

CAHIER D'ÉTUDES WORKING PAPER

N° 142

THE LUXEMBOURG HOUSEHOLD FINANCE CONSUMPTION SURVEY: RESULTS FROM THE THIRD WAVE

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MARCH 2020



BANQUE CENTRALE DU LUXEMBOURG
EUROSYSTÈME

The Luxembourg Household Finance Consumption Survey: Results from the third wave*

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March 2020

Abstract:

This report presents the main results and underlying methodology of the third wave of the Luxembourg Household Finance and Consumption Survey (LU-HFCS) and compares them to results obtained in the first and second wave in 2010 and 2014. This survey is conducted among private households resident in Luxembourg and is part of the Eurosystem Household Finance and Consumption Survey, which provides detailed individual and household data on assets, liabilities, income and consumption. This individual-level information on households provides a view on the distribution of assets and liabilities across the population that complements the aggregate data on the household sector in the financial accounts.

Keywords: Household, survey, wealth, income, assets, debts.

JEL-Codes: D31, D14, C81, C83.

* This report uses data from the Luxembourg Household Finance and Consumption Survey. This report should not be reported as representing the views of the BCL or the Eurosystem. The views expressed are those of the authors and may not be shared by other research staff or policymakers in the BCL, the Eurosystem or the Eurosystem Household Finance and Consumption Network.

We thank research interns Lisa Kothmayr and Janna Ayoub for their work during questionnaire preparation and editing phase, and Paolo Guarda for helpful comments. The data and report were prepared while Barbara Schuster was working at the Banque centrale du Luxembourg.

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Résumé non-technique

Ce cahier présente les principaux résultats de la troisième vague de l'enquête sur le comportement financier et de consommation des ménages au Luxembourg (LU-HFCS). Cette édition de l'enquête a été conduite en 2018 par la Banque centrale du Luxembourg (BCL) en collaboration avec le Luxembourg Institute of Socio-Economic Research (LISER). L'objectif était de recueillir des informations détaillées sur les bilans des ménages (leurs actifs et leurs passifs) ainsi que sur leurs revenus et leur consommation. Ces informations permettent d'analyser la dette et le patrimoine des ménages et leur distribution à travers la population. Au Luxembourg, l'enquête LU-HFCS est la seule source de données détaillées sur les bilans des ménages individuels.

La troisième vague se base sur un échantillon représentatif comportant plus de 1 600 ménages résidant au Luxembourg. En comparant les différentes vagues de l'enquête, il faut tenir présent que chaque échantillon est sélectionné pour être représentatif de l'année en question et que les ménages retenus sont généralement différents d'un échantillon à l'autre.

Actifs des ménages

Les actifs des ménages se composent d'actifs réels et d'actifs financiers. En général, les actifs réels, tels que les biens immobiliers, véhicules ou objets de valeur, représentent la part la plus importante du patrimoine. En 2018, ils représentaient 88 % de tous les actifs bruts détenus par les ménages au Luxembourg. La plupart des ménages était propriétaire de véhicules (87 %) ou de leur résidence principale (69 %). Une part importante des ménages était propriétaire d'autres biens immobiliers (26 %) ou d'objets de valeur (26 %). Ces statistiques sont proches de celles de 2014. En 2018, la valeur moyenne des actifs réels bruts détenus par les ménages atteignait € 881 400. La résidence principale et les autres biens immobiliers constituaient les deux catégories les plus importantes (respectivement 58 % et 23 % du total des actifs réels). Les autres catégories ne représentaient qu'une part limitée des actifs réels, soit 15 % pour les entreprises individuelles, 3 % pour les véhicules et 1 % pour les objets de valeur.

En 2018, seulement 12 % de tous les actifs bruts détenus par les ménages étaient des actifs financiers. Ceux-ci se composaient de dépôts (49 %), d'actifs risqués, tels que les fonds communs de placement (21 %) et les actions (7 %), et d'autres actifs financiers (24 %). Les actifs financiers les plus détenus étaient le compte à vue et le compte d'épargne, présents au sein de 97 % des ménages.

En 2018, la valeur moyenne des actifs financiers atteignait € 121 300, à comparer avec une valeur moyenne de € 132 400 en 2014. Moins de ménages détenaient des fonds communs de placement (15 % des ménages en 2014 et 12 % en 2018), des obligations (passage de 3 % à 1 % des ménages) ou des actions (de 9 % à 8 %).

L'endettement des ménages

En 2018, un peu plus que la moitié des ménages détenaient au moins un type de dette (53 %). Il s'agissait de crédits hypothécaires, détenus par 31 % des ménages, ou d'autres types de dette, détenus par 35 % des ménages. La dette hypothécaire moyenne représentait la plus grande partie de la dette totale des ménages (91 %). La valeur moyenne de la dette des ménages a augmenté de 8 %, passant de € 97 300 en 2014 à € 104 800 en 2018, tandis que la part des ménages qui sont endettés a diminué, passant de 55 % à 53 %. Ainsi, parmi les ménages endettés, le montant moyen de la dette a augmenté de 10 % entre 2014 et 2018. Ces évolutions confirment des tendances déjà observées entre 2010 et 2014. La part des ménages ayant contracté des prêts à la consommation était pratiquement inchangée entre 2014 et 2018.

Le patrimoine net des ménages et l'inégalité

Entre 2014 et 2018, la valeur moyenne du patrimoine net des ménages a augmenté de 17 % en termes nominaux pour atteindre € 897 900. En termes réels, c.-à-d. après correction pour la variation des prix à la consommation, cela correspond à une augmentation de 12 %. La valeur médiane du patrimoine net (c.-à-d. la valeur du patrimoine net qui divise la population en deux moitiés) a atteint € 498 500, augmentant de 14 % en termes nominaux et de 9 % en termes réels.

Selon coefficient de Gini, les inégalités de patrimoine sont presque inchangées entre 2014 et 2018. En 2018, les 5 % des ménages les plus fortunés possédaient environ 38 % du patrimoine total des ménages, tandis que les 20 % des ménages les plus fortunés en possédaient près des deux tiers. Ces résultats ressemblent à ceux observés en 2014.

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1. Introduction

This report presents the main results of the third wave of the Luxembourg Household Finance and Consumption Survey (LU-HFCS) conducted in 2018 among private household resident in Luxembourg. This representative survey provides key distributional statistics regarding private households' financial balance sheets and their economic and financial behaviour. It is the only available source of detailed information on assets and liabilities (as well as income) at the level of individual households in Luxembourg. This survey was conducted jointly by the Banque centrale du Luxembourg (BCL) and the Luxembourg Institute of Socio-Economic Research (LISER), as was the case for the previous waves. The LU-HFCS is part of the Eurosystem Household Finance and Consumption Survey (HFCS) (HFCN, 2013, 2016).

This report serves as background reference document for all further economic analysis and research with LU-HFCS data. It provides comparisons with results from the first and second editions of the survey, conducted in 2010 and 2014. For convenience, this report follows closely the structure and content of the second wave report (Girshina, Mathä and Ziegelmeyer, 2017). We will give more prominence to the main results, as the underlying methodology and data treatment are similar to those in previous waves. Emphasis is placed on distributional aspects and composition of assets and liabilities, wealth and income.

Results indicate that the median Luxembourg household saw its net wealth reach €498,500 in 2018 (a 13.9% increase in nominal terms since 2014). This mainly reflects homeowner gains from the increase in house prices. More than two-thirds of Luxembourg household own their home, and the median value of their homes increased by more than 17% between 2014 and 2018. In real terms, i.e. after adjusting for the change in consumer prices, this corresponds to a 9.2% increase in median net wealth. The average value of net wealth increased 16.9% in nominal terms to reach to €897,900 (12.0% increase in real terms). Wealth inequality, as measured by the Gini coefficient, remained unchanged compared to 2014. In 2018, the top 5% of households owned about 38% of total net wealth, while the top 20% owned almost two-thirds, which is similar to 2014.

In 2018, 53.2% of households were indebted, which is 1.4 percentage points less than in 2014. Mortgage debt was held by 31.2% of households (35.4% held non-mortgage debt). While the share of indebted households declined, largely due to the lower share of households with mortgage debt, the value of average debt across all households increased by 7.7% over the same period. This increase was also largely driven by the rising amount of mortgage debt.

With few exceptions debt burden indicators do not show any significant changes compared to 2014. Among the exceptions, the median debt service-to-income ratio shows a continued decline since 2010. The total debt-servicing burden of Luxembourg households declined, mainly through lower debt service on non-mortgage loans (as was already the case between 2010 and 2014), with median debt service on mortgages almost unchanged. In contrast, the median outstanding Loan-to-Value ratio suggests a statistically significant increase in vulnerability from 2010 to 2018.

In 2018, the median of gross household income¹ reached €71,100 and the mean reached €93,100. The composition of gross income, that is to say the relative contribution from different sources, was stable between 2014 and 2018. Household gross income varied substantially across population groups, with highly educated households in the category 45–54 years of age having the highest levels of income. Compared to renters, homeowners (with or without a mortgage) had substantially higher mean and median gross income.

This report is divided into the following sections. Section 2 summarises previous analyses and research using the HFC survey conducted in Luxembourg. Section 3 provides a general overview of the dataset and discusses how results should be interpreted. Section 4 is devoted to a detailed presentation of the household balance sheet. Summary statistics on assets and liabilities are presented in Sections 4.1 and 4.2, while Section 4.3 assesses household net wealth. Section 4.4 analyses household income. Section 4.5 reports different measures of household debt burden and Section 4.6 discusses income and wealth inequality. Section 5 describes the methodology, fieldwork and data treatment (editing, imputation, weighting and anonymisation of the data collected). It also includes a comparison of the HFCS results with other external data sources (Section 5.9).

2. Results based on previous editions of the HFCS

HFCS data regularly serve to analyse various topics related to household finance among Luxembourg residents, cross-border commuters who work in Luxembourg or residents in the euro area as a whole. The survey provides detailed micro data and distributional information on household balance sheets and on household economic and financial decisions. Each new HFCS wave is usually accompanied by a technical report (Mathä; Porpiglia and Ziegelmeyer,

¹ Gross income does not account for income tax, social security contributions or other payments.

2012a; Girshina; Mathä and Ziegelmeyer, 2017) and text boxes in the BCL Bulletin (BCL, 2012a, 2016b), both of which provide a first discussion of the results.

Reflecting the importance of cross-border commuters for the Luxembourg economy, the LU-HFCS is accompanied by a companion survey among households abroad in which at least one member crosses the border to commute to work in Luxembourg (XB-HFCS). Results from the cross-border commuter survey are also published in technical reports (Mathä, Porpiglia and Ziegelmeyer, 2012b, 2018) and in BCL bulletin text boxes (BCL, 2012b, 2017b). For example, using first wave XB-HFCS data from 2010, cross-border commuter households were found to spend almost one-fifth of their gross annual income in Luxembourg, contributing about 10% to the total household final consumption expenditure in Luxembourg (Mathä, Porpiglia and Ziegelmeyer, 2012b, 2017a). Mathä, Porpiglia and Ziegelmeyer (2017a) link these expenditures to individual- and household-related characteristics, commuting distance, and price differences of tradeable goods (but not services) between the country of work and residence. Thus, cross-border commuters appear to systematically take advantage of existing arbitrage opportunities.

Early research based on the first LU-HFCS wave in 2010 focussed on the asset side of the balance sheet, in particular the ownership of the household main residence (HMR) and other real estate property (OREP). In Luxembourg, as in other euro area countries, the value of the HMR generally represents the main part of households' real estate holdings and real assets (e.g. Arrondel et al., 2016); this is particularly the case for households in the middle of the net wealth distribution. As in other countries, homeownership in Luxembourg is linked to gross income, age, marital status, immigrant status, and having received intergenerational transfers or gifts (e.g. BCL, 2012c). In addition, net wealth seems to be linked to homeownership, which makes this household decision a corner stone for the analysis of wealth accumulation.

Motivated by the early finding of higher household net wealth in Luxembourg than in other euro area countries (e.g. HFCN, 2013a), homeownership is also at the centre of a set of papers analysing the determinants of Luxembourg households' net wealth. The first paper by Mathä, Pulina and Ziegelmeyer (2018) compared (self-)employed households in Luxembourg with corresponding cross-border commuter households. By comparing these two populations, it was possible to examine wealth differences while limiting the impact of certain cross-country differences in institutional, regulatory and economic environment, which Christelis et al. (2013) found to be the dominant factors explaining net wealth difference across countries. The second paper compared Luxembourg households to other euro area countries in terms of net

wealth and housing wealth (Mathä, Porpiglia and Ziegelmeyer, 2017b). These two papers aimed to improve the understanding of how differences in homeownership rates and house price developments contribute to differences in net wealth accumulation. A key common finding is that differences in real estate price developments translate into differences in unrealised accumulated capital gains of homeowners, which in turn contribute substantially to differences in the observed household net wealth. Thus, the high net wealth of Luxembourg households is largely driven by high homeownership rates coupled with high house price increases in the past. This effect is particularly strong in the middle of the net wealth distribution. It is also worth noting that while Luxembourg households are at the top of the net wealth distribution in the euro area, they are less prominent if the comparison is limited to financial assets only (BCL, 2013c, 2016c).

One-third of Luxembourg residents rent their main residence. Households who do not aspire to become homeowners often attribute their decision to high real estate prices and insufficient own funds (BCL, 2019; Claveres et al., 2020). To overcome financial obstacles, about 60% of homeowners provide own labour (*Eigenleistung*) to supplement own funds and external finance. As shown by Lindner et al. (2020), own labour is particularly prevalent among low-income households and those with low initial own funds to finance the acquisition of their home. Other households may decide to relocate across the border where housing is cheaper.

The second most important contributor to household net wealth is other real estate property (OREP), whether in Luxembourg or the euro area. For Luxembourg and its neighbouring countries, Ziegelmeyer (2015) shows that among those households who own OREP, it represents an important share of gross wealth² and generates non-negligible rental income. BCL (2018) provides an update with wave 2 data for Luxembourg.

Household financial decisions are affected by a number of factors including expectations about the future, past experiences, the degree of financial literacy, risk aversion and peer effects. For example, analysis using first wave HFCS data revealed that saving is mostly driven by the precautionary motive in euro area countries, followed by the old age savings motive (Le Blanc et al., 2016). Related to past experiences, the HFCS revealed that the economic and financial crisis resulted in active portfolio rebalancing for some households in Luxembourg. In 2010, one-sixth of households indicated they were unwilling to invest in some financial asset classes that they held two years earlier. Among these households, almost one half no longer wanted

² Gross wealth ignores any mortgages or outstanding loans.

to invest in stocks or mutual funds. Nevertheless, the impact of the economic and financial crisis on household portfolios seemed limited, as negative net wealth developments were only reported by one-sixth of Luxembourg households.

Portfolio structure is also affected by households' financial literacy and risk aversion. Luxembourg households tend to have better financial understanding than those in other euro area countries (BCL, 2016a). BCL (2018a) confirms that less risk-averse households in Luxembourg tend to invest a greater share of their portfolio in risky assets. They also tend to have higher labour income or financial income. Financial decisions often require costs of gathering information, which is why households may seek advice from friends, colleagues and neighbours, who thus influence the economic behaviour of those seeking advice. This result, known as the "peer effect", stems from preferences for conformity to social norms and learning motives. Girshina, Mathä and Ziegelmeyer (2019) show that peer effects also play a role in the portfolio choices of native households, as their stock holdings are influenced by those of their foreign-born peers.

Analysing the distribution of household debt by population group can contribute to monetary policy and financial stability. For example, Ehrmann and Ziegelmeyer (2017) analyse why euro area households take out adjustable rate mortgages as opposed to fixed rate mortgages to finance the acquisition of their home. They report that the use of adjustable rate mortgages is linked to strong economic growth, high interest rate spreads and low unemployment volatility. In a simulation exercise, they further show that the reduction in mortgage rates following the economic and financial crisis resulted in a substantial decline in the debt burden of households with a mortgage, especially in countries with high household debt burdens and large shares of adjustable rate mortgages.

Results from the second wave of the LU-HFCS in 2014 revealed that financial vulnerability of indebted households appeared to increase between 2010 and 2014, despite the decline in debt participation (Giordana and Ziegelmeyer, 2017). In a follow-up paper, the same authors stress test household balance sheets in Luxembourg and conclude that socio-economically disadvantaged households are more likely to default. Bank losses appear to be quite sensitive to the level of financial stress, although this is mitigated by three factors: First, Luxembourg households hold substantial liquid assets, which allow them to continue servicing debt for several months even under stressed conditions. Second, while household leverage can be high at mortgage origination, it tends to decline rapidly among households who serviced their debt

for several years. Third, the loan-to-value ratios at mortgage origination do not appear to be excessive, which limits bank losses in case of default (see Giordana and Ziegelmeyer, 2020).

3. General overview and interpretation of results

The LU-HFCS is a cross-sectional survey. Each wave aims to be representative of the household population in the reference year for which data are collected, so the different waves do not follow the same households over time. Therefore, when comparing assets or liabilities over time, one should be aware that the households in a specific sub-group will differ across waves. The household characteristics refer to the household head, identified as the (self-declared) financially knowledgeable person (FKP) in the household. In the third wave, the reference year for household socio-demographic and economic characteristics, assets and liabilities is 2018 (referring to the time of the interview). The reference year for the income variables is 2017. All monetary figures in the text, tables or graphs are rounded to the nearest 10, 100 or 1,000 euro, depending on their level.

The report distinguishes between the extensive and intensive margin. The extensive margin reflects the participation rate, meaning whether a household holds a particular type of asset or liability. The intensive margin, also referred to as conditional value, is the value of a particular type of asset or liability for those households that hold this particular type of asset or liability. In contrast, unconditional values refer to statistics for the whole (sub-) population in question, including those who do not hold the particular type of asset or liability. Furthermore, we report the share of various asset and liability types relative to the total value of assets and liabilities. The composition of assets and liabilities reflects both participation decisions and conditional values. Our discussion will focus on the 2018 findings and changes since 2014 (sometimes also since 2010).

Inflation adjustment

Unless explicitly indicated, values referring to previous waves (2010 and 2014) are NOT adjusted for consumer price inflation. Statistics shown in nominal terms are usually easier to interpret. Moreover, inflation adjustments require the choice of a price index (among several possible alternatives). This is especially challenging for households resident in Luxembourg, where many regularly shop across the border to take advantage of price differences. Estimates from LU-HFCS wave 2 suggest that Luxembourg households spent 16% of their total

consumption (excluding durables) abroad.³ Tables and figures throughout this report provide nominal values for 2018 and non-adjusted values for 2010 and 2014. Where this paper provides real term comparisons (in the text only), inflation adjustment uses the country-specific *All-index Harmonised Index of Consumer Prices* (source Eurostat: *prc_hicp_aind*).⁴ Consumer price inflation is calculated by comparing the average level of the HICP index in the reference year 2018 relative to that in 2014 or 2010. Thus for Luxembourg comparisons, monetary values for 2010 and 2014 waves are inflated by 1.149 and 1.043, respectively (the adjustment between 2014 and 2010 would be 1.093).

Interpreting changes between wave 1, 2 and 3

As the underlying data are multiply imputed, this report presents results, such as shares, means and medians, that are always calculated across the five imputates using 1,000 replicate weights. Point estimates are reported as the average of point estimates across the five imputates and variance estimates account for both between- and within-imputation variance. This accounts properly for sampling uncertainty and the sampling design features. The median, its standard error and confidence interval is calculated using the STATA command *MEDIANIZE*, version 0.4.⁵ Point estimates are presented with standard errors and confidence bands to indicate their precision. For example, if a particular value is reported to have changed from one wave to another, the standard errors help to infer the confidence that we can attach to the change. The confidence band presented provides the lower and upper bounds of the interval within which we expect the true value to lie with a 95% probability. The confidence attached to a reported value depends, among other factors, on the sampling variability of the outcome and on the sample size.

4. Main findings

4.1 Household assets

Household assets consist of real assets and financial assets. Real assets include the household main residence (HMR), other real estate property (OREP), vehicles, valuables, etc. Real assets are generally the most important household asset as measured by their share in the overall

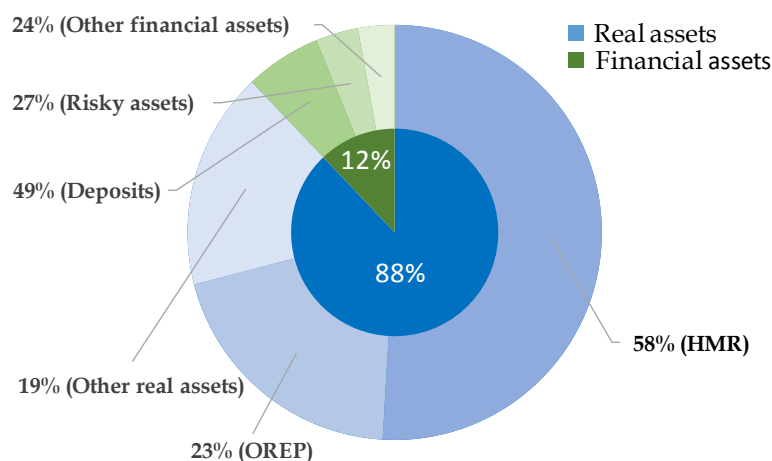
³ According to national accounts published by Statec, 8.6% of household final consumption took place abroad in 2014 (table E2106, October 2019 release).

⁴ This may be only one possibility among several alternatives, but ensures comparability with ECB figures and previous results, as this was used in the technical report of the 2014 wave (Girshina, Mathä and Ziegelmeyer, 2017) and in the ECB results report of wave two (HFCN, 2016).

⁵ We would like to thank Sébastien Perez-Duarte from the ECB for sharing his program with us.

household portfolio. In Luxembourg, real assets represented 87.9% of all gross assets (i.e. assets ignoring any mortgages or loans attached to them) held by households in 2018 (Figure 1). Financial assets include deposit and savings accounts, mutual funds, publicly quoted shares, pension and insurance accounts, etc. We present results for real and financial assets separately, starting with real assets.

Figure 1: Gross wealth composition, wave 2018



Source: Own calculations based on wave 3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

4.1.1 Real assets

In 2018, the most common category of real assets held by Luxembourg households was Vehicles (87.2%), followed by the Household Main Residence (HMR) (69.0%), Other Real Estate Property (OREP) (26.1%) and Valuables (26.1%) (Figure 2, left panel). The corresponding participation rates (the share of households holding a certain asset type) are similar to those reported in 2014 or 2010.

In 2018, the mean gross value of household real assets (i.e., excluding any mortgages or loans attached to them) was €881,400, an increase of 20.2% compared to 2014 and 25.3% compared to 2010 (Figure 2). The HMR and OREP, the two most important categories, accounted for 80.7% of total real assets. Their share in total real assets decreased across survey waves, especially OREP, which declined from 31.8% to 22.8%. This reflected a substantial increase in business wealth associated with self-employment. Participation in self-employed business wealth increased from 3.9% in 2014 to 5.1% in 2018. Its share of total real assets increased from 4.7% in 2014 to 15.3% in 2018. While this difference is statistically significant, it may simply reflect a change in the number of high net worth households included in the sample.

Figure 2: Real assets categories, key statistics (in € thousand)



Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Error bars denote 95% confidence interval.

The unconditional median of total real assets amounted to €565,200 in 2018, an increase of 18.5% compared to 2014. The increase between 2010 and 2014 was comparatively lower at 7.0%. The increase observed in the 2018 median value represents statistically significant difference compared to either of the previous waves.

Considering only those households with real assets, which make up 93.9% of all households, the mean value of gross real assets amounted to €938,600 in 2018 (Figure 2). Differences between 2018 and 2014 and between 2018 and 2010 are significant, whether in conditional or unconditional terms. This also applies to the median. Regarding individual real asset categories, the HMR and self-employment business were both characterised by a significantly higher conditional mean in 2018 than in either 2014 or 2010. The mean values of vehicles and valuables were also significantly higher in 2018 than in 2014.

Considering only households holding real assets, their median level of total real assets was €601,800 in 2018, which represents an increase of 18.6% compared to 2014. This mainly reflects the median value of the HMR among homeowners, which increased 17.4% from its level in 2014 to reach €652,000 in 2018. This represents an acceleration relative to the 11.1% increase between 2010 and 2014. The median value of OREP (among households who own such assets) increased 8.6% from its level in 2014 to reach €380,000 in 2018. For both HMR and OREP the price increase is less than the 27.2% growth in STATEC's hedonic index of residential property prices between 2014Q4 to 2018Q4. However, this hedonic index confirms that between 2014 and 2018 property prices accelerated, as it increased 19.2% from 2010Q4 to 2014Q4.⁶ Between the 2014 and 2018 wave of the HFCS, the conditional mean value of the HMR increased by 14.2%, while its conditional median value increased by 17.4%, suggesting that cheaper properties may have appreciated faster. A similar observation applies to changes between 2010 and 2014.

In contrast to the developments in the median and mean HMR values, the conditional mean of OREP actually decreased by 13.0% between 2014 and 2018 while the median increased by 8.6%. These changes are however not statistically significant.

⁶ STATEC – Indicateurs rapides, Series C – Acquisition prices for dwellings.
<http://www.statistiques.public.lu/fr/publications/series/indicateur-rapides/index.html>.

Similarly, the conditional median value of vehicles, valuables and self-employment business in 2018 are not significantly different from those in 2014 or 2010. In contrast, their conditional means significantly increased in 2018 compared to 2014.

4.1.2 Financial assets

Financial assets represented 12.1% of households' total gross assets in 2018. Financial assets consisted of deposits (sight and saving accounts) (49.0%), risky assets (27.4%) (among which mutual funds (20.8%) and shares (6.6%)) and other financial assets (23.6%) (among which bonds (1.3%), voluntary private pensions / life insurance (6.3%) and other assets (16.0%)) (Figure 3).

Figure 3: Financial asset categories, key statistics (in € thousand)



Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Error bars show 95% confidence interval.

The most widespread financial asset category was sight and saving accounts, held by 97.3% of households in Luxembourg. Within this category, sight accounts (held by 96.2% of households) were much more prevalent than savings accounts (held by 69.7%). Between 2014 and 2018, mean financial assets shrank from about €132,400 to €121,300. Deposits (sight and saving accounts) declined by 3.1% to €59,400. Participation in risky assets, which already

decreased between 2010 and 2014, declined even further in 2018. The share of households holding risky assets shrank from 19.2% in 2014 to 15.8% in 2018, but the overall mean value of risky assets increased by 18.1% to €33,200, suggesting that household holding risky assets substantially increased the value of their investments in such assets (+43.6%). Fewer households held mutual funds (11.6% in 2018 compared to 14.6% in 2014) and bonds (1.4% in 2018 from 2.6% in 2014).

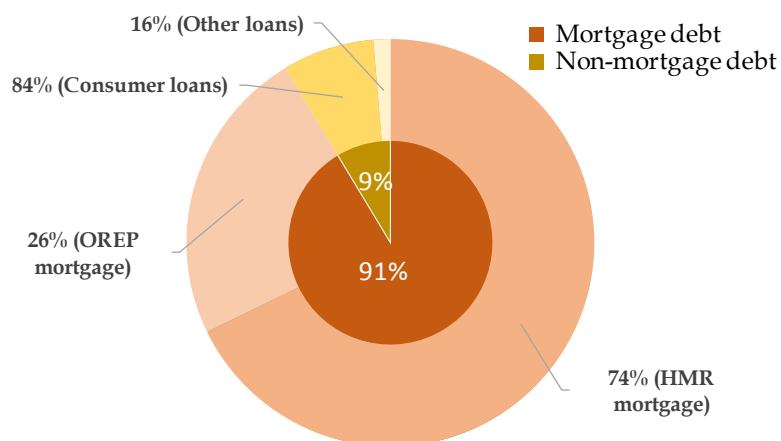
Other popular financial assets include voluntary pensions and life insurance, which are partly subsidised through tax deductions. In 2018, their participation rate was 17.8%. Their unconditional mean value decreased from €23,400 in 2014 to €7,700 in 2018. This significant difference may reflect changes to questions about pensions in the 2018 survey. Following the HFCN recommendations, the pension section in the 2018 questionnaire was more elaborate and included detailed questions on the public pension plan specifically tailored to the Luxembourg situation. This increased complexity may have had an unintended effect on respondents, resulting in higher item non-response in this section compared to previous waves. This section will be simplified in future waves of the survey.

Other types of financial assets (that is non-self-employed business assets, managed accounts and other assets) increased substantially between 2014 and 2018 (from €14,100 to €17,720).

4.2 Household debt

Household debt consists of mortgage debt and non-mortgage debt (Figure 4). Mortgage debt made up 91% of total household debt in 2018. A distinction can be drawn between mortgage debt related the household main residence (HMR) and mortgage debt related to other real estate property (OREP). HMR mortgage debt accounted for 74.1% of mortgage debt among households in Luxembourg in 2018.

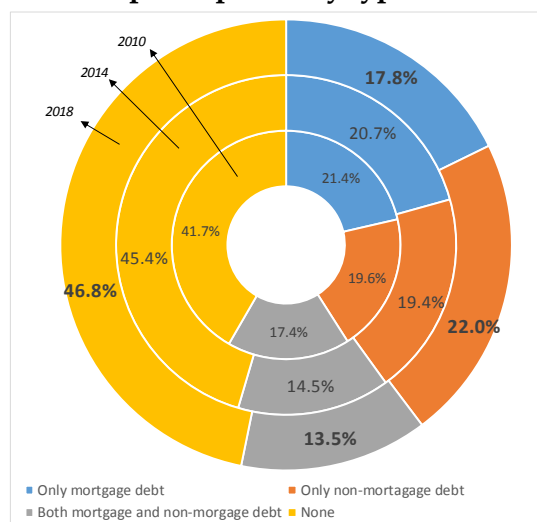
Figure 4: Debt composition, wave 2018



Source: Own calculations based on wave 3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

Figure 5 compares household debt participation across the three survey waves. It distinguishes between households with no debt, with only mortgage debt, with only non-mortgage debt and with both types of debt. In 2018, 53.2% of households in Luxembourg held some type of debt. This share declined by 1.4 percentage points since 2014 (54.6%), extending the decline already visible between 2010 and 2014. This reduction is largely driven by the decline in mortgage debt participation, in particular HMR mortgage debt participation (see also Figure 7), which declined from 2010 to 2014 and continued to decline from 2014 to 2018.

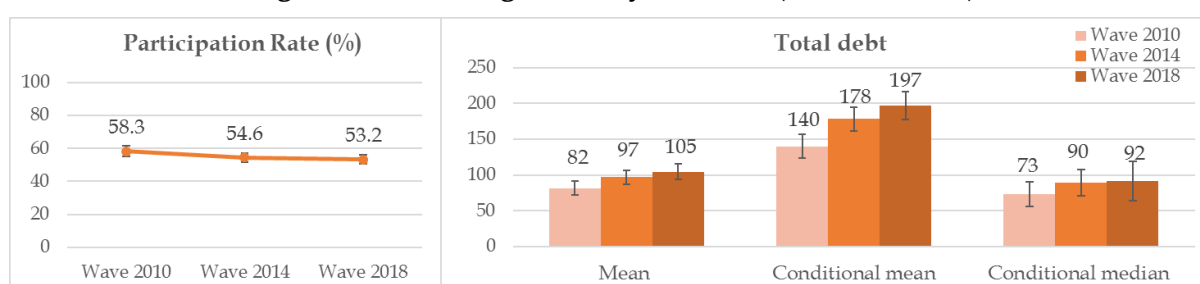
Figure 5: Debt participation by type and survey year



Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

Figure 6 provides more detail concerning these changes in total debt since 2010, separating the extensive and intensive margin. While the share of households holding debt continued to decline, the outstanding amount of debt among indebted households continued to increase. The net effect of these opposing tendencies was a continuous increase in total debt since 2010. Among indebted households, the average amount was €104,800 in 2018, a 10.4% increase since 2014. The conditional median increased more moderately (+2.1%) between 2014 and 2018, suggesting a skewed distribution of debt across households. By and large, this is similar to developments between 2010 and 2014.

