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## THE LUXEMBOURG HOUSEHOLD FINANCE AND CONSUMPTION SURVEY: RESULTS FROM THE FOURTH WAVE IN 2021

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# The Luxembourg Household Finance and Consumption Survey: Results from the fourth wave in 2021\*

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## Abstract:

This report presents the main results and underlying methodology of the 2021 wave of the Luxembourg Household Finance and Consumption Survey (LU-HFCS). From 2018 to 2021, there was a broad-based increase in gross and net household income, as well as in net wealth. This partly reflects the rapid increase in property prices, positive stock market developments and “involuntary” savings during the COVID-19 pandemic. The share of indebted households remained stable, but the average amount of debt increased substantially across all household groups. There were no significant changes in income or wealth inequality since 2018.

Keywords: Household, survey, wealth, income, assets, debts, COVID-19.

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

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## Résumé non-technique

Ce cahier présente les principaux résultats de la quatrième édition de l'enquête sur le comportement financier et de consommation des ménages au Luxembourg (LU-HFCS) conduite en 2021. Cette enquête fournit des statistiques clés sur les bilans financiers des ménages et sur leur comportement économique et financier. Ces informations permettent d'analyser la composition de la dette et du 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.

L'édition de 2021 se base sur un échantillon représentatif comportant plus de 2 000 ménages résidant au Luxembourg. Les résultats sont pondérés pour représenter l'ensemble des ménages résidents. En comparant les différentes éditions de l'enquête, il faut tenir compte que l'échantillon est sélectionné pour être représentatif de l'année en question et que les ménages retenus sont généralement différents d'une édition à l'autre.

Les résultats présentés dans ce cahier se rapportent à la situation économique et financière des ménages au Luxembourg en 2021. Depuis lors, plusieurs évolutions ont eu un impact sur le patrimoine et l'endettement des ménages, notamment la hausse rapide de l'inflation et des taux d'intérêt. L'impact de ces changements sur les finances des ménages sera mesuré lors de la prochaine édition de l'enquête, en cours entre fin-octobre et mi-décembre 2023.

## Changements méthodologiques et la pandémie de COVID-19

Par rapport aux vagues précédentes, l'édition de 2021 a étendu la base de sondage pour inclure les résidents au Luxembourg qui sont employés par les institutions de l'UE ou d'autres organisations internationales. Ce changement améliore la couverture de la population cible, qui passe de 90 % à 100 %. De plus, les mesures sanitaires associées à la pandémie de COVID-19 ont imposé des défis considérables à la conduite de la quatrième édition de l'enquête, nécessitant des changements importants pour garantir sa continuité. Lors des éditions antérieures, des enquêteurs spécialement formés se déplaçaient directement au domicile des ménages pour les aider à remplir le questionnaire, tandis qu'en 2021 les ménages ont rempli eux-mêmes un questionnaire en ligne.

En combinaison, ces changements ont légèrement modifié la population étudiée, réduisant ainsi la comparabilité des résultats à travers le temps.

### **Effets de la pandémie COVID-19 sur le revenu, la consommation et l'épargne des ménages**

L'édition 2021 comprenait une section spéciale consacrée aux effets de la pandémie sur les revenus, la consommation et l'épargne des ménages. Selon les résultats, l'impact économique de la pandémie a été différent selon la position du ménage dans la distribution du revenu ou du patrimoine net. Les ménages les plus modestes étaient plus enclins à déclarer une baisse de leurs revenus, tandis que les ménages les plus aisés étaient plus enclins à déclarer une baisse de leurs dépenses de consommation. Cela n'est pas étonnant dans la mesure que la consommation des ménages plus modestes se compose plus largement de biens et services essentiels qu'il est moins possible de réduire, tandis que la consommation des ménages plus fortunés se compose plus largement de voyages, biens de luxe et services demandant des contacts personnalisés, dont l'offre était fortement réduite pendant la pandémie. Par conséquent, les ménages les plus modestes ont plus souvent signalé une baisse de leur épargne ou de leur patrimoine financier (notamment leurs dépôts bancaires). Ainsi, la pandémie a plus pesé sur les ménages les plus modestes.

### **Revenu brut des ménages**

En 2021, 50% des ménages gagnaient un revenu brut de € 90 000 ou plus. Cela représente une augmentation de près de 9 % par an entre 2018 et 2021, bien que la composition du revenu brut a quelque peu changé. Le niveau du revenu brut varie considérablement selon les groupes de population, atteignant un maximum parmi les ménages les plus instruits et dans la tranche d'âge 45-54 ans. En moyenne, le revenu brut était nettement moins élevé parmi les locataires que parmi les ménages propriétaires de leur résidence (avec ou sans hypothèque).

## Actifs bruts des ménages

Les *actifs réels*, tels que les biens immobiliers, les véhicules ou les objets de valeur, représentent généralement la part la plus importante du patrimoine du ménage. En 2021, ils représentaient 77 % de l'ensemble des actifs bruts détenus par les ménages au Luxembourg. En moyenne, leur valeur brute s'élevait à € 1 109 000 par ménage. La plupart des ménages étaient propriétaires de véhicules (85 %) ou de leur résidence principale (66 %). Une part importante des ménages était propriétaire d'autres biens immobiliers (30 %) ou d'objets de valeur (28 %). Ces parts sont similaires à celles de 2018. La résidence principale et les autres biens immobiliers constituaient les deux catégories les plus importantes, représentant respectivement 57 % et 34 % du total des actifs réels. Les autres catégories ne représentaient qu'une part limitée des actifs réels, soit 5 % pour les activités professionnelles non-salariées, 2 % pour les véhicules et 1 % pour les objets de valeur.

En 2021, les *actifs financiers* représentaient 23 % de l'ensemble des actifs bruts détenus par les ménages. Ils se composaient de dépôts bancaires (36 %), d'actifs risqués, tels que les fonds communs de placement (30 %) ou les actions cotées en bourse (13 %), et d'autres actifs financiers (par exemple les participations dans des entreprises non cotées, comptes gérés par un spécialiste des placements, crédits entre amis ou famille, obligations de sociétés non cotées ou de l'État) (21 %). Les actifs financiers les plus détenus étaient le compte à vue et le compte d'épargne, présents au sein de 91 % des ménages. En moyenne, la valeur des actifs financiers était de € 322 000 par ménage.

## L'endettement et la vulnérabilité des ménages

Un peu plus de la moitié des ménages étaient endettés (54 % en 2021, après 53 % en 2018). Près d'un tiers des ménages détenaient une dette hypothécaire, tandis qu'un peu plus d'un tiers détenaient une dette non hypothécaire. En moyenne, la dette hypothécaire représentait la part la plus importante de la dette totale du ménage (91 %). La valeur moyenne de cette dette totale est passée de € 105 000 en 2018 à € 161 000 en 2021 (augmentation de 54 %). La part des ménages ayant contracté des prêts à la consommation est restée pratiquement inchangée entre 2018 et 2021.

La plupart des indicateurs d'endettement des ménages n'ont pas beaucoup changé par rapport à 2018. En particulier, les valeurs typiques du ratio dette-sur-actifs totaux et du ratio prêt-valeur ont peu changé entre 2018 et 2021. Fin 2021, les taux d'intérêt hypothécaires étaient encore à un niveau très bas, de sorte que la valeur typique du ratio service de la dette (immobilière) sur revenu n'a guère changé par rapport à 2018. Par contre, 50% des ménages avaient un ratio dette-sur-revenu inférieur à 96 % en 2018, mais ce ratio médian était de 133 % en 2021, signe que le revenu des ménages a augmenté moins rapidement que la dette hypothécaire, qui a été gonflée par la progression rapide des prix immobiliers. Parmi les ménages endettés, on observe aussi une augmentation de la liquidité nette par rapport au revenu brut, ce qui pourrait s'expliquer par la bonne performance des marchés boursiers entre 2018 et 2021, ainsi que par l'épargne forcée lors de la pandémie résultant des restrictions mises en place à l'époque.

### **Patrimoine net des ménages**

En 2021, 50% des ménages avaient un patrimoine net (après déduction des dettes) supérieur à € 718 000. Depuis 2018, cette valeur a augmenté de près de 44 % en termes nominaux et de 37 % en termes réels, c'est-à-dire après ajustement pour l'évolution des prix à la consommation.

Ces augmentations du patrimoine résultent principalement de la hausse des prix de l'immobilier, qui a généré des gains pour les ménages propriétaires de leur résidence principale. Plus de deux tiers des ménages au Luxembourg sont propriétaires de leur logement. Dans 50% des cas, la valeur de leur logement a augmenté d'au moins 31 % entre 2018 et 2021. Bien que cette progression des prix couvre l'ensemble des logements et pas seulement ceux qui ont été vendus, elle est assez proche de la progression de l'indice des prix de vente des logements du STATEC qui a augmenté de 44 % entre 2018 et 2021.

Pour les actifs financiers, la valeur moyenne a aussi considérablement augmenté, passant de € 121 000 en 2018 à € 322 000 en 2021. La part de ménages détenant des fonds communs de placement a doublé, passant de 12 % à 24 %, tandis que la part détenant des actions est passée de 8 % à 18 %.

Selon le coefficient de Gini, l'inégalité de la richesse n'a pratiquement pas changé depuis 2018. En 2021, les 5 % de ménages les plus fortunés possédaient environ 34 % du patrimoine net de l'ensemble des ménages et les 20 % les plus fortunés en possédaient près des deux tiers, ce qui ressemble à la situation en 2018.



## **Non-technical summary**

This report presents the main results of the 2021 wave of the Luxembourg Household Financial and Consumption Survey (LU-HFCS). This representative survey collects data on individual households' assets, liabilities, income and consumption. This information serves to analyse the aggregate composition of household debt and wealth, as well as their distribution across the population. In Luxembourg, the LU-HFCS is the only source of detailed data on the balance sheets of individual households.

The 2021 wave draws on a representative sample of over 2,000 households resident in Luxembourg. Results are weighted to represent all households in the population. When comparing different waves of the survey, bear in mind that each sample is selected to be representative for the year in question and that the households selected generally differ from one wave to the next.

The results presented in this report refer to the economic and financial situation of Luxembourg households in 2021. Since then, several developments have affected households' wealth and debt, in particular the rapid rise in inflation and interest rates. The impact of these developments on household finances will be evaluated in the next wave, which is conducted from end-October to mid-December 2023.

## **Methodological changes and the COVID-19 pandemic**

Compared to past waves, the 2021 sampling frame was extended to include Luxembourg residents employed by EU institutions and other international organisations. This change improved the coverage of the target population from 90% to 100%. In addition, the COVID-19 pandemic and associated health measures imposed considerable challenges for the conduct of the fourth wave of the survey, requiring significant changes to ensure its continuity. In previous waves, specially trained interviewers visited the households to help them complete the survey, but in 2021 households completed an online questionnaire.

Together, these changes altered the characteristics of participating households, reducing comparability with past waves.

## **Effect of the COVID-19 pandemic on household income, consumption and savings**

The 2021 questionnaire included a special section devoted to the effects of the pandemic on household income, consumption and savings. According to the results, the pandemic had different economic effects depending on the position of the household in the distribution of net income or wealth. The poorest households were more likely to report a decrease in their income, while the wealthiest households were more likely to report a decline in their consumption expenditure. This is not surprising in so far as the consumption of poorer households is more largely composed of essential goods and services that are difficult to reduce, while the consumption of wealthier households is more largely composed of travel, luxury goods and services requiring personal contact, areas where supply was restricted during the pandemic. Therefore, poorer households more often reported a decline in their savings or financial wealth (notably bank deposits). In this sense, the pandemic disproportionately affected poorer households.

### **Gross household income**

In 2021, median gross household income was nearly €90,000. This represents an increase of almost 9% per year between 2018 and 2021, despite minimal changes in the composition of gross income. The mean level of income varies considerably across population groups, peaking among the most highly educated households and households in the age bracket 45-54 years. On average, gross income was significantly lower among renters than among households that owned their own home (with or without a mortgage).

### **Gross household assets**

Household assets are composed of real assets and financial assets. In general, real assets, such as property, vehicles and valuables account for the largest proportion of assets. In 2021, real assets accounted for 77% of all assets held by households in Luxembourg and their average value was €1,109,000 per household. Vehicles were the most common real asset (owned by 85% of households) followed by the main residence (owned by 66% of households). Other real estate property was owned by 30% of households and valuables by 28%. These shares are similar to those in 2018. In terms of value, the two most important real assets were the household main residence (57% of the value of real assets) and other real estate property

(34%). Other components accounted for much less: 5% for self-employed business wealth, 2% for vehicles and 1% for valuables.

In 2021, financial assets accounted for 22% of all assets held by households. In terms of value, financial assets were composed of bank deposits (36%), risky assets such as mutual funds (30%) or listed shares (13%), and other financial assets (21%), including shares in unlisted companies, accounts managed by investment specialists, loans to friends or family, private companies or government bonds. Deposits were the most widely held type of financial asset, owned by 91% of households. The average value of financial assets was €322,000 per household.

### **Household debt and vulnerability**

In 2021, just over half of all households were in debt (54%, similar to the 53% in 2018). Almost a third of households had mortgage debt, while just over a third had non-mortgage debt. In terms of value, mortgage debt accounted for the largest share of total household debt (91%). On average, the value of total debt increased by 54%, from €105,000 per household in 2018 to €161,000 in 2021. The share of households with consumer loans remained virtually unchanged between 2018 and 2021.

Most household debt indicators did not change significantly from 2018 to 2021. In particular, the median values of the debt-to-total assets ratio and the loan-to-value ratio remained fairly stable between 2018 and 2021. When the survey was conducted at the end of 2021, mortgage interest rates were still at a very low level, so the ratio of mortgage service to income hardly changed compared to 2018. However, the median value of the debt-to-income ratio increased substantially, from 96% to 133%, reflecting faster growth in mortgage debt, which is linked to property prices, than in household income. Among indebted households, there was also an increase in net liquidity relative to gross income, which could be explained by the good stock market performance between 2018 and 2021, as well as “involuntary” savings during the pandemic.

## Household net wealth

In 2021, the median value of household net wealth (after deduction of debt) was €718,000. Compared to 2018, this represents an increase of almost 44% in nominal terms and 37% in real terms (after adjusting for consumer price inflation).

These increases in net wealth mainly reflect gains by households who owned their main residence, thanks to the rise in property prices. More than two-thirds of households in Luxembourg own their home, and the median value of their home rose by 31% between 2018 and 2021. Although this price change covers all homes and not just those that were sold, it is fairly close to the change in STATEC's official house price index (based on acquisitions of dwellings), which rose by 44% between 2018 and 2021.

For financial assets, the average value also rose considerably, from €121,000 per household in 2018 to €322,000 in 2021. The share of households holding mutual funds doubled, from 12% to 24%, while the share holding publicly listed shares increased from 8% to 18%.

The distribution of net wealth, as measured by the Gini coefficient, was virtually unchanged since 2018. In 2021, the wealthiest 5% of households owned around 34% of the net wealth of all households, and the wealthiest 20% owned almost two-thirds, which was similar to the situation in 2018.

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## 1. Introduction

This report presents the main results of the fourth wave of the Luxembourg Household Finance and Consumption Survey (LU-HFCS) conducted in 2021. This representative survey collects detailed data on assets, liabilities, income and consumption at the level of individual Luxembourg households. Individual data are indispensable to analyse the distribution of income, wealth and debt across the population. In Luxembourg, the LU-HFCS is the only source of detailed information on assets and liabilities (as well as income) at the level of individual households.<sup>1</sup>

The 2021 wave of the LU-HFCS was subject to two important changes. First, the sampling frame was extended to include households not affiliated with the Luxembourg social security system. Mostly, these are resident households whose members work in EU institutions or other extraterritorial organisations. Thanks to the improved sampling frame, the coverage of the target population increased from approximately 90% to 100%. Second, the COVID-19 pandemic, which started in early 2020, required some important changes to the conduct of the 2021 survey wave. Most notably, the survey mode was changed from Computer-Assisted Personal Interviews (CAPI) to Computer Assisted Web Interviews (CAWI). While the former entails specifically trained interviewers visiting the households to help them complete the survey, the latter is a self-administered interview through an online questionnaire completed via the internet. Both these changes affected the characteristics of the participating households, reducing comparability to previous survey waves. This report emphasises distributional aspects, as well as the composition of assets and liabilities, wealth and income for the total sample. Comparisons for various sub-populations, especially those related to characteristics of the household's reference person (e.g. age class, level of education) are kept at a minimum in the report.

The 2021 questionnaire included an entire section focussing on the effects of the COVID-19 pandemic on households in Luxembourg. Results suggest that in most cases the pandemic only had a limited impact on gross household income. Twelve percent of households reported a decline in gross income averaging nearly 9%. Regarding consumption, 44% of households reported that they adjusted their expenditure, in part because of mobility restrictions aimed at containing the virus. 27% of households reported that they had reduced their consumption expenditure, generally leading to an increase in yearly savings, since incomes remained

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<sup>1</sup> For a comprehensive list of publications using this data or data from its accompanying survey among cross-border commuters to Luxembourg, see Appendix A.

relatively stable. Overall, 33% of households in Luxembourg reported an increase in yearly savings, while 19% reported a decline.

The impact of the pandemic on income, consumption and yearly savings varied across the Luxembourg population. Generally, households with higher net incomes or net wealth were less negatively affected or more positively affected than poorer households. Similarly, households with higher net income or net wealth were more likely to experience increases in their financial assets. While average consumption expenditure decreased for all households, the decline was considerably less for low-income households. As a result, poorer households were more likely to report lower yearly savings.

Turning to the main results of the 2021 survey, the median level of gross household income<sup>2</sup> reached almost €90,000 and the mean reached €116,000. The composition of gross income, that is to say the relative contribution from different sources, was stable between 2018 and 2021. Household gross income varied substantially across population groups, with the highest levels among households where the reference person had a high level of education and was 45–54 years old. Gross income was substantially higher among homeowners (with or without a mortgage) than among renters.

The median level of household net wealth reached €718,000 in 2021 (almost a 44% increase in nominal terms since 2018). In real terms, i.e. after adjusting for consumer price inflation, this is still a 37% increase. The average value of net wealth increased 41% in nominal terms to reach to €1,270,000, (34% increase in real terms).

This sharp increase in net wealth reflects increases in both real assets and financial assets, following rapid increases in real estate prices and a strong stock market performance between 2018 and 2021, as well as “involuntary” savings during the COVID-19 pandemic. For example, more than two-thirds of Luxembourg households own their home, and the median value of their homes increased by 31% between 2018 and 2021, which is in line with the increase in the general level of house prices in Luxembourg. For example, STATEC reports a 44% increase in housing prices between 2018 and 2021.<sup>3</sup>

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<sup>2</sup> Gross income is before deduction of income tax, social security contributions or other payments.

<sup>3</sup> See STATEC – Short-term indicator C, Acquisition prices for dwellings, No. 02/2022.

Wealth inequality, as measured by the Gini coefficient, remained essentially unchanged. The top 5% of households owned about 34% of total net wealth in 2021, while the top 20% owned almost two-thirds, which is similar to 2018 or 2014.

In 2021, 54% of households were indebted, which is marginally higher than in 2018. Almost one third of households held mortgage debt and slightly more than one third held non-mortgage debt. While the share of indebted households increased marginally, the average level of debt across all households increased by more than 50% over the same period. This increase reflects rising amounts of both mortgage debt and non-mortgage debt. Among households holding mortgage debt, the volume of this debt increased by 47% on average and by 36% at the median. Among those holding non-mortgage debt, the volume of this debt increased by 63% on average and 59% at the median.

In general, the debt burden indicators changed little between 2018 and 2021. While mortgage debt increased with real estate prices, household incomes rose much less. As a result, the median value of the debt-to-asset ratio or outstanding loan-to-value ratio changed little. However, the median value of the debt-to-income ratio rose significantly. When the survey was conducted at the end of 2021, interest rates were still very low so the (mortgage) debt service-to-income ratio hardly changed since 2018. For indebted households, net liquid assets increased faster than gross income, which reflect the peak in equity markets at the end of 2021 and “involuntary” saving during the pandemic. However, the sharp interest rate increases in 2022 and 2023 and their impact on housing affordability and on house price dynamics are not yet reflected in the end-2021 HFCS figures.

This report serves as background reference document for further economic analysis and research with LU-HFCS data. For selected statistics, it also provides comparisons with results from previous waves. For convenience, this report follows closely the structure and content of the second and third wave reports (Girshina, et al., 2017; Chen et al., 2020). It is divided into the following sections. Section 2 provides a general overview of the dataset and sample characteristics, as well as a discussion of how results should be interpreted. Section 3 is devoted to a detailed presentation of household balance sheets, including net wealth, composition of asset and liabilities, income, measures of household debt burden and inequality. Section 4 presents new evidence on how COVID-19 affected Luxembourg households, in terms of employment, income, consumption and savings. Section 5 describes the survey mode, fieldwork and data treatment (editing, imputation, weighting and

anonymization of the data collected). It also includes a comparison of the HFCS results with other external data sources. Section 6 concludes.

