rounding was used on several variables. Some answers which could pose a risk to identification were supressed.	Central Statistics Office: Household Finance and Consumption Survey 2018. Available at: https://www.cso.ie/en/releasesandpublications/ep/p-hfcs/householdfinanceandconsumptionsurvey2018/ Release date: 31 January 2020. Background notes, methodology: https://www.cso.ie/en/releasesandpublications/ep/p-hfcs/householdfinanceandconsumptionsurvey2018/backgroundnotes/
Greece	To avoid the possibility of matching data with households such as using household identifiers containing PSU information (sd0210), we provide anonymized identifiers for the public version of the Greek HFCS data.	
Spain	Location information or country of birth not provided. Age cap.	Banco de España. Boletín Económico 4/2019. Encuesta Financiera de las Familias (EFF) 2017: https://www.bde.es/bde/es/areas/estadis/estadisticas-por/encuestas-hogar/relacionados/Encuesta_Financi/eff_2017.html Release date: December 2019.

France	Data aggregation for some variables, some variables are not transmitted for confidentiality reasons, encryption of all identification numbers	December 2018 : publication of results about wealth ownership (IP n° 1722) https://www.insee.fr/fr/statistiques/3658937 December 2019: "10 % des ménages détiennent près de la moitié du patrimoine total." INSEE Focus n° 176. 19/12/2019. https://www.insee.fr/fr/statistiques/4265758
Croatia	None	
Italy	Variables that may allow the identification of the household are not disseminated, such as the municipality, the date and time of interview, the primary sampling units, etc.	Report "Survey on Italian Household Income and Wealth": https://www.bancaditalia.it/pubblicazioni/indagine-famiglie/bil-fam2016/Fascicolo_IBF_2016_ENG.pdf?language_id=1 Release date : 12 March 2018. Methodological report: https://www.bancaditalia.it/pubblicazioni/metodi-e-fonti-note/metodi-note-2018/MOP_IBF_en.pdf?language_id=1 Link for the microdata: http://www.bancaditalia.it/statistiche/tematiche/indagini-famiglie-imprese/bilanci-famiglie/index.html
Cyprus	ECB anonymisation procedures.	
Latvia		Latvijas Banka, Household Finance and Consumption Statistics, available at: https://www.bank.lv/en/statistics/stat-data/hfcs Release date: 11.12.2019
Lithuania		
Luxembourg	We follow annex 6 of the manual of procedure.	
Hungary	Each person and household is given a unique randomly assigned identifier. The original identification data was deleted.	April 2019: Presentation of the first results for Hungary https://www.mnb.hu/letoltes/vagyonfelmeres-2017-web-en.pdf
Malta	Methods used for anonymisation: Recoding, Suppression and Deletion	
Netherlands	Household and person identifiers encrypted	No national release.
Austria	Data fully anonymized; no additional anonymization was necessary	First Results and Methodological Report: https://www.hfcs.at/dam/jcr:6c798d62-f16a-4fc7-8555-9df9042fc836/hfcs-2017-austria-first-results.pdf Release date: January 2019. Methodological notes for Austria: https://www.hfcs.at/dam/jcr:d1a59fdd-d9a8-4b2c-a234-17de73232e69/hfcs-2017-austria-methodological-notes.pdf
Poland	Household addresses used only by NSI for the survey execution and never applied in the further processing of the data nor transmitted to NCB	Narodowny Bank Polski (2017): "Household Wealth and Debt in Poland. Report of 2016 Survey". Available at: https://www.nbp.pl/en/publikacje/inne/bzgd/bzgd_2016_en.pdf Methodological Annex to the 2016 Survey Report, available at: https://www.nbp.pl/en/publikacje/inne/bzgd/bzgd_2016_metodology_en.pdf

Portugal	Top/Bottom coding Recoding Perturbation (random rounding)	Banco de Portugal: Main results of the ISFF (Inquérito à Situação Financeira das Famílias) 2017. Available at: https://www.bportugal.pt/en/page/portuguese-household-finance-and-consumption-survey Release date 13.11.2019.
Slovenia		
Slovakia	No procedure for data anonymisation	
Finland	Top coding, suppression, recoding	Official Statistics of Finland (OSF): Households' assets [e-publication]. ISSN=2242-3230. Helsinki: Statistics Finland [referred: 13.2.2019]. Access method: http://www.stat.fi/til/vtutk/index_en.html Release date 5.6.2018.