Figure 6: Debt categories, key statistics (in € thousand)



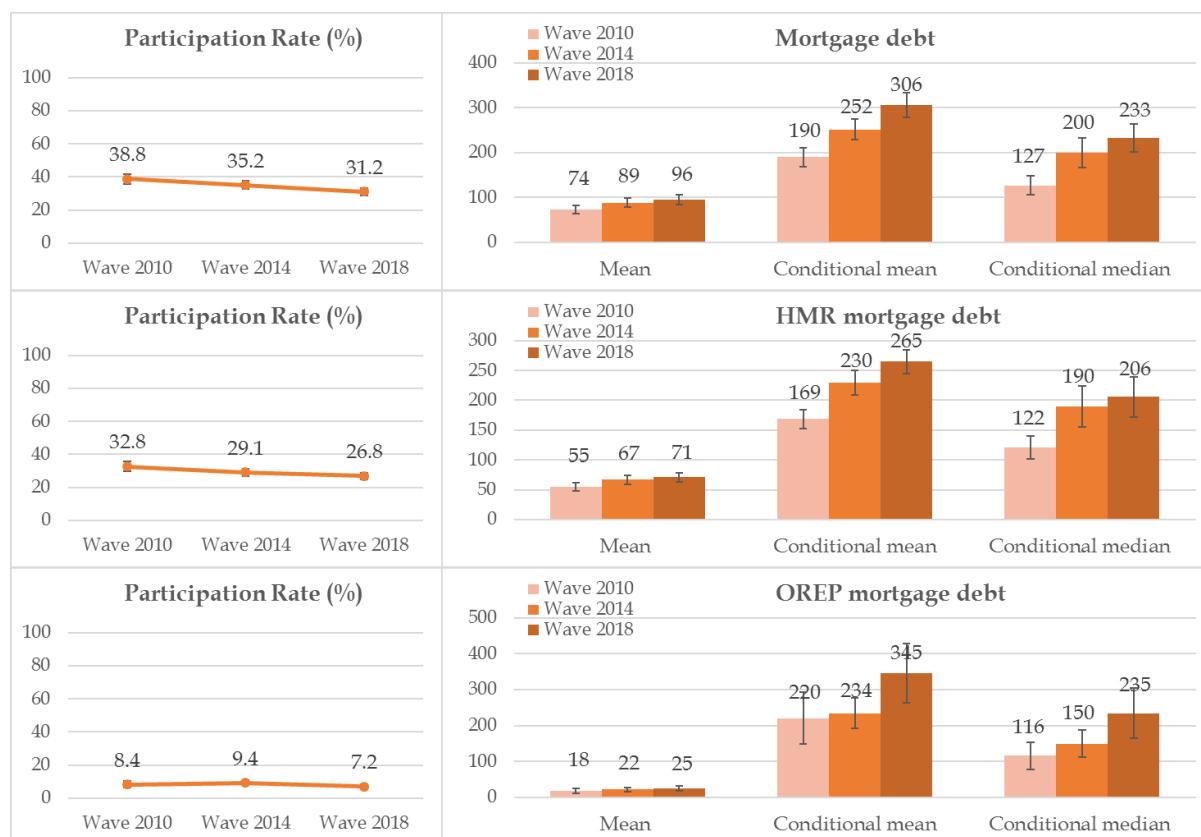
Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Error bars show 95% confidence interval.

4.2.1 Mortgage debt

In 2018, the share of mortgage debt in total debt was 91.3%, only marginally higher than in 2014 (91.1%). The participation rate was 31.2%, a 4-percentage points decline since 2014, after the 3.6 percentage points decline between 2010 and 2014. The reduction in mortgage debt

participation between 2014 and 2018 reflects declines in participation for both HMR mortgages (-2.2 percentage points) and OREP mortgages (-2.2 percentage points).

Figure 7: Mortgage debt categories, key statistics (in € thousand)



Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Error bars show 95% confidence interval.

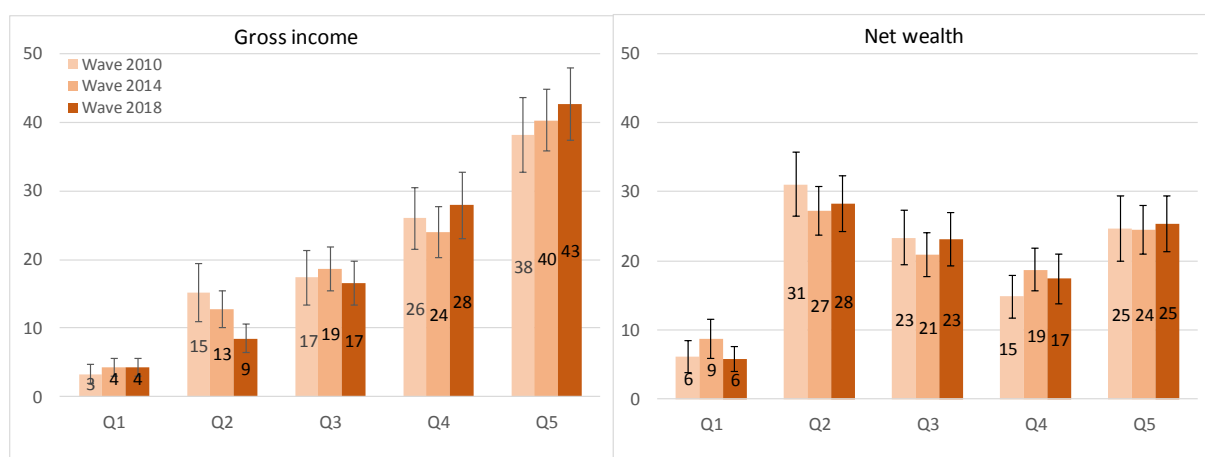
Among households with mortgage debt, the average outstanding amount was €306,500 in 2018, representing a 21.7% increase since 2014. However, this was less than the increase between 2010 and 2014 (+32.4%). Among households with mortgage debt, the median amount was €232,800 in 2018, a 16.4% increase since 2014, which again is lower than the increase between 2010 and 2014 (+57.1%).

Across all households, average mortgage debt increased €7,100 between 2014 and 2018, mainly driven by the increase in HMR mortgage debt (€4,300) and less by the increase in OREP mortgage debt (€2,800). However, in percentage terms, the increase in HMR mortgage debt (+6.4%) was smaller than the increase in OREP mortgage debt (+12.8%). Among households with HMR mortgage debt, the average outstanding amount was €264,700 in 2018, representing a 15.3% increase since 2014. Among households with OREP debt, the average outstanding

amount was €345,000, a 47.5% increase since 2014. The corresponding medians increased by 8.3% (HMR debt) and 56.4% (OREP debt).

Figure 8 plots the share of total mortgage debt held by households in different quintiles of gross income or net wealth. In all survey waves, the share of outstanding mortgages increases with gross income (left panel). The top two quintiles accounted for more than 70% of total mortgage debt in 2018, an increase from their 64% share in 2014 and in 2010. In contrast, households at the bottom 20% of the income distribution held only 4% of total outstanding mortgage debt, a proportion that remained stable across the three waves. The distribution of total mortgage debt across net wealth is more difficult to interpret. Households in the lowest net wealth quintile consistently had the lowest share of total outstanding mortgage debt (only 6% in 2018). This may reflect fewer homeowners and lower HMR values (and therefore smaller mortgages). Households in the second net wealth quintile consistently had the highest share of total mortgage debt (28% in 2018). This may reflect the standard life cycle, with young households with limited savings taking on significant mortgage debt. As these households age, their income is likely to increase and they will gradually reimburse their mortgage. Thus, their liabilities will decline and their savings will accumulate, increasing their net wealth and moving them up to the third and fourth quintiles. However, households in the top net wealth quintile consistently hold about 25% of outstanding mortgage debt, more than in the third or fourth quintiles.

Figure 8: Outstanding mortgage debt by gross income and net wealth quintile (share in %)



Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS; data are multiply imputed and weighted. Error bars show 95% confidence interval.

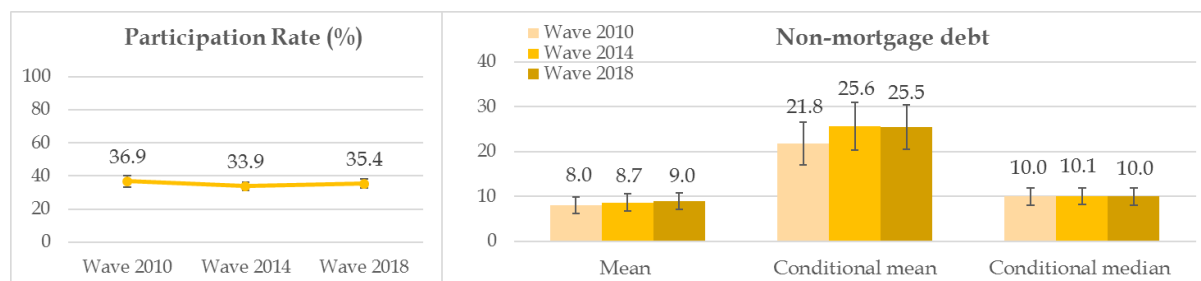
Despite the substantial increase in debt (mortgage debt in particular), HFCS estimates fall short of the level of mortgage debt reported in the Financial Accounts (see Section 5.9).

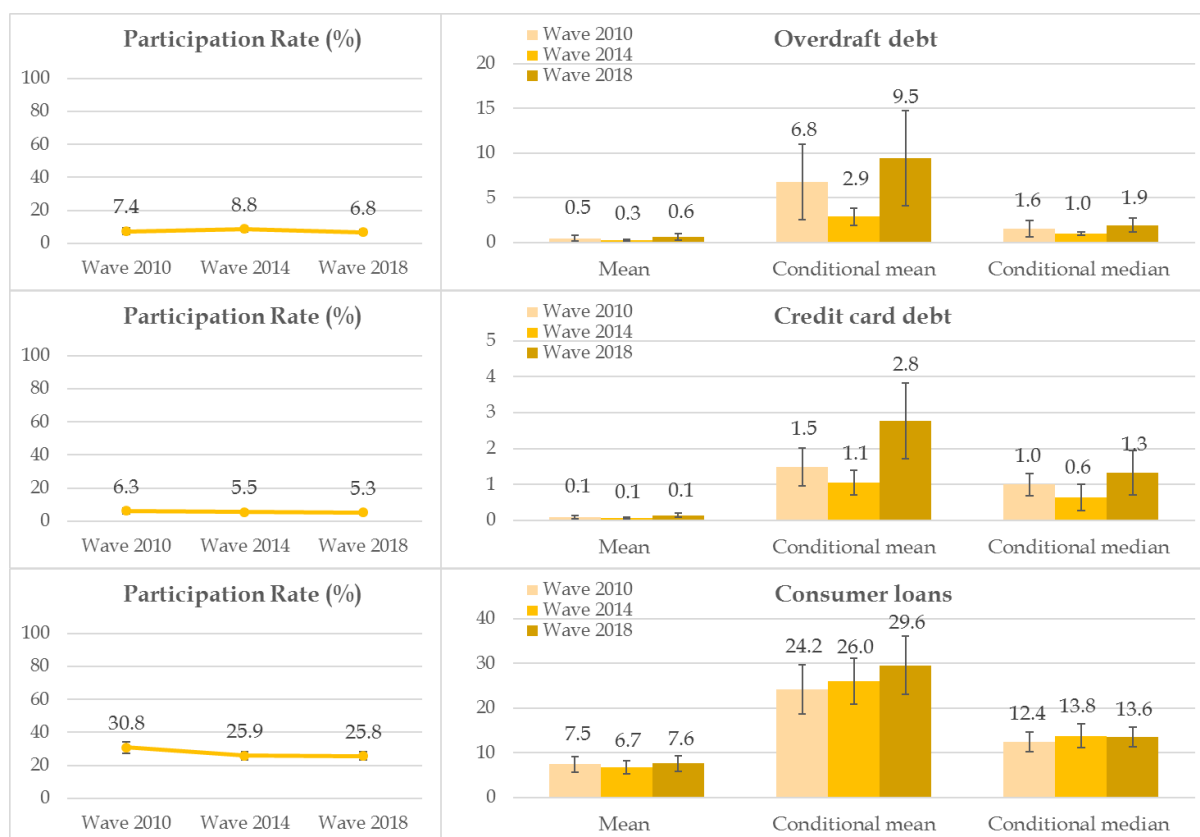
4.2.2 Non-mortgage debt

The outstanding amount of non-mortgage debt is significantly lower than mortgage debt. The share of non-mortgage debt in total debt was 8.6% in 2018, which is comparable to 2014 when it was 8.9%. The participation rate in total non-mortgage debt was 35.4% in 2018 compared to 33.9% in 2014. Over all households, outstanding non-mortgage debt amounted to an average of €9,000 in 2018, which represents a €300 increase since 2014. In 2018, households with non-mortgage debt held on average €25,500, which is comparable to 2014. Similarly, among those with non-mortgage debt, the median outstanding amount remained stable around €10,000. Thus, non-mortgage debt did not mirror developments in mortgage debt. Both participation and the conditional mean were higher in 2018 than in 2014. However, differences between 2014 and 2018 are not statistically significant, whether for the mean or the median, conditional or unconditional.

Analysing the individual components of non-mortgage debt suggests that the share of households with overdraft debt declined (from 8.8% in 2014 to 6.8% in 2018), while the share of households with credit card debt did not change significantly compared to 2014 (from 5.5% to 5.3%). Similarly, the share of households with consumer loans was stable between 2014 and 2018. Among households with overdraft debt, the average amount increased significantly, from €2,900 in 2014 to €9,500 in 2018. Similarly, among households with credit card debt, the average amount was significantly higher in 2018 compared to 2014. However, there was no significant change in the conditional mean of consumer loans.

Figure 9: Non-mortgage debt categories, key statistics (in € thousand)



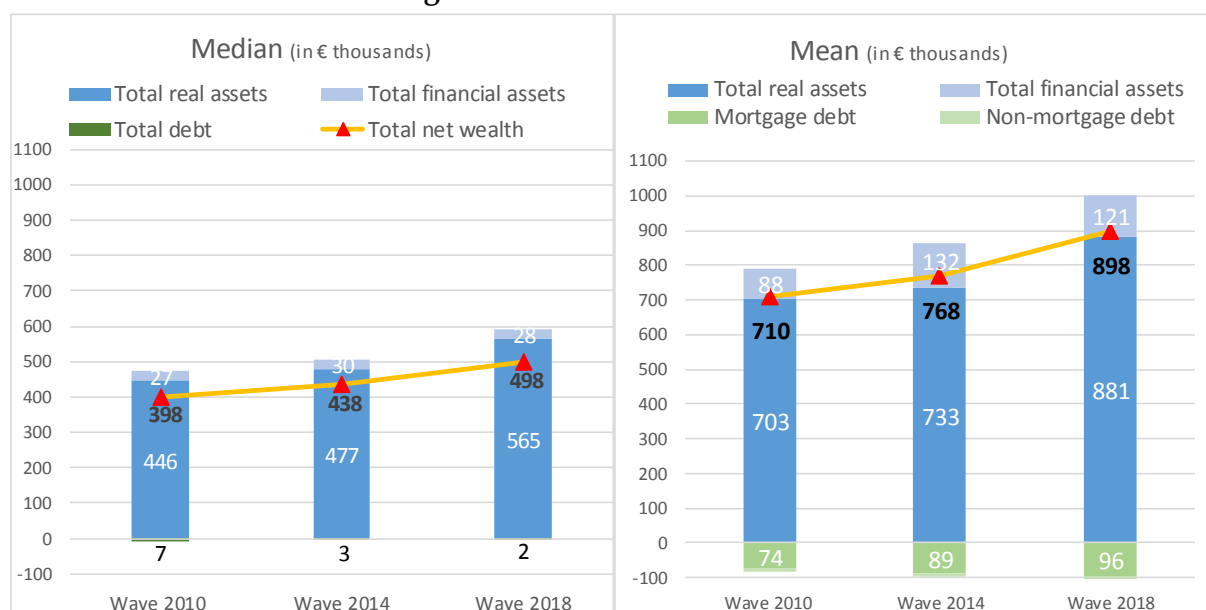


Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Error bars show 95% confidence interval.

4.3 Household net wealth

Total net wealth is defined as the sum of real assets (including housing) and financial assets (excluding public and occupational pensions) minus all liabilities (debt including mortgages). For the average household in Luxembourg, total net wealth in 2018 was €897,900, a 16.9% nominal increase compared to 2014 (Figure 10; Table 1). This corresponds to a 12.0% increase in real terms. The median of household net wealth was €498,900 in 2018, a 13.9% nominal increase compared to 2014 (a 9.2% increase in real terms). Between 2014 and 2018, the nominal changes are statistically significant but not the changes in real terms. In 2018, average total gross wealth mainly comprises total real wealth (€881,400) and to a lesser extent financial wealth (€121,300), as was the case in 2014.

Figure 10: Household net wealth



Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1000 replicate weights. Total financial assets exclude public and occupational pension plans.

The increase in mean total net wealth between 2014 and 2018 was mainly due to higher mean real assets, while mean financial assets were slightly lower in absolute terms (Table 1). Total debt and mortgage debt increased by 7.7% and 8.0%, respectively. On the asset side, the mean value of the HMR increased by €72,700 (+16.6%). On the liability side, the mean value of HMR mortgages increased less in relative and in absolute terms (+6.4% or €4,300). Mean total debt increased from €97,300 to €104,800 (+7.7%), mainly reflecting the increase in HMR mortgage debt (from €66,700 to €71,000 or +6.4%) mentioned in section 4.2.1.

Table 1: Composition of total net wealth, mean and median

Variable	Wave 2010		Wave 2014		Wave 2018	
	Median	Std. Err.	Median	Std. Err.	Median	Std. Err.
Total real wealth	445,700	(18,000)	477,100	(15,500)	565,200	(16,700)
Total financial assets	26,700	(3,200)	30,100	(2,300)	28,200	(2,500)
Total gross wealth	494,400	(19,900)	538,700	(17,000)	634,000	(16,500)
Total debt	7,000	(1,800)	3,100	(1,300)	1,600	(970)
Total net wealth	397,800	(17,100)	437,500	(17,500)	498,500	(23,400)
Variable	Wave 2010		Wave 2014		Wave 2018	
	Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.
Total real wealth	703,500	(56,700)	733,300	(45,700)	881,400	(44,300)
Total financial assets	88,400	(7,700)	132,400	(16,500)	121,300	(10,200)
Total gross wealth	791,900	(59,100)	865,700	(54,200)	1,002,700	(47,600)
Total debt	81,800	(5,100)	97,300	(4,900)	104,800	(5,400)
Total net wealth	710,100	(58,200)	768,400	(53,400)	897,900	(46,800)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Total financial assets exclude public and occupational pension plans.

The change in median net wealth was mainly caused by the increase in total real assets (including real estate, business wealth, vehicles and valuables). Its median value rose to €565,200 in 2018 (+18.5% since 2014), while median total debt declined to €1,600 in 2018 (Table 1). Within total real assets, the main drivers were the value of the HMR and OREP.

Net wealth by population group

Mean and median net wealth varies substantially across population groups. Table A35 and Table A36 in the Appendix report median and mean net wealth for different population groups. Median and mean net wealth generally increase with age. For the median, the difference is particularly large between the two groups 35-44 and 44-54 years of age. With respect to the mean, the difference is particularly large between the groups 16-34 and 35-44 years of age and again between the groups 55-64 and 65+ years of age. Households whose financially knowledgeable person (FKP) is male tend to be substantially richer than households with a female FKP. Both median and mean net wealth is lowest for 1-person households. There is a strong association between the level of educational attainment and median and mean net wealth. In particular, moving from a low to a medium educational level is associated with a non-negligible increase in net wealth.

According to Table A35 and Table A36, net wealth is correlated with housing tenure choice. Outright homeowners are substantially wealthier than homeowners with a mortgage, who are substantially wealthier than renters. This is a common result, already reported for the previous wave of the LU-HFCS (Girshina, Mathä and Ziegelmeyer, 2017), as well as for other countries (e.g. HFCN, 2016).

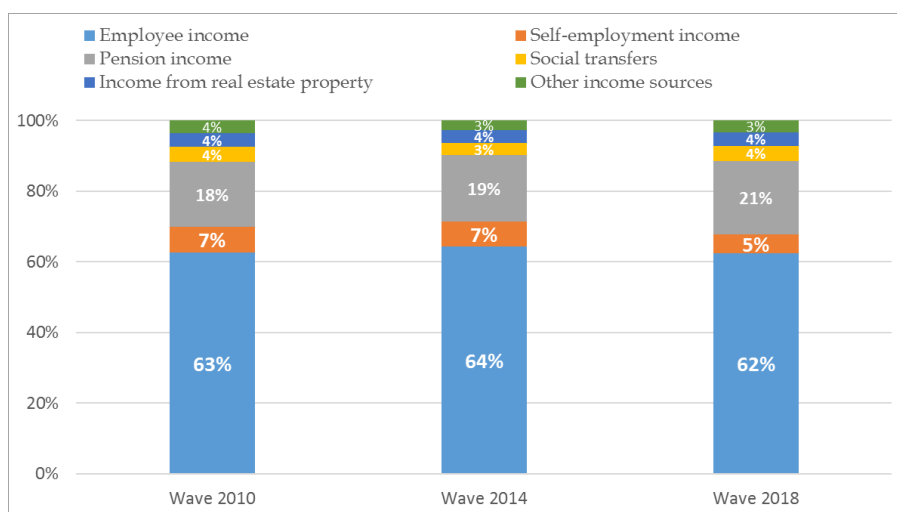
Median and mean net wealth also vary across country of birth. Median net wealth appears to be higher for those born in Luxembourg. However, some of these estimates are highly uncertain due to the limited sample sizes of some subpopulations. Estimates suggest that net wealth is significantly lower for households whose reference person was born in Portugal or other countries not considered separately.

4.4 Household income

The composition of gross income, defined as the income from all sources excluding tax payments and social security contributions, remained stable between 2014 and 2018 (Figure 11). In 2018, 71.6% of households received employee income, which was identical to 2014 (Table 2). The share of households receiving social transfers in 2018 was 40.8%, which represents a significant increase of 4.7 percentage points compared to 2014. However, this

increase was not related to unemployment benefits, as the share of households receiving them actually declined, so it is linked to an increase in other social transfers. Almost 35% of households received a public pension in 2018, which is by and large unchanged from 2010 or 2014.

Figure 11: Composition of mean household gross income



Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS; data are multiply imputed and weighted. Note: Income from family and friends is not included.

Table 2: Participation rate in income sources (% of households)

In (%)	Wave 2010		Wave 2014		Wave 2018	
	Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.
Employee income	71.4	(1.0)	71.6	(0.8)	71.6	(0.9)
Self-employment income	10.3	(0.9)	8.4	(0.6)	7.3	(0.6)
Pension income	35.0	(0.9)	34.5	(0.8)	34.8	(0.7)
Public pension income	34.6	(0.9)	34.0	(0.8)	34.7	(0.7)
Occupational and private pension	2.9	(0.7)	2.6	(0.5)	3.4	(0.6)
Social transfers	41.7	(1.3)	36.1	(1.1)	40.8	(1.1)
Unemployment benefits	4.3	(0.8)	4.9	(0.7)	4.2	(0.6)
Other social transfer	39.2	(1.2)	33.7	(1.0)	38.7	(1.0)
Income from real estate property	13.3	(1.2)	12.5	(0.9)	13.7	(1.0)
Income from financial investment	45.2	(1.9)	40.2	(1.4)	27.8	(1.3)
from financial assets	44.8	(1.9)	40.1	(1.4)	27.4	(1.2)
from private business*	1.0	(0.3)	0.4	(0.2)	0.5	(0.2)
from regular private transfer	5.9	(0.9)	5.7	(0.6)	7.1	(0.7)
from other income sources	2.2	(0.5)	1.6	(0.4)	2.2	(0.4)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1000 replicate weights. Income from friends is not included.

*other than self-employment.

Among households with at least one employee, mean employment income was €81,200 in 2018 compared to €78,400 in 2014 (Panel (b) in Table 3). The corresponding median values were €64,600 in 2018 and €61,400 in 2014. For households with at least one retired member, mean pension income rose from €47,300 in 2014 to €55,400 in 2018, with the corresponding median increasing from €41,600 to €46,400 (Panel (c) in Table 3). The share of households receiving income from self-employment was 7.3%, 1.1 percentage points lower than in 2014 (Table 2).

Table 3: Household gross income statistics, by income category

Panel (a): Mean gross income

	Wave 2010		Wave 2014		Wave 2018	
	Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.
Employee income	52400	(1700)	56100	(1500)	58100	(1300)
Self-employment income	6100	(780)	6100	(740)	4900	(610)
Pension income	15300	(650)	16300	(570)	19300	(730)
<i>Public pension income</i>	14700	(600)	15800	(520)	18100	(590)
<i>Occupational and private pension</i>	660	(230)	500	(220)	1200	(420)
Social transfers	3600	(200)	3000	(170)	4100	(230)
<i>Unemployment benefits</i>	590	(150)	680	(110)	530	(90)
<i>Other social transfer</i>	3000	(140)	2400	(110)	3500	(210)
Income from real estate property	3200	(890)	3200	(490)	3600	(440)
Income from financial investment	1200	(230)	1400	(230)	1600	(560)
<i>from financial assets</i>	910	(190)	1400	(230)	890	(510)
<i>from private business*</i>	310	(140)	70	(40)	730	(230)
<i>from regular private transfer</i>	390	(90)	300	(40)	460	(70)
<i>from other income sources</i>	1400	(710)	660	(320)	990	(540)
Total gross household income	83700	(2300)	87200	(2000)	93100	(1900)

Panel (b): Mean gross income conditional on participation

	Wave 2010		Wave 2014		Wave 2018	
	Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.
Employee income	73,400	(2400)	78,400	(1900)	81,200	(1800)
Self-employment income	58,900	(7000)	72,500	(7700)	66,800	(7300)
Pension income	43,800	(1900)	47,300	(1500)	55,400	(1900)
<i>Public pension income</i>	42,400	(1800)	46,600	(1400)	52,000	(1600)
<i>Occupational and private pension</i>	23,100	(5200)	19,400	(7500)	35,900	(10400)
Social transfers	8,600	(430)	8,400	(400)	10,000	(510)
<i>Unemployment benefits</i>	13,900	(2500)	14,000	(1500)	12,600	(1300)
<i>Other social transfer</i>	7,700	(320)	7,000	(290)	9,200	(490)
Income from real estate property	24,400	(6300)	25,500	(3400)	26,400	(2900)
Income from financial investment	2,700	(510)	3,600	(570)	5,800	(2000)
<i>from financial assets</i>	2,000	(420)	3,400	(570)	3,300	(1900)
<i>from private business*</i>	32,300	(14600)	19,100	(6300)	135,800	(46100)
<i>from regular private transfer</i>	6,700	(1200)	5,300	(470)	6,400	(660)
<i>from other income sources</i>	64,300	(31400)	40,300	(19400)	46,000	(24800)

Panel (c): Median gross income conditional on participation

	Wave 2010		Wave 2014		Wave 2018	
	Median	Std. Err.	Median	Std. Err.	Median	Std. Err.
Employee income	58,700	(2400)	61,400	(1800)	64,600	(2000)
Self-employment income	30,000	(5400)	35,600	(8200)	43,800	(6600)
Pension income	38,800	(2600)	41,600	(1700)	46,400	(2000)
<i>Public pension income</i>	37,800	(2800)	41,200	(1600)	44,400	(2000)
<i>Occupational and private pension</i>	23,000	(10100)	6,000	(3200)	6,400	(5500)
Social transfers	7,000	(380)	6,000	(300)	7,100	(290)
<i>Unemployment benefits</i>	8,800	(3200)	14,000	(2600)	9,200	(3100)
<i>Other social transfer</i>	6,400	(430)	5,600	(340)	6,400	(440)
Income from real estate property	10,200	(1300)	12,400	(1300)	15,000	(1000)
Income from financial investment	500	(40)	390	(50)	210	(30)
<i>from financial assets</i>	500	(40)	390	(50)	200	(30)
<i>from private business*</i>	11,600	(6100)	22,000	(11200)	60,600	(40700)
<i>from regular private transfer</i>	5,100	(790)	3,700	(720)	4,400	(790)
<i>from other income sources</i>	20,000	(4800)	5,400	(3500)	15,200	(5400)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

Note: Income from family and friends is not included. * other than self-employment.

Within this group, the conditional mean of income from self-employment was €66,800, a 7.9% decline since 2014. The conditional median reached €43,800, which represents a significant 23.0% increase since 2014.

In 2018, total gross household income reached a mean value of €93,100 and a median value of €71,100. Both values represent statistically significant increases. Household gross income differed substantially across population groups, as depicted in Table A37 and Table A38 in the Appendix. Mean gross income steadily increases from the youngest age category to those 45-54 years old. It is lower for older age groups, reflecting reduced income in retirement. Households whose financially knowledgeable person (FKP) is male tend to have a higher gross household income than those with a female FKP. Gross income is lowest for 1-person households. Table A37 and Table A38 suggests a very strong association between educational attainment and mean gross income, in particular for households with high educational attainment.

In addition, gross income is correlated with housing tenure status. On average, homeowners who still pay a mortgage have a higher income than homeowners that own their HMR outright. Income is much lower for renters.

The country of origin also plays an important role in household gross income. Table A37 in the Appendix shows that households whose FKP was born in Belgium received the highest median income in 2018, €28,600 more than households whose FKP was born in Portugal (the lowest paid group). Households whose FKP was born in Luxembourg received the second highest median income (€80,800). For most groups, median household income increased between 2014 and 2018, especially households whose FKP was born in Italy, as their income almost doubled over the three waves. However, median income declined since 2010 for households whose FKP was born in Germany (-18.3%) or in other countries not considered separately (-17.2%). Similar conclusions can be drawn using mean household income.

4.5 Household debt burden

The LU-HFCS can be used to calculate various measures of the debt burden of households resident in Luxembourg (HFCN, 2013; Giordana and Ziegelmeier, 2017) (Table 4). The *median debt-to-asset ratio*, which relates the outstanding balance of overall debt to household assets (including housing), was 19.4% in 2018 after 22.1% in 2014. This number masks considerable variation across household groups (Table A39 in the Appendix). For example, households who own their HMR outright had a median debt-to-asset ratio near 2%. For renting households,

the median debt-to-asset ratio declined from 41.4% in 2014 to 36.3% in 2018. However, for homeowners with a mortgage the median debt-to-asset ratio increased from 22.6% in 2010 to 28.2% in 2014 and 33.0% in 2018. The median debt-to-asset ratio tends to fall with household income. It peaked in the second income quintile in 2010 (37.6%) and in 2014 (34.6%) but in 2018, it was highest in the first income quintile (28.7%). In 2018, the median debt-to-asset ratio was 41.6% for the youngest households (16-34 years) but only 1.6% for older households (>65 years). Low ratios for older households were also visible in the breakdown by work status, with pensioners reporting the lowest ratio (2.9%).

The median *debt-to-income ratio*, which relates the outstanding amount of overall debt to annual household gross income, provides one possible measure of sustainability. The median debt-to-income ratio was 96.0% in 2018 compared to 114.1% in 2014 and 86.9% in 2010 (Table 4). The substantial increase between 2010 and 2014 appears to have reversed between 2014 and 2018, possibly because of the substantial increase in median gross income (Table 3, Panel c). However, given the large standard errors around these estimates, differences across years are not statistically significant and therefore need to be interpreted with caution.

Comparing the debt-to-asset ratio with the debt-to-income ratio, results differ somewhat, reflecting differences in the distribution of gross income and gross assets across the population of households. As could be expected, the median debt-to-income ratio was particularly high for homeowners with a mortgage (Table A40), reaching 270% in 2018, after 239% in 2014 and 171% in 2010. Across the net wealth distribution, this ratio was highest in the second quintile, reaching 290% in 2018 after 280% in 2014 and 263% in 2010. For higher net wealth quintiles, this ratio generally tends to decline. As with many other debt burden indicators, the debt-to-income ratio generally declines with age.

Table 4: Median debt burden indicators

Debt burden indicators	Wave 2010		Wave 2014		Wave 2018	
	Median	Std. Err.	Median	Std. Err.	Median	Std. Err.
Debt-to-asset ratio	18.2	2.1	22.1	2.1	19.4	2.1
Debt-to-gross income ratio	86.9	11.2	114.1	10.6	95.5	14.4
Debt service-to-income ratio	16.2	0.8	15.0	0.7	13.4	0.8
Mortgage debt service-to-income	16.3	0.7	17.6	0.7	17.8	0.8
Loan-to-value of HMR	27.5	2.6	34.6	2.8	39.4	2.5
Net liquid assets to gross income (indebted households)	12.2	2.2	11.5	1.7	10.6	2.3

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1000 replicate weights. The results for the debt service-to-income ratio differ from the figures in in Girshina, Mathä and Ziegelmeyer (2017) with regard to debt service payments, as leasing payments are now included.