## **2. General overview and interpretation of results**

The LU-HFCS is a cross-sectional survey, conducted by the Banque centrale du Luxembourg (BCL) jointly with the Luxembourg Institute of Socio-Economic Research (LISER) since the first wave in 2010. The LU-HFCS is part of the Eurosystem Household Finance and Consumption Survey (HFCS) (HFCN, 2013; HFCN, 2016; HFCN, 2020; HFCN, 2023). 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. Hence, when comparing assets or liabilities over time, one should be aware that households in a specific sub-group will differ across waves. The household characteristics refer to the reference person, identified as the financially knowledgeable person (FKP) in the household.<sup>4</sup> In the fourth wave, the reference year for household socio-demographic and economic characteristics, assets and liabilities is 2021 (referring to the time of the interview). The reference year for the income variables is 2020. All monetary figures in the text, tables or graphs are rounded depending on their level. Values in Tables and Figures below €1,000 are rounded to the nearest 10 euro, values above €1,000 and below €100,000 are rounded to the nearest €100 and values above €100,000 are rounded to the nearest €1,000.

For each type of asset or liability, the report distinguishes between the participation rate, meaning whether a household holds this particular type of asset or liability and conditional values, generally meaning either the median or the average value 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 assets and liabilities relative to the total value of assets and liabilities. The composition of assets and liabilities reflects both participation decisions and conditional values.

### **2.1. The 2021 survey and previous waves**

The 2021 gross sample also included Luxembourg residents employed by EU institutions and other international organisations (e.g. the European Commission, European Investment Bank, NATO, etc.). This sub-population was not directly sampled in the previous three waves (2010,

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<sup>4</sup> In 2021, households were asked to self-report who the financially knowledgeable person was, while in previous waves this person was identified with help of the interviewer.

2014 and 2018), as it is not included in the Luxembourg social security register (IGSS). In 2021, these households were sampled through the *Registre National des Personnes Physiques* (RNPP), improving the coverage of the target population from around 90% to 100%. Results presented in this report for 2021 refer to the total sample unless indicated otherwise. For a discussion of how the sampling of these households affects aggregate net wealth statistics, see Section 5.3.

The COVID-19 pandemic, which started in early 2020, required the survey to switch from Computer Assisted Personal Interviews (CAPI) to Computer Assisted Web-based Interviews (CAWI). It was no longer feasible to send interviewers into people's homes to conduct the HFCS. This imposed switch in the survey mode meant that participating households had to complete the questionnaire themselves online. The change inevitably resulted in a drop of the response rate, as interviewers could no longer knock on people's doors to establish contact and encourage them to take part in the survey.

Both the inclusion of households not affiliated with Luxembourg social security and the switch to CAWI mode affected the net sample composition in 2021, reducing comparability to earlier waves. For example, in 2021, more highly educated households completed the survey. Households not affiliated with social security are typically highly educated. In addition, the online survey mode in 2021 may favour highly educated households, who are more likely to have access to a computer with an internet connection. The weighting procedure (see Section 5.6.2) can only partly correct for these changes in the sample composition.

Therefore, this report only compares main aggregates from the 2021 wave to previous waves. Comparisons across waves will be limited to specific components of assets, debt and income across waves. The appendix provides detailed tables across waves for different sub-groups.

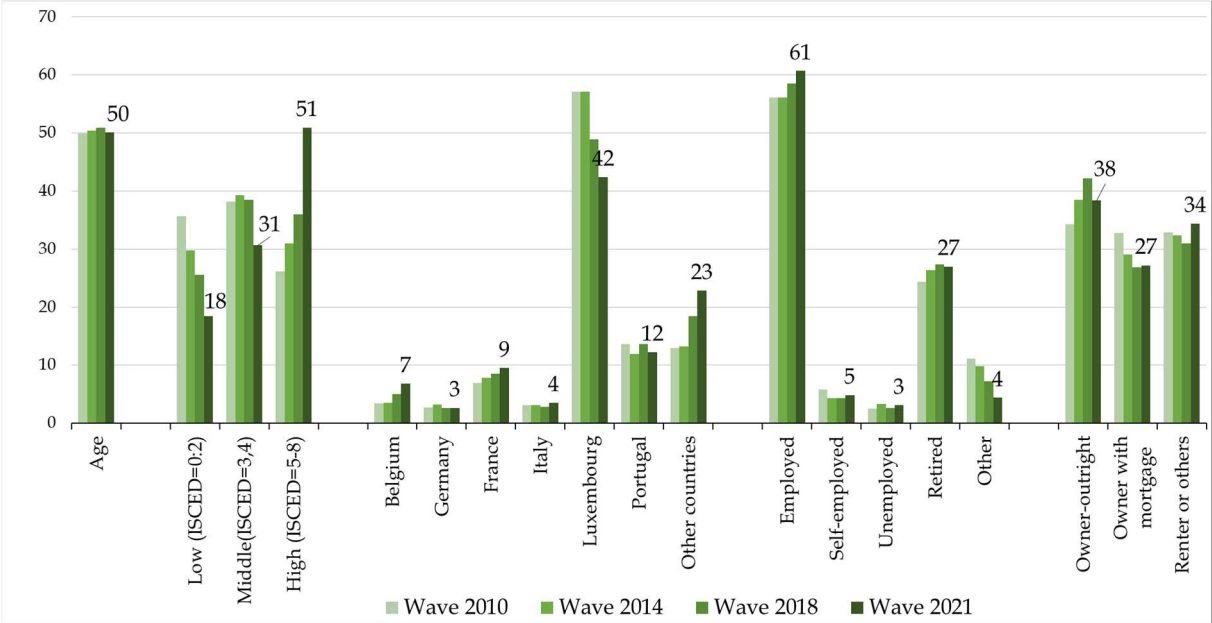
## **2.2. Sample characteristics**

This section presents a breakdown of basic descriptive statistics at the household level (in weighted terms) across various socio-demographic characteristics. According to the coherence and plausibility report produced by the ECB in 2023, the LU-HFCS reflects well the composition by age and gender of the Luxembourg population as reported by official statistics (European Central Bank, 2023).

In 2021, the average household in Luxembourg consisted of 2.4 individuals, of which 0.6 were dependent children (defined as persons aged 0-15 or aged 16-24 not working and living with a parent). The number of household members and children is very similar to previous waves.

The reference person for the household was 50 years old on average, and almost a year younger than in 2018. However, this difference is not statistically significant (Figure 1).

**Figure 1: Household socio-demographic characteristics, by wave**



Note: Variables refer to the reference person for the household, the financially knowledgeable person (FKP).  
 Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Error bars based on 5% significance level.

The share of households where the reference person was born in Luxembourg was 42%, which is 6 percentage points below the share in 2018. The share of households whose reference person was born abroad increases every wave. However, in 2021, 5 percentage points of this decrease result from the new sampling frame, which is extended to include households not affiliated with the Luxembourg social security system. In most of these households the reference person is born outside Luxembourg (87%). Across immigrant groups, households with reference person born in Portugal were the most common, representing 12% of all households in 2021. The second-largest immigrant group in 2021 were households where the reference person was born in France (9%), followed by Belgium (7%), Italy (4%) and Germany (3%). Collectively, these main immigrant groups represented 35% of all households resident in Luxembourg. The share of this group keeps increasing in every wave, rising by almost 10 percentage points between 2010 and 2021. The increase since 2018 is 4 percentage points, which again also reflects the inclusion of households not affiliated with the Luxembourg social security system.

Regarding employment status, 60% of households had a reference person who was employed, 5% a reference person who was self-employed, 3% were unemployed and 27% were retired. Educational attainment was distributed as follows: 18% of the reference persons have low educational attainment (ISCED=0, 1, 2), 31% medium education (ISCED=3, 4) and 51% higher education (ISCED=5-8). The distribution of educational attainment changed substantially over the four waves of the LU-HFCS. Between 2010 and 2021, the share of households with low educational attainment dropped by 18 percentage points, from 36% to 19%. The share with medium educational attainment was stable around 40% between 2010 and 2018; however, it dropped by nearly 8 percentage points between 2018 and 2021. In contrast, the share of households with high educational attainment increased substantially over time, from 26% in 2010 to 51% in 2021 (4 percentage points of this increase can be attributed to households not affiliated with the Luxembourg social security system). Between 2018 and 2021, the shift from low to high education was smaller for Luxembourg-born households than for immigrant households (Table 1). Among immigrant households, the increase in highly educated households was 22 percentage points between 2018 and 2021, while for those born in Luxembourg the share of highly educated households only increased by 4 percentage points. Hence, the overall increase in the share of highly educated households is led by households whose reference person is foreign-born and therefore mainly reflects the change in the sampling frame. Among households not affiliated with the Luxembourg social security system, 83% have a reference person with a high level of education.

While variables such as average age, household size, and gender are calibrated against external population statistics, this is not the case for educational attainment. Hence, the rather large shifts in the distribution of educational attainment are likely to be related to both the sampling frame and the change in survey mode. Also, the switch from CAPI to CAWI may favour participation by highly-educated and internet-savvy individuals, as they are more willing to complete surveys on the internet. We have no influence which household member is selected as main respondent for the survey. However, the household is asked to identify the financially knowledgeable person (FKP) to answer all questions referring to the household as a whole, such as for example questions related to assets and liabilities, etc.

**Table 1: Education by country of origin**

Education by country of origin									
In (%)	Wave 2010		Wave 2014		Wave 2018		Wave 2021		Std. Err.
	Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.	
<b>Born in Luxembourg - Education level</b>									
Low (ISCED=0:2)	32.0	(2.4)	26.9	(1.8)	21.5	(1.7)	20.1	(1.9)	
Middle (ISCED=3,4)	45.9	(2.5)	47.3	(2.0)	48.4	(2.1)	45.3	(2.3)	
High (ISCED=5-8)	22.0	(1.9)	25.8	(1.6)	30.1	(1.7)	34.6	(2.0)	
<b>Born in other countries - Education level</b>									
Low (ISCED=0:2)	40.5	(2.7)	33.6	(1.9)	29.4	(1.8)	17.1	(1.8)	
Middle (ISCED=3,4)	27.8	(2.6)	28.5	(2.1)	29.0	(2.0)	19.2	(1.8)	
High (ISCED=5-8)	31.7	(2.3)	37.8	(2.0)	41.6	(1.9)	63.7	(2.1)	

Note: Variables refer to the reference person of the household (Financially Knowledgeable Person, FKP).

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

### 2.3. Inflation adjustment

Unless explicitly indicated, values referring to previous waves (2010, 2014 and 2018) are nominal values, i.e. 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 in Luxembourg, where, in 2021, 13.0% of household final consumption expenditure took place abroad<sup>5</sup>, since many often shop across the border to take advantage of price differences (e.g. Mathä et al., 2017). Tables and figures throughout this report provide nominal values for 2021, and non-adjusted values for 2010, 2014 or 2018. Where this paper provides real term comparisons (in the text only), inflation adjustment uses the country-specific *Harmonised Index of Consumer Prices*.<sup>6</sup> Consumer price inflation is calculated by comparing the average level of the HICP index in the reference year 2021 relative to that in 2010, 2014 or 2018. Thus for Luxembourg comparisons, monetary values for 2010, 2014 and 2018 waves are inflated by the corresponding factors 1.198 [=1.092 x 1.043 x 1.052], 1.098 [=1.043 x 1.052] and 1.052.

### 2.4. Multiple imputation and statistical uncertainty

As the underlying data are multiply imputed (see sub-section 5.6.1), this report presents results, such as shares, means and medians, that are always calculated across five implicates using 1,000 replicate weights. This report presents point estimates as the average of the point estimates across the five implicates, and variance estimates account for both between- and within-imputation variance. This accounts properly for sampling uncertainty and the

<sup>5</sup> See Luxembourg National Accounts by STATEC, table E2106, accessed 11/11/2022.

<sup>6</sup> The data used comes from Eurostat (prc\_hicp\_aind). The inflation adjustment method and the index used in this report ensures comparability with ECB figures and previous results, as the same index was used in the technical report of waves 2014 and 2018 (Girshina et al., 2017; Chen Y. at al., 2020), and in the ECB results report of wave two (HFCN, 2016).



sampling design features. The median, its standard error and confidence interval is calculated using the STATA command MEDIANIZE, version 0.4.<sup>7</sup> Point estimates are reported with standard errors and confidence bands to indicate their precision. For example, if a particular value appears to have changed from one wave to another, the standard errors help to infer whether the change is statistically significant. 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.

### 3. Main findings

#### 3.1. Household net wealth

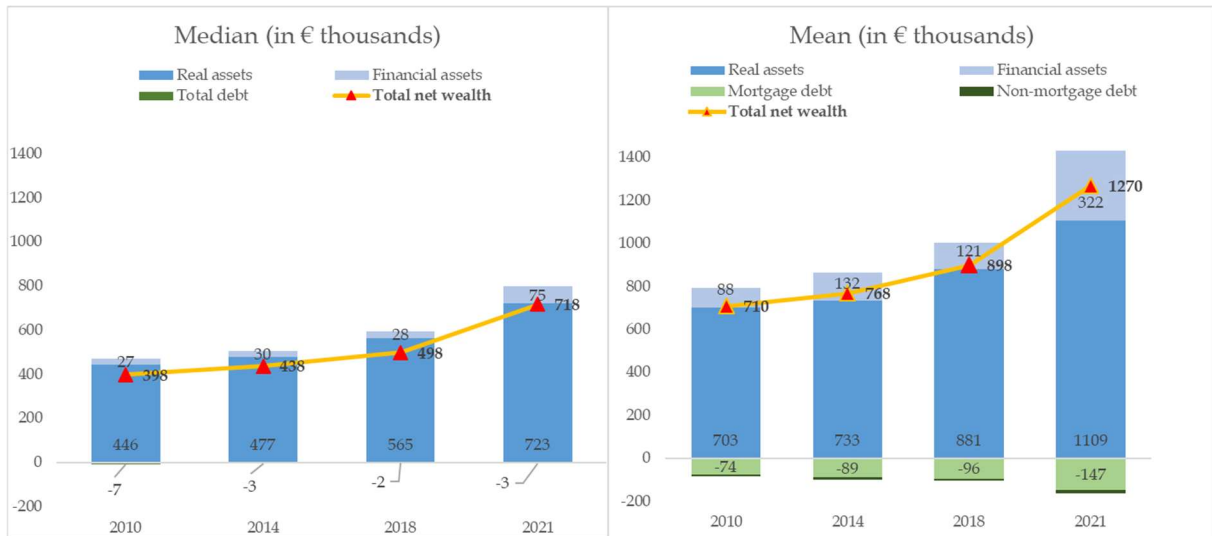
Total net wealth is defined as the sum of real assets (including housing) and financial assets (excluding public and occupational pensions) minus all liabilities (debt including mortgages). In 2021, median household net wealth was nearly €718,000, a nominal increase of 44% since 2018, when it was €498,000 (a 36% increase after adjusting for inflation). Average household net wealth was €1,270,000 in 2021, a nominal increase of around 41% compared to 2018 when it was €898,000 (Figure 2; Table 2). Adjusting for inflation, the increase in average net wealth is 34%. Both nominal and inflation-adjusted changes between 2018 and 2021 are statistically significant.

Total assets consisted of real assets (including real estate, business wealth, vehicles and valuables) and financial assets. Real assets (€1,109,000 on average in 2021) were far more important than financial assets (€322,000), partly because of the high level of real estate prices in Luxembourg. The sharp increase in net wealth from 2018 to 2021 reflects increases in the value of real assets as well as financial assets (Figure 2 and Figure 4) linked to rapid increases in real estate prices, a strong stock market performance between 2018 and 2021, as well as “involuntary” savings during the pandemic.

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<sup>7</sup> We would like to thank Sébastien Perez-Duarte from the ECB for sharing his program with us.

**Figure 2: Household net wealth**



Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted. Total financial assets exclude public and occupational pension plans.

The mean value of real assets rose by 26%, representing more than 61% of the increase in the mean of net wealth. The median value of real assets increased 28%, reaching €723,000 as depicted in Table 2. This change in real assets represented 72% of the increase in median net wealth. Within real assets, the value of real estate plays a crucial part (see section 3.2.1). The household main residence (HMR) increased in value by 24% on average, nearly a €124,000 increase, while other real estate property (OREP) increased in value by 88% on average, a €177,000 increase.

On the liability side, total debt increased by more than 50% in value to reach an average level of €160,900. HMR mortgages increased in value by 34% on average (an increase of about €24,400). The outstanding amount of OREP mortgages increased by 54% (an average increase of €26,500), hence contributing more than 50% to overall increase in mortgage debt. This result contrasts with previous waves, when the growth in total mortgage debt was mainly driven by HMR mortgage debt (For more details see section 3.3.1).

**Table 2: Composition of total net wealth, mean and median**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Median	Std. Err.	Median	Std. Err.	Median	Std. Err.	Median	Std. Err.
Total real wealth	446,000	(18,000)	477,000	(15,500)	565,000	(16,700)	723,000	(26,800)
Total financial assets	26,700	(3,200)	30,100	(2,300)	28,200	(2,500)	75,400	(5,900)
Total gross wealth	494,000	(19,900)	539,000	(17,000)	634,000	(16,500)	852,000	(32,700)
Total debt	7,000	(1,800)	3,100	(1,300)	1,600	(970)	3,400	(2,100)
Total net wealth	398,000	(17,100)	438,000	(17,500)	498,000	(23,400)	718,000	(30,700)
Variable	Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.
Total real wealth	703,000	(56,700)	733,000	(45,700)	881,000	(44,300)	1,109,000	(47,900)
Total financial assets	88,400	(7,700)	132,000	(16,500)	121,000	(10,200)	322,000	(35,600)
Total gross wealth	792,000	(59,100)	866,000	(54,200)	1,003,000	(47,600)	1,431,000	(66,800)
Total debt	81,800	(5,100)	97,300	(4,900)	105,000	(5,400)	161,000	(14,300)
Total net wealth	710,000	(58,200)	768,000	(53,400)	898,000	(46,800)	1,270,000	(62,800)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Total financial assets exclude public and occupational pension plans.

### Net wealth by population group

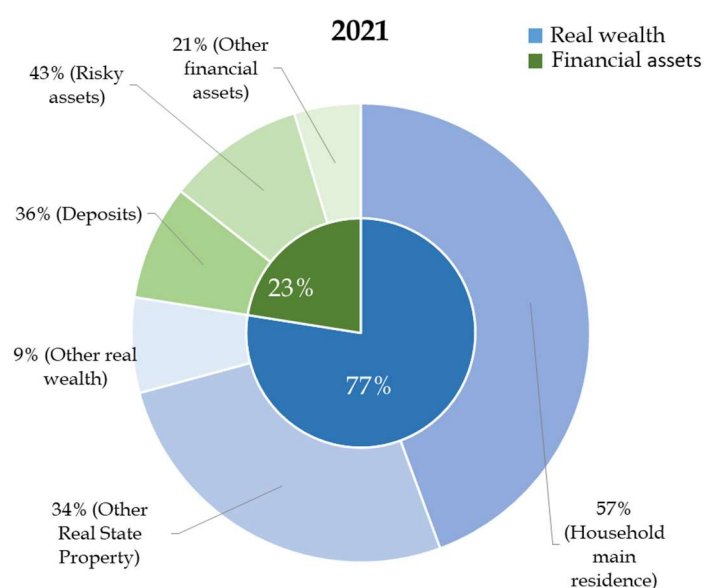
Mean and median net wealth vary substantially across population groups. Table C2 and Table C3 in the Appendix report the median and mean of net wealth for different population groups. Both median and mean net wealth generally increase with age. For the median, the difference is particularly large between the two age groups [35-44] and [44-54] years of age. With respect to the mean, the difference is particularly large between the groups [55-64] and [65+] years of age. Households whose reference person is male tend to be substantially richer than households with a female reference person. Both median and mean net wealth is lowest for 1-person households. Moreover, a higher level of educational attainment is associated with higher median and mean net wealth.

Net wealth is correlated with housing tenure choice (Table C2 and Table C3). Outright homeowners are substantially wealthier than homeowners with a mortgage, who in turn are substantially wealthier than renters. This result was already reported for previous wave of the LU-HFCS (Girshina et al., 2017; Chen et al., 2020), as well as for other euro area countries.

### 3.2. 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 and valuables. Together, these real assets are generally the most important component of the overall household portfolio. In Luxembourg, real assets accounted for 77% of all gross assets (i.e. before deducting any mortgages or loans) held by households in 2021 (Figure 3). Financial assets, which include deposits, mutual funds, publicly quoted shares, pension and insurance accounts, accounted for 23% of all gross assets. We present results for real and financial assets separately, starting with real assets.

**Figure 3: Gross wealth composition, wave 2021**



Source: Own calculations based on the LU-HFCS wave 2021; data are multiply imputed and weighted.

### 3.2.1. Real assets

In 2021, the most widespread real asset among Luxembourg households was Vehicles (85% of households), followed by the Household Main Residence (HMR) (66% of households), Other Real Estate Property (OREP) (30%) and Valuables (28%) (Figure 4, left panel).

Across all households, the gross value of real assets (i.e. before deducting any mortgages or loans) was nearly €1,109,000 on average in 2021, an increase of 26% compared to 2018 (Figure 4). In 2021, the HMR and OREP together accounted for 91% of total real assets, a share that increased by 10 percentage points since 2018. For other real assets, the share declined by 7 percentage points, reflecting a substantial decrease in business wealth associated with self-employment. However, this decrease is to be met with caution, as large swings in the participation rate as well as median and mean values are associated with high uncertainty.<sup>8</sup>

Among households that owned real assets, the median value of their assets in 2021 was €787,000 in 2021, a 31% increase compared to 2018, while the mean value was €1,182,000, a 26% increase (Figure 4).