The *debt service-to-income ratio*, calculated as total monthly debt payments divided by monthly gross income, provides an indication of the drain on current income from (regular) debt repayments. Unlike the debt-to-asset ratio or the debt-to-income ratio, the debt service-to-income ratio compares two flows and may reflect changes to interest rates. In 2018, the median debt service-to-income ratio among indebted households was 13.4% compared to 15.0% in 2014 (Table 4). Differences in the debt service-to-income ratio do not always mirror those in the debt-to-asset ratio. In particular, renters displayed the largest debt-to-asset ratio, but a limited debt service-to-income ratio (Table A41 in the Appendix). This reflects the fact that renters have no housing assets and the non-mortgage debt they service is usually much smaller than mortgage debt serviced by homeowners. While the debt-to-asset ratio generally declines with age, this tendency is much less pronounced for the debt service-to-income ratio and only appears after the second age group. Across the net wealth distribution, the debt service-to-income ratio was especially high for the second and third quintile, largely mirroring the pattern for the debt-to-asset ratio.

The *mortgage debt service-to-income ratio* focuses only on households with mortgage debt (31.2% of Luxembourg households in 2018). Since mortgage debt represents most of overall debt, there are only minor differences between the mortgage debt service-to-income ratio and the overall debt service-to-income ratio (Table 4). However, while in 2010 these ratios were both just above 16%, in 2018 the mortgage debt service-to-income ratio was 17.8%, significantly higher than the overall debt service-to-income ratio (13.4%). Most of the increase in the mortgage debt service-to-income ratio took place between 2010 and 2014, as the median in 2018 remained very close to that in 2014. In 2018, the mortgage debt service-to-income ratio was lowest for outright homeowners⁷ (12.8%), followed by renters (16.1%) and highest for homeowners with a mortgage (18.3%) (Table A42). Between 2014 and 2018, this ratio was relatively unchanged for homeowners with a mortgage.

The *outstanding loan-to-value ratio (LTV)* for mortgages on the household main residence (HMR) is not the LTV at loan origination, but the ratio of the remaining mortgage to the households' estimate of the current value of its main residence. In 2018, the median value was 39.4% (Table 4), higher than in 2014 (34.6%) and significantly above the level in 2010 (27.5%). The LTV ratio was highest for households at the bottom of the net wealth distribution (102% in 2018 compared to 129% in 2014) or in the youngest age group (64.3% in 2018 compared to

⁷ Outright homeowners (as well as renters) have no mortgage on their main residence, but may have mortgage debt on OREP.

59.2% in 2014) (Table A43 in the Appendix). The LTV ratio was considerably lower for households at the top of the net wealth distribution (14.4%) or in the oldest age group (around 8.5%), as well as for pensioners (13.7%). Differences across income quintiles were less pronounced than those across net wealth quintiles. In 2018, the outstanding LTV ratio was 42% in the lowest gross income quintile, 49% in the middle quintile and 31% in the highest quintile.

The *ratio of net liquid assets to gross annual income* provides information on funds readily available to households if they face income shocks. In 2018, the median level of this ratio among households holding debt was 10.6% (Table 4). There is no significant change with respect to 2014 and 2010. This indicator was higher for homeowners, suggesting that they also tend to hold more liquid assets than renters (Table A44). This ratio tends to increase with income and wealth, but also with age and education.

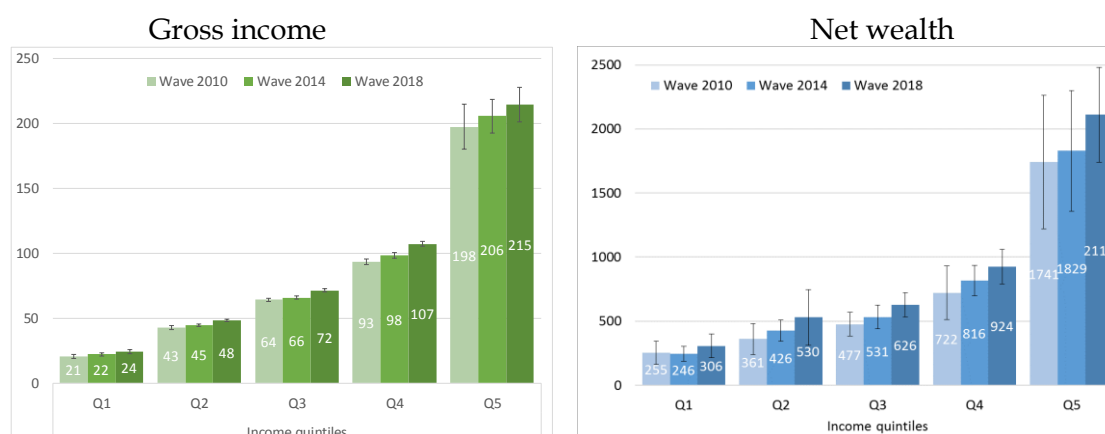
In summary, the data for 2018 does not reveal a clear worsening of financial vulnerability among households resident in Luxembourg. For most debt burden indicators changes in the median between 2010 and 2018 were not statistically significant. However, the increase in the loan-to-value ratio for the HMR was statistically significant between 2010 and 2018. Given the decline in interest rates, it is not surprising that the total debt service-to-income ratio is statistically lower in 2018 than in either 2014 or 2010. This mainly reflects a lower burden servicing of non-mortgage debt, since for mortgage debt the median debt service-to-income ratio was higher in 2018 than in 2014 or 2010. The median outstanding loan-to-value ratio increased, suggesting that households taking out new mortgages may be borrowing larger amounts. However, the weighted median interest rate on HMR mortgages declined from 2.38% in 2010 to 2.20% in 2014 and to 1.86% in 2018. Lower HMR mortgage rates and higher LTVs tend to offset each other, leaving the median mortgage debt service-to-income ratio nearly unchanged. In so far as most mortgages taken out before the Great Recession were at adjustable rates, a rise in interest rates may increase financial pressure on many households in Luxembourg. However, most new mortgages are fixed rate mortgages. The share of outstanding HMR mortgages that are at fixed rates increased from 17% in 2010 to 25% in 2014 to 38% in 2018. These households are at least partially protected from interest rate increases.

4.6 Income and wealth inequality

4.6.1 Gross income and net wealth distribution

Mean net wealth (as defined in Section 4.3) rises steadily with gross income (as defined in Section 4.4), with a particularly steep increase between gross income quintiles 4 and 5 (Figure 12). As illustrated by the confidence intervals, the uncertainty surrounding net wealth estimates is relatively low for income quintiles 1-4, but rather high for quintile 5, reflecting heterogeneity across households within this gross income quintile. Similarly, uncertainty surrounding gross income estimates is very low in income quintiles 1-4 but larger in quintile 5 (Figure 12).

Figure 12: Mean gross income and net wealth, by gross income quintile (in 1,000 €)



Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Note: Income from family and friends is not included.

4.6.2 Income inequality

Income and wealth inequality across households in Luxembourg was stable between 2014 and 2018. Table 5 reports several measures of inequality using gross income or net income (defined as gross income minus taxes and social security contributions).

Rows two to five report ratios comparing different percentiles of the income distribution. The second row reports the ratio of the median or 50th percentile in the distribution (50% of households have an income below this value) to the 10th percentile (the poorest 10% of households have an income below this value). The third row compares the 80th percentile to the 20th percentile, the fourth row compares the 90th to the 50th and the fifth row compares the 90th to the 10th percentile. First, all ratios are lower for **net** income than for gross income, confirming that the tax and benefit system in Luxembourg reduces income inequality by redistributing income. However, even after redistribution, the P90/P10 ratio in 2018 indicates

that households whose net income is in the top 10% earn more than five times as much as those in the bottom 10%. Second, there is no clear evidence that income inequality has changed since 2010.

Table 5: Inequality measures – Household income

	Gross Income			Net income		
	Wave 2010	Wave 2014	Wave 2018	Wave 2010	Wave 2014	Wave 2018
P50 (in €)	65,000	65,000	71,000	n.a.	50,000	51,000
P50/P10	2.83	2.69	2.81	n.a.	2.59	2.57
P80/P20	3.50	3.45	3.53	n.a.	3.15	3.01
P90/P50	2.39	2.61	2.49	n.a.	2.30	2.25
P90/P10	6.75	7.03	7.01	n.a.	5.95	5.77
Gini coeff.	0.42	0.42	0.41	n.a.	0.38	0.36

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS; data are multiply imputed and weighted.

Note: Income from family and friends is not included.

Percentile ratios are limited in the information they provide, because they only compare two specific points in the distribution. Therefore, the final rows of Table 5 report the Gini Coefficient, a popular measure of inequality. The Gini coefficient focuses on the middle of the distribution rather than the tails, where differences may be driven by a small number of atypical individuals.

The Gini coefficient for net income indicates less inequality than the Gini coefficient for gross income, as could be expected. In 2018, the Gini coefficient is 0.41 for gross income and 0.36 for net income, confirming the progressive nature of the Luxembourg tax and transfer system. Comparing the Gini coefficient between 2014 and 2018 suggests a small yet statistically significant reduction in net income inequality.

4.6.3 Wealth inequality

Wealth inequality is more challenging to measure than income inequality. First, net wealth may be negative, while income is usually positive. This is a problem for the Gini coefficient, which is no longer bounded between 0 and 1 if negative values are present. Second, the theory of the life cycle suggests that wealth will be low for young households, increase with age as households progress in their work career, and then decline with age as households consume their savings in retirement. Table 6 reports the same inequality measures, but this time calculated using net wealth. Household net wealth is the sum of real assets (e.g. housing) and financial assets (excluding public and occupational pensions) minus liabilities (including mortgage debt).

Table 6: Inequality measures – Household net wealth

	Wave 2010	Wave 2014	Wave 2018
P50 (in €)	398,000	438,000	498,000
P50/P10	79.0	98.5	70.6
P80/P20	25.7	31.3	23.9
P90/P50	3.5	3.5	3.7
P90/P10	273.0	344.3	262.8
Gini coeff.	0.66	0.65	0.65

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS; data are multiply imputed and weighted.

Evidence from other countries, as well as Luxembourg, indicates that net wealth is generally distributed more unequally than income, so that inequality measures calculated with net wealth tend to be higher than those calculated with income (e.g., Cowell and Van Kerm 2015). For example, for 2018 the P90/P10 ratio for household gross income was 7.0 in Table 6, but it was 263 for household net wealth in Table 6. Looking at the changes over time, the various percentile ratios convey conflicting signals. After an increase between 2010 and 2014, the P90/P10 ratio for net wealth declined again. While substantially smaller in magnitude (<4) the P90/P50 ratio for net wealth increased somewhat from 2014 to 2018. However, the Gini coefficient for net wealth, which takes into account the whole distribution, was stable over the three waves.

Table 7: Top shares – Household net wealth, in %

	Wave 2010	Wave 2014	Wave 2018
Top 1 %	21.3	19.1	20.5
Top 5 %	40.0	36.4	38.0
Top 10 %	51.4	48.7	50.3
Top 20 %	66.7	64.6	65.9
Bottom 50 %	8.5	8.7	8.7

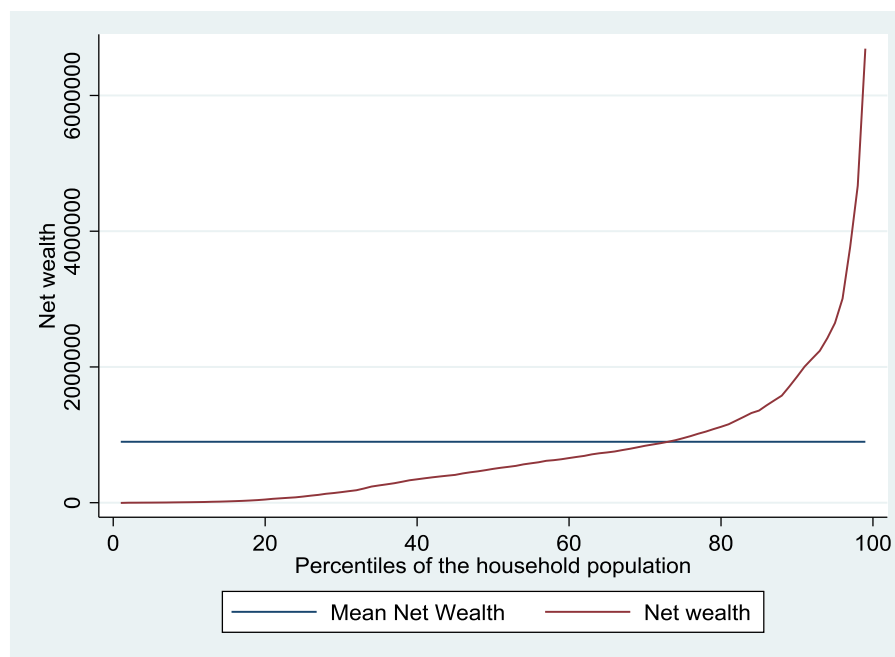
Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

To provide more detail, Table 7 reports the shares of net wealth held by the wealthiest 1%, 5%, 10% and 20% of households. In 2018, the wealthiest 1 percent of households in Luxembourg owned around one fifth of total net wealth, the wealthiest 5 percent almost 40 percent, the wealthiest 10 percent about around one half and the top 20 percent about two thirds. The bottom fifty percent of households owned less than 9 percent of total net wealth. Based on these indicators, wealth inequality did not change much between 2018 and previous waves. The concentration of net wealth at the top of the distribution is visible in Figure 13.⁸

⁸ The distribution shown in Figure 13 is similar to that of the two previous waves.

In 2018, only a very small fraction of households in Luxembourg had negative wealth. Towards the upper end of the distribution, the value of net wealth increases substantially. Average net wealth (the straight blue line) was €897,900 in 2018, substantially above the median (P50 = €498,500).

Figure 13: Distribution of Household Net Wealth in Luxembourg



Source: Own calculations based on wave 3 of the LU-HFCS, BCL.

5. Methodology and data treatment

This section provides a detailed description of the methodological aspects of the LU-HFCS. It roughly follows the numerous steps in chronological order and covers the sampling procedure, the questionnaire, fieldwork, response behaviour and paradata. Finally, it concludes with a detailed description of the data editing, imputation and anonymisation procedures.⁹

5.1 Sampling

The target population comprises all private households and their members residing in Luxembourg as at 31 December 2017. As there is no perfect sampling frame for this target population in Luxembourg, we apply an indirect sampling frame (Lavallée, 2007), which considers all fiscal households included in the Luxembourg social security register (Inspection Générale de la Sécurité Sociale, IGSS). The IGSS register included 284,371 fiscal households

⁹ This section relies heavily on the final report of LISER, which conducted the fieldwork (Bienvenue et al., 2018).

and their 531,371 household members (as at 31 October 2016). This indirect sampling frame does not cover households with no members affiliated to the IGSS. In particular, this excludes households of international civil servants employed by the European institutions in Luxembourg. The indirect sampling unit is a “fiscal household”. A private household may comprise several fiscal households, as private households are not exclusively formed of members with marital or parental ties. Therefore, the link between indirect sampling unit (i.e. the fiscal household) and target unit (i.e. the private household) can be either one-to-one or many-to-one, and needs to be appropriately taken into account by the weighting procedure.

Table 8 : Sampling design and implementation- overview

	1 st Wave (2010)	2 nd Wave (2014)	3 rd Wave (2018)
Sample frame	Luxembourg Social Security Register (Inspection Générale du Sécurité Sociale)		
Sampling unit	Resident fiscal households (indirect sampling frame)		
Target population	Private households and their members residing in Luxembourg as at ...		
	... 31 Dec. 2010	... 31 Dec. 2013	... 31 Dec. 2017
Gross sample	5,000 fiscal households, 2.01% of target population	7,300 fiscal households, 2.73% of target population	7,100 fiscal households, 2.50% of target population
Oversampling of wealthy	Yes: 20%	Yes: 20%	Yes: 20%
Sample size	950 households (planned 1,000)	1,601 households (planned 1,500)	1,616 households (planned 1,600)
Representative of	186,440 households 462,618 individuals	210,965 households 508,248 individuals	226,378 households 544,303 individuals
Number of strata	20 (nationality, employment status, income)		
Coverage (the following are excluded)	collective households	collective households (around 9,073 individuals)	collective households (around 9,179 individuals)
	households mainly comprising international civil servants	households mainly comprising international civil servants (estimated to be 32,359)	households mainly comprising international civil servants (estimated to be 48,523)

The gross sample consists of 7,100 (+ an unused reserve batch of 900) fiscal households from the social security register, covering 2.50% of the target population. It contains 20 strata along three dimensions, namely nationality, occupational status and the individual labour income declared to the social security register.¹⁰ Most of the gross sample (80%) is drawn among the

¹⁰ The highest individual income is used to identify the appropriate stratum if the fiscal household has more than one individual labour income source.

20 strata according to a stratified random sampling procedure. The remaining 20% are proportionally allocated among the high (labour) income strata (with gross mean labour income equal or exceeding the 9th decile, which corresponded to €8,447). This made it possible to oversample wealthy households, as recommended by the HFCN guidelines. One aim of oversampling is to increase the number of observations on certain assets that are relatively infrequent among the general population, because they are mainly owned by wealthy households. This makes it possible to improve the statistical precision of estimates in these asset categories. Due to the oversampling, slightly more than 20% of households in the gross sample are in the high labour income strata.

Table 9: Sampling design by stratum: distribution of the population

Nationality	Auxiliary variables		Strata number	Population	
	Employment status	Individual income		absolute	in %
Luxemburgish	Self-employed	< 9th decile	1	4,842	1.7
		>= 9th decile	2	2,260	0.8
	Private employee	< 9th decile	3	62,405	21.9
		>= 9th decile	4	5,988	2.1
	Public employee	< 9th decile	5	16,140	5.7
		>= 9th decile	6	7,592	2.7
	Other	< 9th decile	7	4,714	1.7
		>= 9th decile	8	17	0.0
	Retired	< 9th decile	9	57,722	20.3
		>= 9th decile	10	1,590	0.6
Foreigners	Self-employed	< 9th decile	11	4,707	1.7
		>= 9th decile	12	1,084	0.4
	Private employee	< 9th decile	13	79,224	27.9
		>= 9th decile	14	9,621	3.4
	Public employee	< 9th decile	15	379	0.1
		>= 9th decile	16	158	0.1
	Other	< 9th decile	17	7,786	2.7
		>= 9th decile	18	83	0.0
	Retired	< 9th decile	19	18,013	6.3
		>= 9th decile	20	46	0.0
Total				284,371	100.0

Source: Inspection Générale de la Sécurité Sociale (IGSS), December 2016.

Note: Sampling unit corresponds to a "fiscal household".

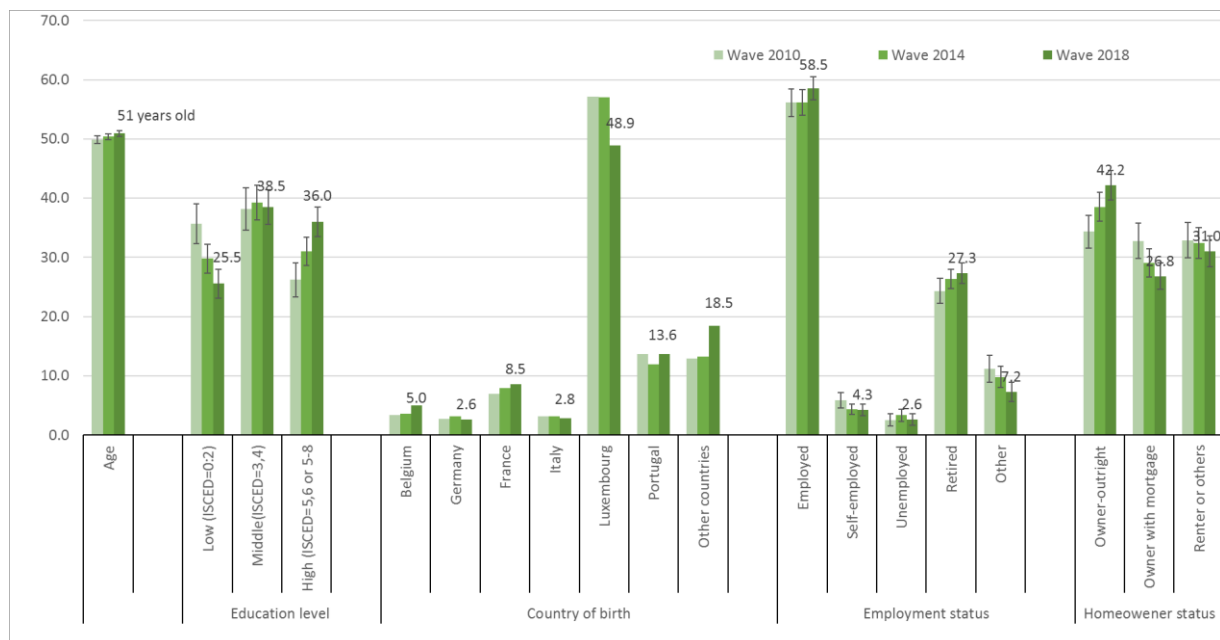
5.2 Sample characteristics

This section presents a breakdown of basic descriptive statistics at the household level (in weighted terms) across various socio-demographic characteristics. According to ECB (2019), the LU-HFCS reflects well the composition by age and gender of the Luxembourg population as reported by official statistics.

In 2018, the average household in Luxembourg consisted of 2.40 individuals, of which 0.66 were dependent children (defined as persons aged 0-15 or aged 16-24 not working and living with a parent). In 2014 (2010), the average household was characterised by 2.41 (2.48)

individuals, 0.63 (0.67) dependent children and 56.5% (59.5%) male heads. (Figure 14). Between 2014 and 2018, mean age increased by 0.5 years to 50.9 years of age.

Figure 14: Household socio-demographic characteristics, by wave



Note: * Variables referring to the reference person of household (FKP).

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1000 replicate weights. Error bars based on 5% significance level.

In 2018, the share of household heads born in Luxembourg was 48.9%, which is 8.2 percentage points lower than in 2014 and 2010. Across immigrant groups, Portuguese-born households were the most common, representing 13.6% of households in 2018, a reduction of 1.7 percentage points from 2014 (this share decreased significantly from 13.7% in 2010 to 11.9% in 2014). The second-largest immigrant group in 2018 were French-born households with 8.5%, followed by Belgian (5.0%), Italian (2.8%) and German (2.6%) households. Collectively, these main immigrant groups represented 32.6% of all households in 2018, an increase compared to 2014 (29.8%) and 2010 (30.0%). Households whose heads were born in other countries (not considered separately) represented 18.5% of all Luxembourg resident households, a substantial increase compared to 2014 (13.2%) and 2010 (12.9%).

Regarding employment status, 58.5% of Luxembourg household heads in 2018 were employed, 4.3% were self-employed, 2.5% were unemployed and 27.3% were retired. Educational attainment was distributed as follows: 25.5% Luxembourg households are characterised by low education (ISCED=0,1,2), 38.5% by medium education (ISCED=3,4) and 36.0% by higher education (ISCED=5,6 or 5-8). The distribution of educational attainment

changed substantially over the three waves of the LU-HFCS. Between 2010 and 2018, the share of households with low educational attainment dropped by more than 10 percentage points, from 35.7% to 25.5%. The share with medium educational attainment remained stable at 38.2% in 2010, 39.3% in 2014 and 38.5% in 2018. As a result, the share with high educational attainment increased substantially, from 26.2% in 2010 to 31.0% in 2014 to reach 36.0% in 2018. Thus, the share with high education increased by about as much as the share with low education declined. This shift from low to high education was similar for households whose reference person was born in Luxembourg and households whose reference person was born abroad (Table 10).

Table 10: Education by country of origin

In (%)	Wave 2010		Wave 2014		Wave 2018	
	Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.
Born in Luxembourg - Education level						
Low (ISCED=0:2)	32	(2.4)	27	(1.8)	21	(1.7)
Middle (ISCED=3,4)	46	(2.5)	47	(2.0)	48	(2.1)
High (ISCED=5,6 or 5:8)	22	(1.9)	26	(1.6)	30	(1.7)
Born in other countries - Education level						
Low (ISCED=0:2)	40	(2.7)	34	(1.9)	29	(1.8)
Middle (ISCED=3,4)	28	(2.6)	29	(2.1)	29	(2.0)
High (ISCED=5,6 or 5:8)	32	(2.3)	38	(2.0)	42	(1.9)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

Note: Variables refer to the reference person of household (FKP).

5.3 Questionnaire

The LU-HFCS is a face-to-face survey and follows the core questionnaire of the Eurosystem HFCS. The questionnaire covers both household- and person-specific questions. Person-specific questions should be answered by individual household members and household-specific questions by the person who is best informed about the household's finances (referred to as the "financially knowledgeable person" or "FKP"). The questionnaire is divided into 9 main sections:

1. General characteristics of the household (personal questions)
2. Real assets and their financing (household questions)
3. Other liabilities / credit constraints (household questions)
4. Private businesses and financial assets (household questions)
5. Employment (personal questions)
6. Pensions and insurance policies (personal questions)
7. Income (personal questions)
8. Intergenerational transfers/ gifts (household questions)
9. Consumption (household questions)

In addition to the core questions, which are common to all participating countries (some are adapted to the national context of Luxembourg), 5 non-core questions (optional) and 32 national specific questions were added. These additional questions mainly ask more detailed information about the main residence. This includes the type of HMR, the size of its plot, the year of the construction, the number of bedrooms, energy class, the value of any investment aimed to increase the energy performance, the number of loan applications, the names of the HMR mortgage providing institutions and external support for future housing acquisition. Other subject areas covered by additional questions were health status, arrival in Luxembourg, citizenship, education of parents, time to workplace, means of transport, future plans: where and when to retire, and household net income. In addition, there was a drop-off self-administered paper and pencil questionnaire, asking participating households after the main interview to answer questions concerning their inheritance and bequeathing motives. In total, the information collected during the interview is represented by more than 300 different variables. The English version was additionally translated into French and German, two of the official languages in Luxembourg.

The interviewer complemented the collected information with two sets of additional information. First, the sampling register documents the contact attempts with the household (i.e. when, how, number of attempts) and the final outcomes. Moreover, the interviewer recorded information on housing and neighbourhood conditions for the entire gross sample. Second, after each interview the interviewer completed the paradata section. This section covers several dimensions of the interviewer's perception of the interview, such as behaviour of the respondent, reliability of the answers, use of documents to provide information, etc.

5.4 Fieldwork

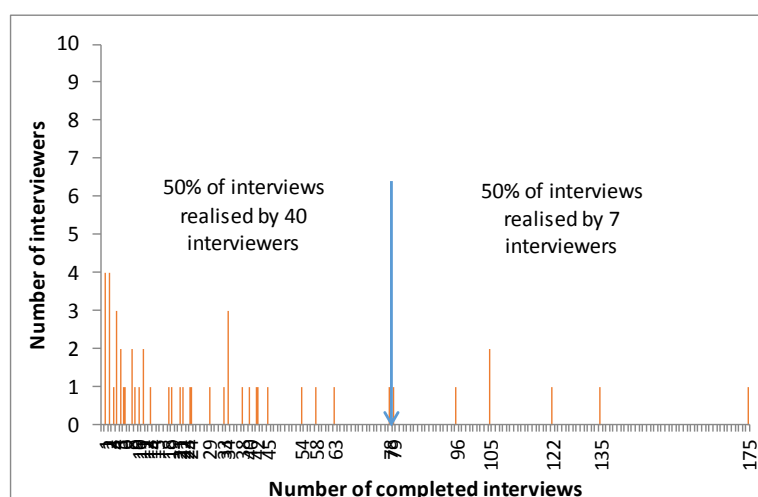
The target net sample size increased from 1,500 to 1,600 between the 2014 wave and the 2018 wave. In the 2018 wave, 1616 interviews were realised compared to 1,601 (950) interviews in the 2014 (2010) wave (Table 8). The incentives for participation introduced in the 2014 wave was kept unchanged. Participating households received a numismatic product with a retail value of €30. After the development and internal validation of the CAPI program, a pre-test was conducted with 24 households between 7 and 22 February to scrutinise the comprehension of the questions, the translation equivalence, the grammar and spelling, as well as the consistency of filters and pop-down menus. The pre-test revealed no substantial issues.

The start of the field phase was announced in a joint press release by BCL and LISER on 14 March 2018. Interested readers were referred to a dedicated web page on the BCL website for general information on the 2018 LU-HFCS wave and for results and publications related to the previous wave. A few days prior to being contacted by the interviewer, households received an introductory letter (both in French and German) signed by the Governor of the BCL and the President of LISER informing them about the survey and being included in the sample. The letter provided the motivation of LU-HFCS, described the sampling procedure, stressed the voluntary participation and assured the confidentiality of the collected information. To help convince households to participate the letter also contained a leaflet, which summarised the acquired knowledge from the second wave. It mentioned that each household would receive a token of appreciation in form of a numismatic product (retail value €30) and that the household would be contacted by an interviewer soon. Finally, contact details by mail, phone or post of LISER and the BCL were provided in case of questions.

5.5 Interviewers

In total, 47 interviewers participated in the survey, which is fewer than in 2014. Twenty-eight interviewers were female, the mode year of birth bracket was between 1955-1964, 23 interviewers had more than one year of experience and 19 already participated in past waves. There was a slight increase in contractual interviewers (7 versus 6) and 6 interviewers were hired from a temporary employment agency. The aim to increase the number of interviewers working on HFCS interviews could however not be achieved. If anything the number of active interviewers decreased from wave 2014 to wave 2018. The number of interviews by interviewer ranged between 1 and 175 with a median of 19 and a mean of 34.4. Estimates from a count data regression model suggest that older and contractually employed interviewers conducted more interviews. There is no statistically significant difference between males and females or between experience and in experienced interviewers.

Figure 15: Number of interviews by interviewer



Source: Own calculations based on wave 3 of the LU-HFCS, non-imputed and unweighted.
 Note: The x-axis displays the exact number of interviews per interviewer (labels overlap).

Interviewers received the address list of households to contact from their fieldwork supervisors. The contact requirements included at least five contact attempts of the household, of which the first and at least contact attempt needed to be face-to-face. Interviewers had to contact the households at different days of the week (at least once during the weekend) and at different times of the day (at least once in the evening). Finally, the interviewer should at least try to contact the same household twice a week. Interviewers were equipped with a compilation of research papers and results from the first and second wave to demonstrate how the individual household data are used.

5.6 Fieldwork quality control

Interviewers and their supervisors remained in regular contact throughout the duration of the fieldwork and were requested, depending on experience and the stage of the fieldwork, to contact their respective supervisor every two weeks. In addition, supervisors (5) had regular meetings with the survey team leader (every two weeks) to review the evolution of the progress in the field, discuss and solve eventual problems (20 meetings in total). Important problems were annotated and stored in a shared document. For example, in the beginning of the fieldwork, two minor issues concerning the questionnaire were quickly resolved.

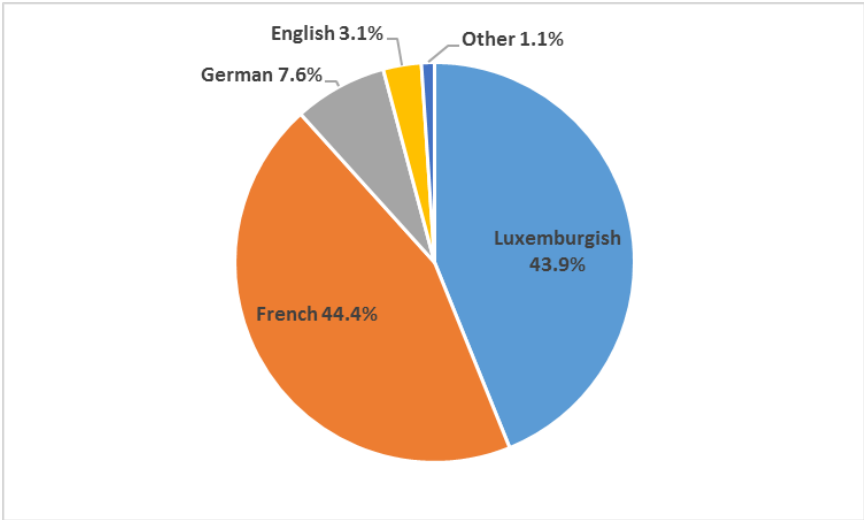
During the fieldwork, quality back-checks were carried out: In total, 10% of households having participated in the survey were re-contacted. A protocol of control included: check of the visit, questions about the content, check of the appropriateness of the interviewer's behaviour and

about the hand-over of the numismatic product. Problems of quality could not be detected at this stage of the survey.

5.7 Interview language and duration

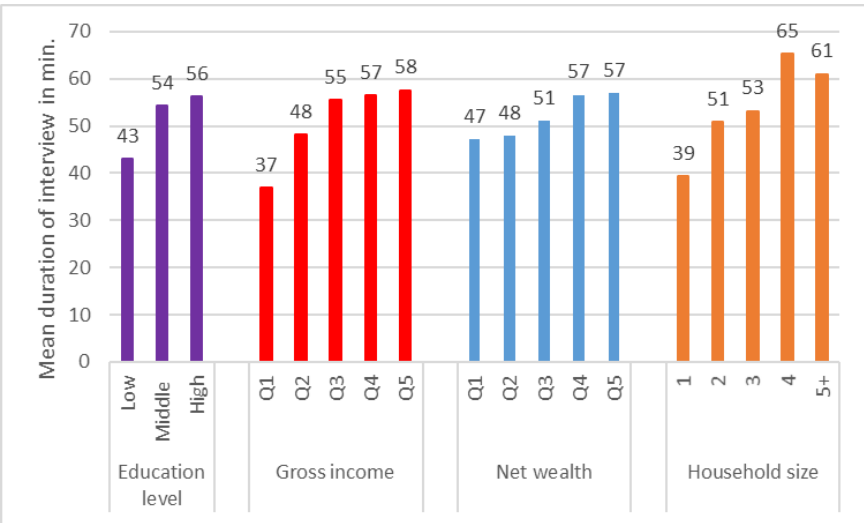
In the net sample, about 44% of the completed interviews were conducted in Luxembourgish, 44% in French, 8% in German, 3% in English and 1% in other languages. The average duration of the interviews was 53 minutes, and thus slightly shorter than in 2014 (56 minutes). The median duration was 45 minutes (2014: 56 minutes) and the inter-quartile range was 28 minutes. The interview duration generally increased with gross income, net wealth and household size.

Figure 16: Language of interview



Source: Own calculations based on wave 3 of the LU-HFCS, non-imputed and unweighted.

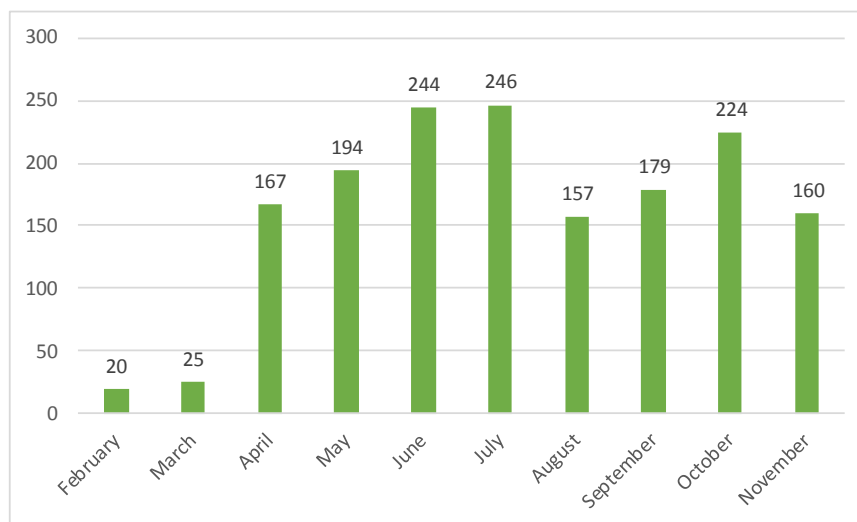
Figure 17: Duration of interview, by socio-economic characteristics



Source: Own calculations based on wave 3 of the LU-HFCS, non-imputed and unweighted.

In total, 1,616 household interviews were successfully concluded, all of them via computer assisted personal interviews (CAPI). This corresponds to a response rate of 24.1%, which is a 0.7 percentage point increase compared to the 2014 wave.

Figure 18: Completed interviews per month, wave 3



Source: Own calculations based on wave 3 of the LU-HFCS, non-imputed and unweighted.

The final data sample is representative of 226,378 households and 544,303 individuals residing in Luxembourg as at 31 December 2017. The reference period for assets and liabilities is always the day of the interview (between February and December November 2018). The reference period for yearly gross and net income is 2017 (calendar year).

5.8 Data treatment

The data treatment consists of four parts: analysis of unit non-response, editing, imputation and weighting.

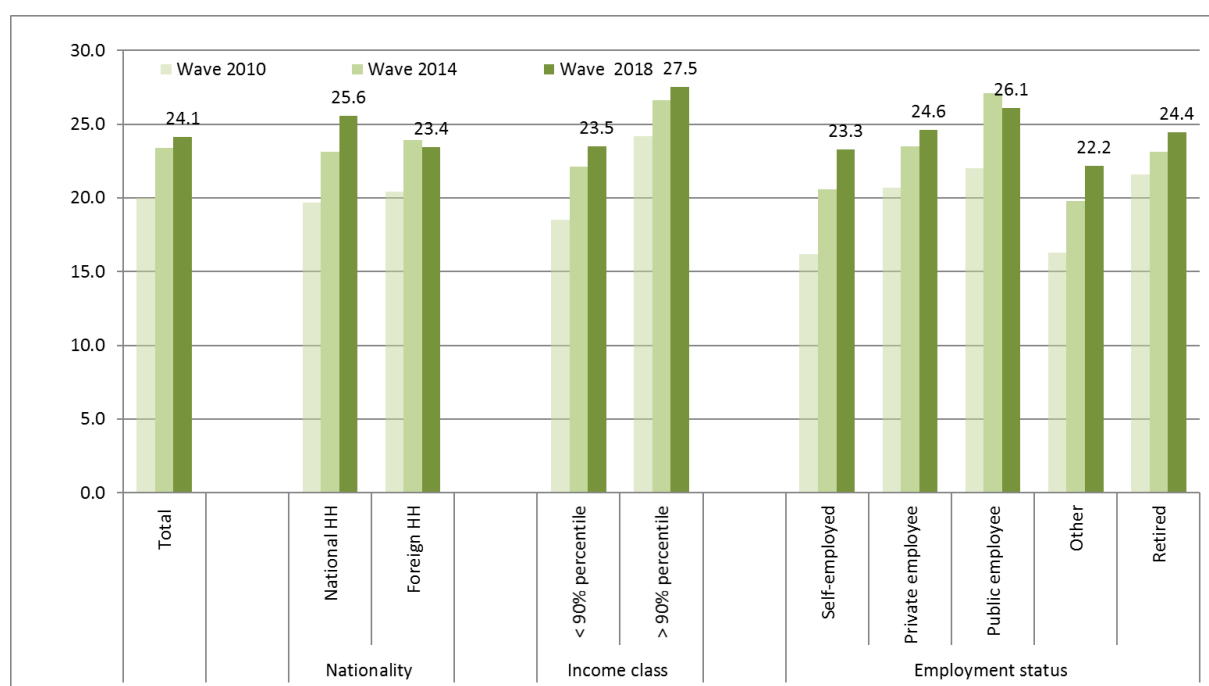
Unit non-response is a key concern for data quality; this being particularly the case if the responding and non-responding part of the population differ in characteristics of interest. Response rates indeed vary considerably across strata (Table 11) and strata variables. The lowest response rate of less than 20% is recorded for the employment status category “Others”; the highest is recorded for the category “Public employees” (Figure 19). In our dataset, there is a general tendency for households with higher incomes to have lower unit non-response rates than households with lower incomes. This pattern is observed for all three waves. In general, foreigners seemed to be more likely to participate than native households in the first and second wave, but not anymore in the third wave; this varies across income and employment status however.

Table 11: Response behaviour for each stratum in %

Nationality	Auxiliary variables Employment status	Strata number	income	Wave 2010	income	Wave 2014	income	Wave 2018
Luxemburgish	Self-employed	1	≤7 000 EUR	14.4	≤7 650 EUR	21.5	≤ 8,447	27.0
		2	>7 000 EUR	15.3	>7 650 EUR	21.4	> 8,447	23.3
	Private employee	3	≤7 000 EUR	18.8	≤7 650 EUR	20.1	≤ 8,447	23.9
		4	>7 000 EUR	24.7	>7 650 EUR	32.3	> 8,447	30.2
	Public employee	5	≤7 000 EUR	18.6	≤7 650 EUR	24.3	≤ 8,447	24.7
		6	>7 000 EUR	24.7	>7 650 EUR	26.1	> 8,447	28.5
	Other	7	≤7 000 EUR	17.1	≤7 650 EUR	20.3	≤ 8,447	23.8
		8	>7 000 EUR	16.7	>7 650 EUR	13.3	> 8,447	30.8
	Retired	9	≤7 000 EUR	17.7	≤7 650 EUR	22.0	≤ 8,447	24.2
		10	>7 000 EUR	36.0	>7 650 EUR	29.0	> 8,447	37.8
Foreigners	Self-employed	11	≤7 000 EUR	19.6	≤7 650 EUR	19.8	≤ 8,447	22.0
		12	>7 000 EUR	15.5	>7 650 EUR	19.5	> 8,447	21.0
	Private employee	13	≤7 000 EUR	20.1	≤7 650 EUR	23.5	≤ 8,447	23.7
		14	>7 000 EUR	27.2	>7 650 EUR	25.5	> 8,447	25.8
	Public employee	15	≤7 000 EUR	18.9	≤7 650 EUR	26.9	≤ 8,447	18.6
		16	>7 000 EUR	36.0	>7 650 EUR	42.5	> 8,447	26.9
	Other	17	≤7 000 EUR	16.8	≤7 650 EUR	22.0	≤ 8,447	22.7
		18	>7 000 EUR	13.2	>7 650 EUR	13.4	> 8,447	17.5
	Retired	19	≤7 000 EUR	18.8	≤7 650 EUR	22.4	≤ 8,447	20.6
		20	>7 000 EUR	39.9	>7 650 EUR	40.5	> 8,447	37.5
Total				20.0		23.4		24.8

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, non-imputed and unweighted.

Figure 19: Response rate by nationality, individual income and occupational status



Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, non-imputed and unweighted.

The *editing* procedure was carried out in cooperation with LISER and followed closely the procedure detailed in of wave 2 (Girshina, Mathä and Ziegelmeyer, 2017, section 2.6.2). In the 3rd wave, the point values of 5,484 observations or 1.1% relative to all applicable cases were set

to missing (in 2014: 1,038 or 0.2%). 1,878 observations or 0.4% of all applicable cases were modified.

The *imputation* of missing values followed closely the procedure algorithm of wave 2 and 1. Mathä, Porpiglia and Ziegelmeyer (2012a) describe for wave 1 how the ECB Multiple Imputation Routine (EMIR) is applied in the Luxembourg context. Girshina, Mathä and Ziegelmeyer (2017, section 2.6.3) describe which principles guide the implementation of the imputation procedure.

The calculation of final *survey weights* follows a 6-step approach in line with ECB recommendations and two previous waves (Girshina, Mathä and Ziegelmeyer, 2017, section 2.6.3). The aim is to achieve a sample representativeness of the target population, which comprises all households residing in Luxembourg as at 31 December 2017 excluding collective households and households with international civil servants. On average, each household in our net sample of 1,616 represents 140 households of our target population. The final sampling weights range from one household representing just one household to one household representing 600 households in the target population (with a standard deviation of around 100). These households cover 544,303 individuals resident in Luxembourg. The corresponding Statec figure (1 January 2018) of 602,005 individuals excluding the estimation of people in collective households (9,179) suggest a coverage rate of approximately 92%.

Replicate weights are calculated by repeating steps 1 to 6 previously described using the Rao-Wu rescaling bootstrap method for a stratified simple random sample. In total 1,000 replicate weights are provided to calculate properly the variance of our point estimates.

The *anonymisation* procedure for the user database (UDB) follows closely the procedure of wave 1 and 2 (Girshina, Mathä and Ziegelmeyer, 2017, section 2.6.4).

5.9 Comparison with other sources

This section compares the results of the LU-HFCS with statistics from other sources. First, the estimates of financial assets and liabilities are compared to the Financial Accounts (FA) included in the National Accounts published by the National Statistical Office. Second, we use data from “Observatoire de l’Habitat” and data on real estate transactions to assess the quality of LU-HFCS data on the household main residence (HMR).

5.9.1 Financial Accounts

A like-for-like comparison is only possible for a subset of financial assets, as the underlying definitions and classification in the HFCS and FA differ. The consensus view is that certain financial assets can be considered highly comparable across these sources, including bank deposits, mutual funds, bonds and quoted shares (HFCN, 2016; Expert Group on Linking Macro and Micro Data, 2019). Table 12 presents the nominal values of these comparable financial assets in the LU-HFCS and in the FA.

Table 12: Financial asset comparison between the LU-HFCS and Financial Accounts

Variable HFCS	HFCS	HFCS	HFCS	Financial accounts (FA - S.14)			HFCS in % of FA		
	2010	2014	2018	2010	2014	2018	2010	2014	2018
Variable HFCS	Euro per capita			Euro per capita					
Sight accounts & savings accounts	15,578	25,459	24,723	45,981	53,456	64,570	34%	48%	38%
Mutual funds	7,312	8,682	10,483	10,585	13,832	16,304	69%	63%	64%
Bonds	2,189	1,097	650	14,968	8,536	5,639	15%	13%	12%
Quoted shares	2,565	2,989	3,335	4,549	6,668	6,946	56%	45%	48%
Comparable financial assets	27,644	38,228	39,191	76,083	82,493	93,459	36%	46%	42%
Amount owned to household	784	1,138	701	1,101	1,216	1,439	71%	94%	49%
Non-selfemployment not publicly traded business	180	5,163	7,203	7,508	8,624	7,228	2%	60%	100%
Private/occupational pension	8,714	11,818	6,665	15,247	19,470	24,600	57%	61%	27%
Any other financial assets & managed accounts	239	732	175	0	0	0	-- n.a. --	-- n.a. --	-- n.a. --
Total financial assets	37,561	57,080	53,934	99,939	111,803	126,726	38%	51%	43%

Source: Own calculations from three waves of the LU-HFCS, Statistics BCL and STATEC. Note: LU-HFCS data are multiply imputed and weighted. The household sector (S.14) in the FA is separated from non-profit institutions serving households (NPISHs, S.15) sector.¹¹ The weighted HFCS totals for each category are divided by the covered population in each survey year: 462,618 individuals for 2010, 508,248 for 2014 and 544,303 for 2018. The FA categories are divided by the total population estimates from Statec in Luxembourg: 512,400 individuals for end of 2010, 563,000 for end of 2014 and 613,900 for end of 2018.

The last column of Table 12 displays a comparison of the coverage ratios of the per capita financial assets in the LU-HFCS and the FA. It shows that survey data typically underreport the amount of comparable financial assets relative to the FA; the lowest coverage was observed in 2010 with 36% and the highest in 2014 with 46%. While the definitions of comparable

¹¹ The FA from BCL combines statistics for household sector (S.14) and non-profit institutions serving households (NPISHs, S.15) sector.

financial assets are similar between the two sources, estimation and measurement errors in surveys can lead to a significant variability. On one side, the distribution of financial wealth is highly skewed to the right (the richest households own most financial wealth). Estimates of financial wealth in survey data are therefore sensitive to the coverage of wealthy households, especially for sub-components of financial wealth that are only owned by few individuals. For example, as displayed in Table 12, the per capita value of bonds in the HFC survey was much lower than in the FA, despite substantial efforts to oversample wealthier households. In addition, the LU-HFCS survey excluded international civil servants and institutionalised individuals. This may also explain the general level of under-reporting.

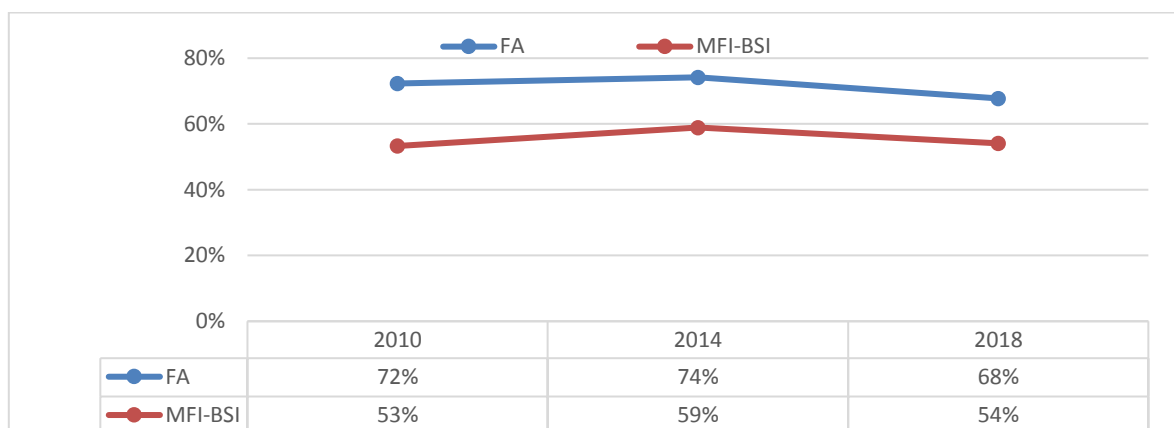
Furthermore, surveyed households may report a false value or declare they do not own such assets. Both these factors can cause micro and macro statistics to diverge. The coverage ratio of “sight and saving accounts” declined in 2018 compared to 2014, but the level remained similar to that in 2010. Mutual funds and shares were covered relatively well with 64% and 48%, respectively.

Table 12 also reports coverage for less comparable financial assets. These coverage ratios varied significantly across the survey waves. In 2018, the high value of non-self employment businesses (companies that are not publicly traded) was mainly caused by better data collection among some extremely wealthy households in Luxembourg. As in previous waves, a discrepancy remains between the per capita value of private/occupational pension wealth reported in the LU-HFCS and the estimates in the financial accounts.¹² This was particularly evident in 2018, where, as discussed in Section 4.1, the pension section of the questionnaire was changed extensively, leading to an increase in item non-response.

However, as mentioned above, the underlying concepts and classifications of these micro data categories were quite different from those in the FA. For example, in contrast to the financial accounts, occupational pensions with defined benefit contracts were not included in the survey. It would be thus inappropriate to use this information to assess the quality of survey data by comparison to the macro data.

¹² It is not possible to separate private and occupational pensions in FA data. Different from the calculation of net wealth in this report, we include occupational pensions in Table 12 to increase the comparability between survey and FA data. Note, occupational pensions are only recorded if they have a balance (defined contribution scheme).

Figure 20: Ratio of household liabilities per capita in the LU-HFCS to FA and MFI statistics



Source: Own calculations from three waves of the LU-HFCS, Statistics BCL and MFI ECB.

The value of liabilities in LU-HFCS is comparable with the value in the FA only at the aggregated level. The classification of liabilities in the FA depends on the duration of loans, i.e. short-term and long-term loans, while loans in LU-HFCS are grouped based on whether or not loans are collateralised by real estate, i.e. mortgage and non-mortgage loans. Figure 19 depicts the ratio of the households' total liabilities per capita in the LU-HFCS to FA. Total debt was relatively well measured in the LU-HFCS. The reason is that the distribution of liabilities is less skewed than the distribution of financial assets. According to Figure 20, the survey estimate for 2018 represented 68% of the total debt reported in the financial accounts, which was a slight decrease from 2014. The red line in Figure 20 compares the value of liabilities in the LU-HFCS to Central Bank statistics on Monetary Financial Institutions' balance sheets (MFI-BSI). Data from this source is not subject to the balancing adjustments applied in the FA. MFI-BSI data is also adjusted for loans originated by MFIs but no longer recorded on their balance sheets, following securitization or sales of non-performing loans. This adjustment increases the comparability of liabilities between these two sources (HFCN, 2016). In 2018, households' liabilities per capita in the survey were 54% of those in the MFI-BSI. However, MFI-BSI statistics for the household sector include non-profit institutions serving households. This may explain why aggregate liabilities in MFI-BSI were higher than reported in the FA.

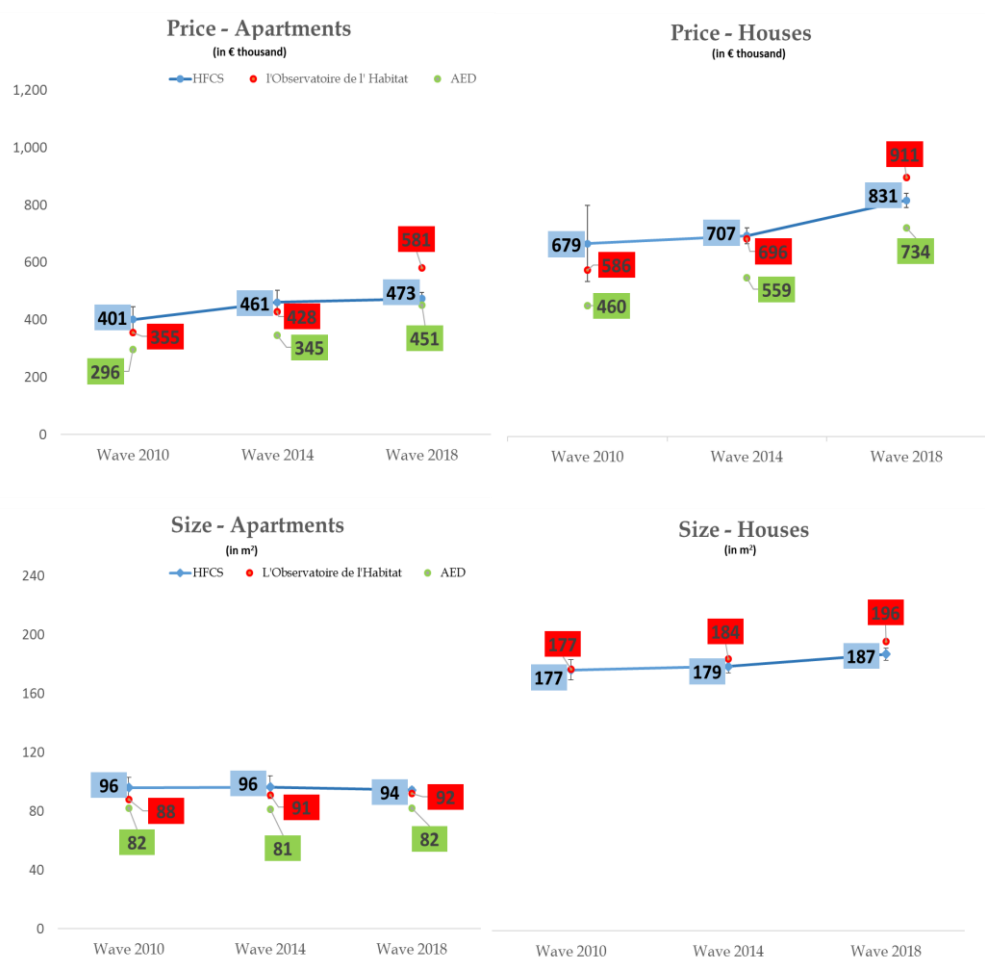
As shown in Table 12 and Figure 20, despite the observed differences between LU-HFCS and macro statistics, the coverage ratios of comparable items are relatively stable across different survey waves, supporting the reliability of the survey data.

5.9.2 The value and sizes of the Household Main Residence

As in many other euro area countries, housing prices increased recently in Luxembourg. As shown in Section 4.1, housing represents the main part of household wealth. Therefore,

changes in its value not only affect estimates of household net wealth, but may also affect household spending and savings decisions. An accurate measure of (aggregate) house prices is essential to study the effects of residential property prices on the economy. However, the heterogeneity of housing and the low frequency of repeated sales of the same property pose a challenge in developing such a measure. Information from the LU-HFCS can complement aggregate price indices, as respondents are asked to assess the current value of their HMR. Mathä, Porpiglia and Ziegelmeyer (2017b) used LU-HFCS information on HMR value at acquisition to study price changes for the same property over time.

Figure 21: HMR value and size by type and survey year



Source: Own calculations from three waves of the LU-HFCS, l'Observatoire de l'Habitat and l'Administration de l'Enregistrement et des domaines et de la TVA. Error bars shown are only for the LU-HFCS estimates and represent the 95% confidence interval. Note that the AED does not collect information about the size of houses sold.

The top panels of Figure 21 report the average self-assessed HMR value for houses and apartments from each LU-HFCS wave and compares it to two alternative measures of residential property prices. One is the average advertised price for the sale of apartments and houses, as provided quarterly by the “*Observatoire de l’Habitat*” established by the Ministry of Housing. The other is the average transaction price computed from individual residential property sales provided by the “*Administration de l’enregistrement, des domaines et de la TVA*” (AED). This second measure only considers sales of existing dwellings that occurred during the fieldwork of each LU-HFCS survey wave. For comparability, Figure 20 reports the average advertised price corresponding to the quarter closest to the middle of the fieldwork in each survey year (i.e. the last quarter of 2010, the third quarter of 2014 and 2018).¹³

According to all measures, the value of apartments and houses increased from 2010 to 2018. For apartments, the average size remained stable across the three waves. For houses, however, both the LU-HFCS and the “*Observatoire de l’Habitat*” data suggest an increase in the average size (see Figure 21, bottom right panel). This may in part explain the price increase for houses. Not surprisingly, average advertised sales prices from the *Observatoire de l’Habitat* were systematically above the average transaction price recorded by the *Administration de l’Enregistrement*. This is not surprising, as we should expect sellers (or real estate agents) to advertise properties above their reserve price.

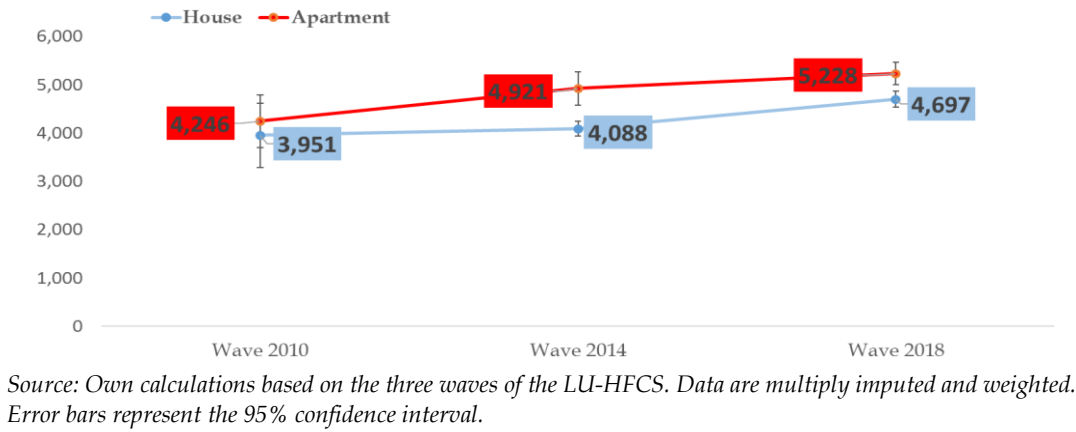
In 2018, average self-assessed values in the LU-HFCS were lower than average advertised prices but higher than average transaction prices. For apartments, the average advertised price was 23% higher than the average self-assessed value, although the latter was comparable to the average transaction price from AED. For house prices, the average self-assessed value in the LU-HFCS was 13% higher than the average transaction price. However, the standard deviation of transaction prices was particularly large for houses in 2018 (about €990,000). Therefore, respondents in the 2018 LU-HFCS appear to have provided reasonable assessments of their HMR values.

The LU-HFCS data also allows us to adjust respondents’ self-assessed value of their HMR for their reported square metre size, providing an average price per square metre. Given the large heterogeneity across dwellings, this measure may better reflects what an average valuation of the HMR. In particular, this measure avoids giving more weight to the value of bigger HMRs.

¹³ Fieldwork took place from September 2010 to April 2011 (wave 1), from April to December 2014 (wave 2) and from February to November 2018 (wave 3).

Figure 22 reports the evolution of this measure for both apartments and houses. It is consistent with the measures presented above.

Figure 22: HMR price per square metre by type and survey year



6. Concluding remarks

This technical report presents the main results of the third wave of the Luxembourg Household Finance and Consumption Survey (LU-HFCS) conducted in 2018 by the Banque centrale du Luxembourg (BCL) in collaboration with the Luxembourg Institute of Socio-Economic Research (LISER). This survey collects detailed information on household balance sheets (assets and liabilities), as well as income and consumption. Individual household data is indispensable to analyse the distribution of income, wealth and debt across the population. In Luxembourg, the LU-HFCS is the only source of detailed data on individual household balance sheets. The third wave is based on a representative sample of more than 1,600 households residing in Luxembourg.

Household assets

Household assets can be divided into real and financial assets. Real assets, such as real estate, vehicles or valuables, account for the largest share and in 2018 they represented 87.9% of all gross assets held by households in Luxembourg. Most households owned vehicles (87.2%) or their main residence (69.0%), and a significant proportion owned other real estate (26.1%) or valuables (26.1%). These shares are close to those of 2014. In 2018, the average value of gross real assets held by households reached €881,400. The household main residence and other real estate were the two most important asset categories (57.9% and 22.8% of total real assets

respectively). The other categories accounted for only a small share of real assets (self-employment businesses were 15.3%, vehicles were 2.6% and valuables were 1.3%).

In 2018, financial assets represented only 12.1% of all gross assets held by households. Financial assets consisted of deposits (49.0%), pensions and private life insurance (6.3%), mutual funds (20.8%), stocks (6.6%), bonds (1.3%) and other financial assets (16.0%). The most commonly held financial assets were current accounts and savings accounts, which were held by 97.1% of households.

In 2018, household financial assets averaged € 121,300, a decline from € 132,400 in 2014. This mainly reflects lower pension assets in the average household (€7,700 in 2018). Fewer households held mutual funds (14.6% of households in 2014 and 11.6% in 2018), bonds (from 2.6% to 1.4% of households) or equities (from 9.0% to 7.8%).

Household debt

In 2018, 53.2% of households in Luxembourg held at least one type of debt. Mortgage debt was held by 31.2% of households and non-mortgage debt was held by 35.4% of households. Among indebted households, the average value of mortgage debt (€306,500) was well above the average value of non-mortgage debt (€25,500). The share of households that held debt decreased from 54.6% in 2014 to 53.2% in 2018, while the average value of debt increased 7.7% over the same period, from €97,300 to €104,800. The total amount of debt owed by indebted households increased by 10.4% since 2014. The share of households with outstanding consumer loans was almost unchanged.

Debt burden indicators do not reveal a worsening in 2018 compared to 2014. Most changes in the median debt burden indicators between 2010 and 2018 are not statistically significant. However, the debt service-to-income ratio declined for non-mortgage debt, but was almost unchanged for mortgage debt. The median Loan-to-Value ratio on outstanding debt indicates higher vulnerability in 2018 compared to 2014, but the decline in mortgage rates partially offsets this, lowering the debt service-to-income ratio.

Household net worth and its inequality

Between 2014 and 2018, changes in the distribution of assets and debt raised average household net wealth by 16.9% in nominal terms to €897,900. In real terms (adjusting for consumer price inflation), this corresponds to a 12.0% increase. The median value of household net wealth increased by 13.9% to € 498,500 in nominal terms and 9.2% in real terms.

Wealth inequalities, as measured by the Gini coefficient, remained unchanged since 2014. In 2018, the top 5% of households in Luxembourg owned about 38% of total net wealth, while the top 20% owned almost two-thirds, which is similar to 2014.