Regarding individual components of real assets, its main components HMR and OREP both increased significantly in value from 2018 to 2021. First, we note that the share of homeowners

<sup>8</sup> The value of business wealth associated with self-employment is difficult to measure given a low participation rate (7% of households in 2021) and wide confidence intervals. The recorded decrease may also reflect the exceptionally high figure for 2018, which seems like an outlier when compared to figures in 2010, 2014 or 2021.

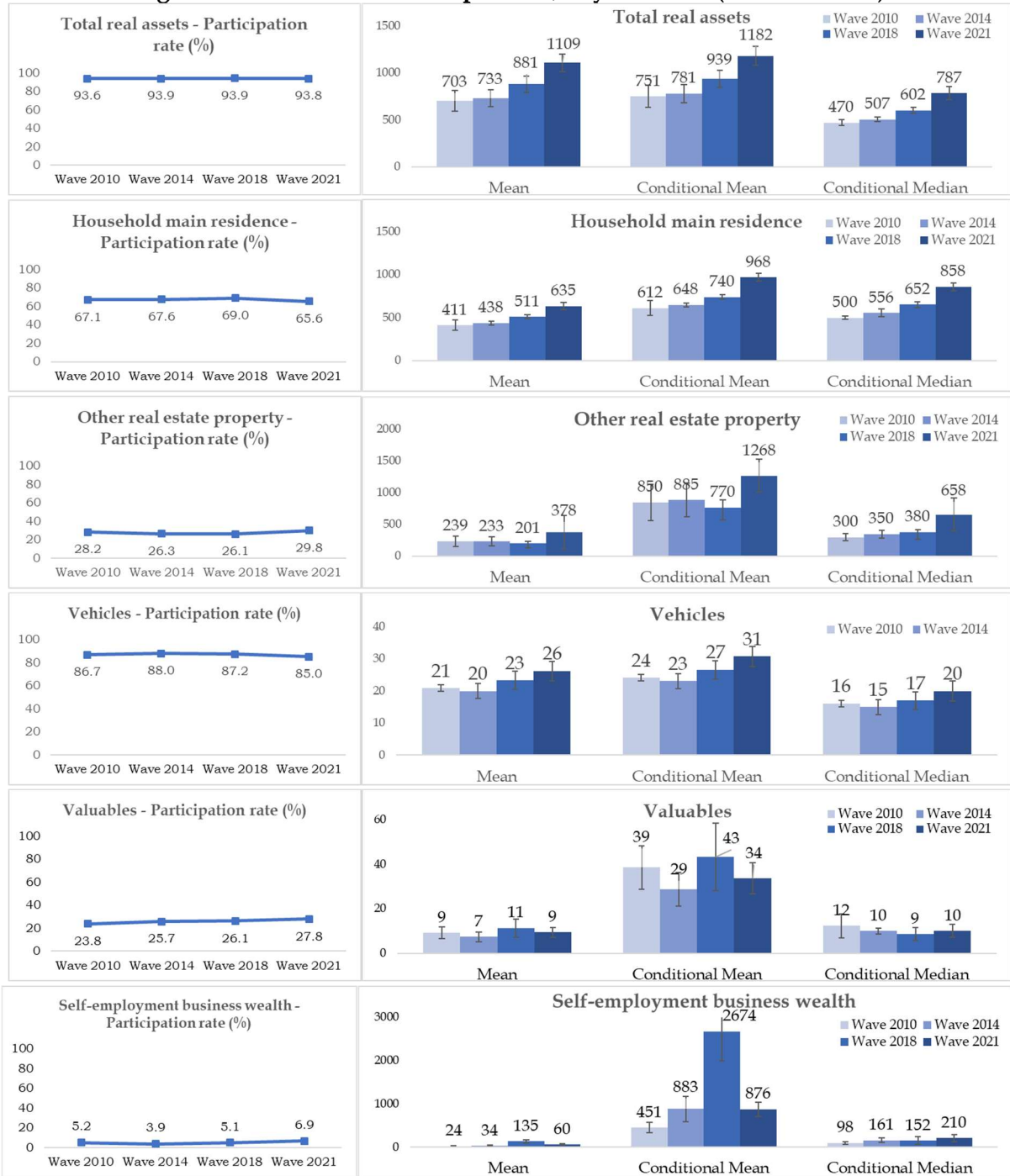
declined and the share of OREP owners increased. This outcome directly stems from the sampling of households not affiliated with the Luxembourg social security system, most of which are foreign-born. These households tend to have a higher probability of renting their HMR (51%) and owning OREP (52%). A rather substantial share of these households (25%) hold temporary contracts. If these households were excluded from the sample, the HMR ownership rate would be 68% and the OREP rate would be 27%, much closer to the values reported for 2018.

Among homeowners, the median value of the HMR was €858,000 in 2021, while the mean value was €968,000. This represents a 31% increase from the median level in 2018, after a 17% increase from 2014 to 2018. The mean level increased 32% from 2018 to 2021 after a 14% increase from 2014 to 2018. These price increases reported by homeowners are in line with official Luxembourg house price statistics. For example, STATEC's official acquisition price index (including both new and existing dwellings) grew 43.6% from 2018 to 2021.<sup>9</sup> As we show in Section 5.7.2, HFCS estimates on the value of the HMR are well in line with external data sources. The median value of OREP among households who owned them was €658,000 in 2021, while its mean value was €1,268,000. Both represent significant increases compared to 2018. This is partially related to the new sampling, as resident households not affiliated with the Luxembourg social security system may now refer to their former HMR abroad as OREP. In addition, the median and average value of vehicles also increased significantly from 2018 to 2021. For valuables and self-employment business wealth, the median values did not change significantly from 2018 to 2021, while their average value declined.

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<sup>9</sup> STATEC - Indicateurs rapides, Series C - Acquisition prices for dwellings - annual series. <https://statistiques.public.lu/en/themes/economie-finances/indicateurs-court-terme.html>.

**Figure 4: Real assets and components, key statistics (in € thousand)**

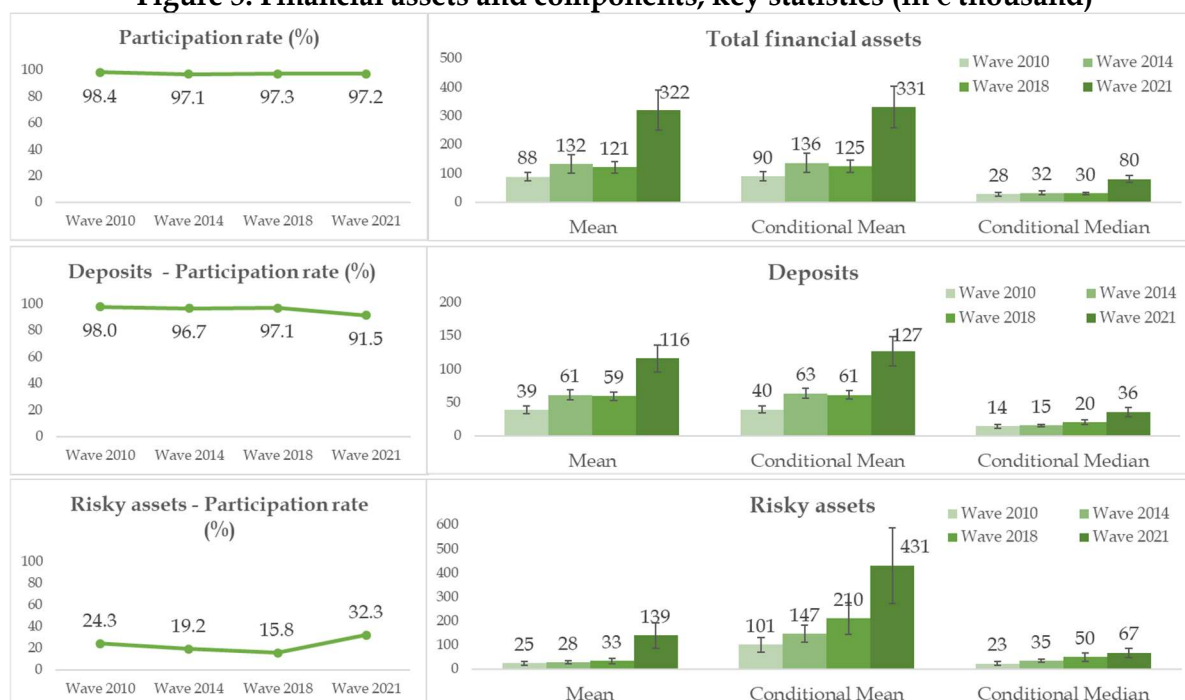


Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Error bars denote 95% confidence interval.

### 3.2.2. Financial assets

Financial assets represented 23% of households' total gross assets in 2021. Financial assets are composed of deposits (36%), risky assets (43%), and other financial assets (21%).

**Figure 5: Financial assets and components, key statistics (in € thousand)**



Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Error bars show 95% confidence interval. Deposits include sight and savings accounts. Risky assets include mutual funds and listed shares.

Deposits remained the most widespread type of financial asset, held by 91% of households in Luxembourg (Figure 5). Deposits are composed of sight accounts (held by 85% of households) and savings accounts (held by 58%).

Risky assets, including mutual funds and listed shares, were held by 32% of households in 2021, up from 16% in 2018. Among households that owned risky assets, their mean value more than doubled since 2018 to reach €431,000 in 2021. Therefore, the mean value of risky assets for the population as a whole increased both because more households were holding risky assets and because the value of those assets was higher among the households who held them. In addition, more households held mutual funds (up to 24% in 2021 from 12% in 2018) and shares (up to 18% in 2021 from 8% in 2018). Positive stock market developments likely encouraged higher participation and contributed to the increase in mean value. From end 2018 to end 2021, the MSCI World stock market index grew by 72%, increasing the book value of risky assets, which attracted more households during the period of low interest rates. Households may also have invested more in deposits and risky assets because of

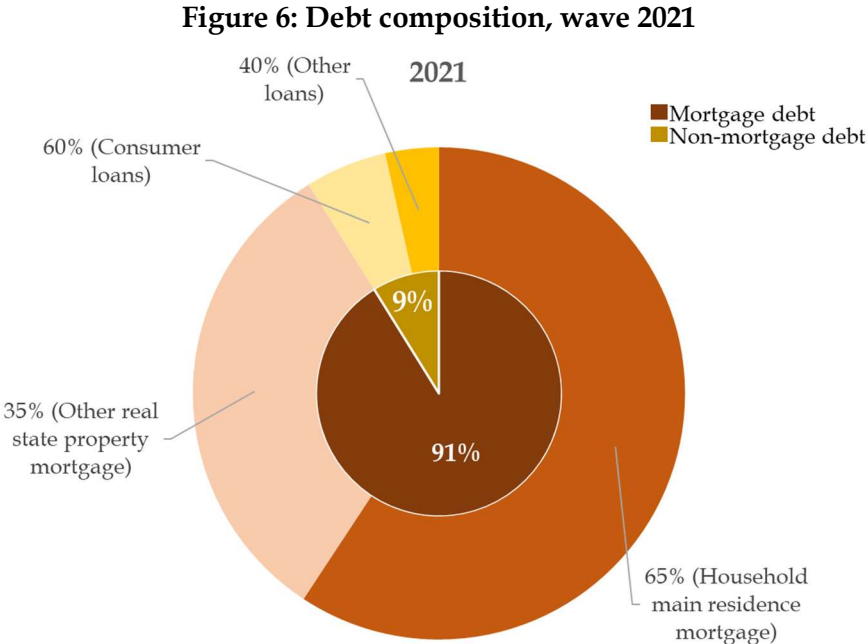


“involuntary” savings during the pandemic, since the savings rate reached 24% in 2020 and 18% in 2021, well above pre-pandemic levels.<sup>10</sup>

Other financial assets include voluntary pensions and life insurance, owned by 61% of households in 2021, with a mean value of €35,600 over the whole population.<sup>11</sup> Remaining financial assets (such as bonds held by 2.1%, non-self-employed business wealth held 3.7%, managed accounts held by 1.3% and money owed to the household held by 8.2% and other assets held by 3.9%) averaged in total €31,100 in 2021.

**3.3. Household debt**

Household debt is composed of mortgage debt and non-mortgage debt (Figure 6). Mortgage debt accounted for 91% of total household debt in 2021, unchanged from 2018. A distinction can be drawn between mortgage debt related to the household main residence (HMR) and mortgage debt related to other real estate property (OREP). HMR mortgage debt accounted for 65% of mortgage debt among households in Luxembourg in 2021.



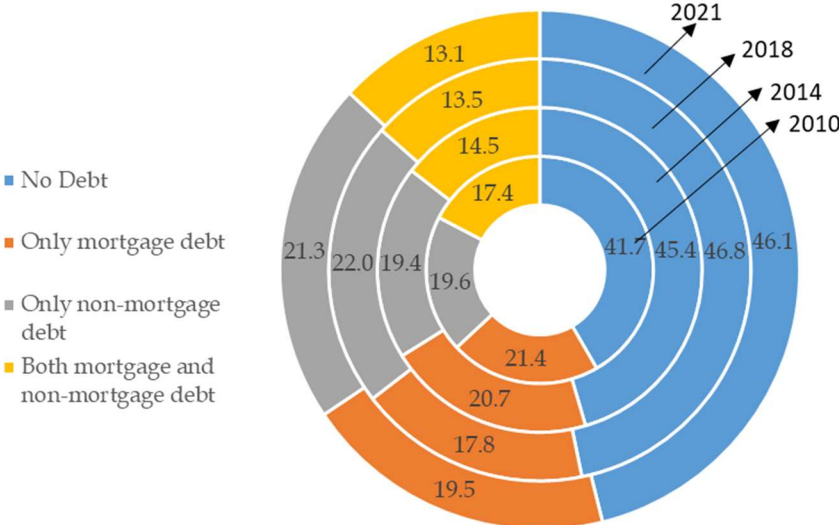
Source: Own calculations based on the LU-HFCS wave 2021; data are multiply imputed and weighted.

<sup>10</sup> Source Eurostat: Household saving rate (online data code: TEC00131); <https://ec.europa.eu/eurostat/databrowser/view/tec00131/default/table?lang=en>  
<sup>11</sup> There was a redesign of the 2018 questionnaire, introducing one complex loop across all different types of pension plans (public, occupational and private). This complexity reduced substantially the participation rate and reported amounts in 2018. The 2021 questionnaire followed more closely the questionnaire design of 2014, focussing this time exclusively on private pensions and life insurance.



Figure 7 breaks down the population of households according to the type of debt held for each of the four 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 2021, 54% of households in Luxembourg held some type of debt. This share is similar to that in 2018 (53%), although there have been some minor changes in share of households with only mortgage debt, with only non-mortgage debt and with both types of debts.

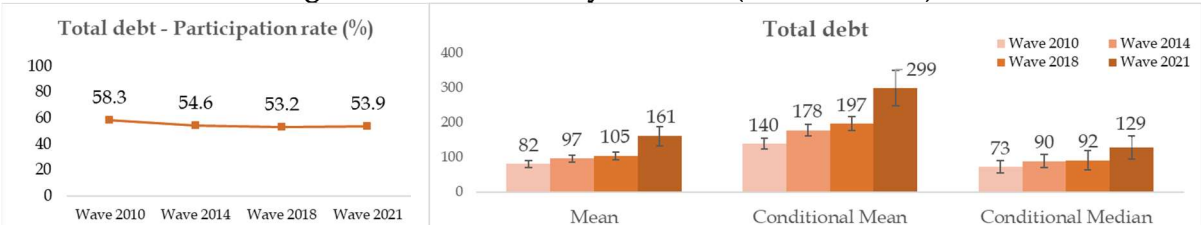
**Figure 7: Type of debt by survey year (% of households)**



Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; Data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

Figure 8 provides more detail concerning these changes in total debt since 2010. In 2021, the share of households holding debt remained stable while the outstanding amount of debt among indebted households continued to increase. Among indebted households in 2021, the conditional mean was €299,000 and the median was €129,000. Figure 8 shows an increase in outstanding debt for both mean and median.

**Figure 8: Total debt, key statistics (in € thousand)**

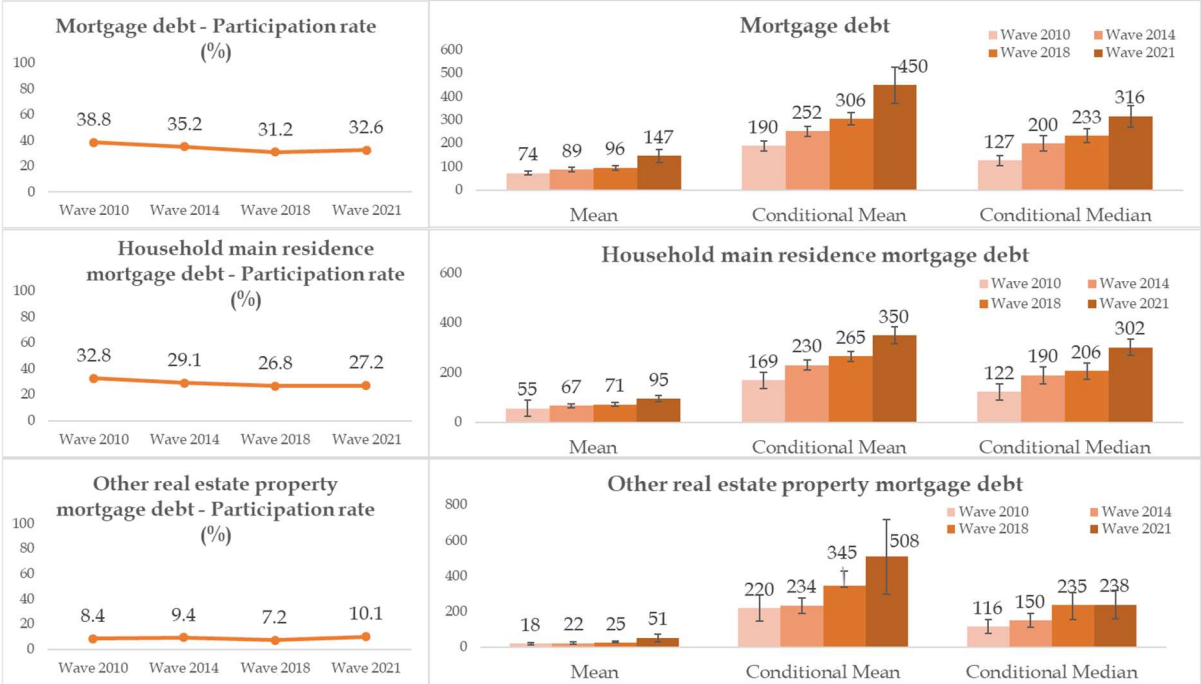


Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Error bars show 95% confidence interval.

### 3.3.1. Mortgage debt

In 2021, the share of mortgage debt in total debt (91%) (Figure 6) remained unchanged compared to 2018 or 2014. The participation rate (33%) was broadly unchanged (+1.4 pp.). Focusing on HMR mortgage debt the participation rate remained around 27%, while for OREP mortgage debt the participation rate increased slightly (2.9 pp.). None of these changes is statistically different from zero, except the change for OREP mortgage debt.

**Figure 9: Mortgage debt and components, key statistics (in € thousand)**



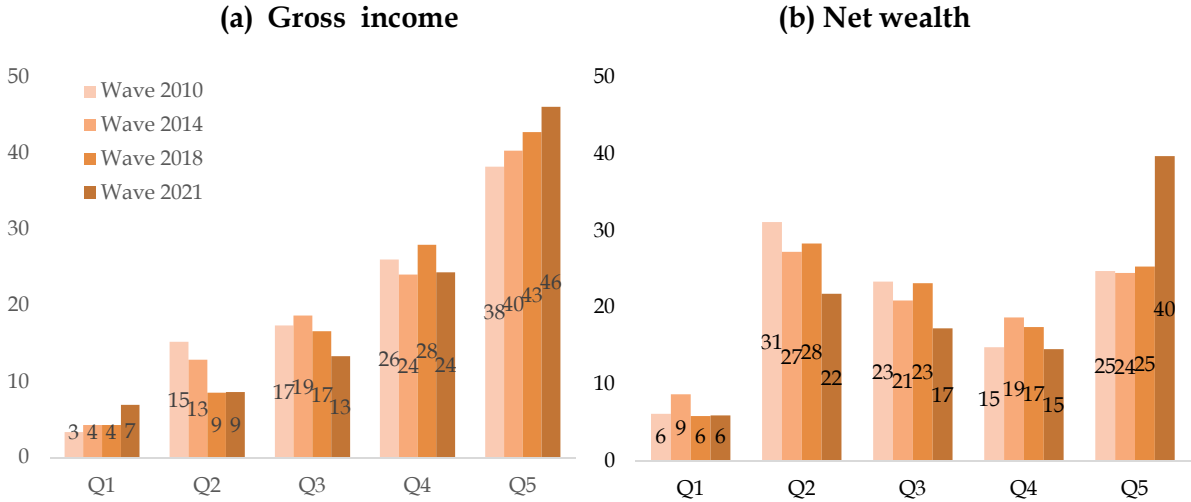
Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Error bars show 95% confidence interval.

Among households with mortgage debt, the average outstanding amount was €450,000 in 2021, a 47% increase compared to 2018. The median amount was €316,000 in 2021, a 36% increase compared to 2018.

Across all households, average mortgage debt increased by 53% (around €51,300) between 2018 and 2021, driven by the increase in both HMR mortgage debt (€24,400) and in OREP mortgage debt (€26,500). Among households with HMR mortgage debt, the outstanding conditional mean was €350,000 in 2021, which is 32% higher than in 2018. Among households with OREP debt, the average outstanding amount was €508,000 in 2021, a 47% increase since 2018. The conditional median amount increased by 47% for HMR debt while it remained broadly unchanged for OREP debt.

Looking across *income* quintiles, in 2021 debt increased substantially across the whole distribution. Figure 10 plots the share of total mortgage debt held by households in different quintiles of the gross income distribution (left panel) or the net wealth distribution (right panel). In the left-hand panel, the share of outstanding mortgages increases steadily with gross income. The top two quintiles accounted for more than 70% of total mortgage debt in 2021, a share similar to the one in 2018. However, households in the bottom income quintile held only 7% of total outstanding mortgage debt in 2021, an increase by 3 percentage points compared to the three previous waves.

**Figure 10: Share of outstanding mortgage debt, by gross income and net wealth quintile (in %)**



Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

In the right-hand panel, the distribution of total mortgage debt across net wealth quintiles is more difficult to interpret. Households in the lowest quintile consistently had the lowest share of total outstanding mortgage debt (only 6% in 2018 and 2021). This also reflects a lower share of homeowners and HMR values (and therefore smaller mortgages) in this quintile. Households in the second net wealth quintile had a share of total outstanding mortgage debt of 22% in 2021. This share is 6 percentage points lower than in 2018. Households in the top net wealth quintile held about 40% of outstanding mortgage debt in 2021, nearly 8 percentage points higher than the share held in the third and fourth quintile together.

Overall, HFCS estimates for the level of mortgage debt in 2021 seem closer to those reported in the financial accounts than in the past. Total household debt calculated using the 2021 HFCS

survey represents 87% of total debt calculated using financial account information. Section 5.8 compares the two data sources in more detail.

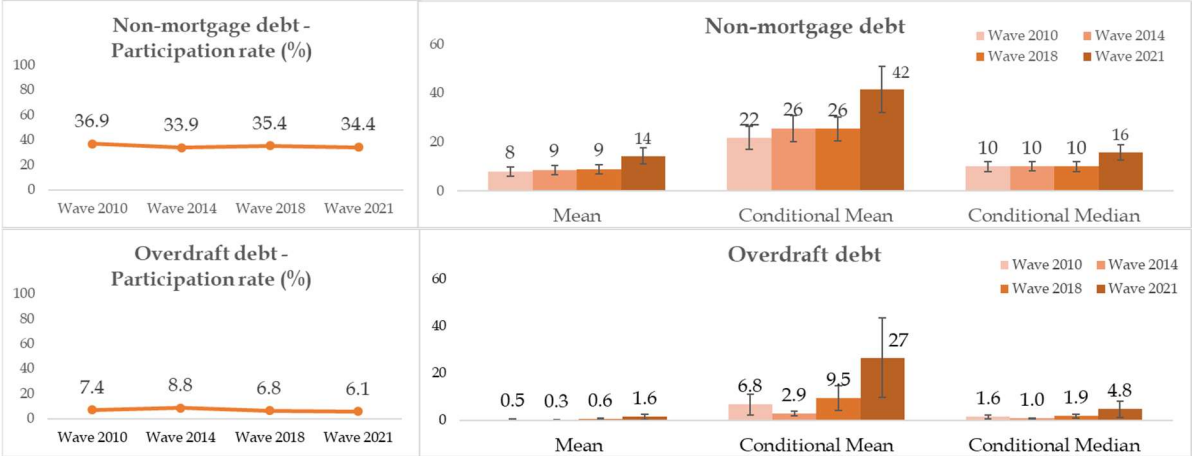
**3.3.2. Non-mortgage debt**

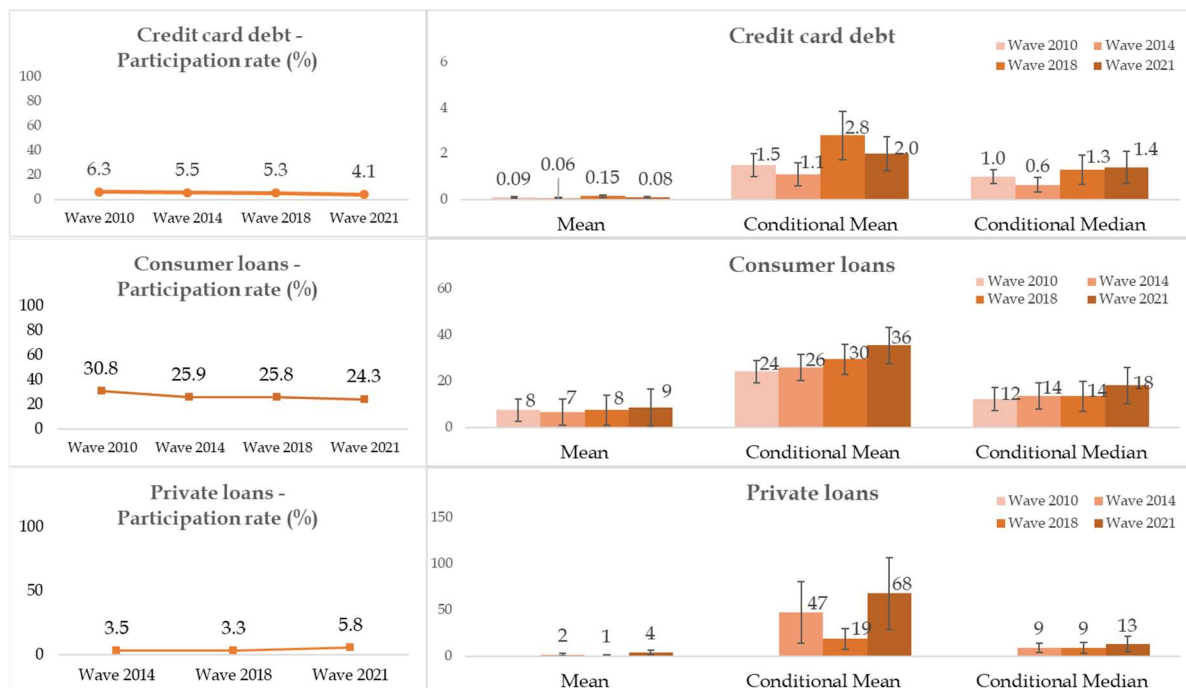
Non-mortgage debt is significantly lower than mortgage debt. In 2021, non-mortgage debt was 8.9% of total debt (Figure 6), which is comparable to 2018 when it was 8.6%. The share of households holding non-mortgage debt was 34% in 2021, almost unchanged compared to 2018 (35%). Over all households, outstanding non-mortgage debt averaged €14,300 in 2021, a €5,300 increase since 2018. Among households holding non-mortgage debt, the average value was €41,500 in 2021, a 63% increase from 2018. The median value was €15,900 in 2021, almost a 60% increase from 2018. Differences between 2018 and 2021 are statistically significant for the conditional mean and median amount.

Turning to the individual components of non-mortgage debt, the share of households with overdraft debt was broadly unchanged (6.8% in 2018 and 6.1% in 2021). The share of households with credit card debt decreased slightly (5.3% in 2018 and 4.1% in 2021). The share of households with consumer loans also decreased slightly (26% in 2018 and 24% in 2021), however, none of these changes are statistically different from zero.

Among households with overdraft debt, the average amount increased significantly from €9,500 in 2018 to €26,600 in 2021. Among households with credit card debt, the average amount was somewhat lower compared to 2018 (not statistically significant). The increase in the conditional mean of consumer loans was also not statistically significant.

**Figure 11: Non-mortgage debt and components, key statistics (in € thousand)**





Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Error bars show 95% confidence interval.

### 3.4. Household income

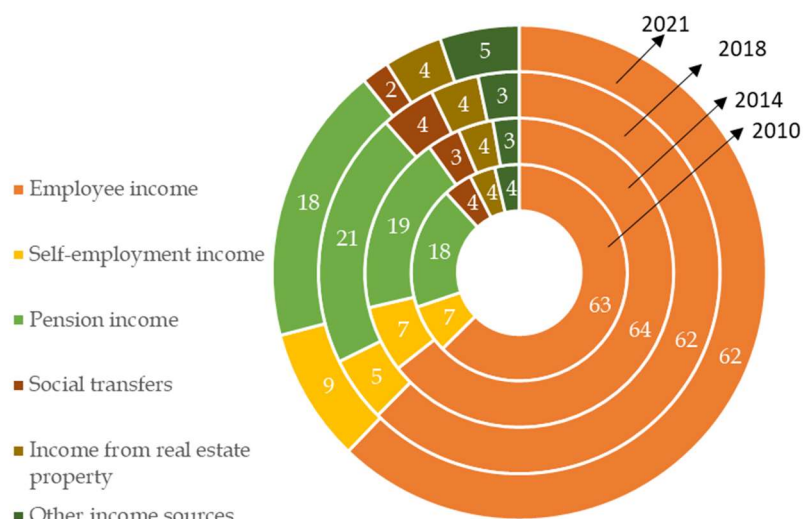
Household gross income consists of income from all sources before deducting tax payments and social security contributions. These include employment, self-employment income, pensions, unemployment and other social transfers.

In 2021, 77% of households received employee income, up slightly from 72% in 2018 (Table 3). The share of households receiving income from self-employment was 16% in 2021, 8 percentage points higher than in 2018. Almost 27% of households received a public pension in 2021, which is lower than in 2018 (around 34%). The share of households receiving social transfers was 24% in 2021, a significant decline of 19 percentage points compared to 2018. While the share of households receiving unemployment benefits increased 3.6 percentage points, the share receiving other social transfers declined 22 percentage points.

The share of employee income in total income was unchanged from 2018, at 62% (Figure 12). Among households with at least one employee, employment income averaged nearly €94,000 in 2021, up from €81,000 in 2018 (Panel b in Table 4). The corresponding median values were €77,600 in 2021 and €64,600 in 2018. For households with at least one pensioner, mean pension income rose from €55,400 in 2018 to €71,200 in 2021, with the corresponding median increasing from €46,400 to €67,000 (Panel c in Table 4).

While more households earned self-employment income than in 2018, the conditional mean of this income component declined by 2.1% to €65,400 in 2021. The conditional median declined 2.3% to reach €42,800. Over the whole population in 2021, total gross household income reached a mean value of €116,400 and a median value of €89,600 (Table 4). Both represent statistically significant increases compared to 2018.

**Figure 12: Composition of mean household gross income (in %)**



Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Note: Income from family and friends is not included.

**Table 3: Share of households by income component (% of households)**

In (%)	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.
Employee income	71.4	(1.0)	71.6	(0.8)	71.6	(0.9)	77.3	(1.2)
Self-employment income	10.3	(0.9)	8.4	(0.6)	7.3	(0.6)	15.6	(1.1)
Pension income	35.0	(0.9)	34.5	(0.8)	34.8	(0.7)	29.9	(1.0)
Public pension income	34.6	(0.9)	34.0	(0.8)	34.7	(0.7)	27.6	(1.0)
Occupational and private pension	2.9	(0.7)	2.6	(0.5)	3.4	(0.6)	5.8	(0.7)
Social transfers	41.7	(1.3)	36.1	(1.1)	40.8	(1.1)	21.9	(1.3)
Unemployment benefits	4.3	(0.8)	4.9	(0.7)	4.2	(0.6)	7.8	(0.9)
Other social transfer	39.2	(1.2)	33.7	(1.0)	38.7	(1.0)	16.2	(1.1)
Income from real estate property	13.3	(1.2)	12.5	(0.9)	13.7	(1.0)	16.2	(1.1)
Income from financial investment	45.2	(1.9)	40.2	(1.4)	27.8	(1.3)	16.7	(1.1)
from financial assets	44.8	(1.9)	40.1	(1.4)	27.4	(1.2)	15.9	(1.1)
from private business*	1.0	(0.3)	0.4	(0.2)	0.5	(0.2)	0.9	(0.4)
Income from regular private transfers	5.9	(0.9)	5.7	(0.6)	7.1	(0.7)	8.4	(0.9)
Income from other income sources	2.2	(0.5)	1.6	(0.4)	2.2	(0.4)	3.1	(0.6)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Income from friends is not included. \* other than self-employment.

**Table 4: Household gross income statistics, by income component**

**Panel (a): Mean gross income**

	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.
Employee income	52,400	(1700)	56,100	(1500)	58,100	(1300)	72,400	(1700)
Self-employment income	6,100	(780)	6,100	(740)	4,900	(610)	10,200	(1100)
Pension income	15,300	(650)	16,300	(570)	19,300	(730)	21,300	(880)
<i>Public pension income</i>	14,700	(600)	15,800	(520)	18,100	(590)	19,000	(800)
<i>Occupational and private pension</i>	660	(230)	500	(220)	1,200	(420)	2,300	(440)
Social transfers	3,600	(200)	3,000	(170)	4,100	(230)	2,100	(250)
<i>Unemployment benefits</i>	590	(150)	680	(110)	530	(90)	1,100	(220)
<i>Other social transfer</i>	3,000	(140)	2,400	(110)	3,500	(210)	1,000	(120)
Income from real estate property	3,200	(890)	3,200	(490)	3,600	(440)	4,400	(500)
Income from financial investment	1,200	(230)	1,400	(230)	1,600	(560)	3,100	(940)
<i>from financial assets</i>	910	(190)	1,400	(230)	890	(510)	2,400	(840)
<i>from private business*</i>	310	(140)	70	(40)	730	(230)	670	(410)
Income from regular private transfers	390	(90)	300	(40)	460	(70)	610	(150)
Income from other income sources	1,400	(710)	660	(320)	990	(540)	2,400	(1000)
<b>Total gross household income</b>	<b>83,700</b>	<b>(2300)</b>	<b>87,200</b>	<b>(2000)</b>	<b>93,100</b>	<b>(1900)</b>	<b>116,000</b>	<b>(2900)</b>

**Panel (b): Mean gross income conditional on participation**

	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.
Employee income	73,400	(2400)	78,400	(1900)	81,200	(1800)	93,600	(2000)
Self-employment income	58,900	(7000)	72,500	(7700)	66,800	(7300)	65,400	(6200)
Pension income	43,800	(1900)	47,300	(1500)	55,400	(1900)	71,200	(2300)
<i>Public pension income</i>	42,400	(1800)	46,600	(1400)	52,000	(1600)	68,700	(2100)
<i>Occupational and private pension</i>	23,100	(5200)	19,400	(7500)	35,900	(10400)	39,000	(5800)
Social transfers	8,600	(430)	8,400	(400)	10,000	(510)	9,600	(990)
<i>Unemployment benefits</i>	13,900	(2500)	14,000	(1500)	12,600	(1300)	13,600	(2200)
<i>Other social transfer</i>	7,700	(320)	7,000	(290)	9,200	(490)	6,400	(560)
Income from real estate property	24,400	(6300)	25,500	(3400)	26,400	(2900)	27,500	(2500)
Income from financial investment	2,700	(510)	3,600	(570)	5,800	(2000)	18,300	(5400)
<i>from financial assets</i>	2,000	(420)	3,400	(570)	3,300	(1900)	15,000	(5200)
<i>from private business*</i>	32,300	(14600)	19,100	(6300)	136,000	(46100)	77,900	(30200)
Income from regular private transfers	6,700	(1200)	5,300	(470)	6,400	(660)	7,300	(1800)
Income from other income sources	64,300	(31400)	40,300	(19400)	46,000	(24800)	76,000	(29800)
<b>Total gross household income</b>	<b>83,700</b>	<b>(2300)</b>	<b>87,200</b>	<b>(2000)</b>	<b>93,100</b>	<b>(1900)</b>	<b>116,000</b>	<b>(2900)</b>

**Panel (c): Median gross income conditional on participation**

	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Median	Std. Err.	Median	Std. Err.	Median	Std. Err.	Median	Std. Err.
Employee income	58,700	(2400)	61,400	(1800)	64,600	(2000)	77,600	(3000)
Self-employment income	30,000	(5400)	35,600	(8200)	43,800	(6600)	42,800	(7100)
Pension income	38,800	(2600)	41,600	(1700)	46,400	(2000)	67,000	(3300)
<i>Public pension income</i>	37,800	(2800)	41,200	(1600)	44,400	(2000)	67,000	(3200)
<i>Occupational and private pension</i>	23,000	(10100)	6,000	(3200)	6,400	(5500)	26,400	(10900)
Social transfers	7,000	(380)	6,000	(300)	7,100	(290)	5,900	(620)
<i>Unemployment benefits</i>	8,800	(3200)	14,000	(2600)	9,200	(3100)	9,400	(2200)
<i>Other social transfer</i>	6,400	(430)	5,600	(340)	6,400	(440)	4,600	(550)
Income from real estate property	10,200	(1300)	12,400	(1300)	15,000	(1000)	15,200	(1300)
Income from financial investment	500	(40)	390	(50)	210	(30)	1,400	(360)
<i>from financial assets</i>	500	(40)	390	(50)	200	(30)	1,100	(310)
<i>from private business*</i>	11,600	(6100)	22,000	(11200)	60,600	(40700)	69,400	(67200)
Income from regular private transfers	5,100	(790)	3,700	(720)	4,400	(790)	3,400	(380)
Income from other income sources	20,000	(4800)	5,400	(3500)	15,200	(5400)	21,600	(13700)
<b>Total gross household income</b>	<b>64,800</b>	<b>(1800)</b>	<b>64,600</b>	<b>(1600)</b>	<b>71,100</b>	<b>(2000)</b>	<b>89,600</b>	<b>(2500)</b>

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

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.



### Gross income by population group

Household gross income differed substantially across population groups, as depicted in Table C37 and Table C38 in the Appendix. In 2021, median and mean gross income steadily increases from the youngest age group to peak among households with reference person between 55 and 64 years old. In previous waves, household income peaked in a younger age group, with reference person between 45 and 54 years old. Nevertheless, in both 2018 and 2021, median and mean gross income was lower for the oldest age group (65+), reflecting reduced income in retirement. In 2021, average annual gross income in households with a female reference person was only 78% of the level in households with a male reference person (without taking into account other characteristics including age, employment status or education). Gross income is lowest for one-person households. Table C37 and Table C38 suggest a very strong correlation between educational attainment and mean gross income, with income significantly higher for households with high educational attainment.

Gross income is also correlated with housing tenure status. On average, households who rent have lower incomes than those who own their homes (with or without mortgages). Among homeowners, those who still pay a mortgage tend to have higher income than those who own their HMR outright. This difference in income may reflect different age profiles and stages in the life cycle. Households usually acquire their home when they begin working and start a family and pay off their mortgage over a long time horizon. When entering the retirement age, (pension) income drops while the mortgage is typically paid off.

### 3.5. Household debt burden

The LU-HFCS data can be used to calculate various debt burden measures for individual households (HFCN, 2013; Giordana and Ziegelmeyer, 2023) (Table 5). In 2021, the *median debt-to-asset ratio* (20%), which relates the outstanding balance of overall debt to household assets (including housing), was almost unchanged compared to 2018. However, the aggregate result masks considerable variation across household groups (Table C39 in the Appendix). For example, households who own their HMR outright had a very low median debt-to-asset ratio, close to 2%. For households who were renting, the median debt-to-asset ratio declined from 36% in 2018 to 25% in 2021. For homeowners with a mortgage, the median debt-to-asset ratio also decreased from 33% in 2018 to 27% in 2021. Both declines reflect the strong increase of house prices and good performance of the stock market. The debt-to-asset ratio seems to decline as one moves up the income distribution. It peaked in the second income quintile in 2010 (38%) and in 2014 (35%), but it peaked in the first income quintile in 2018 (29%) and 2021



(37%). For the youngest households (16-34 years) the median debt-to-asset ratio in 2021 was 39% but only 7% 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 (6.2%).

The median *debt-to-income ratio*, which relates the outstanding amount of overall debt to annual household gross income, increased from 96% in 2018 to 133% in 2021 (difference not significant at the 10% level (Table 5). The median debt-to-income ratio was particularly high for three household groups. These are homeowners with a mortgage, households in the second net wealth quintile and households with a reference person between 35 and 44 years old (Table C40 in the Appendix).

**Table 5: Debt burden indicators**

Debt burden indicators	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Median	Std. Err.	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)	19.6	(1.4)
Debt-to-gross income ratio	86.9	(11.2)	114.1	(10.6)	95.5	(14.4)	133.1	(18.0)
Debt-service-to-income ratio	16.2	(0.8)	15.0	(0.7)	13.4	(0.8)	14.6	(0.8)
Mortgage debt-service-to-income	16.3	(0.7)	17.6	(0.7)	17.8	(0.8)	18.0	(0.8)
Loan-to-value of HMR	27.5	(2.6)	34.6	(2.8)	39.0	(2.5)	34.9	(2.4)
Net liquid assets to gross income (indebted households)	12.2	(2.2)	11.5	(1.7)	10.6	(2.3)	17.9	(3.7)

*Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. The results for the debt service-to-income ratio differ from the figures 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 (Table 5). Unlike the debt-to-asset ratio or the debt-to-income ratio, the debt service-to-income ratio will be more sensitive to changes in interest payments caused by policy rate changes. In 2021, the median debt service-to-income ratio among indebted households was nearly 15%, slightly higher than in 2018 (13%) (difference not significant). Differences in the debt service-to-income ratio do not always align with those in the debt-to-asset ratio. In particular, renters have a higher debt-to-asset ratio but a lower debt service-to-income ratio (Table C41 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. In general, the debt-to-asset ratio declines with age, but the debt service-to-income ratio peaks among middle-aged households between 35 and 54. This is because this group is more likely to purchase a home and take out a mortgage. Across the net wealth distribution, the debt service-to-income ratio is higher 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 (33% of Luxembourg households in 2021). Since mortgage debt represents the lion's share 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 5). In 2021, the mortgage debt service-to-income ratio was 18%, which is higher than the overall debt service-to-income ratio (15%), while back in 2010, they were both just above 16%. Most of the increase in the mortgage debt service-to-income ratio took place between 2010 and 2014, with the 2021 value being only marginally above the 2018 value. For homeowners with a mortgage, the ratio is almost unchanged since 2014. The mortgage debt service-to-income ratio is lowest for outright homeowners<sup>12</sup> and renters (both 14%) and highest for homeowners with a mortgage (18%) (Table C41 in the Appendix). However, this ratio for outright homeowners increased steadily since 2014, suggesting an increasing share of this group investing in OREP.