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8. Appendix

Table A1: Main household characteristics

Main household characteristics						
Variable	Wave 2010		Wave 2014		Wave 2018	
	Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.
Age of reference person	49.9	(0.3)	50.4	(0.2)	50.9	(0.2)
Household size	2.5	(0.0)	2.4	(0.0)	2.4	(0.0)
In (%)						
Male	59.5	(1.4)	56.5	(1.1)	58.0	(1.0)
<i>Civil status</i>						
Single	24.7	(1.4)	27.2	(1.2)	26.7	(1.1)
Couple	52.8	(1.2)	49.6	(1.0)	50.2	(0.9)
Divorced	13.4	(1.3)	13.7	(1.0)	14.3	(1.0)
Widowed	9.1	(1.0)	9.5	(0.8)	8.8	(0.8)
<i>Country of birth</i>						
Belgium	3.4	(0.6)	3.6	(0.5)	5.0	(0.6)
Germany	2.7	(0.6)	3.2	(0.5)	2.6	(0.4)
France	7.0	(0.9)	7.9	(0.7)	8.5	(0.8)
Italy	3.1	(0.6)	3.2	(0.5)	2.8	(0.5)
Luxembourg	57.1	(1.3)	57.1	(1.1)	48.9	(1.1)
Portugal	13.7	(0.9)	11.9	(0.6)	13.6	(0.8)
Other countries	12.9	(1.0)	13.2	(0.8)	18.5	(1.0)
<i>Education level</i>						
Low (ISCED=0:2)	35.7	(1.7)	29.8	(1.2)	25.5	(1.2)
Middle (ISCED=3,4)	38.2	(1.8)	39.2	(1.5)	38.5	(1.5)
High (ISCED=5,6 or 5:8)	26.2	(1.4)	31.0	(1.2)	36.0	(1.3)
<i>Employment status</i>						
Employed	56.1	(1.2)	56.1	(1.1)	58.5	(1.0)
Self-employed	5.9	(0.6)	4.4	(0.4)	4.3	(0.5)
Unemployed	2.5	(0.5)	3.3	(0.5)	2.6	(0.5)
Retired	24.3	(1.1)	26.3	(0.8)	27.3	(0.9)
Other	11.1	(1.2)	9.8	(0.9)	7.2	(0.8)
<i>Number of dependent children</i>	0.7	(0.0)	0.6	(0.0)	0.6	(0.0)
<i>Housing status</i>						
Owner-outright	34.3	(1.4)	38.5	(1.2)	42.2	(1.3)
Owner with mortgage	32.8	(1.5)	29.1	(1.2)	26.8	(1.1)
Renter or other	32.9	(1.5)	32.4	(1.3)	31.0	(1.3)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A2: Total real assets, participation rate
by household characteristic**

(In %)		Wave 2010		Wave 2014		Wave 2018	
Variable		Part. rate	Std.Err.	Part. rate	Std.Err.	Part. rate	Std.Err.
All households		93.6	(0.9)	93.9	(0.8)	93.9	(0.8)
<i>Gender</i>							
	Male	95.4	(1.1)	94.5	(1.1)	93.6	(1.0)
	Female	91.1	(1.8)	93.0	(1.4)	94.4	(1.1)
<i>Age of reference person</i>							
	16-34	92.2	(2.5)	92.7	(2.1)	94.8	(1.6)
	35-44	92.4	(2.1)	92.7	(2.2)	89.9	(2.1)
	45-54	92.3	(2.2)	93.9	(1.7)	94.6	(1.6)
	55-64	95.1	(2.2)	94.0	(1.8)	95.6	(1.5)
	65+	96.7	(1.6)	95.8	(1.6)	94.8	(1.7)
<i>Civil status</i>							
	Single	84.9	(2.7)	87.5	(2.2)	90.5	(1.8)
	Couple	98.3	(0.7)	98.2	(0.7)	97.2	(0.7)
	Divorced	91.9	(3.0)	92.4	(2.3)	87.4	(3.0)
	Widowed	93.1	(3.7)	91.4	(3.4)	95.8	(2.4)
<i>Country of birth</i>							
	Belgium	94.1	(5.7)	100.0	-	91.8	(4.1)
	Germany	100.0	-	94.5	(4.6)	96.4	(3.5)
	France	87.8	(4.8)	94.7	(3.0)	88.3	(4.0)
	Italy	90.7	(6.1)	90.2	(6.3)	100.0	-
	Luxembourg	96.1	(1.0)	95.7	(0.9)	97.7	(0.7)
	Portugal	91.8	(3.1)	93.7	(2.5)	90.4	(2.7)
	Other countries	87.3	(3.6)	84.4	(3.8)	88.4	(2.3)
<i>Education level</i>							
	Low (ISCED=0:2)	90.0	(2.0)	91.9	(1.8)	88.5	(2.1)
	Middle (ISCED=3,4)	94.2	(1.4)	94.7	(1.3)	95.4	(1.0)
	High (ISCED=5,6 or 5:8)	97.8	(1.2)	94.7	(1.4)	96.2	(1.1)
<i>Employment status</i>							
	Employed	93.0	(1.4)	94.8	(1.1)	94.3	(1.0)
	Self-employed	99.5	(0.5)	100.0	-	96.1	(3.6)
	Unemployed	83.4	(8.9)	70.9	(8.2)	78.5	(7.8)
	Retired	97.7	(1.2)	96.4	(1.3)	95.8	(1.3)
	Other	87.3	(4.0)	86.5	(3.8)	87.6	(3.7)
<i>Housing status</i>							
	Owner-outright	100.0	-	100.0	-	100.0	-
	Owner with mortgage	100.0	-	100.0	-	100.0	-
	Renter or other	80.7	(2.7)	81.0	(2.3)	80.3	(2.3)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A3: Total real assets, conditional median
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.
All households	470,500	(15,600)	507,400	(12,700)	601,800	(16,500)
<i>Gender</i>						
Male	501,400	(20,200)	562,800	(25,600)	643,900	(20,500)
Female	443,000	(23,800)	454,400	(19,000)	535,000	(25,700)
<i>Age of reference person</i>						
16-34	243,400	(64,700)	305,000	(36,700)	383,600	(50,600)
35-44	465,200	(34,200)	447,400	(34,800)	574,800	(36,000)
45-54	495,700	(37,200)	581,600	(43,200)	637,300	(29,500)
55-64	549,100	(69,200)	657,600	(44,900)	673,700	(51,000)
65+	573,400	(43,200)	646,400	(43,700)	725,200	(54,100)
<i>Civil status</i>						
Single	284,900	(30,800)	376,000	(32,700)	397,000	(41,900)
Couple	547,800	(24,600)	612,400	(21,000)	726,400	(23,700)
Divorced	397,800	(44,400)	410,000	(44,000)	418,500	(45,900)
Widowed	491,000	(37,600)	481,100	(61,000)	614,300	(52,300)
<i>Country of birth</i>						
Belgium	404,500	(151,700)	660,500	(128,100)	601,600	(83,800)
Germany	523,600	(142,400)	686,600	(83,600)	590,400	(90,400)
France	366,500	(90,700)	406,700	(80,000)	449,000	(66,600)
Italy	406,300	(92,700)	402,900	(133,900)	568,000	(83,900)
Luxembourg	538,200	(21,100)	596,800	(26,100)	746,300	(23,000)
Portugal	118,000	(66,000)	259,400	(41,300)	396,900	(50,900)
Other countries	304,300	(75,300)	336,000	(79,300)	304,000	(105,500)
<i>Education level</i>						
Low (ISCED=0:2)	380,700	(27,100)	367,600	(22,300)	477,900	(36,600)
Middle (ISCED=3,4)	493,900	(23,600)	529,600	(25,600)	613,400	(25,200)
High (ISCED=5,6 or 5:8)	609,100	(48,400)	674,600	(39,600)	738,000	(37,700)
<i>Employment status</i>						
Employed	420,600	(21,500)	479,100	(21,800)	564,600	(19,800)
Self-employed	630,000	(102,800)	957,700	(155,000)	926,000	(227,900)
Unemployed	8,500	(84,900)	85,000	(101,300)	170,000	(136,600)
Retired	602,500	(45,400)	647,200	(34,800)	774,000	(42,800)
Other	435,500	(46,500)	431,200	(58,800)	496,900	(66,400)
<i>Housing status</i>						
Owner-outright	616,000	(31,700)	685,000	(21,300)	761,600	(31,900)
Owner with mortgage	528,300	(19,400)	628,200	(27,200)	730,400	(23,700)
Renter or other	16,500	(4,200)	15,000	(2,100)	14,600	(2,000)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A4: Total real assets, conditional mean
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.
All households	751,200	(60,600)	781,300	(48,300)	938,600	(46,800)
<i>Gender</i>						
Male	778,100	(72,200)	818,700	(47,600)	1,108,600	(76,700)
Female	709,600	(111,700)	732,000	(92,000)	705,500	(40,600)
<i>Age of reference person</i>						
16-34	322,400	(38,700)	393,000	(46,500)	455,500	(39,000)
35-44	619,000	(100,100)	593,900	(42,200)	872,000	(127,300)
45-54	903,400	(191,900)	887,000	(99,500)	880,100	(64,300)
55-64	885,600	(85,000)	1,111,500	(209,500)	1,036,300	(129,200)
65+	1,001,000	(162,800)	934,300	(85,200)	1,375,600	(185,700)
<i>Civil status</i>						
Single	547,400	(141,900)	553,400	(49,800)	588,300	(85,700)
Couple	909,200	(91,100)	932,500	(85,800)	1,060,800	(62,900)
Divorced	489,500	(67,400)	621,200	(73,800)	687,100	(77,400)
Widowed	669,700	(130,000)	790,200	(105,600)	1,606,700	(438,900)
<i>Country of birth</i>						
Belgium	513,400	(85,400)	819,100	(96,800)	853,800	(136,000)
Germany	1,296,500	(587,100)	1,064,500	(389,500)	907,600	(236,700)
France	571,600	(125,200)	755,700	(153,900)	1,053,600	(331,500)
Italy	572,200	(171,600)	503,400	(85,800)	793,500	(138,800)
Luxembourg	950,900	(98,700)	926,500	(75,300)	1,189,900	(88,700)
Portugal	263,400	(35,200)	341,000	(39,000)	417,000	(34,800)
Other countries	402,300	(47,100)	510,200	(58,800)	598,500	(85,300)
<i>Education level</i>						
Low (ISCED=0:2)	485,800	(49,500)	537,600	(41,200)	544,000	(41,800)
Middle (ISCED=3,4)	779,000	(113,300)	731,800	(41,800)	1,021,700	(110,100)
High (ISCED=5,6 or 5:8)	1,044,800	(144,700)	1,071,600	(138,000)	1,108,100	(90,900)
<i>Employment status</i>						
Employed	612,700	(81,600)	640,500	(38,300)	736,600	(46,300)
Self-employed	1,616,000	(306,300)	1,467,200	(172,900)	1,996,200	(514,300)
Unemployed	174,400	(71,400)	281,400	(75,600)	295,800	(96,700)
Retired	977,500	(139,000)	1,024,800	(149,000)	1,323,400	(149,500)
Other	548,800	(69,600)	722,100	(140,600)	629,500	(120,300)
<i>Housing status</i>						
Owner-outright	1,222,600	(147,400)	1,109,400	(105,300)	1,324,400	(106,900)
Owner with mortgage	743,700	(67,400)	898,200	(49,200)	1,033,300	(86,300)
Renter or other	150,700	(26,000)	170,200	(30,900)	183,000	(42,000)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A5: Household main residence, participation rate
by household characteristic**

(In %)		Wave 2010		Wave 2014		Wave 2018	
Variable		Part. rate	Std.Err.	Part. rate	Std.Err.	Part. rate	Std.Err.
All households		67.1	(1.5)	67.6	(1.3)	69.0	(1.3)
<i>Gender</i>							
	Male	63.9	(2.2)	68.2	(1.8)	67.8	(1.7)
	Female	71.8	(2.6)	66.9	(2.1)	70.6	(2.1)
<i>Age of reference person</i>							
	16-34	45.7	(4.2)	49.7	(3.7)	53.3	(3.8)
	35-44	62.1	(3.5)	60.7	(3.3)	62.7	(3.3)
	45-54	65.0	(3.6)	70.1	(3.0)	72.2	(2.7)
	55-64	77.9	(3.8)	73.6	(3.1)	67.3	(3.3)
	65+	86.0	(3.2)	83.4	(2.6)	86.4	(2.4)
<i>Civil status</i>							
	Single	47.1	(3.7)	54.7	(3.1)	55.3	(3.1)
	Couple	75.7	(1.9)	74.5	(1.7)	76.6	(1.7)
	Divorced	57.5	(5.4)	58.2	(4.1)	57.2	(3.9)
	Widowed	86.1	(4.9)	81.7	(4.3)	86.6	(3.9)
<i>Country of birth</i>							
	Belgium	50.1	(9.3)	81.5	(6.1)	66.5	(7.0)
	Germany	65.5	(10.6)	72.5	(7.5)	62.3	(8.6)
	France	43.8	(6.7)	48.2	(5.6)	53.9	(5.5)
	Italy	69.4	(9.4)	52.6	(8.7)	75.7	(7.6)
	Luxembourg	83.6	(1.8)	79.5	(1.7)	85.7	(1.5)
	Portugal	38.7	(5.1)	51.4	(4.0)	56.0	(4.2)
	Other countries	41.1	(5.0)	41.1	(4.1)	42.0	(3.6)
<i>Education level</i>							
	Low (ISCED=0:2)	59.2	(3.1)	62.9	(2.7)	63.3	(2.9)
	Middle (ISCED=3,4)	72.4	(2.7)	71.1	(2.2)	72.1	(2.3)
	High (ISCED=5,6 or 5:8)	70.2	(3.1)	67.7	(2.5)	69.8	(2.2)
<i>Employment status</i>							
	Employed	61.5	(2.3)	63.9	(1.8)	63.6	(1.8)
	Self-employed	54.8	(5.7)	77.9	(5.0)	71.0	(6.9)
	Unemployed	25.5	(10.2)	28.1	(7.3)	39.0	(8.9)
	Retired	83.9	(3.1)	82.2	(2.4)	84.9	(2.2)
	Other	74.8	(4.7)	58.5	(4.9)	62.2	(5.8)
<i>Housing status</i>							
	Owner-outright	100.0	-	100.0	-	100.0	-
	Owner with mortgage	100.0	-	100.0	-	100.0	-
	Renter or other	0.0	-	0.0	-	0.0	-

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A6: Household main residence, conditional median
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.
All households	500,000	(8,400)	555,600	(22,900)	652,000	(16,600)
<i>Gender</i>						
Male	500,000	(19,600)	600,000	(19,000)	700,000	(20,000)
Female	450,600	(22,000)	500,000	(20,900)	600,000	(24,400)
<i>Age of reference person</i>						
16-34	400,000	(23,000)	463,500	(30,200)	562,000	(38,000)
35-44	500,000	(13,100)	561,500	(38,600)	650,000	(36,300)
45-54	500,000	(36,100)	650,000	(35,800)	682,000	(39,600)
55-64	500,000	(22,900)	618,600	(30,800)	722,000	(35,800)
65+	514,200	(42,000)	543,300	(47,600)	676,000	(44,100)
<i>Civil status</i>						
Single	400,000	(23,300)	485,800	(27,300)	506,000	(24,100)
Couple	530,000	(29,300)	650,000	(19,400)	744,000	(27,400)
Divorced	440,000	(29,900)	500,000	(26,800)	514,000	(43,700)
Widowed	450,000	(33,800)	471,300	(39,300)	600,000	(45,400)
<i>Country of birth</i>						
Belgium	500,000	(101,800)	580,000	(79,500)	670,000	(94,600)
Germany	600,000	(80,300)	650,000	(57,400)	600,000	(44,800)
France	500,000	(34,700)	608,600	(62,400)	600,000	(70,400)
Italy	400,000	(75,200)	500,000	(59,800)	630,000	(84,200)
Luxembourg	500,000	(7,900)	600,000	(17,000)	700,000	(20,500)
Portugal	350,000	(30,900)	350,000	(24,000)	486,000	(35,000)
Other countries	500,000	(35,500)	550,000	(37,200)	665,000	(48,800)
<i>Education level</i>						
Low (ISCED=0:2)	450,000	(25,700)	469,300	(20,600)	532,000	(35,000)
Middle (ISCED=3,4)	496,000	(22,100)	595,000	(27,900)	650,000	(21,000)
High (ISCED=5,6 or 5:8)	568,000	(36,900)	696,000	(31,600)	800,000	(25,300)
<i>Employment status</i>						
Employed	482,200	(19,400)	550,000	(21,700)	650,000	(17,000)
Self-employed	699,300	(87,000)	718,600	(71,000)	874,000	(98,600)
Unemployed	365,100	(124,600)	432,700	(121,500)	400,000	(50,300)
Retired	516,500	(39,700)	600,000	(35,800)	702,000	(32,000)
Other	450,000	(37,700)	500,000	(36,300)	562,000	(68,500)
<i>Housing status</i>						
Owner-outright	500,000	(18,000)	551,500	(27,000)	658,000	(24,700)
Owner with mortgage	459,000	(24,200)	570,800	(30,900)	650,000	(21,300)
Renter or other	-	-	-	-	-	-

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A7: Household main residence, conditional mean
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.
All households	611,900	(45,100)	647,900	(12,000)	740,100	(13,600)
<i>Gender</i>						
Male	597,700	(17,900)	674,700	(16,200)	783,400	(19,700)
Female	630,500	(102,000)	612,300	(19,400)	682,500	(19,500)
<i>Age of reference person</i>						
16-34	434,200	(25,600)	529,900	(27,500)	615,500	(26,100)
35-44	583,900	(54,800)	619,000	(23,800)	703,400	(28,300)
45-54	756,700	(190,100)	698,800	(26,600)	749,400	(27,400)
55-64	635,100	(45,700)	734,400	(34,100)	831,300	(39,100)
65+	585,000	(32,100)	627,300	(24,000)	762,800	(31,700)
<i>Civil status</i>						
Single	644,900	(234,100)	545,400	(21,700)	577,500	(22,100)
Couple	651,600	(30,600)	716,400	(17,200)	833,900	(19,900)
Divorced	491,800	(31,700)	596,000	(34,200)	663,700	(47,000)
Widowed	478,800	(32,500)	570,700	(43,000)	664,300	(37,600)
<i>Country of birth</i>						
Belgium	556,000	(55,800)	633,900	(53,200)	684,000	(53,300)
Germany	645,800	(82,200)	692,900	(68,000)	684,100	(67,900)
France	576,000	(71,800)	719,800	(66,400)	684,200	(49,400)
Italy	672,200	(210,100)	535,900	(55,600)	721,400	(72,600)
Luxembourg	642,900	(61,200)	674,500	(15,400)	788,500	(18,500)
Portugal	401,800	(28,500)	445,400	(24,700)	530,200	(32,100)
Other countries	545,100	(39,200)	625,800	(39,800)	758,500	(49,100)
<i>Education level</i>						
Low (ISCED=0:2)	520,700	(30,200)	530,900	(19,800)	571,700	(23,700)
Middle (ISCED=3,4)	548,300	(23,100)	638,000	(18,300)	709,500	(19,300)
High (ISCED=5,6 or 5:8)	812,000	(152,700)	765,400	(24,300)	882,300	(27,200)
<i>Employment status</i>						
Employed	607,800	(80,500)	628,400	(14,800)	713,800	(15,700)
Self-employed	1,029,600	(227,100)	857,500	(68,700)	1,025,300	(116,300)
Unemployed	477,400	(152,700)	523,400	(76,500)	414,800	(45,000)
Retired	594,500	(27,900)	665,600	(24,400)	780,000	(27,000)
Other	520,900	(63,600)	599,200	(49,000)	632,500	(44,600)
<i>Housing status</i>						
Owner-outright	693,200	(86,100)	642,000	(16,500)	746,000	(19,000)
Owner with mortgage	526,700	(15,600)	655,700	(19,200)	730,700	(20,900)
Renter or other	-	-	-	-	-	-

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A8: Other real estate property, participation rate
by household characteristic**

(In %)		Wave 2010		Wave 2014		Wave 2018	
Variable		Part. rate	Std.Err.	Part. rate	Std.Err.	Part. rate	Std.Err.
All households		28.2	(1.6)	26.3	(1.2)	26.1	(1.2)
<i>Gender</i>							
	Male	32.1	(2.3)	29.4	(1.6)	30.4	(1.8)
	Female	22.4	(2.5)	22.4	(1.8)	20.2	(1.7)
<i>Age of reference person</i>							
	16-34	17.3	(3.2)	12.0	(2.3)	12.1	(2.1)
	35-44	20.3	(2.8)	21.6	(2.6)	22.4	(2.6)
	45-54	31.1	(3.6)	29.1	(2.7)	27.1	(2.6)
	55-64	36.6	(4.0)	37.6	(3.1)	33.4	(3.3)
	65+	37.1	(4.6)	32.1	(3.1)	34.2	(3.0)
<i>Civil status</i>							
	Single	17.1	(2.7)	18.1	(2.1)	18.3	(2.2)
	Couple	34.7	(2.3)	32.1	(1.8)	32.7	(1.9)
	Divorced	25.1	(4.7)	22.7	(3.4)	17.1	(2.6)
	Widowed	24.9	(6.2)	25.0	(4.7)	26.4	(4.7)
<i>Country of birth</i>							
	Belgium	32.9	(8.7)	33.6	(7.3)	36.6	(6.7)
	Germany	23.9	(8.1)	31.5	(7.5)	28.1	(7.4)
	France	30.0	(6.1)	30.5	(5.1)	26.3	(4.3)
	Italy	16.7	(6.8)	22.6	(6.5)	35.5	(8.1)
	Luxembourg	29.1	(2.2)	26.3	(1.7)	27.4	(1.8)
	Portugal	26.9	(4.8)	27.2	(3.5)	24.5	(3.6)
	Other countries	26.8	(4.5)	21.2	(3.4)	19.0	(2.8)
<i>Education level</i>							
	Low (ISCED=0:2)	22.8	(2.9)	22.8	(2.2)	21.2	(2.4)
	Middle (ISCED=3,4)	25.6	(2.7)	23.6	(2.0)	22.4	(2.0)
	High (ISCED=5,6 or 5:8)	39.2	(3.1)	33.3	(2.4)	33.5	(2.2)
<i>Employment status</i>							
	Employed	24.0	(2.1)	23.2	(1.6)	23.3	(1.6)
	Self-employed	45.7	(5.5)	48.3	(5.8)	35.3	(6.4)
	Unemployed	8.1	(5.5)	14.4	(5.5)	5.2	(3.6)
	Retired	40.0	(4.0)	33.4	(2.7)	34.1	(2.7)
	Other	18.7	(4.9)	20.0	(3.9)	20.3	(4.5)
<i>Housing status</i>							
	Owner-outright	39.6	(3.2)	33.1	(2.1)	32.5	(2.1)
	Owner with mortgage	21.0	(2.4)	22.5	(2.1)	25.1	(2.3)
	Renter or other	23.4	(2.8)	21.8	(2.1)	18.2	(2.0)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A9: Other real estate property, conditional median
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.
All households	300,000	(28,200)	350,000	(30,000)	380,000	(22,000)
<i>Gender</i>						
Male	316,000	(41,200)	376,600	(43,000)	433,000	(44,700)
Female	300,000	(64,300)	322,000	(47,200)	269,000	(46,800)
<i>Age of reference person</i>						
16-34	250,000	(63,100)	276,500	(48,700)	400,000	(88,900)
35-44	304,900	(78,100)	309,600	(61,700)	369,000	(46,500)
45-54	230,700	(43,900)	278,000	(38,900)	318,000	(51,000)
55-64	363,600	(112,200)	450,000	(70,300)	400,000	(55,100)
65+	430,600	(167,200)	471,600	(82,500)	434,000	(105,000)
<i>Civil status</i>						
Single	244,600	(68,600)	405,500	(69,900)	291,200	(51,200)
Couple	339,900	(30,100)	350,000	(33,500)	400,000	(38,200)
Divorced	360,900	(130,600)	286,300	(78,600)	396,000	(115,700)
Widowed	300,000	(368,500)	350,000	(235,700)	316,000	(116,800)
<i>Country of birth</i>						
Belgium	400,000	(152,800)	317,200	(115,500)	380,000	(105,700)
Germany	770,000	(1,558,600)	358,200	(243,300)	188,000	(134,000)
France	319,000	(85,200)	280,000	(114,500)	330,000	(108,000)
Italy	210,000	(110,400)	400,000	(227,700)	300,000	(199,600)
Luxembourg	387,700	(69,000)	455,600	(41,200)	421,000	(62,400)
Portugal	164,800	(28,900)	91,700	(21,800)	150,000	(29,000)
Other countries	200,000	(37,700)	400,000	(76,900)	492,000	(131,800)
<i>Education level</i>						
Low (ISCED=0:2)	197,300	(23,900)	183,800	(54,300)	162,000	(44,100)
Middle (ISCED=3,4)	352,000	(56,000)	395,300	(66,600)	432,000	(82,500)
High (ISCED=5,6 or 5:8)	381,700	(80,100)	409,900	(34,000)	445,000	(40,400)
<i>Employment status</i>						
Employed	229,200	(23,900)	300,000	(21,100)	375,000	(28,500)
Self-employed	707,500	(120,200)	654,000	(154,600)	480,000	(184,200)
Unemployed	135,000	(122,900)	110,000	(219,400)	170,000	(317,800)
Retired	385,500	(107,300)	400,200	(60,100)	414,000	(89,600)
Other	286,000	(158,100)	425,600	(222,800)	180,000	(95,300)
<i>Housing status</i>						
Owner-outright	361,000	(101,000)	455,600	(48,700)	428,000	(65,400)
Owner with mortgage	311,700	(65,200)	322,000	(45,000)	351,800	(42,200)
Renter or other	200,000	(27,600)	239,500	(47,800)	299,400	(111,300)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A10: Other real estate property, conditional mean
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.
All households	849,600	(145,700)	885,200	(136,000)	769,800	(59,800)
<i>Gender</i>						
Male	905,900	(179,800)	778,600	(90,500)	834,500	(72,600)
Female	731,000	(257,700)	1,066,700	(326,700)	635,300	(102,100)
<i>Age of reference person</i>						
16-34	402,600	(130,400)	618,800	(279,500)	531,400	(113,700)
35-44	695,500	(375,100)	525,200	(66,300)	708,300	(136,200)
45-54	858,800	(338,200)	802,900	(173,500)	658,700	(92,500)
55-64	797,600	(170,900)	1,147,300	(451,900)	866,000	(150,800)
65+	1,159,500	(345,300)	1,041,800	(191,400)	883,800	(126,100)
<i>Civil status</i>						
Single	719,200	(214,800)	709,500	(149,900)	541,600	(92,500)
Couple	958,000	(209,100)	938,200	(208,900)	813,600	(81,700)
Divorced	474,200	(96,300)	832,300	(228,500)	883,300	(205,100)
Widowed	774,100	(375,700)	964,300	(260,200)	821,600	(236,600)
<i>Country of birth</i>						
Belgium	471,300	(110,700)	506,200	(126,700)	738,400	(242,000)
Germany	2,870,400	(1,464,500)	1,468,700	(980,500)	601,300	(236,200)
France	475,300	(94,900)	893,200	(346,600)	632,800	(138,400)
Italy	223,600	(74,200)	641,100	(153,500)	615,000	(264,500)
Luxembourg	1,109,100	(235,900)	1,069,300	(214,900)	977,300	(92,500)
Portugal	237,400	(51,300)	249,500	(93,900)	243,800	(45,000)
Other countries	320,000	(49,500)	643,200	(161,100)	660,700	(152,700)
<i>Education level</i>						
Low (ISCED=0:2)	417,200	(108,200)	588,000	(115,900)	423,400	(124,100)
Middle (ISCED=3,4)	1,101,200	(350,800)	796,800	(102,600)	924,400	(116,400)
High (ISCED=5,6 or 5:8)	952,200	(197,700)	1,160,200	(321,500)	815,200	(85,300)
<i>Employment status</i>						
Employed	653,700	(211,400)	601,200	(73,900)	658,100	(66,000)
Self-employed	1,536,800	(398,300)	1,119,700	(161,500)	1,054,400	(250,200)
Unemployed	201,100	(131,700)	290,000	(216,600)	394,500	(237,900)
Retired	1,048,300	(278,000)	1,198,900	(368,700)	937,100	(122,700)
Other	368,700	(106,400)	1,256,700	(474,400)	486,700	(166,900)
<i>Housing status</i>						
Owner-outright	1,171,900	(266,100)	1,182,700	(260,800)	969,300	(95,100)
Owner with mortgage	755,000	(283,300)	754,300	(143,100)	552,400	(59,500)
Renter or other	365,400	(58,100)	468,500	(72,100)	544,600	(112,300)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A11: Total financial assets, participation rate
by household characteristic**

(In %)		Wave 2010		Wave 2014		Wave 2018	
Variable		Part. rate	Std.Err.	Part. rate	Std.Err.	Part. rate	Std.Err.
All households		98.4	(0.5)	97.1	(0.5)	97.3	(0.5)
<i>Gender</i>							
	Male	97.8	(0.7)	97.4	(0.7)	97.3	(0.7)
	Female	99.3	(0.5)	96.6	(0.9)	97.2	(0.8)
<i>Age of reference person</i>							
	16-34	97.0	(1.6)	95.4	(1.6)	97.9	(1.0)
	35-44	97.9	(1.2)	97.5	(1.1)	97.7	(1.2)
	45-54	100.0	(0.0)	98.8	(0.8)	97.5	(1.0)
	55-64	96.3	(1.8)	96.1	(1.5)	96.7	(1.3)
	65+	100.0	-	97.2	(1.2)	96.6	(1.3)
<i>Civil status</i>							
	Single	97.8	(1.0)	95.4	(1.3)	96.3	(1.3)
	Couple	98.9	(0.6)	98.5	(0.5)	98.2	(0.6)
	Divorced	96.5	(2.1)	96.9	(1.6)	95.7	(1.7)
	Widowed	100.0	-	94.5	(2.7)	97.2	(2.0)
<i>Country of birth</i>							
	Belgium	97.0	(3.5)	100.0	-	96.8	(2.7)
	Germany	100.0	-	100.0	-	100.0	-
	France	98.4	(1.8)	99.5	-	93.1	(2.9)
	Italy	100.0	-	94.4	(5.2)	96.7	(3.3)
	Luxembourg	99.2	(0.4)	98.3	(0.5)	98.8	(0.5)
	Portugal	95.9	(2.2)	90.7	(2.9)	95.3	(1.7)
	Other countries	97.0	(1.9)	95.2	(2.0)	96.3	(1.6)
<i>Education level</i>							
	Low (ISCED=0:2)	97.6	(1.0)	92.8	(1.6)	95.4	(1.3)
	Middle (ISCED=3,4)	98.3	(0.8)	99.0	(0.4)	97.4	(0.9)
	High (ISCED=5,6 or 5:8)	99.6	(0.4)	98.7	(0.7)	98.5	(0.6)
<i>Employment status</i>							
	Employed	97.7	(0.8)	97.6	(0.7)	97.5	(0.7)
	Self-employed	98.9	(1.1)	98.5	(1.5)	98.8	-
	Unemployed	95.5	(4.5)	94.9	(3.8)	100.0	-
	Retired	100.0	-	96.0	(1.3)	96.3	(1.2)
	Other	98.5	(1.0)	97.2	(1.6)	97.0	(1.5)
<i>Housing status</i>							
	Owner-outright	100.0	-	97.5	(0.9)	96.8	(0.9)
	Owner with mortgage	98.4	(0.9)	98.9	(0.6)	99.2	(0.4)
	Renter or other	96.7	(1.2)	94.9	(1.3)	96.2	(1.2)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A12: Total financial assets, conditional median
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.
All households	27,900	(3,300)	32,100	(2,900)	30,300	(2,200)
<i>Gender</i>						
Male	36,900	(6,200)	39,700	(4,400)	39,900	(4,400)
Female	21,000	(3,100)	26,600	(3,400)	20,100	(2,900)
<i>Age of reference person</i>						
16-34	19,600	(4,300)	16,100	(4,100)	18,300	(4,100)
35-44	30,400	(5,600)	28,700	(5,600)	26,400	(5,000)
45-54	31,200	(7,600)	34,100	(6,400)	28,500	(5,100)
55-64	35,800	(10,600)	50,200	(8,800)	33,000	(7,400)
65+	32,800	(7,700)	55,000	(12,600)	65,600	(11,700)
<i>Civil status</i>						
Single	20,400	(3,400)	21,000	(5,900)	26,700	(4,400)
Couple	38,300	(4,700)	44,000	(5,200)	38,700	(4,400)
Divorced	22,800	(5,100)	24,700	(4,900)	15,800	(4,000)
Widowed	22,700	(9,300)	26,200	(11,200)	41,900	(14,300)
<i>Country of birth</i>						
Belgium	34,600	(28,500)	79,000	(29,700)	56,700	(13,500)
Germany	33,600	(28,500)	114,400	(30,200)	53,200	(22,400)
France	21,500	(6,500)	47,200	(10,800)	32,300	(10,000)
Italy	10,800	(6,800)	30,700	(18,900)	61,900	(44,900)
Luxembourg	41,900	(3,900)	43,600	(5,300)	44,700	(6,000)
Portugal	7,900	(3,600)	10,700	(1,800)	6,400	(1,900)
Other countries	21,400	(5,200)	15,800	(4,900)	10,300	(3,000)
<i>Education level</i>						
Low (ISCED=0:2)	10,700	(2,600)	13,500	(2,400)	10,400	(2,900)
Middle (ISCED=3,4)	33,100	(6,700)	33,300	(5,600)	22,400	(3,700)
High (ISCED=5,6 or 5:8)	58,800	(11,800)	75,000	(10,000)	63,700	(6,600)
<i>Employment status</i>						
Employed	29,600	(4,100)	30,400	(2,800)	25,000	(2,800)
Self-employed	59,000	(15,200)	76,900	(18,000)	64,500	(17,900)
Unemployed	4,200	(4,200)	3,000	(3,100)	5,000	(2,100)
Retired	38,200	(8,500)	50,700	(7,900)	61,500	(11,400)
Other	10,500	(4,500)	15,900	(8,700)	6,900	(5,100)
<i>Housing status</i>						
Owner-outright	48,800	(7,200)	66,500	(9,400)	56,400	(7,700)
Owner with mortgage	37,200	(5,000)	37,500	(4,900)	31,700	(2,900)
Renter or other	10,600	(3,400)	10,100	(2,200)	8,400	(2,100)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A13: Total financial assets, conditional mean
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.
All households	89,900	(7,900)	136,400	(17,000)	124,700	(10,500)
<i>Gender</i>						
Male	108,500	(9,300)	158,900	(28,300)	158,300	(16,900)
Female	62,900	(13,900)	106,900	(13,300)	78,300	(9,400)
<i>Age of reference person</i>						
16-34	37,200	(4,700)	57,300	(11,300)	69,600	(17,200)
35-44	64,600	(7,100)	98,700	(13,700)	90,300	(16,200)
45-54	96,200	(14,500)	191,700	(73,300)	106,800	(14,300)
55-64	113,800	(18,400)	176,100	(29,200)	171,200	(33,200)
65+	138,800	(30,400)	156,400	(18,000)	182,500	(29,300)
<i>Civil status</i>						
Single	53,100	(8,200)	112,800	(14,600)	90,700	(13,600)
Couple	110,200	(9,700)	131,200	(11,800)	156,500	(19,500)
Divorced	66,500	(19,000)	208,700	(115,200)	67,500	(11,400)
Widowed	104,700	(56,200)	126,400	(33,100)	135,400	(32,200)
<i>Country of birth</i>						
Belgium	135,800	(39,700)	177,200	(42,600)	166,900	(39,000)
Germany	155,400	(51,400)	159,700	(32,600)	179,100	(60,500)
France	74,900	(17,300)	308,000	(193,500)	210,500	(54,100)
Italy	52,200	(24,700)	120,900	(29,700)	169,200	(52,000)
Luxembourg	107,300	(12,400)	139,300	(11,600)	135,800	(15,800)
Portugal	19,800	(3,300)	37,400	(8,300)	29,800	(4,500)
Other countries	76,000	(18,500)	87,900	(16,400)	99,500	(23,200)
<i>Education level</i>						
Low (ISCED=0:2)	45,200	(15,600)	63,700	(9,200)	48,200	(7,100)
Middle (ISCED=3,4)	86,100	(9,800)	103,500	(10,300)	97,800	(16,200)
High (ISCED=5,6 or 5:8)	155,000	(16,200)	244,100	(52,100)	205,900	(22,900)
<i>Employment status</i>						
Employed	74,600	(7,000)	131,100	(28,000)	105,300	(10,500)
Self-employed	138,200	(22,700)	213,900	(41,500)	171,800	(40,100)
Unemployed	20,200	(10,400)	51,200	(18,200)	24,000	(7,400)
Retired	142,900	(26,100)	164,100	(22,700)	192,100	(29,300)
Other	38,700	(12,600)	86,500	(18,200)	39,600	(9,400)
<i>Housing status</i>						
Owner-outright	151,400	(20,600)	183,500	(17,200)	168,400	(20,900)
Owner with mortgage	73,900	(8,500)	156,900	(52,700)	124,300	(16,600)
Renter or other	39,700	(4,700)	59,600	(8,000)	65,300	(14,000)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A14: Deposits, participation rate
by household characteristic**

(In %)		Wave 2010		Wave 2014		Wave 2018	
Variable		Part. rate	Std.Err.	Part. rate	Std.Err.	Part. rate	Std.Err.
All households		98.0	(0.5)	96.7	(0.6)	97.1	(0.5)
<i>Gender</i>							
	Male	97.4	(0.8)	97.0	(0.7)	97.0	(0.7)
	Female	98.9	(0.6)	96.3	(0.9)	97.2	(0.8)
<i>Age of reference person</i>							
	16-34	96.9	(1.6)	95.1	(1.7)	97.2	(1.2)
	35-44	97.2	(1.4)	97.2	(1.2)	97.5	(1.2)
	45-54	99.0	(0.9)	98.2	(0.9)	97.5	(1.0)
	55-64	96.3	(1.8)	95.6	(1.6)	96.7	(1.3)
	65+	100.0	-	96.9	(1.3)	96.6	(1.3)
<i>Civil status</i>							
	Single	97.1	(1.2)	95.2	(1.3)	95.7	(1.3)
	Couple	98.8	(0.6)	98.0	(0.6)	98.2	(0.6)
	Divorced	94.8	(2.5)	96.9	(1.6)	95.7	(1.7)
	Widowed	100.0	-	93.8	(2.7)	97.2	(2.0)
<i>Country of birth</i>							
	Belgium	97.0	(3.5)	100.0	-	96.8	(2.7)
	Germany	100.0	-	100.0	-	100.0	-
	France	98.4	(1.8)	99.5	-	92.9	(2.9)
	Italy	99.5	-	94.4	(5.2)	96.7	(3.3)
	Luxembourg	98.9	(0.5)	97.9	(0.6)	98.8	(0.5)
	Portugal	94.2	(2.6)	90.3	(2.9)	95.3	(1.7)
	Other countries	97.0	(1.9)	94.3	(2.2)	95.6	(1.7)
<i>Education level</i>							
	Low (ISCED=0:2)	96.9	(1.2)	92.6	(1.6)	95.4	(1.3)
	Middle (ISCED=3,4)	97.9	(0.9)	98.5	(0.5)	97.4	(0.9)
	High (ISCED=5,6 or 5:8)	99.6	(0.4)	98.3	(0.8)	98.1	(0.7)
<i>Employment status</i>							
	Employed	97.0	(0.9)	97.4	(0.7)	97.2	(0.7)
	Self-employed	98.9	(1.1)	98.5	(1.5)	98.8	-
	Unemployed	95.5	(4.5)	94.9	(3.8)	100.0	-
	Retired	100.0	-	95.7	(1.3)	96.3	(1.2)
	Other	98.5	(1.0)	95.2	(2.2)	97.0	(1.5)
<i>Housing status</i>							
	Owner-outright	99.5	(0.5)	97.1	(0.9)	96.8	(0.9)
	Owner with mortgage	98.3	(0.9)	98.9	(0.6)	99.2	(0.4)
	Renter or other	96.0	(1.3)	94.2	(1.4)	95.7	(1.2)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A15: Deposits, conditional median
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.
All households	14,300	(1,400)	15,400	(1,000)	20,100	(1,700)
<i>Gender</i>						
Male	17,200	(1,700)	16,700	(1,400)	25,300	(2,800)
Female	10,400	(1,600)	14,100	(1,400)	13,700	(2,400)
<i>Age of reference person</i>						
16-34	10,800	(3,100)	11,200	(2,000)	9,900	(2,600)
35-44	12,100	(1,900)	11,400	(2,100)	17,000	(2,600)
45-54	13,100	(3,000)	13,100	(2,000)	16,200	(3,900)
55-64	19,200	(4,200)	20,000	(4,300)	19,600	(5,700)
65+	20,200	(3,900)	30,100	(6,300)	44,400	(7,900)
<i>Civil status</i>						
Single	11,500	(2,200)	10,400	(2,100)	15,800	(3,300)
Couple	17,700	(2,100)	18,200	(2,000)	24,100	(2,500)
Divorced	9,600	(2,500)	10,400	(1,900)	8,700	(2,700)
Widowed	16,700	(8,200)	20,400	(6,100)	36,800	(9,200)
<i>Country of birth</i>						
Belgium	16,100	(10,100)	38,200	(10,100)	36,800	(9,700)
Germany	9,200	(8,400)	21,300	(16,100)	12,500	(12,000)
France	16,500	(3,800)	17,800	(5,500)	21,900	(4,500)
Italy	7,400	(4,100)	10,300	(7,100)	38,900	(19,700)
Luxembourg	19,300	(2,300)	18,700	(2,300)	32,600	(3,300)
Portugal	4,500	(1,200)	6,200	(1,300)	5,300	(1,200)
Other countries	10,100	(3,000)	7,900	(2,000)	7,900	(2,200)
<i>Education level</i>						
Low (ISCED=0:2)	6,200	(1,400)	7,600	(1,200)	8,100	(2,200)
Middle (ISCED=3,4)	14,700	(2,400)	14,300	(1,600)	15,000	(2,300)
High (ISCED=5,6 or 5:8)	30,200	(4,400)	32,600	(4,500)	36,800	(3,800)
<i>Employment status</i>						
Employed	13,400	(1,600)	14,900	(1,300)	16,000	(2,100)
Self-employed	19,200	(4,500)	26,800	(11,700)	32,400	(12,800)
Unemployed	4,000	(3,100)	1,700	(1,000)	5,000	(1,800)
Retired	21,400	(3,900)	26,800	(3,600)	42,700	(6,500)
Other	7,100	(2,600)	8,700	(2,500)	5,000	(3,200)
<i>Housing status</i>						
Owner-outright	24,300	(3,300)	32,300	(5,800)	39,300	(3,800)
Owner with mortgage	13,300	(1,900)	15,500	(1,400)	20,900	(2,200)
Renter or other	4,900	(1,200)	5,300	(1,100)	5,900	(800)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A16: Deposits, conditional mean
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.
All households	39,500	(2,800)	63,400	(3,800)	61,200	(3,200)
<i>Gender</i>						
Male	46,100	(3,900)	67,800	(4,800)	71,300	(4,600)
Female	29,800	(4,000)	57,700	(6,900)	47,300	(4,400)
<i>Age of reference person</i>						
16-34	22,700	(3,200)	36,800	(8,900)	30,800	(3,700)
35-44	32,300	(3,700)	52,300	(10,000)	45,300	(5,900)
45-54	36,300	(5,200)	55,000	(6,200)	56,000	(5,400)
55-64	54,300	(8,100)	77,200	(8,700)	86,600	(11,500)
65+	54,300	(9,400)	95,700	(10,900)	85,800	(7,800)
<i>Civil status</i>						
Single	26,200	(3,700)	61,600	(10,400)	44,200	(4,800)
Couple	48,100	(4,300)	67,300	(4,900)	70,900	(4,700)
Divorced	21,700	(4,300)	48,900	(7,500)	48,800	(9,600)
Widowed	49,700	(12,400)	69,500	(16,000)	76,100	(11,000)
<i>Country of birth</i>						
Belgium	57,200	(14,900)	75,400	(20,700)	99,000	(25,800)
Germany	35,800	(11,700)	90,200	(29,600)	78,700	(37,800)
France	32,800	(10,000)	56,000	(8,900)	51,400	(8,600)
Italy	19,700	(9,400)	43,600	(12,400)	83,500	(25,000)
Luxembourg	48,100	(4,400)	77,400	(5,800)	73,900	(4,400)
Portugal	10,200	(1,600)	21,600	(6,500)	24,000	(4,200)
Other countries	35,300	(6,100)	36,100	(6,200)	41,700	(6,600)
<i>Education level</i>						
Low (ISCED=0:2)	17,600	(3,200)	36,700	(5,500)	40,100	(6,700)
Middle (ISCED=3,4)	39,300	(4,600)	53,600	(5,300)	54,900	(5,200)
High (ISCED=5,6 or 5:8)	68,500	(7,600)	100,200	(9,800)	82,500	(6,000)
<i>Employment status</i>						
Employed	34,200	(2,800)	55,200	(5,400)	50,200	(3,400)
Self-employed	51,700	(9,400)	87,800	(15,700)	71,900	(15,500)
Unemployed	9,000	(3,400)	34,000	(17,700)	16,900	(5,700)
Retired	60,000	(8,600)	86,800	(9,400)	95,600	(8,500)
Other	20,300	(4,000)	47,300	(11,700)	31,700	(7,700)
<i>Housing status</i>						
Owner-outright	61,200	(6,700)	103,000	(8,700)	88,100	(6,200)
Owner with mortgage	34,100	(3,900)	51,600	(6,000)	53,600	(5,400)
Renter or other	21,400	(2,900)	26,100	(3,100)	31,000	(4,000)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A17: Risky assets, participation rate
by household characteristic**

(In %)		Wave 2010		Wave 2014		Wave 2018	
Variable		Part. rate	Std.Err.	Part. rate	Std.Err.	Part. rate	Std.Err.
All households		24.3	(1.5)	19.2	(1.1)	15.8	(1.0)
<i>Gender</i>							
	Male	29.5	(2.1)	23.5	(1.6)	19.8	(1.4)
	Female	16.8	(2.1)	13.6	(1.5)	10.3	(1.4)
<i>Age of reference person</i>							
	16-34	17.0	(3.1)	10.6	(2.1)	10.8	(2.3)
	35-44	24.9	(3.2)	17.7	(2.3)	15.8	(2.2)
	45-54	29.5	(3.3)	21.6	(2.5)	14.9	(1.8)
	55-64	26.7	(3.7)	23.1	(2.6)	14.9	(2.2)
	65+	23.0	(3.9)	22.9	(2.9)	21.5	(2.5)
<i>Civil status</i>							
	Single	19.8	(2.9)	17.1	(2.2)	13.7	(2.0)
	Couple	30.0	(2.2)	22.3	(1.6)	19.0	(1.4)
	Divorced	17.2	(3.8)	15.2	(2.8)	10.1	(2.0)
	Widowed	14.3	(5.1)	14.7	(3.7)	12.9	(3.5)
<i>Country of birth</i>							
	Belgium	40.6	(8.8)	42.9	(7.5)	15.5	(4.3)
	Germany	43.9	(10.7)	39.2	(7.9)	26.4	(7.3)
	France	27.3	(6.3)	22.7	(4.5)	19.9	(3.8)
	Italy	11.0	(6.5)	21.5	(6.5)	23.9	(7.4)
	Luxembourg	27.6	(2.2)	20.8	(1.5)	18.4	(1.5)
	Portugal	4.4	(2.3)	0.5	(0.3)	1.2	(0.9)
	Other countries	24.3	(4.5)	15.1	(2.9)	15.1	(2.4)
<i>Education level</i>							
	Low (ISCED=0:2)	8.1	(1.9)	6.4	(1.3)	6.8	(1.4)
	Middle (ISCED=3,4)	23.5	(2.6)	18.3	(1.8)	10.7	(1.4)
	High (ISCED=5,6 or 5:8)	47.6	(3.3)	32.6	(2.4)	27.6	(2.0)
<i>Employment status</i>							
	Employed	25.0	(2.0)	17.6	(1.4)	14.6	(1.2)
	Self-employed	42.7	(5.6)	29.9	(5.1)	21.4	(6.4)
	Unemployed	12.7	(8.3)	9.8	(4.3)	3.2	(2.9)
	Retired	26.2	(3.5)	22.4	(2.4)	21.4	(2.3)
	Other	9.8	(3.8)	18.2	(3.7)	5.1	(2.4)
<i>Housing status</i>							
	Owner-outright	31.7	(2.9)	26.3	(2.0)	19.9	(1.8)
	Owner with mortgage	27.9	(2.8)	19.4	(1.9)	15.9	(1.7)
	Renter or other	13.1	(2.1)	10.6	(1.7)	10.1	(1.5)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A18: Risky assets, conditional median
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. median	Std.Err. Cond. median	Cond. median	Std.Err. Cond. median	Cond. median	Std.Err. Cond. median
All households	22,600	(4,300)	34,700	(7,400)	50,000	(8,900)
<i>Gender</i>						
Male	25,600	(7,500)	33,900	(8,100)	55,800	(11,100)
Female	16,900	(6,700)	39,200	(18,400)	42,900	(17,300)
<i>Age of reference person</i>						
16-34	4,900	(3,000)	8,700	(4,900)	20,800	(12,400)
35-44	14,800	(3,100)	25,000	(8,900)	23,000	(12,800)
45-54	27,400	(9,400)	33,600	(15,100)	34,800	(11,900)
55-64	32,300	(8,900)	56,900	(23,500)	62,600	(41,200)
65+	123,200	(87,200)	92,000	(31,700)	112,000	(41,100)
<i>Civil status</i>						
Single	15,300	(4,700)	29,700	(15,300)	41,800	(13,300)
Couple	22,700	(6,400)	32,400	(7,600)	63,000	(16,500)
Divorced	39,800	(25,200)	24,400	(27,600)	27,000	(16,600)
Widowed	63,200	(160,000)	183,300	(79,000)	82,000	(163,400)
<i>Country of birth</i>						
Belgium	27,700	(43,300)	33,600	(26,500)	82,800	(111,500)
Germany	39,600	(66,900)	36,700	(42,200)	66,000	(118,100)
France	21,600	(36,700)	50,900	(46,200)	43,600	(19,200)
Italy	5,000	(22,500)	80,100	(78,500)	123,800	(181,100)
Luxembourg	29,200	(8,000)	33,000	(10,100)	57,800	(12,500)
Portugal	5,000	(12,900)	14,300	(11,800)	12,000	(119,100)
Other countries	16,000	(4,900)	32,300	(23,000)	21,400	(19,900)
<i>Education level</i>						
Low (ISCED=0:2)	19,500	(31,400)	33,600	(31,100)	36,400	(16,100)
Middle (ISCED=3,4)	31,100	(9,100)	36,800	(13,200)	61,600	(26,200)
High (ISCED=5,6 or 5:8)	20,000	(4,700)	36,100	(11,300)	52,000	(13,200)
<i>Employment status</i>						
Employed	16,500	(2,800)	25,000	(4,500)	36,300	(8,200)
Self-employed	26,300	(8,800)	25,300	(27,200)	61,200	(133,600)
Unemployed	9,300	(71,700)	81,100	(72,600)	8,000	(10,300)
Retired	74,000	(34,300)	80,200	(27,000)	102,400	(31,900)
Other	23,800	(50,400)	53,100	(33,200)	26,200	(70,400)
<i>Housing status</i>						
Owner-outright	59,800	(14,500)	63,900	(21,200)	89,000	(19,300)
Owner with mortgage	19,200	(3,500)	19,200	(5,300)	40,000	(14,300)
Renter or other	13,100	(3,000)	23,000	(12,200)	20,200	(6,500)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A19: Risky assets, conditional mean
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.
All households	100,700	(15,300)	146,500	(18,600)	210,400	(34,200)
<i>Gender</i>						
Male	107,300	(16,700)	160,100	(25,800)	228,000	(42,400)
Female	83,500	(35,700)	115,900	(22,600)	163,900	(60,100)
<i>Age of reference person</i>						
16-34	15,800	(5,500)	32,200	(21,600)	39,900	(9,600)
35-44	42,700	(11,000)	81,300	(16,900)	126,100	(55,000)
45-54	89,100	(25,200)	178,200	(59,100)	187,600	(62,000)
55-64	86,600	(23,100)	199,800	(45,700)	223,700	(41,400)
65+	254,000	(59,300)	171,000	(31,500)	347,700	(95,200)
<i>Civil status</i>						
Single	37,200	(14,900)	137,700	(40,400)	138,400	(53,700)
Couple	109,100	(17,400)	120,700	(15,800)	242,100	(54,200)
Divorced	136,700	(67,400)	208,800	(117,700)	78,500	(24,400)
Widowed	172,900	(124,300)	287,100	(92,000)	343,100	(172,900)
<i>Country of birth</i>						
Belgium	123,200	(62,000)	149,700	(56,500)	262,800	(140,600)
Germany	175,600	(71,800)	86,700	(29,100)	241,100	(99,600)
France	100,400	(33,000)	273,300	(141,800)	292,100	(128,500)
Italy	17,400	(19,100)	143,200	(44,100)	256,800	(171,600)
Luxembourg	112,400	(22,400)	125,900	(18,900)	200,300	(49,300)
Portugal	12,100	(9,400)	20,600	(8,900)	85,500	(105,200)
Other countries	29,400	(8,200)	196,000	(74,400)	168,100	(53,900)
<i>Education level</i>						
Low (ISCED=0:2)	126,300	(56,800)	166,700	(58,700)	57,000	(23,700)
Middle (ISCED=3,4)	88,400	(20,300)	129,000	(26,300)	151,600	(40,200)
High (ISCED=5,6 or 5:8)	103,600	(22,000)	155,300	(30,200)	261,800	(53,400)
<i>Employment status</i>						
Employed	57,700	(13,100)	120,600	(26,600)	155,400	(32,100)
Self-employed	66,400	(14,300)	167,200	(72,700)	228,800	(125,100)
Unemployed	63,900	(53,700)	93,800	(47,300)	11,600	(9,500)
Retired	216,300	(44,200)	189,700	(36,900)	302,300	(79,100)
Other	66,900	(56,300)	141,800	(58,700)	34,400	(68,400)
<i>Housing status</i>						
Owner-outright	172,700	(32,000)	168,100	(24,400)	257,800	(59,400)
Owner with mortgage	44,200	(7,700)	140,400	(45,400)	176,800	(47,600)
Renter or other	38,400	(9,700)	92,900	(30,000)	128,900	(64,500)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A20: Total household debt, participation rate
by household characteristic**

(In %)		Wave 2010		Wave 2014		Wave 2018	
Variable		Part. rate	Std.Err.	Part. rate	Std.Err.	Part. rate	Std.Err.
All households		58.3	(1.6)	54.6	(1.4)	53.2	(1.4)
<i>Gender</i>							
	Male	59.6	(2.3)	55.6	(1.9)	52.4	(1.8)
	Female	56.6	(2.6)	53.1	(2.2)	54.3	(2.2)
<i>Age of reference person</i>							
	16-34	70.3	(4.0)	65.8	(3.6)	68.6	(3.5)
	35-44	77.8	(3.3)	67.1	(3.2)	66.2	(3.4)
	45-54	70.1	(3.6)	68.5	(2.9)	67.7	(2.8)
	55-64	54.9	(4.4)	55.6	(3.4)	44.4	(3.4)
	65+	16.2	(3.3)	17.0	(2.5)	21.7	(2.8)
<i>Civil status</i>							
	Single	60.2	(3.7)	51.7	(3.2)	49.9	(2.9)
	Couple	63.8	(2.2)	61.3	(1.8)	60.6	(1.8)
	Divorced	64.3	(5.1)	59.5	(4.0)	54.6	(3.9)
	Widowed	12.7	(4.2)	20.5	(4.3)	18.9	(3.9)
<i>Country of birth</i>							
	Belgium	66.3	(8.7)	57.1	(8.3)	56.1	(6.6)
	Germany	51.4	(11.3)	53.2	(8.3)	40.9	(8.6)
	France	53.6	(7.1)	63.7	(5.5)	50.9	(5.6)
	Italy	59.9	(10.6)	55.4	(8.5)	44.9	(8.7)
	Luxembourg	56.2	(2.2)	53.4	(1.8)	53.2	(1.9)
	Portugal	64.6	(5.2)	54.6	(4.3)	58.5	(4.2)
	Other countries	62.9	(5.2)	53.7	(4.5)	52.4	(3.7)
<i>Education level</i>							
	Low (ISCED=0:2)	52.0	(3.2)	40.8	(2.7)	45.6	(2.8)
	Middle (ISCED=3,4)	56.8	(2.8)	57.3	(2.3)	54.4	(2.4)
	High (ISCED=5,6 or 5:8)	69.3	(3.3)	64.3	(2.6)	57.4	(2.4)
<i>Employment status</i>							
	Employed	73.1	(2.2)	68.0	(2.0)	65.2	(1.9)
	Self-employed	71.5	(5.3)	64.2	(5.2)	76.3	(6.4)
	Unemployed	44.7	(11.6)	49.8	(8.2)	41.4	(9.7)
	Retired	26.2	(3.5)	29.7	(2.7)	27.4	(2.5)
	Other	50.2	(5.9)	41.4	(5.0)	44.0	(5.7)
<i>Housing status</i>							
	Owner-outright	29.6	(2.8)	29.2	(2.1)	33.0	(2.1)
	Owner with mortgage	100.0	-	100.0	-	100.0	-
	Renter or other	46.8	(3.3)	43.9	(2.7)	40.1	(2.7)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A21: Total household debt, conditional median
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. median	Std.Err. cond. median	Std.Err. cond. median	Std.Err. cond. median	Std.Err. cond. median	Std.Err. cond. median
All households	73,400	(8,800)	89,800	(9,400)	91,700	(13,900)
<i>Gender</i>						
Male	66,500	(13,500)	90,000	(12,900)	92,500	(19,800)
Female	79,600	(13,700)	88,100	(16,800)	92,300	(19,500)
<i>Age of reference person</i>						
16-34	134,600	(32,200)	150,000	(31,900)	109,300	(54,800)
35-44	120,800	(17,500)	180,000	(31,600)	204,600	(25,700)
45-54	50,800	(14,200)	66,800	(19,400)	85,400	(15,400)
55-64	29,000	(7,200)	28,000	(6,000)	29,400	(12,100)
65+	36,400	(12,100)	23,600	(8,600)	19,000	(4,600)
<i>Civil status</i>						
Single	51,700	(21,100)	103,100	(26,900)	78,100	(29,300)
Couple	86,400	(8,400)	101,600	(14,600)	112,400	(17,700)
Divorced	59,000	(15,700)	50,700	(21,700)	57,400	(32,600)
Widowed	17,200	(13,900)	19,100	(6,000)	23,500	(23,800)
<i>Country of birth</i>						
Belgium	71,800	(44,600)	94,800	(68,000)	122,700	(32,400)
Germany	93,300	(53,500)	213,000	(60,400)	290,000	(68,900)
France	30,000	(24,700)	123,200	(31,300)	58,300	(65,700)
Italy	28,900	(50,200)	87,200	(35,500)	40,700	(84,500)
Luxembourg	90,000	(10,800)	97,500	(16,400)	100,000	(18,400)
Portugal	32,000	(25,100)	88,900	(28,200)	80,800	(32,000)
Other countries	73,000	(30,800)	42,300	(14,700)	37,500	(33,900)
<i>Education level</i>						
Low (ISCED=0:2)	42,200	(9,900)	45,900	(10,400)	27,600	(15,400)
Middle (ISCED=3,4)	71,500	(12,400)	53,200	(13,800)	54,200	(19,700)
High (ISCED=5,6 or 5:8)	121,600	(20,200)	162,600	(23,000)	170,200	(30,300)
<i>Employment status</i>						
Employed	95,000	(11,000)	130,000	(12,100)	135,400	(15,100)
Self-employed	130,500	(60,500)	212,600	(67,600)	139,200	(60,700)
Unemployed	16,700	(33,800)	19,000	(20,500)	17,600	(54,500)
Retired	29,800	(7,300)	20,700	(4,600)	20,100	(3,500)
Other	35,000	(13,400)	22,200	(11,900)	32,000	(26,400)
<i>Housing status</i>						
Owner-outright	21,600	(4,200)	19,200	(3,900)	20,000	(2,400)
Owner with mortgage	144,600	(16,200)	220,000	(13,700)	246,000	(19,500)
Renter or other	10,000	(2,300)	16,700	(3,000)	9,700	(1,600)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A22: Total household debt, conditional mean
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.
All households	140,200	(8,400)	178,400	(8,500)	196,900	(10,000)
<i>Gender</i>						
Male	136,000	(11,100)	184,800	(12,100)	197,900	(13,000)
Female	146,700	(13,700)	169,600	(11,300)	195,700	(15,100)
<i>Age of reference person</i>						
16-34	176,200	(17,800)	214,700	(22,200)	221,200	(20,900)
35-44	169,900	(13,800)	240,100	(17,600)	277,800	(21,800)
45-54	112,300	(13,300)	160,500	(14,500)	184,800	(20,500)
55-64	104,200	(34,800)	105,100	(17,100)	108,000	(13,100)
65+	65,000	(19,500)	75,600	(19,900)	89,400	(26,700)
<i>Civil status</i>						
Single	134,800	(19,300)	173,800	(17,000)	169,700	(15,300)
Couple	154,200	(10,900)	198,600	(12,000)	224,500	(15,200)
Divorced	107,800	(15,900)	146,500	(18,900)	150,000	(19,900)
Widowed	42,700	(17,400)	29,900	(7,200)	132,200	(36,700)
<i>Country of birth</i>						
Belgium	136,100	(31,700)	204,400	(44,900)	183,600	(40,500)
Germany	199,200	(69,900)	244,500	(54,900)	318,900	(78,900)
France	88,500	(18,300)	181,100	(28,400)	242,400	(48,800)
Italy	108,900	(32,400)	128,900	(31,500)	179,500	(47,500)
Luxembourg	154,300	(13,200)	195,100	(12,300)	212,500	(15,100)
Portugal	98,100	(16,500)	143,400	(15,300)	141,500	(17,900)
Other countries	152,000	(23,400)	125,400	(18,500)	173,100	(22,500)
<i>Education level</i>						
Low (ISCED=0:2)	91,900	(9,800)	118,600	(12,800)	106,000	(11,600)
Middle (ISCED=3,4)	134,900	(15,900)	155,100	(13,200)	174,300	(15,300)
High (ISCED=5,6 or 5:8)	195,800	(16,900)	241,100	(16,600)	271,200	(19,100)
<i>Employment status</i>						
Employed	147,000	(8,400)	193,800	(10,100)	224,600	(12,600)
Self-employed	299,900	(55,600)	364,800	(58,300)	220,700	(35,100)
Unemployed	53,500	(26,000)	57,800	(22,100)	122,300	(45,300)
Retired	78,400	(31,900)	89,800	(20,100)	87,600	(17,300)
Other	58,800	(10,200)	124,100	(29,700)	124,000	(26,400)
<i>Housing status</i>						
Owner-outright	71,700	(21,900)	77,600	(10,900)	106,300	(20,600)
Owner with mortgage	197,000	(11,200)	268,000	(12,400)	303,100	(12,500)
Renter or other	64,400	(11,800)	74,900	(12,800)	69,500	(14,500)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A23: Total mortgage debt, participation rate
by household characteristic**