The *outstanding loan-to-value ratio (LTV)* for mortgages on the household main residence (HMR) is the mortgage amount remaining to be paid divided by the current estimated value of the HMR<sup>13</sup>. In 2021, the median value was 35% (Table 5), below the 39% estimated for 2018, but still significantly above the 27% estimated for 2010. The LTV ratio was highest for households in the bottom quintile of the net wealth distribution (106% in 2021 compared to 102% in 2018) or in the youngest age group (58% in 2021 compared to 64% in 2018) (Table C43 in the Appendix). The LTV ratio is considerably lower for households in the top quintile of the net wealth distribution (24%) or in the oldest age group (around 10%), as well as for pensioners (11%). Differences across income quintiles were less pronounced than those across net wealth quintiles. In 2021, the outstanding LTV ratio was 44% in the lowest gross income quintile and 31% in the highest.

The *ratio of net liquid assets to gross annual income* provides information on funds readily available to households if they face income shocks. Among households holding debt in 2021, the median level of this ratio was 18%, a substantial increase from its 2018 level (11%) (Table 5). This overall improvement is likely related to the strong stock market performance between 2018 and 2021, as well as "forced" savings during the pandemic. This indicator is substantially higher for homeowners, suggesting that they tend to hold more liquid assets than renters

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<sup>12</sup> Outright homeowners (as well as renters) have no mortgage on their main residence, but may have mortgage debt on OREP.

<sup>13</sup> The *outstanding loan-to-value ratio (LTV)* is not calculated at loan origination but on the outstanding amount.

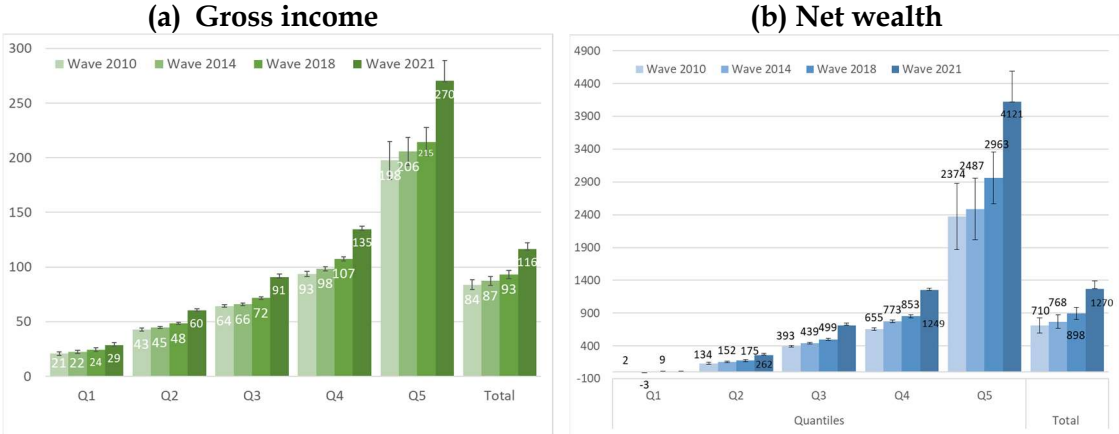
(Table C44 in the Appendix). This ratio tends to be higher towards the top of the income and wealth distribution, but also increases with age and education.

### 3.6. Income and wealth inequality

#### 3.6.1. Gross income and net wealth distribution

Net wealth (as defined in Section 3.1) rises steadily with gross income (as defined in Section 3.4), with a particularly steep increase between gross income quintiles Q4 and Q5 (Figure 13). As illustrated by the confidence intervals, the uncertainty surrounding net wealth estimates is relatively low for income quintiles Q1-Q4, but rather high for quintile Q5, reflecting heterogeneity across households within the top quintile. Similarly, uncertainty surrounding gross income estimates is very low in income quintiles Q1-Q4 but larger in quintile Q5 (Figure 13).

**Figure 13: Mean gross income and net wealth, by gross income quintile (in 1,000 €)**



Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Note: Income from family and friends is not included.

#### 3.6.2. Income inequality

Income and wealth inequality across households in Luxembourg changed little between 2018 and 2021. Table 6 reports several measures of inequality using either 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 50<sup>th</sup> percentile in the distribution (50% of households have an income below this value) to the 10<sup>th</sup> percentile (the poorest 10% of households have an income below this value). The third row compares the 80<sup>th</sup> percentile to the 20<sup>th</sup> percentile, the fourth row compares the 90<sup>th</sup> to the 50<sup>th</sup> and the fifth row compares

the 90th to the 10th percentile. First, all ratios are lower for **net** income than for gross income, confirming the progressive nature of the tax and benefit system in Luxembourg, which reduces income inequality through redistribution. However, even after redistribution, the P90/P10 ratio in 2014, 2018 and 2021 indicates that households whose net income is in the top 10% earn more than six times as much as those in the bottom 10%. Second, there is no indication that income inequality has changed since 2010.

**Table 6: Inequality measures – Household income**

	Gross Income				Net income			
	Wave 2010	Wave 2014	Wave 2018	Wave 2021	Wave 2010	Wave 2014	Wave 2018	Wave 2021
P50	65,000	65,000	71,000	90,000	na	50,000	51,000	64,800
P50/P10	2.83	2.69	2.81	3.10	na	2.59	2.57	2.82
P80/P20	3.50	3.45	3.53	3.60	na	3.15	3.01	3.01
P90/P50	2.39	2.61	2.49	2.53	na	2.30	2.25	2.22
P90/P10	6.75	7.03	7.01	7.83	na	5.95	5.77	6.26
Gini coeff.	0.42	0.42	0.41	0.41	na	0.38	0.36	0.36

*Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; 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 6 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 2021, the Gini coefficient is 0.41 for gross income, similar to 2018 and 0.36 for net income, again confirming the progressive nature of the Luxembourg tax and transfer system.<sup>14</sup>

### 3.6.3. 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 7 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

<sup>14</sup> If we were to exclude households not affiliated with the Luxembourg social security system, the Gini coefficients for gross and net income in 2021 would be 0.42 and 0.36.

financial assets (excluding public and occupational pensions) minus liabilities (including mortgage debt).

**Table 7: Inequality measures – Household net wealth**

	Wave 2010	Wave 2014	Wave 2018	Wave 2021
P50	398,000	438,000	498,000	718,000
P50/P10	79.0	98.5	70.6	48.1
P80/P20	25.7	31.3	23.9	21.2
P90/P50	3.5	3.5	3.7	4.0
P90/P10	273.0	344.3	262.8	191.9
Gini coeff	0.66	0.65	0.65	0.64

*Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted.*

Evidence from other countries 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). Therefore, it is not surprising that in Luxembourg, the P90/P10 ratio for household gross income was 7.8 in 2021 (Table 6), but it was 192 for household net wealth (Table 7).

Considering 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 between 2014 and 2018, and it declined further between 2018 and 2021. While substantially smaller in magnitude, the P90/P50 ratio for net wealth increased from 2014 to 2018 and increased further from 2018 to 2021, reaching the value of 4 for the first time. The P50/P10 measure suggests a reduction in net wealth inequality between the median and the 10<sup>th</sup> percentile. However, the Gini coefficient for net wealth, which takes into account the whole distribution, barely moves. If anything, one could argue there was a slight decrease in inequality since 2010.<sup>15</sup>

**Table 8: Top shares – Household net wealth (in %)**

	Wave 2010	Wave 2014	Wave 2018	Wave 2021
Top 1%	21.3	19.1	20.5	15.2
Top 5%	40.0	36.4	38.0	34.5
Top 10%	51.4	48.7	50.3	47.9
Top 20%	66.7	64.6	65.9	64.9
Bottom 50%	8.5	8.7	8.7	9.0

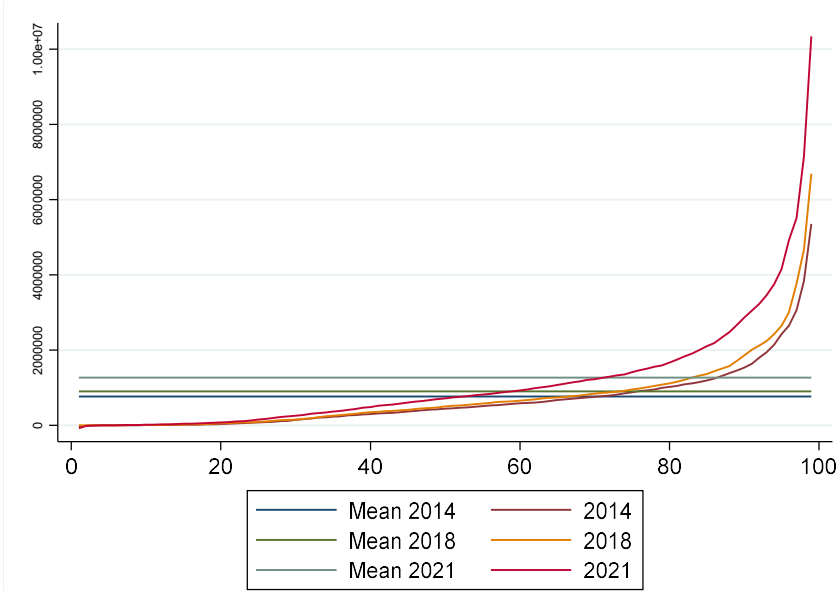
*Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.*

<sup>15</sup> If we were to exclude households not affiliated with the Luxembourg social security system, the Gini coefficient for net wealth in 2021 would be 0.64.

To provide more detail, Table 8 reports the shares of net wealth held by the wealthiest 1%, 5%, 10% and 20% of households. In 2021, the wealthiest 1 percent of households in Luxembourg owned around 15% of total net wealth, the wealthiest 5 percent 34%, the wealthiest 10 percent 48%, and the top 20 percent about two thirds (quasi unchanged from 2018). The bottom fifty percent of households owned less than 9 percent of total net wealth (unchanged from 2018). The concentration of net wealth at the top of the distribution appears in Figure 14.

In 2021, only a very small fraction of households in Luxembourg had negative net wealth. Towards the upper end of the distribution, the value of net wealth increases substantially. Average net wealth (the straight light blue line) was €1,270,000 in 2021, substantially above the median (P50 = €717,000). Based on these indicators, wealth inequality did not change significantly between 2021 and previous waves.

**Figure 14: Distribution of Household Net Wealth in Luxembourg**



Source: Own calculations based on the 2014, 2018 and 2021 LU-HFCS waves.

## 4. Special Feature: Effects of COVID-19 on Income, Consumption and Savings<sup>16</sup>

### 4.1. Introduction

This section explores the impact of the COVID-19 pandemic on the financial situation of households using data from the Luxembourg Household Finance and Consumption Survey (LU-HFCS). In 2021, the LU-HFCS included a separate section dedicated to the COVID-19 pandemic. More specifically, the survey asked households how the pandemic affected their work status, income, consumption patterns, savings and financial wealth in 2020.

About 20% of households experienced changes to their income due to COVID-19, while around 50% reported significant changes in their consumption and savings patterns. This may be a direct reflection of the lockdown measures, but may also suggest a shift in financial priorities and an increased sense of financial prudence in the face of uncertainty (Dossche et al., 2021). Moreover, around 25% reported changes in the value of their financial assets, signalling a potential impact on their wealth, savings and financial stability.

More importantly, our analysis finds that the economic impact of the COVID-19 pandemic varied significantly across the Luxembourg population. Although most households maintained stable incomes throughout the pandemic, poorer households were more likely to experience a decline in income. However, the average change for households at the bottom of the income distribution was only about -1% of gross income. Although consumption expenditure declined across income groups, the impact was less pronounced for low-income households, which may explain why they were also more likely to report a decline in their savings. Low-income households were also more likely report a decline in the value of their financial assets (including bank deposits). This suggests that the pandemic was more of a burden for poorer households, emphasizing the challenges they faced in preserving their financial situation and possible effects on long-term financial stability. These findings collectively highlight the complex and heterogeneous nature of the pandemic's influence on the economy and its implications for households' economic and financial behaviour.

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<sup>16</sup> This section of the technical report was published separately as “COVID-19 Effects on Income, Consumption and Savings: Evidence from the Luxembourg Household Finance and Consumption Survey”, Analyse 3, BCL Bulletin 2023-02.

## 4.2. Context and a brief review

On May 5th 2023, the UN World Health Organization (WHO) declared an end to the COVID-19 public health emergency. Cumulative confirmed COVID-19 cases worldwide amount to 765 million, including an estimated 7 to 20 million deaths. By end-March 2023, Luxembourg had reported 320,000 cumulative confirmed COVID-19 cases.<sup>17</sup> Of these, 3.4% were hospitalised and 0.4% died.<sup>18</sup>

In mid-March 2020, the Luxembourg government put in place several lockdown measures to contain the spread of the virus. These contributed to a 6.3% contraction of real gross domestic product in 2020 Q2, compared to the same quarter in 2019. Over the whole of 2020, total hours worked shrank by 4.0%, particularly in “accommodation and food service activities”, where they fell dramatically by 31%, and in manufacturing, where they dropped by 9%. Annual growth in total employment declined from 3.3% in 2019 to 1.7% in 2020, the slowest growth since the 2009 Great Recession (1.0%). The unemployment rate increased rapidly from 5.5% in February 2020 to 7.0% in June 2020.<sup>19</sup>

The Luxembourg government launched a comprehensive stabilization and recovery plan in 2020, which included i. additional expenditure, targeted especially at small and medium-sized enterprises, as well as start-ups and self-employed businesses; ii. delay and carry-over of tax payments; iii. guarantees or loans to companies; iv. other forms of assistance to households, such as support for extraordinary leave for family reasons, sickness benefits, or social assistance. In total, this expenditure amounted to an estimated 2.6% of Luxembourg GDP, of which one percentage point was for short-time work measures (*chômage partiel*), and 0.4 percentage points were allocated to extraordinary leave for family reasons.<sup>20</sup>

In 2021, Luxembourg’s economy rebounded strongly. By Q2, annual growth in real GDP had recovered to 10.6%. Annual hours worked rose by 7.3%, and annual employment growth bounced back to 3.0%. By October 2021, the unemployment rate had receded to pre-COVID-19 levels, suggesting that the effect of COVID-19 on the Luxembourg labour market was mostly temporary in nature.

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<sup>17</sup> Data retrieved from <https://covid19.public.lu/fr/graph.html>, accessed 24/05/2023. In December 2021, Luxembourg had a total population of 645,397 (STATEC, 2022).

<sup>18</sup> Data retrieved from <https://covid19.public.lu/fr/graph.html>, accessed 24/05/2023.

<sup>19</sup> Data retrieved from <https://lustat.statec.lu/>, accessed 24/05/2023.

<sup>20</sup> Businesses in Luxembourg that could not operate normally during lockdown could apply for the short-time working scheme under which the government paid up to 80% of salary costs.



### 4.3. Changes in income

Results from the LU-HFCS suggest that during 2020 about 16% of households in Luxembourg reported that at least one member left their job voluntarily, was laid off, or closed their business due to COVID-19 (see Table B1 in the Appendix). Job losses would have been greater without the widespread introduction of remote work arrangements and the extension of short-time work (*chômage partiel*) to most economic sectors. According to Luxembourg's National Statistics Institute (STATEC, 2022b), nearly 52% of employees (full-time or part-time) were working from home in 2020 Q2. Economy-wide, the use of "short-time work" schemes reached almost 35% of total employment by April 2020 (in full-time equivalent terms) (STATEC, 2022c).

Individuals on short-time work faced a reduction in their gross income, since the scheme generally provides partial coverage. A STATEC survey shows that about 13% of Luxembourg's residents reported a reduction in their income during the early stages of the COVID-19 pandemic (STATEC, 2020). This is consistent with results from the LU-HFCS, which indicate that in 2020 nearly 12% of households reported a reduction in total gross income due to COVID-19. However, most households reported stable incomes during the period (82%), and 6% even reported gains in income.

HFCS results confirm that gains and losses in gross income were heterogeneous across the population. Figure 15 depicts the share of households reporting gains or losses in the different parts of the distribution of net income or net wealth. Households are divided into five equal groups (quintiles) based on their position within the respective distribution.<sup>21</sup>

Figure 15 suggests several conclusions. First, in all quintiles (net income or net wealth), more households declared income declines than gains. Second, low-income and low-wealth households were more likely to report income declines (upward-sloping line through net balances). The share reporting declines was largest in the bottom net income quintile Q1 while the share reporting income gains was largest in the top two net income quintiles.

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<sup>21</sup> These quintiles are based on the distributions for net income in 2020 and net wealth in 2021, i.e. post pandemic distributions. Information provided in the survey does not allow us to calculate the 2019 distributions. However, Figure B1 in Appendix B provides a similar graph using gross income quintiles for 2019 derived from the questions in the COVID-19 section of the survey. As can be seen, the results remain qualitatively similar.

**Figure 15: Share of households reporting changes to their gross income 2019-2020, by net income and net wealth quintile (in %)**



Note: The question was: “As a result of the crisis, how did the total gross income (including any subsidies the household received) of your household change in 2020 compared to a similar period in 2019?” The net balance is the difference between the share reporting increases and the share reporting declines.

Source: Own calculations based on the LU-HFCS wave 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Error bars denote 95% confidence interval.

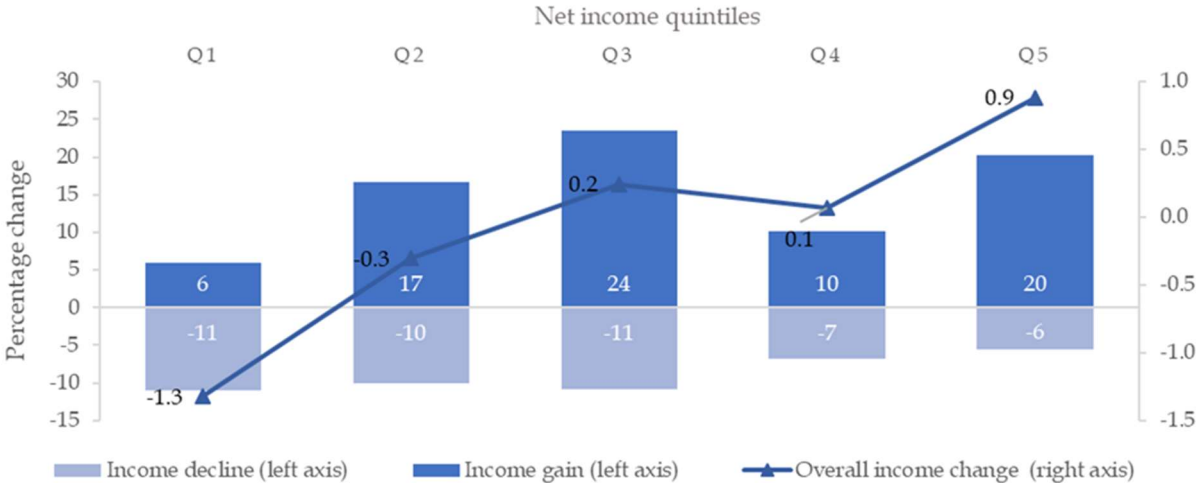
Regarding the size of income changes, for those households reporting an income decline, the mean decrease was 9% (median 5%). For those reporting income gains, the mean increase was 22% (median 5.4%). Nonetheless, 82% of all households did not report any change, consequently, the average difference in households’ income between 2019 and 2020 was negligible.

Figure 16 indicates the average size of the change in gross income between 2019 and 2020 for each net income quintile, as well as separately for households within each quintile reporting declines or gains. Among households reporting declines, the largest occurred in net income quintiles Q1-Q3, with an average around 10%. Meanwhile, for the top quintile Q5, the average decline was less than 6%. Among households reporting gains, those in the bottom quintile reported lower gains (6%) than those in the top quintile (20%).

Considering all households within each quintile, the average change in gross income was always less than 2% in absolute terms. However, in the bottom quintile there was a 1.3% decline on average, while in the top quintile there was a 0.9% gain on average. This difference between quintiles Q5 and Q1 is statistically significant at the 90% level.

Results for other countries also suggest unequal income effects across for different income groups (Adams-Prassl et al., 2020; Chetty et al., 2020; Hacıoğlu-Hoke et al., 2021; Crossley et al., 2021). For example, using transaction data from the UK Money Dashboard (MDB), Hacıoğlu-Hoke et al. (2021) find that the bottom of the income distribution experienced the largest declines in earnings in spring of 2020.

**Figure 16: Gross income level and change 2019- 2020, mean by net income quintile**



Note: The question was, “Could you please provide us with your best estimates of the increase (decrease) of your total gross income in absolute terms in 2020 compared to a similar period in 2019?”  
 Source: Own calculations based on the LU-HFCS wave 2021; data are multiply imputed and weighted.