(In %)		Wave 2010		Wave 2014		Wave 2018	
Variable		Part. rate	Std.Err.	Part. rate	Std.Err.	Part. rate	Std.Err.
All households		38.8	(1.6)	35.2	(1.3)	31.2	(1.2)
<i>Gender</i>							
	Male	38.7	(2.2)	35.8	(1.8)	31.3	(1.5)
	Female	38.8	(2.5)	34.4	(2.0)	31.2	(1.9)
<i>Age of reference person</i>							
	16-34	44.9	(4.3)	39.7	(3.6)	37.3	(3.6)
	35-44	58.7	(3.7)	51.9	(3.4)	47.9	(3.5)
	45-54	47.7	(3.9)	46.9	(3.0)	44.2	(2.8)
	55-64	31.0	(4.1)	31.5	(3.0)	22.2	(2.5)
	65+	7.6	(2.3)	5.6	(1.4)	5.8	(1.4)
<i>Civil status</i>							
	Single	35.6	(3.7)	32.4	(2.9)	27.0	(2.6)
	Couple	46.1	(2.2)	42.6	(1.9)	38.8	(1.8)
	Divorced	38.3	(5.1)	34.0	(3.8)	28.8	(3.2)
	Widowed	5.5	(2.0)	6.6	(2.4)	5.3	(1.8)
<i>Country of birth</i>							
	Belgium	42.3	(8.8)	36.9	(7.1)	38.3	(6.3)
	Germany	34.4	(10.1)	51.6	(8.2)	38.7	(8.4)
	France	26.7	(5.8)	42.8	(5.6)	26.8	(4.3)
	Italy	36.6	(10.2)	29.5	(7.2)	19.4	(5.6)
	Luxembourg	39.4	(2.2)	33.9	(1.6)	33.1	(1.7)
	Portugal	36.7	(5.1)	36.2	(4.0)	33.1	(3.7)
	Other countries	44.9	(5.2)	32.1	(3.8)	25.8	(3.0)
<i>Education level</i>							
	Low (ISCED=0:2)	29.7	(2.8)	24.8	(2.3)	20.1	(2.2)
	Middle (ISCED=3,4)	37.9	(2.8)	33.6	(2.2)	30.5	(2.2)
	High (ISCED=5,6 or 5:8)	52.4	(3.4)	47.3	(2.6)	39.9	(2.3)
<i>Employment status</i>							
	Employed	51.7	(2.5)	48.1	(1.9)	42.4	(1.7)
	Self-employed	52.5	(5.7)	52.2	(5.4)	51.5	(7.3)
	Unemployed	24.6	(9.9)	22.3	(7.2)	13.0	(5.4)
	Retired	13.1	(2.5)	12.5	(1.8)	7.9	(1.4)
	Other	25.7	(5.0)	18.9	(3.8)	24.2	(4.8)
<i>Housing status</i>							
	Owner-outright	6.6	(1.3)	6.4	(1.0)	5.6	(0.9)
	Owner with mortgage	100.0	-	100.0	-	100.0	-
	Renter or other	11.3	(2.0)	11.3	(1.7)	6.6	(1.2)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A24 Total mortgage debt, conditional median
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.
All households	127,300	(10,900)	200,000	(16,600)	232,800	(15,700)
<i>Gender</i>						
Male	124,500	(14,800)	180,100	(20,500)	235,600	(19,000)
Female	133,000	(19,600)	216,400	(22,000)	230,900	(24,900)
<i>Age of reference person</i>						
16-34	230,000	(19,200)	280,000	(16,800)	350,000	(25,800)
35-44	168,800	(19,000)	241,900	(14,300)	288,800	(21,900)
45-54	90,000	(12,700)	150,000	(16,400)	161,200	(21,200)
55-64	48,000	(10,000)	84,000	(16,300)	125,000	(14,500)
65+	60,000	(37,700)	64,000	(61,400)	120,900	(66,700)
<i>Civil status</i>						
Single	137,800	(23,200)	210,300	(21,400)	249,300	(24,900)
Couple	127,100	(16,300)	200,000	(22,600)	231,800	(23,600)
Divorced	117,400	(29,600)	163,400	(47,100)	185,000	(31,800)
Widowed	85,400	(48,200)	42,900	(23,500)	350,000	(99,200)
<i>Country of birth</i>						
Belgium	92,300	(84,200)	222,300	(64,400)	143,500	(46,100)
Germany	118,800	(103,000)	191,100	(59,300)	288,000	(62,100)
France	135,000	(29,600)	136,000	(32,700)	285,300	(49,100)
Italy	130,000	(57,900)	192,700	(73,100)	330,000	(78,200)
Luxembourg	133,500	(15,600)	230,200	(18,000)	233,500	(24,500)
Portugal	112,100	(29,800)	199,200	(36,900)	190,600	(18,000)
Other countries	150,000	(42,600)	126,000	(21,500)	264,500	(49,200)
<i>Education level</i>						
Low (ISCED=0:2)	104,400	(16,700)	110,500	(24,300)	164,400	(17,200)
Middle (ISCED=3,4)	118,600	(19,000)	165,000	(31,000)	209,900	(34,700)
High (ISCED=5,6 or 5:8)	176,100	(22,600)	238,400	(16,100)	288,600	(21,500)
<i>Employment status</i>						
Employed	150,000	(13,800)	214,000	(15,000)	242,400	(16,800)
Self-employed	250,000	(44,100)	312,000	(73,800)	300,500	(94,000)
Unemployed	61,000	(63,100)	62,800	(55,800)	308,000	(93,000)
Retired	42,500	(13,600)	72,000	(28,400)	138,000	(39,800)
Other	68,000	(15,800)	146,200	(78,800)	146,400	(64,000)
<i>Housing status</i>						
Owner-outright	65,500	(33,900)	149,400	(50,300)	240,000	(56,200)
Owner with mortgage	127,300	(13,400)	210,000	(15,700)	232,700	(17,800)
Renter or other	142,800	(39,500)	105,800	(35,100)	230,000	(93,500)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A25: Total mortgage debt, conditional mean
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.
All households	190,200	(10,800)	251,900	(11,300)	306,500	(14,100)
<i>Gender</i>						
Male	189,800	(16,200)	269,200	(18,200)	283,600	(13,500)
Female	182,300	(14,200)	249,900	(16,200)	308,600	(22,300)
<i>Age of reference person</i>						
16-34	260,400	(19,600)	347,000	(33,500)	371,700	(26,600)
35-44	206,400	(16,000)	310,000	(22,200)	365,000	(26,400)
45-54	138,800	(17,900)	213,700	(19,600)	213,500	(16,000)
55-64	122,100	(54,500)	123,600	(21,100)	177,300	(24,200)
65+	105,100	(40,100)	191,600	(56,500)	192,900	(85,100)
<i>Civil status</i>						
Single	197,100	(31,700)	249,800	(22,500)	277,400	(19,400)
Couple	189,200	(12,400)	274,500	(17,100)	309,100	(17,600)
Divorced	164,100	(21,700)	243,600	(32,300)	251,600	(32,300)
Widowed	106,700	(21,200)	72,100	(19,600)	370,700	(184,400)
<i>Country of birth</i>						
Belgium	188,100	(42,600)	342,100	(60,900)	237,100	(38,100)
Germany	212,900	(99,000)	194,500	(39,200)	268,400	(42,800)
France	204,800	(39,300)	290,500	(48,500)	449,500	(80,900)
Italy	167,900	(48,700)	226,900	(55,300)	374,600	(43,600)
Luxembourg	189,800	(15,400)	283,000	(18,900)	288,900	(17,500)
Portugal	154,700	(24,500)	211,100	(18,300)	237,100	(24,800)
Other countries	198,500	(32,200)	194,300	(24,200)	322,500	(38,100)
<i>Education level</i>						
Low (ISCED=0:2)	135,300	(14,100)	184,500	(20,800)	199,600	(18,500)
Middle (ISCED=3,4)	174,900	(19,900)	233,100	(19,000)	275,800	(22,300)
High (ISCED=5,6 or 5:8)	240,400	(20,800)	328,300	(21,900)	348,200	(19,300)
<i>Employment status</i>						
Employed	195,900	(10,600)	264,200	(13,400)	305,200	(14,200)
Self-employed	377,700	(107,800)	442,800	(75,400)	293,300	(41,900)
Unemployed	103,400	(43,800)	126,500	(74,700)	370,300	(75,100)
Retired	79,600	(23,300)	127,500	(31,000)	193,300	(46,100)
Other	90,500	(18,400)	254,200	(60,800)	223,900	(43,500)
<i>Housing status</i>						
Owner-outright	-	-	-	-	-	-
Owner with mortgage	186,600	(11,000)	260,900	(12,400)	294,700	(12,400)
Renter or other	-	-	-	-	-	-

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A26: HMR mortgage debt, participation rate
by household characteristic**

(In %)	Wave 2010		Wave 2014		Wave 2018	
Variable	Part. rate	Std.Err.	Part. rate	Std.Err.	Part. rate	Std.Err.
All households	32.8	(1.5)	29.1	(1.2)	26.8	(1.1)
<i>Gender</i>						
Male	31.9	(2.1)	29.3	(1.7)	25.7	(1.5)
Female	34.1	(2.5)	28.8	(1.9)	28.4	(1.9)
<i>Age of reference person</i>						
16-34	38.7	(4.1)	33.5	(3.5)	34.6	(3.4)
35-44	52.6	(3.7)	44.5	(3.3)	41.7	(3.4)
45-54	37.0	(3.7)	39.3	(2.9)	38.9	(2.8)
55-64	25.0	(3.9)	23.9	(2.8)	16.5	(2.3)
65+	7.1	(2.3)	3.7	(1.2)	3.5	(1.1)
<i>Civil status</i>						
Single	30.2	(3.5)	25.9	(2.8)	23.8	(2.5)
Couple	38.3	(2.2)	36.1	(1.8)	33.4	(1.7)
Divorced	36.0	(5.1)	26.2	(3.5)	24.2	(3.0)
Widowed	3.0	(1.2)	5.8	(2.3)	2.7	(1.3)
<i>Country of birth</i>						
Belgium	28.9	(8.3)	26.2	(5.9)	31.7	(6.0)
Germany	24.7	(9.3)	36.4	(7.6)	33.3	(7.9)
France	12.4	(3.9)	31.2	(5.0)	21.3	(4.0)
Italy	31.5	(10.0)	20.3	(6.0)	18.2	(5.4)
Luxembourg	35.7	(2.1)	29.2	(1.6)	28.7	(1.6)
Portugal	31.1	(4.9)	31.9	(3.9)	29.9	(3.6)
Other countries	35.6	(4.8)	26.0	(3.6)	21.3	(2.8)
<i>Education level</i>						
Low (ISCED=0:2)	24.9	(2.6)	20.2	(2.2)	17.9	(2.1)
Middle (ISCED=3,4)	33.3	(2.7)	29.3	(2.1)	27.2	(2.1)
High (ISCED=5,6 or 5:8)	42.8	(3.4)	37.3	(2.5)	32.9	(2.2)
<i>Employment status</i>						
Employed	44.9	(2.4)	40.6	(1.9)	37.1	(1.7)
Self-employed	31.0	(5.4)	42.9	(5.3)	42.6	(7.0)
Unemployed	19.5	(9.2)	14.5	(6.3)	12.5	(5.4)
Retired	11.3	(2.4)	9.7	(1.7)	4.8	(1.1)
Other	22.9	(4.9)	14.1	(3.3)	22.7	(4.7)
<i>Housing status</i>						
Owner-outright	0.0	-	0.0	-	0.0	-
Owner with mortgage	100.0	-	100.0	-	100.0	-
Renter or other	0.0	-	0.0	-	0.0	-

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A27: HMR mortgage debt, conditional median
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.
All households	121,500	(9,800)	190,000	(17,400)	205,700	(17,100)
<i>Gender</i>						
Male	114,300	(14,100)	165,000	(18,900)	201,800	(18,400)
Female	126,600	(18,000)	216,000	(25,000)	211,700	(25,500)
<i>Age of reference person</i>						
16-34	240,800	(18,300)	280,400	(15,400)	350,000	(27,100)
35-44	151,600	(21,900)	240,000	(14,300)	258,800	(22,200)
45-54	81,300	(14,300)	130,000	(17,000)	140,000	(14,900)
55-64	47,000	(7,800)	48,000	(16,100)	125,000	(16,700)
65+	60,000	(41,500)	72,900	(114,700)	49,500	(52,900)
<i>Civil status</i>						
Single	133,300	(24,900)	207,800	(21,400)	248,800	(25,700)
Couple	122,000	(13,900)	182,900	(25,200)	200,000	(18,300)
Divorced	110,900	(26,900)	166,800	(46,400)	180,000	(27,700)
Widowed	107,600	(27,700)	52,600	(23,200)	369,300	(132,700)
<i>Country of birth</i>						
Belgium	240,000	(81,200)	282,300	(60,900)	148,400	(48,800)
Germany	100,500	(65,400)	170,000	(54,900)	148,600	(68,200)
France	157,900	(47,500)	155,000	(39,800)	275,000	(49,000)
Italy	130,000	(73,600)	130,000	(79,900)	330,000	(49,000)
Luxembourg	125,200	(12,700)	214,200	(21,300)	200,000	(23,100)
Portugal	116,600	(34,700)	199,200	(33,300)	194,400	(17,100)
Other countries	110,000	(45,100)	126,800	(20,700)	242,500	(45,600)
<i>Education level</i>						
Low (ISCED=0:2)	103,400	(16,500)	126,000	(28,600)	160,000	(14,900)
Middle (ISCED=3,4)	105,500	(15,800)	147,300	(21,600)	191,600	(25,900)
High (ISCED=5,6 or 5:8)	172,200	(27,300)	240,000	(16,700)	264,700	(23,500)
<i>Employment status</i>						
Employed	147,700	(14,400)	200,600	(15,500)	220,000	(18,100)
Self-employed	160,000	(79,000)	243,400	(64,900)	212,000	(68,400)
Unemployed	112,000	(64,200)	85,000	(55,900)	295,000	(82,800)
Retired	40,500	(10,400)	48,000	(20,500)	101,200	(51,200)
Other	68,000	(18,300)	222,000	(77,700)	178,000	(66,300)
<i>Housing status</i>						
Owner-outright	-	-	-	-	-	-
Owner with mortgage	121,500	(9,800)	190,000	(17,400)	205,700	(17,100)
Renter or other	-	-	-	-	-	-

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A28: HMR mortgage debt, conditional mean
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.
All households	168,700	(8,100)	229,600	(10,200)	264,700	(10,100)
<i>Gender</i>						
Male	167,500	(11,200)	231,000	(14,500)	256,900	(11,500)
Female	170,400	(12,700)	227,700	(13,900)	274,400	(17,900)
<i>Age of reference person</i>						
16-34	252,800	(17,600)	317,500	(25,700)	359,500	(23,900)
35-44	190,000	(13,900)	268,000	(16,800)	310,200	(17,800)
45-54	122,300	(14,900)	183,600	(17,600)	191,300	(14,700)
55-64	70,900	(15,300)	105,800	(18,300)	160,600	(22,100)
65+	103,700	(40,200)	189,200	(56,800)	155,000	(66,900)
<i>Civil status</i>						
Single	160,100	(16,600)	235,200	(19,700)	258,500	(17,800)
Couple	176,200	(11,100)	233,100	(13,300)	275,000	(14,000)
Divorced	153,700	(20,200)	226,100	(31,900)	226,600	(24,000)
Widowed	106,700	(21,200)	64,900	(16,400)	249,500	(80,500)
<i>Country of birth</i>						
Belgium	187,900	(42,600)	281,600	(40,400)	219,200	(34,900)
Germany	154,100	(56,600)	190,500	(38,700)	203,700	(38,600)
France	194,600	(38,900)	249,800	(42,500)	338,600	(37,100)
Italy	167,100	(48,600)	212,300	(54,700)	341,300	(32,900)
Luxembourg	166,200	(10,100)	244,900	(15,200)	262,700	(15,000)
Portugal	150,800	(22,400)	199,400	(17,600)	227,200	(23,400)
Other countries	189,900	(31,000)	175,900	(22,000)	297,800	(33,500)
<i>Education level</i>						
Low (ISCED=0:2)	134,200	(14,100)	176,600	(20,200)	185,900	(17,400)
Middle (ISCED=3,4)	155,400	(13,400)	200,100	(14,800)	252,300	(19,000)
High (ISCED=5,6 or 5:8)	210,800	(17,000)	286,500	(17,900)	305,900	(14,600)
<i>Employment status</i>						
Employed	184,600	(9,500)	237,400	(11,200)	273,800	(11,300)
Self-employed	218,400	(40,200)	310,200	(50,800)	270,200	(40,000)
Unemployed	103,400	(43,800)	94,400	(48,800)	274,200	(72,100)
Retired	76,400	(22,900)	121,500	(29,500)	166,500	(36,500)
Other	87,900	(17,900)	238,900	(58,000)	214,600	(42,800)
<i>Housing status</i>						
Owner-outright	-	-	-	-	-	-
Owner with mortgage	168,700	(8,100)	229,600	(10,200)	264,700	(10,100)
Renter or other	-	-	-	-	-	-

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

Table A29: Other real estate property mortgage debt, participation rate by household characteristic

(In %)		Wave 2010		Wave 2014		Wave 2018	
Variable		Part. rate	Std.Err.	Part. rate	Std.Err.	Part. rate	Std.Err.
All households		8.4	(0.9)	9.4	(0.8)	7.2	(0.7)
<i>Gender</i>							
	Male	9.2	(1.4)	10.2	(1.1)	8.2	(1.0)
	Female	7.1	(1.3)	8.3	(1.2)	5.7	(0.9)
<i>Age of reference person</i>							
	16-34	8.7	(2.5)	9.0	(2.1)	4.2	(1.4)
	35-44	10.5	(2.1)	13.1	(2.2)	12.5	(2.2)
	45-54	13.1	(2.5)	13.2	(2.0)	9.9	(1.5)
	55-64	8.2	(2.2)	9.3	(1.8)	6.8	(1.3)
	65+	0.8	(0.4)	2.1	(0.8)	2.5	(0.9)
<i>Civil status</i>							
	Single	6.6	(1.8)	8.4	(1.6)	4.6	(1.1)
	Couple	11.2	(1.4)	11.1	(1.2)	9.4	(1.1)
	Divorced	4.6	(2.1)	10.5	(2.5)	6.8	(1.7)
	Widowed	2.5	(1.6)	1.1	(0.9)	3.0	(1.3)
<i>Country of birth</i>							
	Belgium	13.9	(6.5)	16.0	(5.7)	9.1	(3.2)
	Germany	12.2	(6.0)	17.9	(6.4)	13.9	(5.3)
	France	15.5	(4.9)	16.7	(4.3)	9.6	(2.3)
	Italy	5.2	(4.0)	11.6	(4.8)	5.2	(3.2)
	Luxembourg	6.9	(1.1)	8.1	(1.0)	6.9	(0.9)
	Portugal	6.8	(2.6)	6.4	(2.0)	6.8	(2.0)
	Other countries	11.2	(3.1)	8.5	(2.0)	5.8	(1.6)
<i>Education level</i>							
	Low (ISCED=0:2)	5.5	(1.5)	5.6	(1.3)	3.8	(1.0)
	Middle (ISCED=3,4)	6.2	(1.3)	7.3	(1.2)	5.4	(1.0)
	High (ISCED=5,6 or 5:8)	15.6	(2.3)	15.6	(1.8)	11.5	(1.4)
<i>Employment status</i>							
	Employed	10.0	(1.5)	11.8	(1.2)	8.9	(1.0)
	Self-employed	29.0	(5.0)	23.3	(4.7)	15.0	(4.8)
	Unemployed	5.1	(4.6)	9.0	(4.4)	5.2	(3.6)
	Retired	2.3	(0.9)	3.0	(0.9)	3.2	(0.9)
	Other	3.2	(2.0)	6.3	(2.2)	4.3	(2.3)
<i>Housing status</i>							
	Owner-outright	6.6	(1.3)	6.4	(1.0)	5.6	(0.9)
	Owner with mortgage	7.3	(1.5)	11.1	(1.6)	10.3	(1.6)
	Renter or other	11.3	(2.0)	11.3	(1.7)	6.6	(1.2)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

Table A30: Other real estate property mortgage debt, conditional median by household characteristic

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.
All households	116,400	(19,500)	150,000	(19,300)	234,600	(35,900)
<i>Gender</i>						
Male	111,000	(19,500)	150,000	(25,200)	250,000	(40,300)
Female	130,700	(51,300)	150,000	(30,500)	165,200	(59,200)
<i>Age of reference person</i>						
16-34	95,000	(43,800)	210,000	(72,400)	253,800	(130,100)
35-44	136,000	(34,300)	190,000	(35,100)	303,600	(86,900)
45-54	120,000	(37,600)	141,600	(27,000)	222,000	(39,200)
55-64	62,000	(82,200)	170,000	(56,900)	132,300	(39,400)
65+	34,500	(62,300)	40,000	(27,700)	256,000	(110,300)
<i>Civil status</i>						
Single	153,100	(72,500)	157,200	(59,400)	149,900	(115,100)
Couple	108,000	(21,400)	170,000	(20,800)	239,500	(38,400)
Divorced	127,800	(119,300)	135,700	(39,600)	165,700	(68,000)
Widowed	25,000	(7,600)	14,500	(50,200)	350,000	(136,900)
<i>Country of birth</i>						
Belgium	71,900	(67,700)	210,000	(100,300)	151,400	(147,100)
Germany	250,000	(271,600)	248,000	(244,200)	160,000	(210,800)
France	111,800	(44,600)	113,000	(34,900)	280,000	(61,500)
Italy	150,000	(65,900)	127,700	(93,100)	160,000	(36,300)
Luxembourg	120,100	(33,800)	203,700	(29,600)	256,800	(35,100)
Portugal	61,600	(37,200)	100,000	(41,600)	50,000	(31,200)
Other countries	200,000	(56,300)	98,800	(50,000)	335,000	(108,200)
<i>Education level</i>						
Low (ISCED=0:2)	85,000	(46,800)	50,900	(35,400)	144,000	(69,100)
Middle (ISCED=3,4)	140,800	(37,200)	208,200	(46,300)	313,600	(52,900)
High (ISCED=5,6 or 5:8)	111,000	(21,100)	160,000	(23,100)	222,000	(44,900)
<i>Employment status</i>						
Employed	105,200	(22,600)	152,700	(22,300)	242,000	(39,400)
Self-employed	250,000	(55,300)	210,000	(74,900)	262,600	(122,100)
Unemployed	15,000	-	46,200	(102,900)	140,000	(170,100)
Retired	146,200	(249,800)	156,200	(81,200)	250,000	(68,100)
Other	45,000	(28,800)	100,000	(73,600)	34,000	(47,600)
<i>Housing status</i>						
Owner-outright	65,500	(33,900)	149,400	(50,300)	240,000	(56,200)
Owner with mortgage	99,900	(30,500)	182,600	(22,600)	242,500	(45,600)
Renter or other	142,800	(39,500)	105,800	(35,100)	230,000	(93,500)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

Table A31: Other real estate property mortgage debt, conditional mean by household characteristic

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.
All households	220,200	(36,900)	233,900	(21,700)	345,000	(42,000)
<i>Gender</i>						
Male	208,200	(44,800)	258,500	(32,500)	351,900	(54,700)
Female	243,300	(71,600)	195,100	(24,400)	331,300	(67,500)
<i>Age of reference person</i>						
16-34	181,700	(70,500)	270,700	(47,500)	372,700	(113,300)
35-44	228,900	(48,900)	247,600	(45,800)	346,400	(58,500)
45-54	183,100	(37,500)	196,600	(28,100)	401,900	(111,200)
55-64	352,800	(201,500)	281,600	(67,500)	212,800	(40,200)
65+	88,300	(41,500)	67,300	(21,800)	380,900	(152,500)
<i>Civil status</i>						
Single	375,900	(140,700)	257,200	(58,200)	305,100	(80,100)
Couple	190,900	(36,500)	246,100	(26,500)	369,600	(59,700)
Divorced	164,100	(97,900)	164,800	(36,200)	255,700	(50,400)
Widowed	17,600	(6,000)	46,100	(42,900)	419,800	(117,600)
<i>Country of birth</i>						
Belgium	93,200	(49,700)	200,800	(64,600)	318,400	(185,900)
Germany	463,600	(242,700)	323,600	(126,300)	436,900	(247,000)
France	103,500	(21,500)	140,400	(31,200)	474,900	(141,000)
Italy	152,300	(64,800)	186,600	(50,500)	174,500	(31,000)
Luxembourg	286,400	(74,500)	283,900	(31,000)	388,600	(69,900)
Portugal	89,800	(29,300)	108,400	(21,700)	101,500	(32,800)
Other countries	204,200	(39,600)	210,000	(77,900)	320,800	(71,400)
<i>Education level</i>						
Low (ISCED=0:2)	142,000	(38,700)	112,200	(22,200)	186,200	(42,200)
Middle (ISCED=3,4)	275,400	(107,100)	290,200	(46,600)	329,300	(54,700)
High (ISCED=5,6 or 5:8)	225,700	(42,700)	243,000	(29,900)	389,900	(66,200)
<i>Employment status</i>						
Employed	148,100	(22,900)	215,200	(24,000)	375,400	(53,200)
Self-employed	462,400	(120,300)	411,600	(96,000)	282,100	(81,100)
Unemployed	15,000	-	113,400	(74,700)	253,000	(127,600)
Retired	358,200	(267,300)	277,800	(121,600)	327,900	(98,600)
Other	60,900	(25,000)	139,300	(47,500)	56,000	(40,000)
<i>Housing status</i>						
Owner-outright	200,200	(90,100)	192,700	(29,600)	429,300	(105,900)
Owner with mortgage	245,900	(90,900)	281,000	(36,800)	292,400	(46,000)
Renter or other	215,800	(35,900)	219,900	(41,600)	319,000	(60,700)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A32: Non-mortgage debt, participation rate
by household characteristic**

(In %)		Wave 2010		Wave 2014		Wave 2018	
Variable		Part. rate	Std.Err.	Part. rate	Std.Err.	Part. rate	Std.Err.
All households		32.8	(1.5)	29.1	(1.2)	26.8	(1.1)
<i>Gender</i>							
	Male	38.8	(2.4)	35.1	(1.8)	32.6	(1.8)
	Female	34.2	(2.8)	32.3	(2.0)	39.4	(2.2)
<i>Age of reference person</i>							
	16-34	41.7	(4.5)	42.6	(3.7)	46.6	(3.6)
	35-44	45.1	(3.8)	36.8	(3.1)	39.9	(3.3)
	45-54	45.5	(3.9)	40.7	(3.1)	44.0	(3.0)
	55-64	40.6	(4.2)	37.1	(3.3)	31.7	(3.4)
	65+	11.8	(3.0)	13.6	(2.4)	16.9	(2.5)
<i>Civil status</i>							
	Single	38.7	(3.8)	29.5	(2.9)	33.1	(2.7)
	Couple	40.3	(2.3)	37.8	(1.9)	39.4	(1.9)
	Divorced	40.1	(5.2)	39.5	(3.9)	39.1	(3.9)
	Widowed	8.4	(3.8)	18.0	(4.2)	14.2	(3.6)
<i>Country of birth</i>							
	Belgium	35.8	(8.7)	29.5	(7.0)	30.6	(6.2)
	Germany	27.4	(10.2)	28.6	(7.5)	20.7	(7.0)
	France	35.6	(6.8)	31.1	(5.2)	31.6	(5.3)
	Italy	43.6	(10.5)	38.7	(8.3)	33.6	(8.3)
	Luxembourg	35.1	(2.4)	34.6	(1.8)	35.3	(1.9)
	Portugal	45.7	(5.4)	35.4	(4.1)	41.7	(4.1)
	Other countries	37.4	(5.1)	32.3	(4.1)	36.5	(3.6)
<i>Education level</i>							
	Low (ISCED=0:2)	37.7	(3.3)	28.2	(2.4)	35.5	(2.7)
	Middle (ISCED=3,4)	36.2	(2.8)	38.8	(2.3)	39.0	(2.4)
	High (ISCED=5,6 or 5:8)	37.1	(3.4)	33.1	(2.5)	31.6	(2.2)
<i>Employment status</i>							
	Employed	43.5	(2.5)	40.2	(1.9)	42.2	(1.9)
	Self-employed	46.7	(5.8)	24.6	(4.7)	46.2	(7.1)
	Unemployed	27.1	(10.5)	32.4	(7.6)	34.0	(9.2)
	Retired	19.9	(3.3)	22.9	(2.6)	21.6	(2.3)
	Other	38.3	(5.8)	32.0	(4.8)	27.2	(5.1)
<i>Housing status</i>							
	Owner-outright	25.0	(2.7)	24.9	(2.0)	29.2	(2.1)
	Owner with mortgage	47.2	(3.2)	42.6	(2.6)	44.8	(2.6)
	Renter or other	39.2	(3.3)	36.8	(2.7)	35.8	(2.7)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A33: Non-mortgage debt, conditional median
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.
All households	10,000	(1,000)	10,100	(920)	10,000	(990)
<i>Gender</i>						
Male	10,500	(1,300)	10,100	(1,500)	11,900	(1,700)
Female	9,800	(1,600)	10,300	(1,300)	9,000	(930)
<i>Age of reference person</i>						
16-34	8,700	(1,900)	13,000	(2,500)	10,000	(1,500)
35-44	12,200	(1,400)	10,700	(2,400)	9,600	(1,800)
45-54	11,000	(1,900)	11,000	(1,600)	10,200	(1,900)
55-64	9,500	(2,200)	8,200	(1,700)	13,800	(3,400)
65+	9,900	(9,400)	7,700	(3,600)	8,100	(3,800)
<i>Civil status</i>						
Single	7,700	(1,100)	10,000	(1,800)	9,500	(1,200)
Couple	13,000	(1,000)	13,200	(1,900)	11,500	(1,600)
Divorced	9,500	(2,700)	7,000	(1,700)	7,800	(2,000)
Widowed	10,000	(10,900)	7,100	(4,800)	18,000	(8,600)
<i>Country of birth</i>						
Belgium	13,000	(5,800)	10,000	(5,100)	10,000	(2,800)
Germany	19,700	(11,900)	2,400	(3,400)	4,100	(2,400)
France	7,500	(5,600)	10,300	(5,200)	9,200	(2,100)
Italy	8,600	(4,300)	9,400	(4,100)	16,600	(8,200)
Luxembourg	12,200	(1,200)	12,900	(1,700)	14,400	(1,400)
Portugal	8,800	(1,700)	9,400	(2,400)	8,800	(1,700)
Other countries	9,000	(2,300)	9,100	(2,300)	7,100	(1,500)
<i>Education level</i>						
Low (ISCED=0:2)	9,000	(840)	10,000	(2,100)	9,000	(1,300)
Middle (ISCED=3,4)	12,000	(1,700)	10,000	(1,200)	10,700	(2,100)
High (ISCED=5,6 or 5:8)	12,400	(3,000)	12,900	(2,800)	10,800	(1,500)
<i>Employment status</i>						
Employed	11,700	(1,300)	12,200	(1,300)	11,400	(1,500)
Self-employed	13,700	(4,200)	3,700	(4,300)	9,200	(3,600)
Unemployed	8,300	(4,700)	3,700	(3,000)	7,200	(3,600)
Retired	9,500	(3,100)	7,400	(1,800)	9,900	(3,000)
Other	8,600	(1,700)	10,500	(4,400)	3,000	(2,800)
<i>Housing status</i>						
Owner-outright	16,800	(2,500)	11,300	(2,600)	15,100	(2,400)
Owner with mortgage	11,800	(1,300)	11,000	(1,900)	10,600	(1,800)
Renter or other	8,000	(950)	10,000	(1,400)	8,000	(1,100)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A34: Non-mortgage debt, conditional mean
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.
All households	21,800	(2,400)	25,600	(2,700)	25,500	(2,500)
<i>Gender</i>						
Male	21,300	(3,000)	25,700	(3,300)	27,000	(3,500)
Female	22,500	(4,400)	25,500	(4,400)	23,700	(3,800)
<i>Age of reference person</i>						
16-34	24,600	(7,300)	25,200	(4,600)	25,100	(5,900)
35-44	18,000	(2,600)	25,700	(4,400)	27,800	(6,200)
45-54	21,100	(4,600)	29,200	(5,900)	25,200	(3,900)
55-64	25,800	(7,000)	18,500	(5,400)	22,300	(3,800)
65+	21,200	(6,100)	32,000	(15,000)	26,900	(9,300)
<i>Civil status</i>						
Single	20,700	(5,900)	24,300	(5,100)	26,900	(6,300)
Couple	23,600	(3,100)	27,200	(3,400)	24,100	(2,600)
Divorced	16,400	(4,200)	26,900	(8,600)	25,200	(8,400)
Widowed	21,800	(11,600)	10,400	(2,800)	38,100	(15,200)
<i>Country of birth</i>						
Belgium	63,900	(35,300)	36,500	(21,800)	14,900	(4,100)
Germany	28,800	(9,400)	10,200	(5,000)	8,100	(3,900)
France	20,200	(7,200)	44,200	(19,000)	18,700	(6,600)
Italy	10,700	(2,300)	16,700	(7,300)	28,500	(9,900)
Luxembourg	21,500	(3,200)	27,800	(3,600)	30,400	(4,000)
Portugal	22,800	(7,400)	21,800	(5,700)	19,200	(5,000)
Other countries	13,800	(2,900)	11,900	(1,600)	24,300	(7,300)
<i>Education level</i>						
Low (ISCED=0:2)	17,500	(3,400)	23,000	(5,700)	22,700	(4,400)
Middle (ISCED=3,4)	21,900	(3,700)	23,300	(3,800)	21,900	(3,900)
High (ISCED=5,6 or 5:8)	27,500	(5,700)	31,200	(5,300)	32,400	(5,200)
<i>Employment status</i>						
Employed	22,700	(3,300)	25,400	(2,700)	27,300	(3,200)
Self-employed	27,300	(6,400)	21,400	(12,500)	24,200	(8,800)
Unemployed	11,000	(2,700)	13,900	(12,500)	9,000	(2,400)
Retired	17,800	(3,600)	28,100	(8,900)	25,000	(6,200)
Other	19,300	(6,800)	27,900	(13,200)	12,400	(5,200)
<i>Housing status</i>						
Owner-outright	32,100	(6,900)	41,900	(7,400)	38,000	(5,600)
Owner with mortgage	22,000	(3,500)	16,800	(1,500)	18,600	(2,000)
Renter or other	14,700	(3,200)	21,700	(4,400)	19,000	(4,700)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A35: Median household net wealth
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Median	Std.Err.	Median	Std.Err.	Median	Std.Err.
All households	397,800	(17,100)	437,500	(17,500)	498,500	(23,400)
<i>Gender</i>						
Male	446,600	(34,100)	517,900	(27,500)	566,200	(35,400)
Female	358,900	(30,200)	367,100	(28,900)	404,100	(35,300)
<i>Age of reference person</i>						
16-34	59,000	(14,300)	108,600	(31,900)	161,300	(28,500)
35-44	286,000	(34,000)	277,500	(21,400)	323,400	(46,000)
45-54	426,900	(42,100)	545,000	(36,100)	519,700	(70,600)
55-64	561,900	(71,700)	628,500	(45,400)	680,000	(61,800)
65+	604,800	(40,100)	722,900	(40,600)	802,000	(54,100)
<i>Civil status</i>						
Single	93,800	(38,700)	256,300	(39,100)	248,400	(40,200)
Couple	510,000	(40,100)	722,900	(40,600)	802,000	(54,100)
Divorced	312,300	(47,000)	328,300	(44,900)	288,500	(74,700)
Widowed	511,500	(43,300)	522,500	(63,700)	693,700	(74,600)
<i>Country of birth</i>						
Belgium	257,000	(128,400)	543,500	(127,100)	587,300	(98,600)
Germany	519,900	(180,100)	589,500	(92,700)	586,800	(156,400)
France	251,200	(148,600)	273,200	(68,500)	360,200	(77,200)
Italy	323,700	(74,500)	352,500	(194,300)	655,500	(135,000)
Luxembourg	522,300	(23,800)	567,500	(23,700)	705,500	(31,000)
Portugal	48,100	(17,900)	113,400	(38,600)	179,900	(55,200)
Other countries	151,900	(59,900)	136,800	(70,100)	107,300	(34,900)
<i>Education level</i>						
Low (ISCED=0:2)	277,100	(39,100)	290,400	(34,400)	335,400	(47,800)
Middle (ISCED=3,4)	444,500	(34,400)	487,800	(34,700)	508,300	(45,700)
High (ISCED=5,6 or 5:8)	519,200	(58,200)	538,700	(39,500)	631,600	(42,900)
<i>Employment status</i>						
Employed	272,700	(24,700)	327,700	(28,800)	380,000	(22,100)
Self-employed	495,000	(173,400)	838,800	(119,100)	617,300	(337,100)
Unemployed	17,000	(35,900)	15,800	(32,300)	36,200	(42,600)
Retired	642,100	(43,200)	696,400	(37,800)	847,600	(44,200)
Other	400,000	(60,500)	293,100	(94,600)	387,300	(111,600)
<i>Housing status</i>						
Owner-outright	680,200	(45,400)	769,100	(30,100)	845,300	(29,600)
Owner with mortgage	428,000	(23,800)	497,600	(29,600)	502,500	(32,200)
Renter or other	22,100	(4,100)	18,300	(3,600)	23,000	(4,400)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A36: Mean net wealth
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Mean	Std.Err.	Mean	Std.Err.	Mean	Std.Err.
All households	710,100	(58,200)	768,400	(53,400)	897,900	(46,800)
<i>Gender</i>						
Male	767,200	(70,400)	825,500	(58,300)	1,087,500	(76,200)
Female	626,100	(106,300)	694,100	(95,300)	635,800	(41,700)
<i>Age of reference person</i>						
16-34	209,500	(31,400)	277,600	(43,000)	348,300	(37,400)
35-44	503,200	(92,100)	485,900	(41,600)	688,100	(121,200)
45-54	850,800	(180,700)	912,700	(130,700)	812,000	(67,600)
55-64	894,500	(78,400)	1,155,500	(219,800)	1,108,100	(135,500)
65+	1,096,400	(171,900)	1,034,500	(88,900)	1,461,000	(179,600)
<i>Civil status</i>						
Single	435,400	(117,500)	502,000	(47,400)	534,900	(84,000)
Couple	904,100	(171,900)	1,034,500	(88,900)	1,461,000	(179,600)
Divorced	444,600	(65,300)	689,200	(159,500)	583,400	(73,400)
Widowed	722,900	(165,200)	835,500	(110,600)	1,645,800	(419,100)
<i>Country of birth</i>						
Belgium	524,400	(116,000)	879,500	(107,600)	842,700	(123,700)
Germany	1,349,600	(610,700)	1,035,600	(394,800)	923,300	(228,600)
France	528,100	(113,700)	906,800	(288,700)	1,002,600	(314,900)
Italy	506,000	(158,900)	496,800	(84,300)	876,600	(153,400)
Luxembourg	933,100	(97,200)	919,800	(78,900)	1,183,400	(88,500)
Portugal	197,500	(29,000)	275,200	(39,700)	322,700	(31,200)
Other countries	329,500	(45,900)	447,100	(57,200)	533,800	(83,000)
<i>Education level</i>						
Low (ISCED=0:2)	433,800	(53,900)	504,900	(42,700)	479,000	(39,300)
Middle (ISCED=3,4)	741,700	(108,000)	706,500	(42,300)	975,000	(106,500)
High (ISCED=5,6 or 5:8)	1,040,100	(144,500)	1,100,100	(157,000)	1,112,900	(95,600)
<i>Employment status</i>						
Employed	535,400	(76,700)	603,500	(50,500)	650,900	(46,500)
Self-employed	1,530,300	(294,800)	1,443,700	(174,500)	1,920,100	(525,100)
Unemployed	140,700	(54,300)	219,300	(56,500)	205,700	(71,300)
Retired	1,076,900	(146,300)	1,118,600	(159,400)	1,429,400	(147,400)
Other	487,500	(68,100)	657,300	(127,000)	535,500	(105,800)
<i>Housing status</i>						
Owner-outright	1,352,800	(152,300)	1,265,700	(115,700)	1,452,400	(110,900)
Owner with mortgage	619,300	(65,600)	785,300	(80,700)	853,500	(89,800)
Renter or other	129,900	(20,900)	161,600	(26,700)	182,000	(38,700)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A37: Median gross income
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Median	Std.Err.	Median	Std.Err.	Median	Std.Err.
All households	64,800	(1,800)	64,600	(1,600)	71,100	(2,000)
<i>Gender</i>						
Male	69,900	(2,300)	71,500	(2,700)	79,000	(2,600)
Female	52,900	(4,100)	58,700	(2,300)	60,300	(3,000)
<i>Age of reference person</i>						
16-34	53,300	(4,000)	57,500	(3,500)	65,700	(4,000)
35-44	72,000	(4,600)	71,500	(4,000)	78,900	(4,300)
45-54	75,100	(5,900)	81,900	(5,000)	83,700	(4,700)
55-64	72,100	(5,400)	70,200	(7,900)	72,400	(6,000)
65+	53,900	(4,500)	52,100	(2,900)	58,800	(4,100)
<i>Civil status</i>						
Single	49,700	(4,000)	54,400	(2,800)	61,400	(3,200)
Couple	77,600	(4,500)	52,100	(2,900)	58,800	(4,100)
Divorced	51,300	(8,700)	48,400	(6,600)	49,300	(2,900)
Widowed	36,000	(5,600)	44,200	(4,900)	49,600	(4,900)
<i>Country of birth</i>						
Belgium	70,100	(15,600)	77,500	(18,700)	81,400	(14,900)
Germany	77,000	(35,400)	71,300	(12,700)	62,900	(13,200)
France	51,300	(7,200)	72,100	(9,300)	75,200	(7,100)
Italy	38,200	(13,200)	60,400	(10,900)	71,800	(15,500)
Luxembourg	70,400	(2,800)	73,800	(2,800)	80,800	(2,900)
Portugal	49,800	(2,800)	48,100	(3,100)	52,800	(3,500)
Other countries	68,800	(7,300)	57,900	(3,400)	57,000	(3,900)
<i>Education level</i>						
Low (ISCED=0:2)	48,000	(3,700)	46,200	(2,400)	47,800	(1,600)
Middle (ISCED=3,4)	61,700	(3,400)	64,100	(2,000)	65,600	(2,600)
High (ISCED=5,6 or 5:8)	107,200	(4,100)	97,500	(5,200)	107,900	(5,000)
<i>Employment status</i>						
Employed	70,500	(2,400)	73,500	(2,900)	79,300	(2,700)
Self-employed	102,500	(16,000)	124,400	(19,100)	106,300	(24,500)
Unemployed	40,300	(8,200)	38,700	(6,000)	38,300	(12,200)
Retired	60,600	(3,800)	57,500	(2,500)	64,500	(3,300)
Other	42,500	(5,800)	48,000	(3,900)	38,000	(4,700)
<i>Housing status</i>						
Owner-outright	69,000	(3,700)	73,200	(3,500)	76,000	(3,000)
Owner with mortgage	84,200	(3,900)	85,400	(4,600)	99,200	(4,100)
Renter or other	41,600	(2,800)	42,700	(2,400)	48,300	(2,800)