**4.4. Changes in consumption**

Based on the survey results, 45% of households in Luxembourg changed their consumption habits due to the pandemic and related lockdown measures. Expenditures decreased for 27% of households and increased for 18% (Table B1).

According to a study by STATEC, Luxembourg households modified their spending patterns in 2020 (STATEC, 2021). According to this study, expenditure on restaurants, cafes, and canteens decreased by 43%, while cultural and sports services saw a reduction of 22%. Conversely, expenditure on food and beverages at home increased by 23%, food deliveries rose by 25%, and there was a notable surge in purchases of computers (36%) and home maintenance and repair products (34%).

Several international studies show that the effects of COVID-19 on household consumption vary substantially across sub-groups (e.g., Baker et al., 2020; Carvalho, et al., 2021; Hacıoğlu-Hoke et al., 2021; Chetty et al., 2020; Cox, et al., 2020; Bounie, et al., 2020; Chronopoulos et al.,

2020). Some of these studies provide evidence that the aggregate decrease in household consumption is driven by a reduction in expenditures of high-income households.

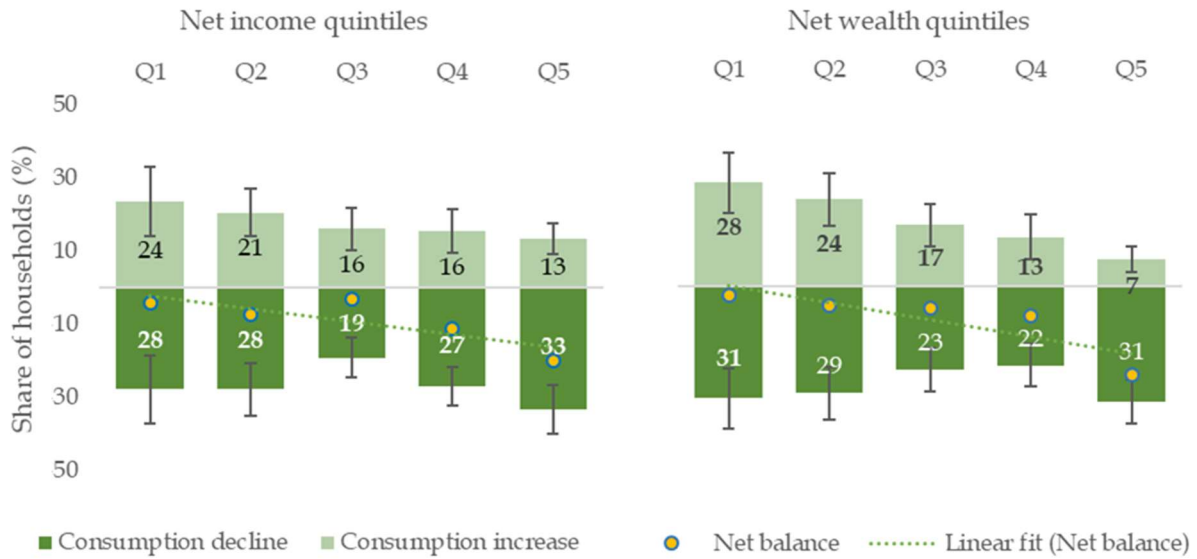
For example, Carvalho et al. (2021) identified a large decrease in Spanish household expenditure during the days following the lockdown measures. The most affluent households reported the largest declines, citing reduced opportunities to buy luxury goods and services (e.g. travel, hotels, restaurants, etc.).

Similarly, Hacıoğlu-Hoke et al. (2021) analysed UK transaction data from a mobile app and found that the most affluent users reduced expenditure the most (around 35% in June 2020 compared to June 2019). In contrast, low-income users reported the smallest reductions, while facing the largest declines in their earnings. The weaker impact on low-income users may reflect the higher share of basic goods in their consumption bundle.

Chetty et al. (2020) used highly detailed US transactions data to show that the reduction in expenditure among high-income households mostly concerned in-person contact services (restaurants, beauty shops and airlines). Other luxury expenditure actually increased during the COVID-19 crisis, such as the installation of private pools or demand for landscaping services.

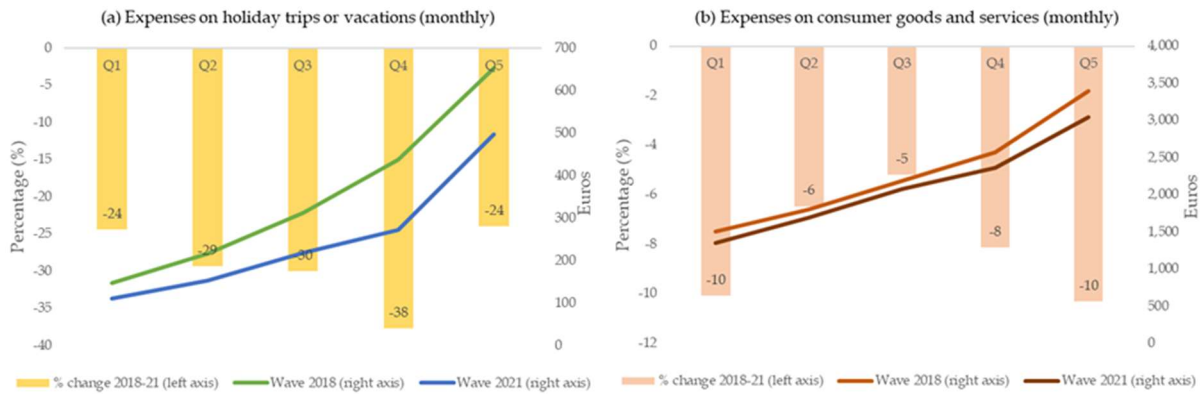
Figure 17 depicts the share of households reporting changes to their consumption expenditure in different parts of the distribution of net income or net wealth. In the top quintiles, fewer households reported increases and more reported decreases. For example, in the net wealth distribution, the share reporting decreases was similar in quintiles Q5 and Q1, but the share reporting increases was 7% in Q5 and 28% in Q1.

**Figure 17: Share of households reporting changes to their consumption 2019-2020, by net income and net wealth quintile (in %)**



Note: The question was: “How did your consumption of goods and services change in 2020 compared to a similar period in 2019?” The net balance is the difference between the share reporting gains and the share reporting losses.  
 Source: Own calculations based on the LU-HFCS wave 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Figure 18: Consumption expenditure in waves 2018 and 2021, average level and percent change by net income quintile**



Note: Left axis: relative change in percentage (bar chart). Right axis: Average expenditures in euro (line charts). The questions were: 1) “In 2020, about how much did (you/your household) spend on holiday trips or vacations? Please include transportation, accommodations, meals, package tours, entertainment and any other related expenses”; and 2) “Overall, about how much does your household spend on average by month on all consumer goods and services? Consider all household expenses including food, utilities, etc. but excluding consumer durables (e.g. cars, household appliances, etc.), rent, loan repayments, insurance policies, renovation, etc.”  
 Source: Own calculations based on the LU-HFCS waves 2018 and 2021; data are multiply imputed and weighted.

The impact of COVID-19 can be analysed separately for expenditures on consumer goods and expenditures on holiday trips or vacations (Figure 18). While average expenditure on holidays decreased in all net income quintiles, it decreased considerably less for low-income

households. The most marked decline (38%) is observed for households in the fourth net income quintile (see Figure 18, panel a), while in the bottom and top quintile the decrease is comparable in relative terms (-24%). Variation across net income quintiles was less for consumer goods and services than for holiday expenditures. Consumption expenditures decreased most for households in the bottom and top quintiles (by 10%), and declined least for households in Q3 (see Figure 18, panel b).

#### **4.5. Changes in financial wealth**

COVID-19 also had an impact on financial assets held by households (including bank deposits, stocks and mutual funds). Overall, 11% of households reported a reduction in the value of their financial assets, while 14% reported gains. Note that a household reporting a decline in its financial assets may be thinking of the balance on their savings account at the bank, as well as the market value of any stocks or mutual funds they own. Differences between top and bottom quintiles were similar for the net income distribution and the net wealth distribution. In the net income distribution, the share of households reporting a decline in the value of their financial assets was larger in the bottom quintile (13%) than in the top quintile (8%) (Figure 19). However, the share of households reporting gains in the value of their financial assets was larger in the top quintile (22%) than in the bottom quintile (11%). In the net wealth distribution, the share reporting a decline was also larger in the bottom quintile (16%) than in the top quintile (8%). However, the share reporting gains was larger in the top quintile (18%) than in the bottom quintile (10%). This suggests that, on balance, poorer households were more likely to report declines and less likely to report gains in the value of their financial assets.

**Figure 19: Share of households reporting financial wealth changes 2019-2020, by net income and net wealth quintile (in %)**



Note: The question was: “As a result of the crisis, how did the value of your household’s financial assets (that is, deposits, stocks, mutual funds and other financial assets) change in 2020?” The net balance is the difference between the share reporting gains and the share reporting losses.

Source: Own calculations based on the LU-HFCS wave 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Error bars denote 95% confidence interval.

#### 4.6. Changes in savings

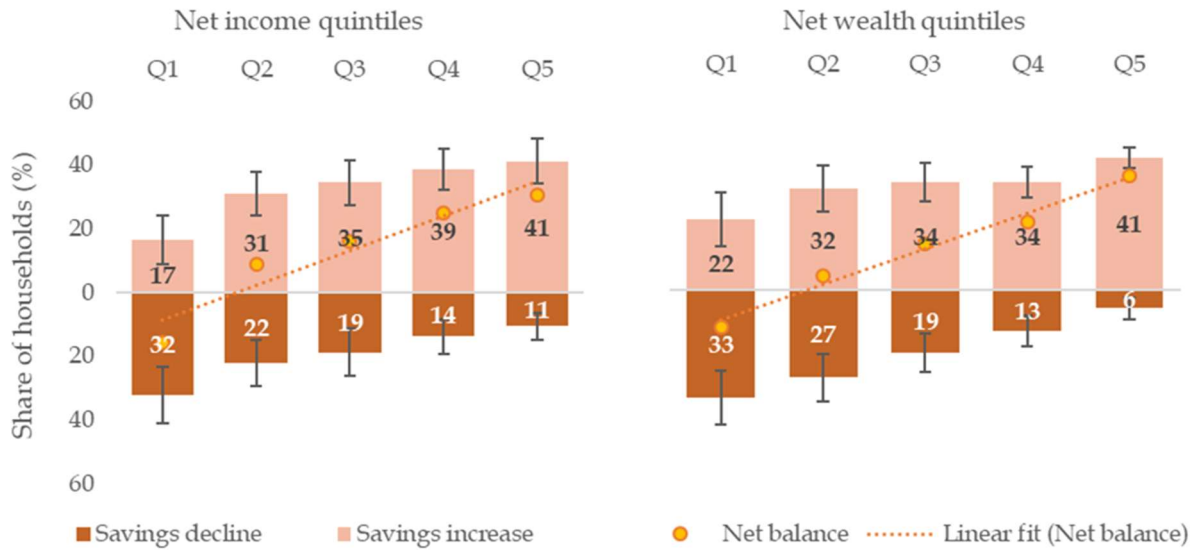
In principle, changes in income and changes in consumption jointly determine changes in savings.<sup>22</sup> Across Luxembourg households, 33% reported an increase in their overall savings between 2019 and 2020, while 19% reported a decline. Figure 20 indicates these shares for different quintiles of net income or net wealth. For the net income distribution, 32% of households in the bottom quintile reported that their savings declined, while 17% reported an increase. In the top quintile, 11% reported a decline and 41% reported an increase.

In general, poorer households were more likely to report a savings decline and less likely to report a savings increase. Differences between top and bottom quintiles are statistically significant for both distributions. These findings are similar to those reported by Dossche et al. (2021) using data from the European Commission consumer survey.<sup>23</sup> In addition, changes in savings also vary across other household characteristics, such as age or education of the reference person, with the older and more educated being more likely to report an increase in savings and less likely to report a decline (Figure B1).

<sup>22</sup> However, the accounting identity only holds approximately in the survey due to the formulation of the questions.

<sup>23</sup> Directorate-General Economic and Financial Affairs (ECFIN).

**Figure 20: Share of households reporting changes to their savings 2019-2020, by net income and net wealth quintiles (in %)**



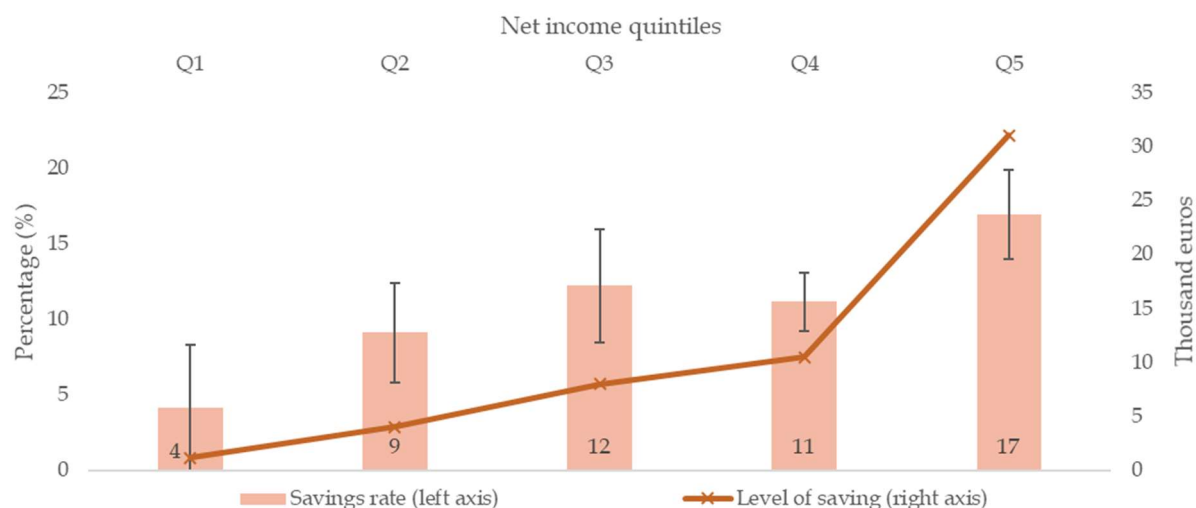
Note: The question was: “Has your household saving changed as a result of the COVID-19 crisis in 2020 compared to a similar period in 2019?” The net balance is the difference between the share reporting increases and the share reporting declines. Source: Own calculations based on the LU-HFCS wave 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Error bars denote 95% confidence interval.

In Figure 21, the reported savings rate is higher in the top quintile, which is consistent with the decline in consumption reported in Figure 18 and the increase in income reported in Figure 16. On average, households in the top income quintile reported that they saved 17% of their annual net income in 2020. For households in the bottom quintile, the average annual saving rate was only 4.1%.

Since most households reported their gross income was unchanged between 2019 and 2020, the reported changes in annual savings likely result from the decline in those consumption expenditures that require social contact (see Chetty et al. (2020)). In particular, the level of expenditures on holidays declined more in the top income quintiles, allowing these households to save more. According to Chetty et al. (2020), this is because goods and services requiring social contact represent a higher share of total expenditure for high-income households. Therefore, the pandemic increased the existing heterogeneity in savings across the income distribution.



**Figure 21: Annual savings in 2020, average level and savings rate by net income quintiles**



Note: Total savings were calculated using the questions: “How much were you able to save out of your net income in 2020? Or could you quantify by how much your expenses exceeded your net income in 2020?”  
 Source: Own calculations based on the LU-HFCS wave 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Error bars denote 95% confidence interval.

## 5. Methodology and data treatment

This section provides a detailed description of the methodological aspects applied in 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 anonymization procedures.<sup>24</sup>

### 5.1. Questionnaire

The LU-HFCS is a cross-sectional household survey and follows the core questionnaire of the Eurosystem HFCS. 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. 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”).

<sup>24</sup> This section relies heavily on the final report of LISER, which conducted the fieldwork (Bienvenue, et al., 2023).

The questionnaire is composed of 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)

Due to the switch from computer-assisted personal interviews (CAPI) to Computer-assisted web interviews (CAWI), the questionnaire had to be shortened to limit the burden on interviewees. In total 55 core questions were dropped (e.g. questions on intergenerational transfers/ gifts; information on previous job for unemployed and retired; details on self-employment business wealth and (non)-mortgage debt; ...). However, aggregate components can still be derived from the remaining questions. In addition to the core questions, which are common to all participating countries (some are adapted to the national context of Luxembourg), the questionnaire included 12 non-core questions (harmonised questions that central banks could include in their national survey) and 48 national questions specific to the Luxembourg survey. These additional non-core or national questions mainly ask for changes in household finances and budget due to the COVID-19 pandemic. In total, the information collected during the interview represents more than 300 different variables. The English version was translated into French and German, two of the official languages in Luxembourg. It was also translated into Portuguese to cater for the largest immigrant community in Luxembourg.

Due to the survey mode change (from CAPI to CAWI), information regarding the housing and environment of all sampled households could not be obtained. These data are usually collected by the interviewers knocking on households' doors to establish contact. In addition, so-called paradata could not be collected, including several dimensions of the interviewer's perception of the interview, such as behaviour of the respondent, reliability of the answers, use of supporting documents to provide information, etc.

## **5.2. Survey mode**

The LU-HFCS was conducted as a Computer Assisted Personal Interview (CAPI) in 2010, 2014 and 2018. This is the preferred survey methodology as set out by the Eurosystem

Household Finance and Consumption Network (HFCN). During the COVID-19 pandemic it was not feasible to conduct personal interviews in participants' home, so the survey had to switch from CAPI to Computer Assisted Web-based Interviews (CAWI). Participants were asked to complete the questionnaire themselves online without the help of an interviewer. This change required shortening the questionnaire. It also led to a drop in the response rate, since interviewers were no longer visiting people's home to encourage them to participate in the survey. Also, households that were invited could not participate unless they had access to a computer with an internet connection, which is likely to have altered the net sample composition, limiting comparability to earlier waves. For example, in 2021, more highly-educated people completed the survey. The weighting procedure (see Section 5.6.2) can only partly correct for this selection effect.

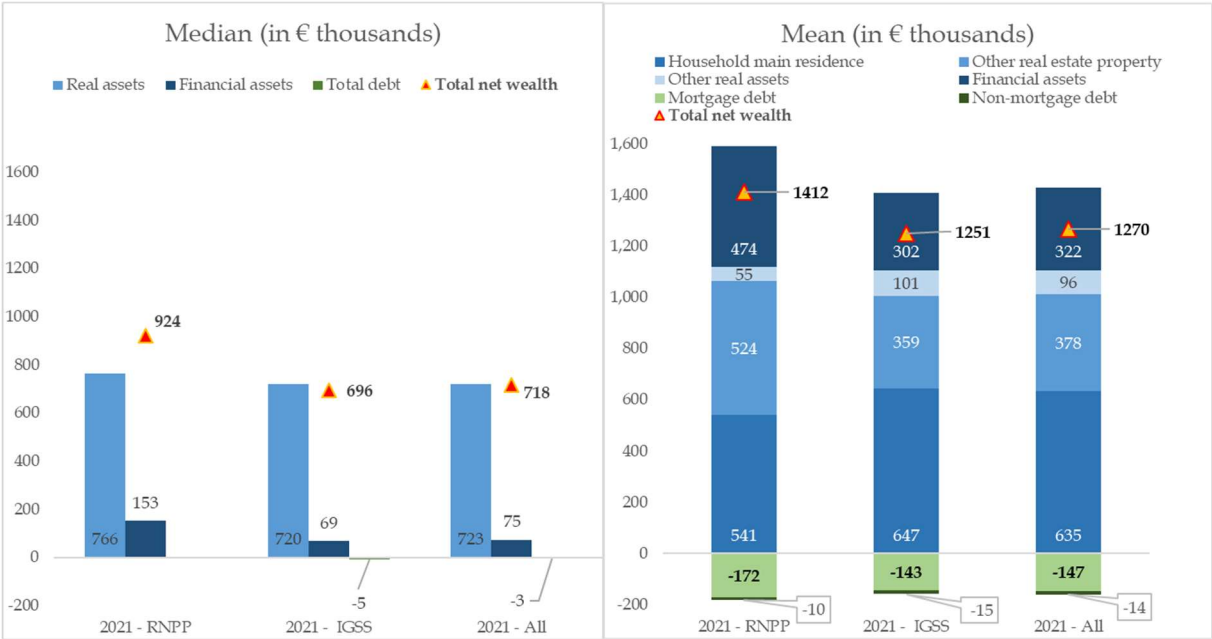
### 5.3. Sampling

The target population covers all private households and their members residing in Luxembourg on 31 December 2021. As there is no perfect sampling frame for this target population in Luxembourg, we apply an indirect sampling frame (Lavallée, 2007). This considers all administrative households included in the Luxembourg Social Security System (*Inspection Générale de la Sécurité Sociale, IGSS*) and / or the National Register of Natural Persons (*Registre National des Personnes Physiques, RNPP*). The indirect sampling unit is an administrative household. A private household may comprise several administrative 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 administrative 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.

The reference date for the sampling frame is 31 December 2020. The sample was drawn from 353,495 administrative households with respect to the characteristics of the reference person associated with the administrative household. Around 89.1% of the resident population were registered in the Luxembourg social security system at the reference date. For this population, auxiliary information concerning their nationality, occupational status and income is available, which was used to stratify the sampling. The remaining households were drawn from the RNPP, which could distinguish between nationals and foreigners but does not contain any information on employment status.

The sampling of households present in the RNPP but not in the social security database represents an improvement in the indirect sampling frame compared to previous waves, as it increases the coverage of the target population (i.e., all households resident in Luxembourg except for collective institutions) from approximately 90% to 100%. In previous waves, the sampling relied solely on the social security register, as there was no access to the RNPP database. Hence, the indirect sampling frame did not cover households without members directly affiliated to Luxembourg’s social security system. In particular, it excluded the non-negligible share of households represented by international civil servants employed in Luxembourg by European or other international organisations (e.g. European Commission, Eurostat, European Investment Bank, NATO). These households differ in several important aspects from those sampled through the social security register. For example, they are more highly educated (83%), more likely to be renters (51%), and more likely to be employed on a temporary basis (25%) (e.g. secondment from the home institution).

**Figure 22: Comparison of net wealth between overall sample and the IGSS and RNPP sub-samples**



Note: 2021 - IGSS refers to households sampled through the Luxembourg social security register (Inspection Générale de la Sécurité Sociale, IGSS). RNPP - 2021 refers to households sampled through the Registre National des Personnes Physiques (RNPP), i.e. mainly residents employed in EU institutions and other international organisations.

Source: Own calculations based on 2021 LU-HFCS wave; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

This improved coverage of the target population reduces comparability with results from previous waves. Although key aggregate statistics, such as net wealth, may appear largely unaffected, as the population share of the additional households is only 11%, differences do

appear. Compared to the social security sub-sample, households in the RNPP sub-sample have higher median and mean net wealth (Figure 22). This sub-sample is also more homogenous and therefore the distribution of net wealth is less skewed than in the social security sub-sample. Were we to exclude households not affiliated with Luxembourg social security (e.g., EU civil servants, NATO employees), then average net wealth in 2021 would be €1,251,000. Aggregate figures are slightly higher when these additional households are included in the net sample.

As the sampling of these households represents a non-negligible improvement in the coverage of the target population, all statistics, tables and figures in this report are based on the larger, improved target population, which includes households not affiliated with Luxembourg social security but present in the RNPP.

The gross sample consists of 20,000 households, covering 5.7% of the target population. The sampling procedure is based on stratified random sampling. Stratification is based on nationality, occupational status (including the distinction between blue- and white-collar workers), as well as individual labour income declared to social security.<sup>25</sup> In total, the sampling procedure uses 26 different strata. Two strata include individuals who are not affiliated with Luxembourg social security, but present in the RNPP. These are mostly EU civil servants and employees of other international organisations. Since labour status and income is unknown for these individuals, they could not be included in the recommended oversampling by income.

First, 80% of the gross sample was drawn proportionally among the 26 strata. Second, the remaining 20% of the gross sample was drawn among the high-income strata (with gross mean labour income equalling or exceeding the 9<sup>th</sup> decile, which corresponded to €9,062 per month).<sup>26</sup> This made it possible to oversample wealthy households, as recommended in the HFCN guidelines. One aim of oversampling is to increase the number of observations for asset types that are mainly owned by wealthier households and therefore relatively infrequent among the general population. This improves the statistical precision of estimates for these asset types and improves estimation of the upper tail of the wealth distribution, leading to better coverage with respect to national accounts statistics.

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<sup>25</sup> If the administrative household includes more than one member with labour income, then the stratum is identified using the member with the highest individual income.

<sup>26</sup> For strata 2, 4, 10, 12, 14, 16, 19, 20, 22 and 24 the decision was to include a minimum of 50 administrative households in the sample and proportionally allocate the rest of the sample across the remaining strata.

**Table 9 : Sampling design and implementation - overview**

	Wave 2010	Wave 2014	Wave 2018	Wave 2021
Sample frame	Social Security System (Inspection Générale de la Sécurité Sociale, IGSS)			IGSS RNPP
Sampling unit	Resident administrative households (indirect sampling frame)			
Target population	Private households and their members residing in Luxembourg on			
	31 Dec. 2010	31 Dec. 2013	31 Dec. 2017	31 Dec. 2021*
Gross sample size administrative households	5,000	7,300	7,100	20,000
Share of target population	2.01%	2.73%	2.50%	5.66%
Oversampling of wealthy	20%	20%	20%	20%
<i>Net Sample size</i>				
# households	950	1,601	1,616	2,010
# target	1,000	1,500	1,600	1,600
<i>Representative of</i>				
# households	186,440	210,965	226,378	268,916
# individuals	462,618	508,248	544,303	645,397
Number of strata	20 (nationality, employment status, income)			26 (20 + blue- & white-collar)
Coverage (the following are excluded)	collective households	collective households (around 9,073 individuals)	collective households (around 9,719 individuals)	collective households
	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)	

Note: \* incl. people not affiliated with IGSS. In 2021, the non-response error cannot be split into coverage and refusal. The CAWI mode cannot collect reasons for non-response or identify out-of-scope individuals including those in collective households.

**Table 10: Sampling design and response behaviour, by stratum**

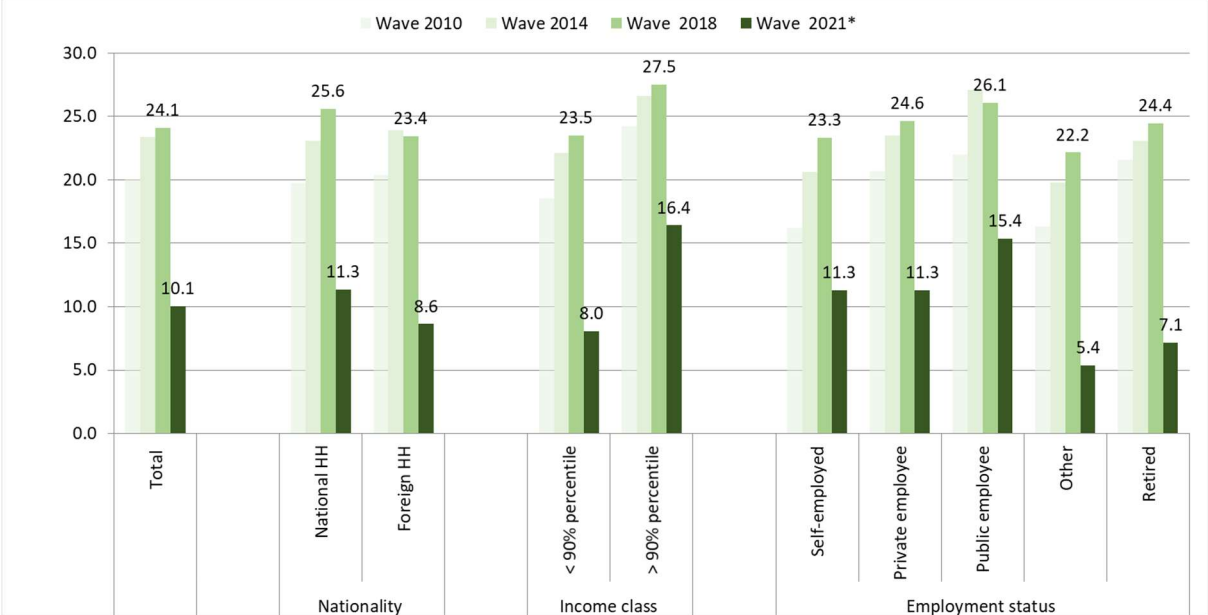
Nationality	Employment status	Individual income decile	Stratum ID	Population size	Allocation		Sample size		n/N
					1	2	Gross N	Net n	
Luxembourg	Self-employed	≤ 9th	1	7,803	353		353	42	11.9
		> 9th	2	65	3	47	50	10	20.0
	Blue collar	≤ 9th	3	22,215	1,006		1,006	49	4.9
		> 9th	4	136	6	44	50	7	14.0
	White collar	≤ 9th	5	43,374	1,963		1,963	256	13.0
		> 9th	6	7,870	356	947	1,303	239	18.3
	Public employee	≤ 9th	7	16,240	705		705	84	11.9
		> 9th	8	9,720	440	1,170	1,610	270	16.8
	Unemployed, voluntary insured (other)	≤ 9th	9	27,813	1,259		1,259	65	5.2
		> 9th	10	265	12	38	50	6	12.0
	Retired	≤ 9th	11	40,965	1,854		1,854	132	7.1
		> 9th	12	191	9	41	50	14	28.0
Foreign	Self-employed	≤ 9th	13	5,452	247		248	23	9.3
		> 9th	14	52	2	48	50	4	8.0
	Blue collar	≤ 9th	15	42,634	1,930		1,930	83	4.3
		> 9th	16	241	11	39	50	6	12.0
	White collar	≤ 9th	17	41,697	1,887		1,887	222	11.8
		> 9th	18	12,450	564	1,498	2,062	300	14.5
	Public employee	≤ 9th	19	443	50		50	9	18.0
		> 9th	20	270	12	38	50	8	16.0
	Unemployed, voluntary insured (other)	≤ 9th	21	18,539	839		839	35	4.2
		> 9th	22	187	8	42	50	12	24.0
	Retired	≤ 9th	23	16,285	737		737	32	4.3
		> 9th	24	53	2	48	50	14	28.0
Luxemb.	RNPP		25	6,268	284		284	20	7.0
Foreign	RNPP		26	32,267	1,460		1,460	68	4.7
<b>Total</b>				353,495	16,000	4,000	20,000	2,010	10.1

Source: Bienvenue, et al., (2023), based on Inspection Générale de la Sécurité Sociale (IGSS), Registre National des Personnes Physiques (RNPP), 31 December 2020. Note: Sampling unit corresponds to an “administrative household”

*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 do vary considerably across strata (Table 10). The lowest response rate (5%) is recorded for employment status “Unemployed, voluntary assured (other)”; the highest is recorded for “public employees” (Figure 23). In the LU-HFCS 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 four waves, but became much more prominent in 2021 when the survey switched to CAWI. In general, foreign-born households seemed more likely to participate than native-born households in 2010 and 2014,

but this is no longer the case in 2018 and 2021. However, this varies across income and employment status.

**Figure 23: Response rates across stratum characteristics, by wave**



Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021, non-imputed and unweighted. \* wave 2021 numbers are based on responses over the gross sample and hence represent a lower bound. RNPP strata included in comparing national and foreign households only.

**5.4. Fieldwork**

The target net sample size was 1,600 completed questionnaires, as for the 2018 wave. In 2021, the number of completed interviews was 2,010, exceeding the 1,616 interviews completed in 2018 (Table 9). BCL and LISER announced the start of the field phase in a joint press release on 29 October 2021. This provided a link to a dedicated web page on the BCL website for the interested public, providing general information regarding the 2021 LU-HFCS wave and publications related to the previous wave. Sampled households were contacted via an introductory letter (in both French and German) signed by the Governor of the BCL and the CEO of LISER. The letter presented the motivation of LU-HFCS, described the sampling procedure, stressed that participation was voluntary and assured that collected information would be treated as confidential. To encourage households to participate, the letter also contained a leaflet summarising the key results from the third wave. In the 2014 and 2018 waves, participating households were given a numismatic product as a token of appreciation for their participation. Due to the COVID-19 pandemic and switch in survey mode, it was no longer feasible to reward participating households with a physical gift. Instead, participating households were given a chance to enter a lottery with first prize equal to €1,000. A total value of €20,000 was distributed in shopping vouchers issued by the government-backed initiative

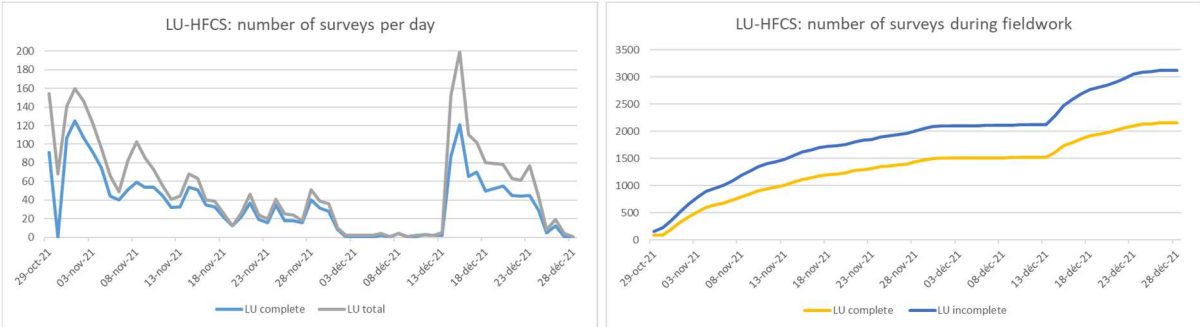


“Letzshop”. The voucher prizes were distributed as follows 1x € 1,000, 3 x€500, 10x €250, 50x €100 and 200x €50. Finally, LISER and the BCL contact details (email, phone and postal address) were provided for any questions, as well as a helpline telephone number. The survey was conducted online, starting on 29 October 2021 and ending on 29 December 2021.

Compared to the CAPI mode used previously, CAWI has the benefit of shortening the field phase to approximately two months. However, a major disadvantage of CAWI is that it is not possible to collect additional information such as the reason for non-participation or the so-called paradata, i.e. data collected by the interviewer before and after the interview, for example concerning the surroundings of the dwelling. Furthermore, answers are no longer validated by a trained interviewer. More importantly, the net sample composition is likely to have changed due to the switch to CAWI, which limits comparability of 2021 results to previous results for 2018, 2014 or 2010.

Figure 24 plots participation by day through the fieldwork phase. The response rate was relatively high at the beginning and continuously declined until the indicated deadline. After the initial deadline of 30 November 2021, almost no further interviews were completed. As the target of 1,600 replies was not achieved, a reminder was sent out mid-December. The effect of the reminder and its timing is clearly visible, as shortly afterwards almost as many surveys were completed as during the beginning of the fieldwork.

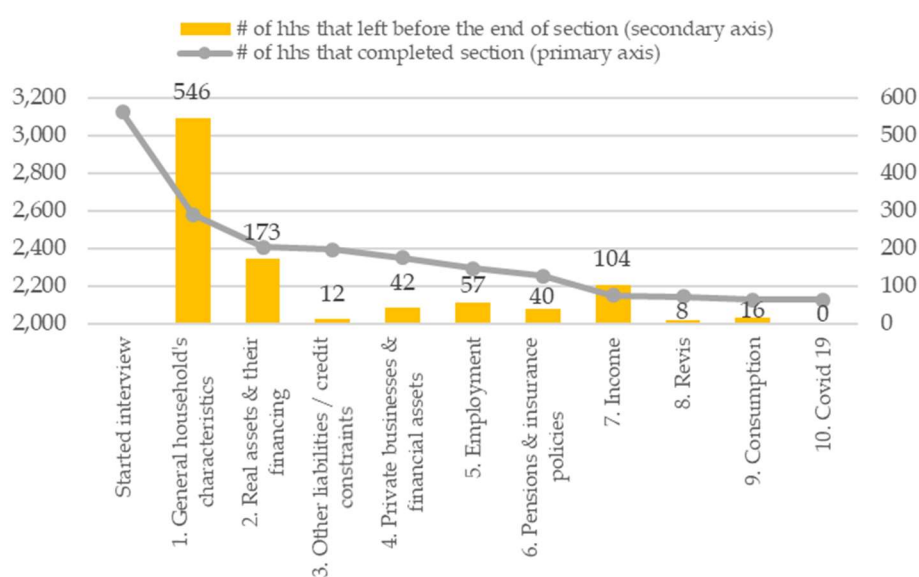
**Figure 24: Evolution of surveys per day, 2021 wave**



Note: “completed surveys” refers to those households reaching the end of section 7 of the questionnaire.  
 Source: Bienvenue, et al., (2023), non-imputed and unweighted.

In total, 3,125 households logged in and started answering the online survey (Figure 25). Of these, 546 households did not even complete section 1 on the general characteristics of the household. Another 173 households abandoned the survey during section 2 on real assets and their financing and an additional 104 households abandoned during section 7 on income. All the other sections show substantially lower drop-out rates. In total, 2,127 households answered the questionnaire to its end.

**Figure 25: Questionnaire completion and dropout**



Source: Own calculations based on the 2021 LU-HFCS wave.

The final net sample was constructed starting with all 2,151 households that had completed at least section 7 on income. First, households with a high item non-response rate were excluded. A total of 262 households had item non-response rates exceeding 25% across all applicable questions (without counting bracket values as missing). In previous waves, households with non-response rates exceeding 25% were examined individually to try to keep them in the net sample, but given the larger number of interviews to process in 2021, a different approach was adopted. An index was constructed based on the importance of the most relevant questions in the domains of wealth, income and demographic characteristics. As the HFCS is mainly a wealth survey, the domain on wealth contributes 50% and the other two domains contribute 25% each. The index equals 100% if all selected questions were answered and 0% if no selected question was answered. Households with item non-response rates of more than 25% were retained in the final net sample if their index value was 75% or above.

In total, 2,010 household interviews were included in the final net sample. This corresponds to a response rate of 10.1%, which is a substantial drop from 24.1% in 2018. However, the net sample exceeds the target size of 1,600 completed interviews by more than 25%.

The final data sample is representative of 268,916 households and 645,397 individuals residing in Luxembourg on 31 December 2021. The reference period for assets and liabilities is always the day of the interview (between end October and end December 2021). The reference period for yearly income is 2020 (calendar year).

### 5.5. Interview language and duration

With regard to the languages in which the interview was conducted, there was a marked change in 2021. Households could choose between French, German, English and Portuguese.<sup>27</sup> 53% of households chose French, 30% German, 14% English, and 3% Portuguese. In 2018, about 44% of the completed interviews were conducted in Luxembourgish<sup>28</sup>, 44% in French, 8% in German, 3% in English and 1% in other languages. Of course, this reflects the switch from CAPI to CAWI, with interviewers no longer being available to accompany the household in answering the questionnaire. In 2018, interviewers spoke Luxembourgish and households could answer in Luxembourgish, although the questions were only available in French, German or English.

**Figure 26: Language of interview**



Source: Own calculations based on the 2018 and the 2021 LU-HFCS waves, non-imputed and unweighted.

<sup>27</sup> A telephone helpline was also available to all households. In some cases, help was provided via email.

<sup>28</sup> Luxembourgish is mostly a spoken language, so while many interviews were conducted in Luxembourgish they resulted in questionnaires filled out in French or German (no Luxembourgish questionnaire was available given the many technical terms).

**Table 11: Language use during interview, by stratum, 2021**

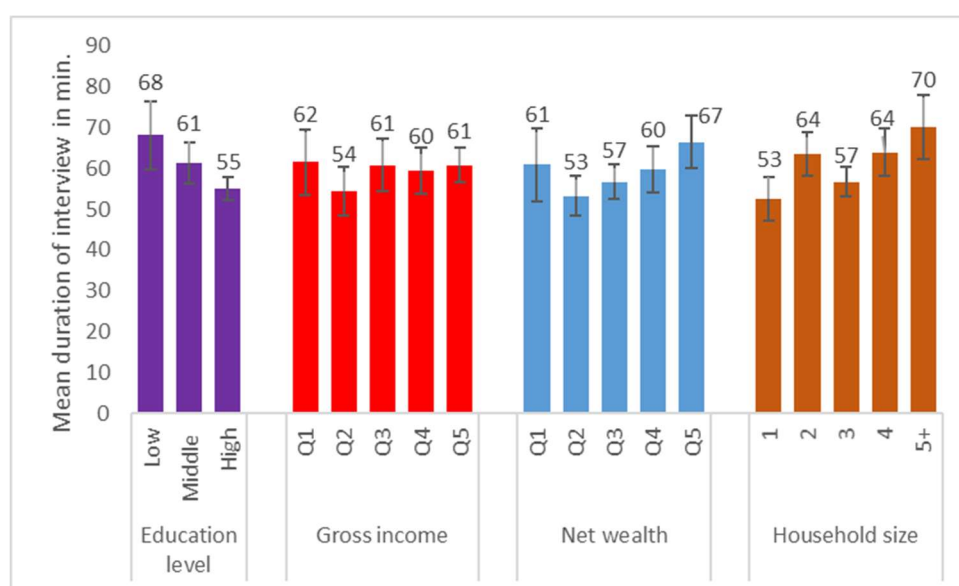
Country of birth	Occupational status	Income	English	French	German	Portuguese
Luxembourgish	Self-employed	low	0.0	59.5	40.5	0.0
		high	20.0	60.0	20.0	0.0
	Blue collar	low	4.1	49.0	44.9	2.0
		high	14.3	57.1	28.6	0.0
	White collar	low	5.5	47.3	46.5	0.8
		high	8.8	57.7	33.1	0.4
	Public employee	low	0.0	38.1	61.9	0.0
		high	0.7	55.6	43.7	0.0
	Unemployed, voluntarily insured (other)	low	4.6	47.7	47.7	0.0
		high	16.7	16.7	66.7	0.0
	Retired	low	3.0	45.5	51.5	0.0
		high	0.0	57.1	42.9	0.0
	RNPP	-	5.0	75.0	20.0	0.0
	Total			4.3	51.5	43.9
Foreign	Self-employed	low	13.0	65.2	21.7	0.0
		high	0.0	100.0	0.0	0.0
	Blue collar	low	6.0	53.0	6.0	34.9
		high	16.7	66.7	16.7	0.0
	White collar	low	35.1	55.4	5.4	4.1
		high	33.3	54.0	11.7	1.0
	Public employee	low	0.0	88.9	11.1	0.0
		high	0.0	75.0	25.0	0.0
	Unemployed, voluntarily insured (other)	low	25.7	57.1	8.6	8.6
		high	25.0	66.7	8.3	0.0
	Retired	low	3.1	75.0	15.6	6.3
		high	21.4	57.1	21.4	0.0
	RNPP	-	41.2	45.6	8.8	4.4
	Total			28.3	56.0	6.0

Source: Own calculations based on the 2021 LU-HFCS wave, non-imputed and unweighted.