Source: Own calculations based on waves 1, 2 and 3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Note: Income from family and friends is not included.

**Table A38: Mean household gross income
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018	
	Mean	Std.Err.	Mean	Std.Err.	Mean	Std.Err.
All households	83,700	(2,300)	87,200	(2,000)	93,100	(1,900)
<i>Gender</i>						
Male	92,400	(3,500)	95,400	(3,000)	104,300	(3,000)
Female	70,800	(3,300)	76,500	(2,500)	77,600	(2,300)
<i>Age of reference person</i>						
16-34	66,500	(3,700)	68,300	(3,400)	81,600	(3,800)
35-44	88,400	(5,600)	92,600	(4,500)	93,400	(3,600)
45-54	97,300	(5,900)	106,800	(5,500)	109,300	(5,500)
55-64	101,700	(8,500)	98,900	(6,000)	101,000	(6,200)
65+	65,500	(6,100)	69,800	(3,800)	80,700	(4,800)
<i>Civil status</i>						
Single	63,400	(3,400)	73,700	(4,000)	71,900	(2,800)
Couple	104,000	(6,100)	69,800	(3,800)	80,700	(4,800)
Divorced	63,300	(5,300)	72,700	(5,600)	69,200	(4,500)
Widowed	50,600	(5,900)	62,200	(6,400)	64,500	(5,000)
<i>Country of birth</i>						
Belgium	114,200	(26,400)	110,800	(16,000)	108,100	(11,200)
Germany	131,400	(26,000)	86,100	(9,500)	97,500	(14,300)
France	76,900	(7,900)	111,100	(13,700)	99,500	(9,400)
Italy	69,800	(15,000)	79,300	(9,600)	101,700	(14,000)
Luxembourg	87,100	(3,100)	92,100	(2,500)	102,900	(2,900)
Portugal	53,900	(3,200)	53,300	(3,000)	64,400	(5,700)
Other countries	88,800	(8,800)	78,300	(5,500)	79,400	(4,400)
<i>Education level</i>						
Low (ISCED=0:2)	57,100	(3,000)	59,100	(2,700)	57,000	(2,200)
Middle (ISCED=3,4)	75,400	(3,700)	79,700	(2,700)	83,300	(3,100)
High (ISCED=5,6 or 5:8)	131,800	(6,600)	123,700	(5,000)	129,200	(4,600)
<i>Employment status</i>						
Employed	88,700	(3,200)	93,000	(2,600)	98,300	(2,400)
Self-employed	154,100	(17,500)	166,500	(15,800)	154,800	(21,400)
Unemployed	39,800	(5,200)	49,700	(6,200)	60,900	(11,300)
Retired	75,000	(5,300)	76,800	(3,900)	86,000	(4,100)
Other	50,100	(5,000)	59,000	(5,000)	53,200	(5,500)
<i>Housing status</i>						
Owner-outright	90,100	(4,800)	94,000	(3,600)	99,800	(3,600)
Owner with mortgage	98,000	(3,400)	108,600	(4,000)	117,100	(4,100)
Renter or other	62,600	(4,600)	59,900	(3,000)	63,200	(2,600)

Source: Own calculations based on waves 1, 2 and 3 of the LUI-HFCS, data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A39: Median Debt-to-Asset ratio
by household characteristics**

(In %)		Wave 2010		Wave 2014		Wave 2018	
Variable		Median	Std.Err.	Median	Std.Err.	Median	Std.Err.
All households		18.2	2.1	22.1	2.1	19.4	2.1
<i>Gender</i>							
	Male	16.4	2.1	21.3	2.5	18.2	1.8
	Female	22.6	3.8	23.4	3.2	25.1	4.9
<i>Age of reference person</i>							
	16-34	54.9	5.2	50.3	4.6	41.6	6.3
	35-44	25.2	4.4	32.7	3.7	34.3	2.4
	45-54	13.1	2.5	15.9	2.3	13.9	2.4
	55-64	5.7	1.2	6.5	1.4	8.6	2.4
	65+	4.3	1.9	4.0	1.8	1.6	0.7
<i>Civil status</i>							
	Single	32.7	6.7	31.4	4.5	31.4	4.9
	Couple	14.8	1.1	18.7	2.8	16.2	2.4
	Divorced	18.6	4.5	20.9	4.0	31.8	6.4
	Widowed	8.3	47.9	4.2	2.3	3.3	4.8
<i>Country of birth</i>							
	Belgium	12.1	7.2	17.4	6.2	18.7	5.5
	Germany	27.5	25.5	27.3	6.3	18.4	7.9
	France	22.9	8.1	29.1	6.9	28.0	8.4
	Italy	27.7	24.8	19.2	33.7	11.2	14.2
	Luxembourg	14.4	2.0	16.3	2.8	14.5	1.9
	Portugal	39.6	6.6	44.2	4.9	32.9	4.8
	Other countries	18.2	8.1	22.2	3.9	26.6	7.0
<i>Education level</i>							
	Low (ISCED=0:2)	26.1	6.1	22.9	4.7	18.7	3.4
	Middle (ISCED=3,4)	14.9	2.5	17.9	2.9	18.4	4.0
	High (ISCED=5,6 or 5:8)	18.8	3.0	25.3	2.6	21.1	3.5
<i>Employment status</i>							
	Employed	25.0	3.3	28.1	2.5	26.1	2.8
	Self-employed	13.7	3.6	20.9	6.1	17.4	7.0
	Unemployed	52.4	34766.1	24.1	6.9	11.9	13861.6
	Retired	4.7	1.3	5.3	1.6	2.9	0.9
	Other	7.7	4.7	18.0	8.3	27.0	12.7
<i>Housing status</i>							
	Owner-outright	2.8	0.5	1.8	0.4	2.0	0.3
	Owner with mortgage	22.6	2.3	28.2	1.9	33.0	1.9
	Renter or other	39.9	7.5	41.4	6.8	36.3	6.6
<i>Gross Income quintile</i>							
	Q1	26.7	13.9	28.8	7.6	28.7	9.7
	Q2	37.6	10.6	34.6	6.2	19.6	8.2
	Q3	21.8	7.1	26.1	5.0	23.4	8.2
	Q4	15.7	2.4	15.2	4.5	22.5	5.1
	Q5	13.8	2.1	14.6	1.6	16.0	2.4
<i>Net wealth quintile</i>							
	Q1	84.0	15.5	91.1	12.6	64.3	7.5
	Q2	52.2	5.8	47.4	3.8	50.5	3.3
	Q3	17.7	3.1	18.2	3.5	27.4	3.2
	Q4	8.9	2.1	9.8	2.2	6.0	1.8
	Q5	4.4	0.8	5.6	1.2	5.2	0.9

Source: Own calculations based on waves 1-3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A40: Median Debt-to-Income ratio
by household characteristics**

(In %)		Wave 2010		Wave 2014		Wave 2018	
Variable		Median	Std.Err.	Median	Std.Err.	Median	Std.Err.
All households		86.9	11.2	114.1	10.6	95.5	14.4
<i>Gender</i>							
	Male	73.5	12.0	99.9	14.5	85.7	17.2
	Female	117.0	22.4	128.6	16.5	108.4	20.7
<i>Age of reference person</i>							
	16-34	190.6	56.2	195.6	49.0	144.5	73.5
	35-44	149.1	15.6	198.6	25.7	234.1	24.4
	45-54	58.7	9.6	83.4	14.9	86.9	17.7
	55-64	27.0	8.1	36.2	6.4	37.8	14.1
	65+	38.4	17.6	34.9	16.8	22.8	6.2
<i>Civil status</i>							
	Single	88.3	30.0	141.7	32.0	112.5	38.3
	Couple	88.4	10.3	112.5	12.1	91.8	16.6
	Divorced	128.5	38.8	106.1	25.8	116.3	37.7
	Widowed	19.0	18.0	32.6	20.1	41.8	26.3
<i>Country of birth</i>							
	Belgium	85.5	39.3	68.6	39.7	97.5	38.6
	Germany	114.3	67.7	172.6	50.1	236.4	67.3
	France	33.5	28.1	101.1	27.5	54.6	39.1
	Italy	47.7	65.6	73.6	37.4	89.8	69.2
	Luxembourg	98.0	15.9	111.6	16.4	105.1	15.4
	Portugal	48.2	42.3	183.1	45.8	112.0	48.2
	Other countries	79.5	33.9	54.5	25.7	38.7	38.2
<i>Education level</i>							
	Low (ISCED=0:2)	61.7	19.4	94.1	22.4	53.5	21.0
	Middle (ISCED=3,4)	88.7	16.9	69.0	19.3	75.0	20.8
	High (ISCED=5,6 or 5:8)	109.6	20.1	145.7	12.2	133.9	20.4
<i>Employment status</i>							
	Employed	125.7	14.0	143.4	11.5	129.7	16.0
	Self-employed	84.4	39.5	162.5	46.3	114.4	43.4
	Unemployed	55.1	58.6	27.9	26.4	30.7	133.1
	Retired	33.1	9.5	31.8	8.8	25.3	5.8
	Other	53.9	17.4	44.7	20.7	100.5	75.1
<i>Housing status</i>							
	Owner-outright	23.8	4.4	19.6	5.3	21.9	3.1
	Owner with mortgage	171.1	16.2	239.1	18.4	270.1	14.7
	Renter or other	24.6	4.6	31.1	5.0	17.3	2.6
<i>Gross Income quintile</i>							
	Q1	45.2	29.0	83.8	44.1	45.9	27.6
	Q2	92.1	48.9	139.6	64.3	35.2	17.9
	Q3	115.3	32.4	138.3	25.6	133.4	44.2
	Q4	103.4	20.9	106.2	23.6	133.3	26.7
	Q5	71.4	15.6	100.4	13.4	111.1	14.9
<i>Net wealth quintile</i>							
	Q1	30.6	8.6	32.3	6.1	16.0	3.4
	Q2	262.8	42.0	280.3	30.3	289.8	36.3
	Q3	121.1	23.3	143.5	25.5	195.6	29.7
	Q4	72.9	19.5	79.5	20.1	70.1	21.2
	Q5	61.7	11.4	73.3	13.6	64.2	14.9

Source: Own calculations based on waves 1-3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A41: Median Debt Service-to-Income ratio
by household characteristics**

(In %)		Wave 2010		Wave 2014		Wave 2018	
Variable		Median	Std.Err.	Median	Std.Err.	Median	Std.Err.
All households		16.2	0.8	15.0	0.7	13.4	0.8
<i>Gender</i>							
	Male	14.7	1.1	14.4	0.7	12.5	1.1
	Female	17.5	0.9	16.7	1.1	14.3	1.4
<i>Age of reference person</i>							
	16-34	18.5	2.5	17.1	2.0	15.6	2.2
	35-44	18.4	1.3	19.7	1.3	17.2	1.5
	45-54	14.0	1.9	14.7	0.8	13.7	1.1
	55-64	11.3	1.5	9.2	1.3	8.5	1.6
	65+	11.0	4.8	10.3	2.2	7.6	1.6
<i>Civil status</i>							
	Single	16.0	2.3	17.4	1.7	12.6	1.6
	Couple	16.1	0.8	14.8	0.9	13.6	0.9
	Divorced	17.9	3.3	14.8	1.6	15.3	2.5
	Widowed	6.2	5.0	7.4	3.7	10.1	3.1
<i>Country of birth</i>							
	Belgium	12.6	5.0	11.4	2.3	14.1	2.9
	Germany	19.0	8.8	18.2	3.6	20.8	9.8
	France	14.7	3.1	14.6	2.2	10.3	2.9
	Italy	13.1	5.3	10.4	2.1	10.7	4.7
	Luxembourg	16.8	0.9	15.6	0.9	13.5	1.0
	Portugal	15.7	2.4	19.8	1.5	16.1	2.9
	Other countries	14.7	1.9	11.6	1.4	10.8	1.8
<i>Education level</i>							
	Low (ISCED=0:2)	15.4	1.5	18.4	1.5	11.6	1.4
	Middle (ISCED=3,4)	16.9	1.8	14.1	1.0	12.9	1.2
	High (ISCED=5,6 or 5:8)	16.2	1.1	14.7	0.8	14.6	1.1
<i>Employment status</i>							
	Employed	17.1	1.0	17.1	0.8	15.0	1.0
	Self-employed	14.7	2.6	14.0	3.9	12.9	5.4
	Unemployed	17.5	7.0	9.6	4.3	7.3	5.8
	Retired	12.4	2.6	8.8	1.0	7.5	1.3
	Other	13.1	2.9	9.7	3.6	11.4	5.6
<i>Housing status</i>							
	Owner-outright	8.3	1.2	6.9	0.7	7.1	0.8
	Owner with mortgage	20.1	0.9	21.2	0.6	21.4	0.7
	Renter or other	10.6	1.2	9.2	0.9	5.8	0.8
<i>Gross Income quintile</i>							
		0.0	0.0	0.0	0.0	0.0	0.0
	Q1	17.0	4.1	19.8	3.5	11.2	4.1
	Q2	20.3	2.1	19.6	3.3	10.2	1.7
	Q3	18.7	2.7	17.8	1.9	16.8	2.3
	Q4	17.2	1.6	14.6	1.0	16.1	1.1
	Q5	11.4	1.2	11.7	0.9	12.2	1.0
<i>Net wealth quintile</i>							
	Q1	11.9	1.7	9.9	1.5	5.4	1.0
	Q2	21.3	1.7	21.6	1.3	19.7	2.1
	Q3	17.0	1.2	17.8	1.3	17.5	1.7
	Q4	12.7	1.8	13.8	1.4	13.6	1.9
	Q5	13.0	1.8	11.3	1.1	11.4	1.3

Source: Own calculations based on waves 1-3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A42: Median Mortgage Debt Service-to-Income ratio
by household characteristics**

(In %)	Wave 2010		Wave 2014		Wave 2018	
Variable	Median	Std.Err.	Median	Std.Err.	Median	Std.Err.
All households	16.3	0.7	17.6	0.7	17.8	0.8
<i>Gender</i>						
Male	14.9	1.2	16.0	1.2	16.9	1.0
Female	17.0	1.2	18.3	0.9	19.1	1.2
<i>Age of reference person</i>						
16-34	20.9	1.7	21.3	1.9	22.9	1.3
35-44	16.7	1.0	19.0	1.3	18.0	1.1
45-54	13.3	1.7	14.8	1.1	15.2	1.2
55-64	13.3	1.3	14.0	1.4	14.0	1.8
65+	22.0	4.9	20.2	4.8	23.3	6.9
<i>Civil status</i>						
Single	18.6	2.6	21.6	1.4	19.5	2.1
Couple	15.2	0.9	15.4	0.9	17.3	0.9
Divorced	19.9	2.6	17.5	1.8	21.4	2.5
Widowed	5.7	6.2	11.1	7.7	17.9	5.6
<i>Country of birth</i>						
Belgium	13.8	5.0	11.7	2.0	16.3	3.1
Germany	16.8	15.0	17.1	3.3	20.8	9.8
France	20.6	2.8	19.0	2.9	15.6	2.0
Italy	15.4	3.8	14.7	5.1	18.0	6.3
Luxembourg	16.6	0.9	18.3	0.8	16.6	1.3
Portugal	14.7	1.7	19.8	1.6	20.3	1.8
Other countries	14.0	2.3	14.3	1.3	19.5	2.5
<i>Education level</i>						
Low (ISCED=0:2)	15.6	1.5	19.2	1.5	21.3	2.1
Middle (ISCED=3,4)	18.2	1.7	17.6	1.3	18.3	1.6
High (ISCED=5,6 or 5:8)	14.8	1.1	15.9	1.1	16.8	1.1
<i>Employment status</i>						
Employed	16.4	0.7	17.9	0.7	17.6	0.9
Self-employed	17.1	3.3	16.3	4.3	20.1	3.4
Unemployed	18.0	7.4	11.0	5.8	21.4	5.8
Retired	14.1	2.6	13.9	2.7	14.1	2.9
Other	15.5	3.8	20.3	5.1	25.0	11.9
<i>Housing status</i>						
Owner-outright	9.9	2.5	8.6	2.2	12.8	2.3
Owner with mortgage	16.4	0.7	18.3	0.6	18.3	0.9
Renter or other	16.9	3.3	13.2	3.1	16.1	5.5
<i>Gross Income quintile</i>	0.0	0.0	0.0	0.0	0.0	0.0
Q1	36.0	8.7	29.5	11.5	45.2	17.1
Q2	22.6	2.3	25.6	2.7	24.3	1.7
Q3	19.4	1.8	20.8	1.5	20.6	1.9
Q4	14.6	1.1	15.3	1.6	16.5	1.0
Q5	10.9	1.1	11.7	0.8	13.0	0.9
<i>Net wealth quintile</i>						
Q1	28.2	7.5	41.0	11.4	25.3	4.3
Q2	20.6	1.9	21.7	1.3	22.1	1.2
Q3	15.5	1.1	17.4	1.0	17.5	1.3
Q4	13.5	1.3	14.2	1.1	15.1	1.4
Q5	12.7	1.6	11.3	1.1	14.6	1.6

Source: Own calculations based on waves 1-3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A43: Median outstanding Loan-to-Value ratio (stock)
by household characteristics**

(In %)	Wave 2010		Wave 2014		Wave 2018	
Variable	Median	Std.Err.	Median	Std.Err.	Median	Std.Err.
All households	27.5	2.6	34.6	2.8	39.4	2.5
<i>Gender</i>						
Male	24.5	3.4	32.3	3.5	34.1	3.1
Female	32.2	4.5	38.4	4.1	44.3	4.0
<i>Age of reference person</i>	0.0	0.0	0.0	0.0	0.0	0.0
16-34	69.2	7.6	59.2	4.2	64.3	2.7
35-44	30.7	5.4	43.5	3.5	45.0	4.4
45-54	15.0	2.3	19.9	3.0	23.6	4.9
55-64	9.6	2.9	8.0	2.2	18.4	5.5
65+	9.2	10.6	17.4	12.8	8.5	5.6
<i>Civil status</i>						
Single	38.2	8.2	45.8	5.9	51.0	5.4
Couple	25.9	4.3	32.0	3.4	33.5	2.8
Divorced	26.1	5.3	29.9	4.8	41.2	6.9
Widowed	24.2	7.0	12.2	3.8	73.9	29.0
<i>Country of birth</i>						
Belgium	37.3	14.0	51.0	12.8	26.4	8.9
Germany	27.4	9.8	25.0	7.7	24.7	11.0
France	22.2	7.7	39.0	9.1	64.1	10.4
Italy	24.9	11.5	24.9	16.0	50.5	6.7
Luxembourg	26.4	3.3	32.2	3.9	33.6	3.9
Portugal	41.7	7.7	51.0	7.5	43.3	5.8
Other countries	22.6	9.8	22.6	4.3	48.6	7.2
<i>Education level</i>						
Low (ISCED=0:2)	27.1	4.8	32.4	7.5	34.2	3.6
Middle (ISCED=3,4)	25.7	5.2	26.3	4.2	38.9	5.8
High (ISCED=5,6 or 5:8)	30.7	4.7	40.0	3.4	42.3	3.8
<i>Employment status</i>	0.0	0.0	0.0	0.0	0.0	0.0
Employed	33.1	4.1	38.5	2.8	41.0	3.4
Self-employed	25.3	11.0	37.4	5.7	39.2	9.5
Unemployed	39.2	24.8	25.0	15.5	89.3	25.6
Retired	7.1	2.3	9.0	4.1	13.7	7.2
Other	24.2	5.2	35.3	17.2	35.8	9.7
<i>Housing status</i>						
Owner-outright	-	-	-	-	-	-
Owner with mortgage	27.5	2.6	34.6	2.8	39.4	2.5
Renter or other	-	-	-	-	-	-
<i>Gross Income quintile</i>						
Q1	17.7	10.0	25.3	12.0	42.0	10.2
Q2	44.8	12.1	48.5	7.7	45.3	6.7
Q3	31.0	6.6	32.5	5.4	49.4	9.2
Q4	25.5	6.0	34.4	6.8	38.8	5.0
Q5	24.3	4.4	31.0	4.1	31.3	3.7
<i>Net wealth quintile</i>						
Q1	92.6	34.1	129.3	21.4	102.2	5.1
Q2	68.0	4.8	64.3	4.2	64.2	3.1
Q3	24.3	4.1	33.4	5.2	36.5	3.1
Q4	14.7	1.7	18.5	3.0	16.5	3.8
Q5	12.1	3.3	12.9	1.8	14.4	3.2

Source: Own calculations based on waves 1-3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.

**Table A44: Median Net Liquid Assets to Income ratio
by household characteristics**

(In %)		Wave 2010		Wave 2014		Wave 2018	
Variable		Median	Std.Err.	Median	Std.Err.	Median	Std.Err.
All households		12.2	2.2	11.5	1.7	10.6	2.3
<i>Gender</i>							
	Male	14.9	2.9	10.9	1.8	16.6	3.2
	Female	7.1	3.2	12.8	3.2	4.7	2.1
<i>Age of reference person</i>		0.0	0.0	0.0	0.0	0.0	0.0
	16-34	10.5	4.8	5.5	3.1	7.3	3.1
	35-44	12.3	3.4	11.4	2.6	15.3	4.3
	45-54	10.9	6.2	9.7	2.8	9.0	3.7
	55-64	9.5	6.5	25.0	7.6	6.7	5.2
	65+	28.2	18.7	23.9	17.9	36.0	30.4
<i>Civil status</i>							
	Single	12.7	6.3	8.6	2.8	10.1	4.8
	Couple	13.7	2.5	12.9	2.0	13.4	2.8
	Divorced	5.3	4.8	6.8	5.1	1.2	2.9
	Widowed	12.7	44.7	21.5	16.4	10.5	17.1
<i>Country of birth</i>							
	Belgium	19.2	28.7	24.5	20.0	25.0	7.2
	Germany	12.7	19.9	35.9	38.0	37.2	32.2
	France	18.0	11.3	12.9	4.5	11.2	14.9
	Italy	0.7	5.8	10.1	14.5	15.5	39.0
	Luxembourg	20.6	5.2	12.6	3.1	16.7	3.6
	Portugal	-1.5	3.8	3.0	2.7	1.5	1.8
	Other countries	12.4	6.9	6.3	5.0	2.6	3.6
<i>Education level</i>							
	Low (ISCED=0:2)	-0.3	1.9	2.1	2.5	1.7	2.2
	Middle (ISCED=3,4)	16.5	3.5	8.0	2.9	6.0	2.8
	High (ISCED=5,6 or 5:8)	29.3	5.3	26.5	4.2	24.5	3.8
<i>Employment status</i>		0.0	0.0	0.0	0.0	0.0	0.0
	Employed	11.4	3.0	12.1	1.9	10.2	2.2
	Self-employed	19.3	10.4	18.3	14.6	26.9	9.6
	Unemployed	-6.1	31.6	3.9	20.5	-7.3	9.4
	Retired	26.2	14.1	16.5	8.9	19.9	10.0
	Other	2.3	5.3	1.8	8.2	2.2	3.5
<i>Housing status</i>							
	Owner-outright	26.1	10.2	19.2	9.3	7.2	6.1
	Owner with mortgage	16.5	2.8	15.6	2.1	18.9	2.9
	Renter or other	-1.4	3.2	-2.9	2.0	-1.1	2.1
<i>Gross Income quintile</i>							
	Q1	-0.7	5.0	1.5	6.7	-2.1	1.9
	Q2	8.1	7.0	5.6	2.9	2.1	3.7
	Q3	6.2	4.1	7.8	3.2	8.9	5.6
	Q4	20.5	6.9	14.1	4.6	14.9	5.5
	Q5	28.6	7.3	30.3	5.5	26.5	4.0
<i>Net wealth quintile</i>							
	Q1	-12.3	4.1	-14.9	3.2	-4.7	1.9
	Q2	10.1	4.1	7.5	2.2	7.2	3.3
	Q3	10.6	3.1	13.9	3.1	7.1	3.6
	Q4	25.7	6.3	20.8	6.7	22.4	8.4
	Q5	69.6	14.3	75.8	13.8	61.0	15.8

Source: Own calculations based on waves 1-3 of the LU-HFCS; data are multiply imputed and weighted; variance estimation based on 1000 replicate weights.



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