The choice of language to complete the online survey differed substantially across strata, as Table 11 reveals. Among Luxembourg nationals, the French questionnaire was slightly preferred to the German version (52% vs 44%), but French was clearly the preferred option among foreigners (56%), followed by English (28%). French was preferred choice by both blue-collar employees (52%) and white-collar employees (53%). However, Portuguese was chosen by 21% of blue-collar employees and only a negligible share of white-collar employees. Instead, English was chosen by 21% of white-collar employees, but only 6% of blue-collar employees.

The average interview duration was 57 minutes and the median duration was 47 minutes, both of which are similar to 2018. The inter-quartile range of interview duration was 30 minutes in 2021. Interview duration generally increased with household size, while it was shorter for reference persons with higher levels of educational attainment.

**Figure 27: Duration of interview by socio-economic characteristics**



Source: Own calculations based on the 2021 LU-HFCS wave, non-imputed and unweighted.

## 5.6. Data treatment

The data treatment consisted of four parts: analysis of unit non-response, editing, imputation and weighting. The *editing* procedure was carried out in cooperation with LISER and closely followed the procedure detailed for wave 2 (Girshina et al., 2017, section 2.6.2). Modifications were made to 2,532 answers or 0.5% of all applicable cases.<sup>29</sup>

### 5.6.1. Imputation

The *imputation* of missing values closely followed the procedure for previous waves. For wave 1, Mathä et al. (2012a) describe how the ECB Multiple Imputation Routine (EMIR) was applied in the Luxembourg context. For wave 2, Girshina et al. (2017, section 2.6.3) describe the guiding principles of the imputation procedure. Compared to previous survey waves, imputation of the 2021 wave presents some differences worth mentioning.

First, we modified the variable selection procedure for the imputation of continuous variables. Coefficients and imputed values may be unstable when explanatory variables in the regression are correlated or the number of explanatory variables is large compared to the number of observations. To limit this problem, we generally use backward elimination to select the subset of explanatory variables for each given model. In addition to backward elimination, for this

<sup>29</sup> An even higher number of unreasonable answers were set to missing. The exact number cannot be determined due to a simplification of flags following ECB guidelines. In addition, answers provided in brackets were checked for reasonability and modified or set to missing if needed.

wave we introduced a penalised regression method: LASSO (Tibshirani, 1996; Zou, 2006) if the backward selection methods lead to very deterministic models (overfitting). The LASSO regression adds a constraint to the minimisation problem of a regular regression:

$$\operatorname{argmin}_{\beta} \left( \sum_{i=1}^n (y_i - x_i' \beta)^2 + \lambda \sum_{j=1}^k |\beta_j| \right)$$

where  $\lambda$  is a penalty parameter that controls the level of shrinkage. This method is particularly efficient for model selection, as it naturally tends to shrink some of the coefficients to zero providing a more parsimonious model.

For  $\lambda = 0$  no parameters are eliminated and the estimate is equal to that of a linear regression. As  $\lambda$  increases, more parameters are eliminated, as their coefficients are set to zero. There are different ways to determine the value of this penalty parameter. We used the Schwarz Bayesian information criterion (Schwarz, 1978; Judge et al., 1985),

$$SBC = n \log \left( \frac{\sum_{i=1}^n (y_i - x_i' \beta)^2}{n} \right) + k \log(n),$$

and select models with lower SBC.

Second, for each variable we used the final survey weights to estimate weighted imputation regressions, while in previous waves we included final weights as additional control variables in the imputation regression.

Third, in 2021, about 1,960 cross-border workers from neighbouring countries participated in the survey along with Luxembourg residents. These households work in Luxembourg but live in Germany, France or Belgium. While these households are obviously excluded from the results reported in this working paper, their answers were used in the imputation phase. The datasets from Luxembourg residents and from Luxembourg's cross-border workers were imputed together. A larger sample size helps considerably when imputing variables that naturally have a low number of observations, such as those related to members of the household in addition to the reference person or their spouse. In addition, the sample of cross-border workers is linked to the resident sample in many ways. Nevertheless, appropriate control variables were included in all models to capture differences between cross-border workers and residents.

### 5.6.2. Weighting and anonymization

The aim is to make the sample representative of the target population, which comprises all households residing in Luxembourg on 31 December 2021 (excluding collective households). On average, each household in our net sample of 2,010 represents 134 households of our target population.

The calculation of final *survey weights* follows a 4-step approach. Compared to the previous waves, it was not possible to adjust the weighting procedure for “no-contact”, “non-eligibility” or “refusal” (see Girshina et al., 2017, section 2.6.3), as in 2021 there was no interviewer visiting the address of the sampled households.

The final sampling weights range from one household representing just 2.35 households in the target population to one household representing 994 households (with a standard deviation of around 36). The household weights were calibrated to match the official number of 645,397 inhabitants on 31 December 2021 (STATEC, 2022a). *Replicate weights* are calculated by repeating steps 1 to 4 using the Rao-Wu rescaling bootstrap method for a stratified simple random sample. In total 1,000 replicate weights are provided to properly calculate the variance of our point estimates.

The *anonymization* procedure for the user database (UDB) closely follows the procedure in previous waves (Girshina et al., 2017, section 2.6.4).

## 5.7. Comparison with other sources

This section compares the results of the LU-HFCS with statistics from other sources. First, LU-HFCS estimates of financial assets and liabilities are compared to household sector balance sheets in the Financial Accounts (FA). Second, LU-HFCS data on the household main residence (HMR) is compared to data from “Observatoire de l’Habitat” and official data on real estate transactions.

### 5.7.1. Financial Accounts

A like-for-like comparison is only possible for a subset of financial assets, as the HFCS and Financial Accounts use different definitions and classifications. However, the ESCB Expert Group on Linking macro and micro data for the household sector (2020) agreed that certain financial assets can be considered highly comparable across these sources, including bank deposits, mutual funds, bonds and quoted shares. Table 12 compares the nominal values of these household sector financial assets in Luxembourg according to the LU-HFCS and the Financial Accounts estimates.

The last four columns of Table 12 report LU-HFCS coverage ratios for the per capita financial assets in the Financial Accounts. Survey data typically underreport the amount of financial assets relative to the Financial Accounts. The coverage ratio for total financial assets was lowest in 2010 at 36% and highest in 2021 at 89%. While the definitions of these financial assets are similar between the two sources, estimation and measurement errors in surveys can lead to significant variability.

First, the distribution of financial wealth is highly skewed to the right (the richest households own most financial wealth). Therefore, survey data estimates of financial wealth are sensitive to the coverage of wealthy households, especially when estimating sub-components of financial wealth that are only owned by few individuals. For example, Table 12 indicates that the per capita value of bonds in the LU-HFCS was lower than in the Financial Accounts, despite substantial efforts to oversample wealthier households. Until the 2021 wave, the LU-HFCS survey did not include international civil servants.

Second, surveyed households may report a false value or incorrectly declare that they do not own such assets. Both these factors can account for the divergence between micro and macro statistics. For “sight and saving accounts” the coverage ratio declined from 2014 to 2018, but increased in 2021 to 65%. For mutual funds and shares, the 2021 wave of LU-HFCS reported a higher aggregate value than the Financial Accounts.

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 business wealth (participations in companies that are not publicly traded) probably reflected better data collection among some extremely wealthy households in Luxembourg. For private/occupational pension wealth, there remains a significant discrepancy between data sources, as in previous waves. This was particularly evident in 2018, where, as discussed in section 5.1, the pension section of the questionnaire changed extensively, leading to a strong decline in participation in private pensions and life insurance.



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

Variable HFCS	HFCS	HFCS	HFCS	HFCS	Financial accounts (FA - S.14)				HFCS in % of FA			
	2010	2014	2018	2021	2010	2014	2018	2021	2010	2014	2018	2021
	Euro per capita				Euro per capita							
Sight accounts & savings accounts	15,578	25,459	24,723	48,276	45,981	53,456	64,570	73,808	34%	48%	38%	65%
Mutual funds	7,312	8,682	10,483	40,065	10,585	13,832	16,304	26,431	69%	63%	64%	152%
Bonds	2,189	1,097	650	1,032	14,968	8,536	5,639	4,722	15%	13%	12%	22%
Quoted shares	2,565	2,989	3,335	17,897	4,549	6,668	6,946	11,327	56%	45%	48%	158%
<b>Comparable financial assets</b>	<b>27,644</b>	<b>38,228</b>	<b>39,191</b>	107,269	<b>76,083</b>	<b>82,493</b>	<b>93,459</b>	116,287	<b>36%</b>	<b>46%</b>	<b>42%</b>	92%
Amount owned to household	784	1,138	701	2,926	1,101	1,216	1,439	1,677	71%	94%	49%	174%
Non-selfemployment not publicly traded business	180	5,163	7,203	5,799	7,508	8,624	7,228	3,593	2%	60%	100%	161%
Private/occupational pension	8,714	11,818	6,665	14,814	15,247	19,470	24,600	28,963	57%	61%	27%	51%
Any other financial assets & managed accounts	239	732	175	3,205	-	-	-	-	-	-	-	-
<b>Total financial assets</b>	<b>37,561</b>	<b>57,080</b>	<b>53,934</b>	<b>134,014</b>	<b>99,939</b>	<b>111,803</b>	<b>126,726</b>	<b>150,521</b>	<b>38%</b>	<b>51%</b>	<b>43%</b>	<b>89%</b>
<b>Total debt</b>	<b>32,960</b>	<b>39,713</b>	<b>43,313</b>	<b>65,396</b>	<b>45,100</b>	<b>54,256</b>	<b>64,994</b>	<b>74,853</b>	<b>73%</b>	<b>73%</b>	<b>67%</b>	<b>87%</b>
N° individuals	462618	508248	544303	645397	512400	563000	613900	645397				

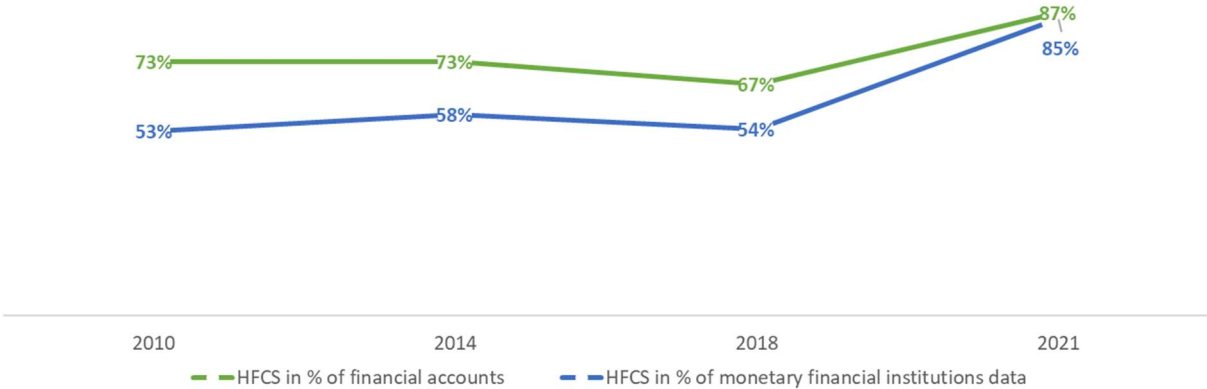
Note: LU-HFCS data are multiply imputed and weighted. The Financial accounts data used in the table are based on (unpublished) data for the household sector (S.14), excluding non-profit institutions serving households (NPISHs, S.15).<sup>30</sup> Weighted HFCS totals for each asset type are divided by the population covered by each survey year, and financial accounts totals are divided by total population estimates from STATEC for the end of the respective year. Revisions to Financial Accounts modified previously published estimates of the coverage ratios.

Source: Own calculations based on LU-HFCS waves 2010, 2014, 2018 and 2021; Statistics BCL and STATEC.

<sup>30</sup> The Financial Accounts published by BCL is only available as statistics for the household sector (S.14) and non-profit institutions serving households (NPISHs, S.15) sector combined.

However, as mentioned above, the underlying concepts and classifications differ between the LU-HFCS and the Financial Accounts. For example, the 2021 LU-HFCS excluded occupational pensions, although these remain in the financial accounts. Therefore, it would be inappropriate to compare total financial assets to assess the quality of survey data. In any event, both financial accounts and HFCS data have their weaknesses (Expert Group on Linking macro and micro data for the household sector, 2020).

**Figure 28: Coverage rate of household liabilities in the LU-HFCS**



*Note: The graph depicts the ratio of per capita household liabilities in the LU-HFCS relative to FA and MFI statistics. Source: Own calculations based on LU-HFCS waves 2010, 2014, 2018 and 2021; Statistics BCL and MFI ECB.*

Figure 28 depicts the ratio of per capita household total liabilities in the LU-HFCS to the Financial Accounts estimate. Coverage is relatively good since the distribution of liabilities across the population is less skewed than the distribution of financial assets. In 2021, the LU-HFCS covers 87% of total debt reported in the Luxembourg financial accounts, which is a substantial increase compared to previous waves (green line) (Figure 28). The blue line in Figure 28 compares the value of liabilities in the LU-HFCS to Central Bank statistics on the balance sheets of Monetary Financial Institutions (MFI-BSI).<sup>31</sup> Data from this source is not subject to the balancing adjustments applied to the Financial Accounts. MFI-BSI data is 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 2021, aggregate household liabilities

<sup>31</sup> The data corresponds to the SDW series BSI.M.LU.N.A.A20.A.1.U2.2250.Z01.E, SI.M.LU.N.A.A21.A.1.U2.2250.Z01.E, BSI.M.LU.N.A.A22.A.1.U2.2250.Z01.E, BSI.M.LU.N.A.A23.A.1.U2.2250.Z01.E

in the LU-HFCS covered 85% of the estimate from the MFI-BSI data. However, MFI-BSI statistics combine the household sector with non-profit institutions serving households. This may explain why aggregate liabilities in MFI-BSI data were higher than reported in the Financial Accounts.

Overall, Table 12 and Figure 28 indicate that coverage ratios of comparable items improved in 2021.

### **5.7.2. The value and size of the Household Main Residence**

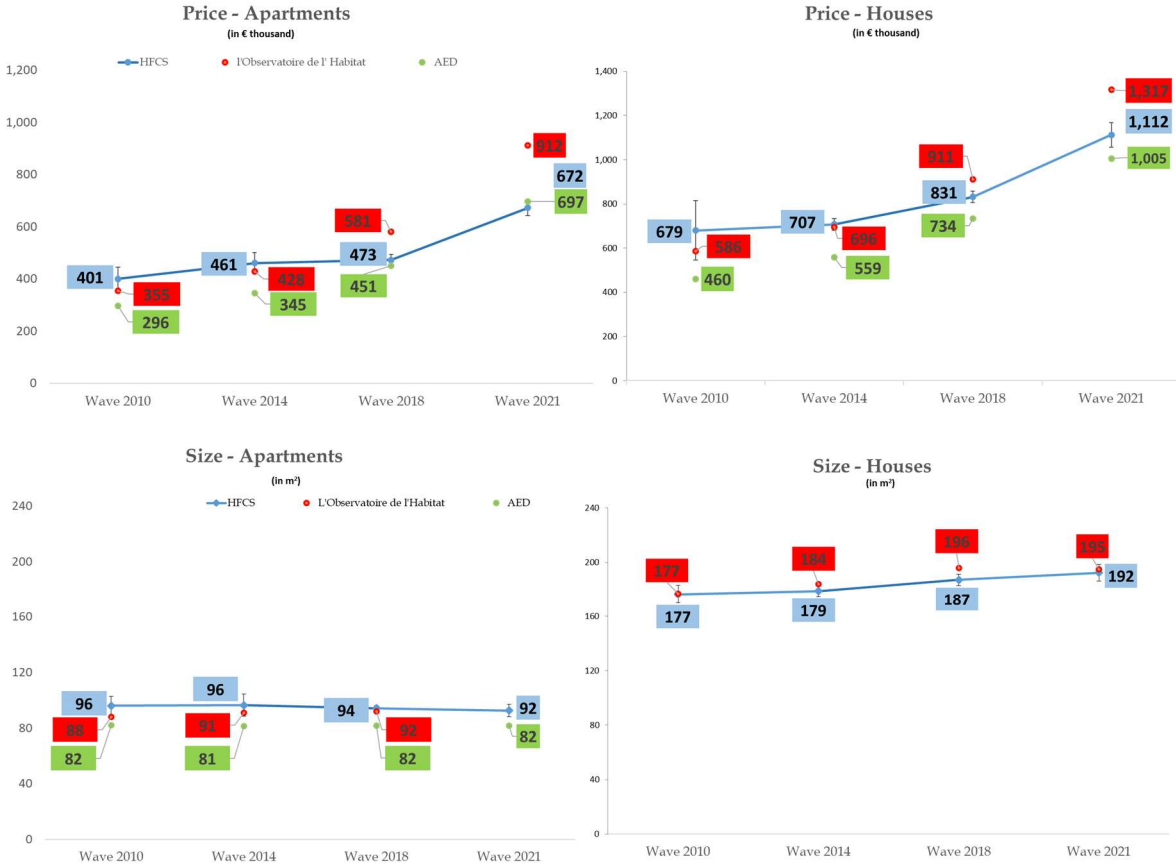
As in many other euro area countries, in 2021 housing prices increased in Luxembourg. As shown in Section 4.1, housing represents the main part of household wealth. Therefore, changes in its value not only affect estimates of household net wealth, but may also affect household spending and savings decisions. 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 et al. (2017b) used LU-HFCS information on HMR value at acquisition to study price changes for the same property over time. Naidin et al. (2022) replaced subjective values reported by participants in the LU-HFCS with objectified values imputed using hedonic models estimated on observable market data. These objectified estimates serve to construct macroeconomic measures, such as the price-to-rent ratio, price-to-income ratio and rent-to-income ratio for the entire housing stock (not just the part actually sold) and to conduct micro-simulations, e.g. on housing affordability. They find that only 18% of renters could theoretically afford to purchase the dwelling they currently occupy at current housing market conditions.

The top panels of Figure 29 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 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 29 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).<sup>32</sup> Unfortunately, the “*Observatoire de l’Habitat*” discontinued its quarterly report, so the yearly figure is used for the 2021 wave.

**Figure 29: Average HMR value and size, by type and survey year**



Note: 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. For wave 2021, the prices correspond to the overall year average, while for the previous waves it corresponds to average of the respective quarter in each year when the survey was conducted. Source: Own calculations based on LU-HFCS waves 2010, 2014, 2018 and 2021, l’Observatoire de l’Habitat and l’Administration de l’Enregistrement et des domaines et de la TVA.

According to all measures, the value of apartments and houses increased from 2010 to 2021. For apartments, the average size remained stable across the four waves. For houses, however, both the LU-HFCS and the “*Observatoire de l’Habitat*” data suggest a steady increase in the average size (see Figure 29, bottom right panel). This may in part explain the price increase for houses. Not surprisingly, advertised sales prices from the *Observatoire de l’Habitat* were

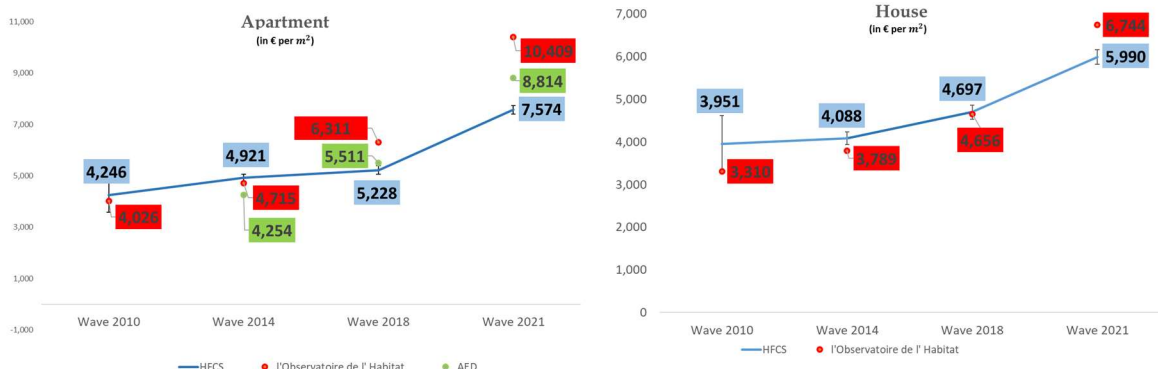
<sup>32</sup> Fieldwork took place from September 2010 to April 2011 (wave 1), from April to December 2014 (wave 2) and from February to November 2018 (wave 3).

systematically above transaction prices recorded by the *Administration de l'Enregistrement*. This confirms that advertised prices are generally higher than the reservation price that sellers are willing to accept.

In 2021, 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 19% higher than the average self-assessed value, although the latter was comparable to the average transaction price from AED. For houses, the average self-assessed value in the LU-HFCS was 10% higher than the average transaction price. The standard deviation of transaction prices from AED was particularly large for houses in 2021 (around €478,000), compared to apartments (approx. €270,000). In summary, participants in the 2021 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 surface, providing an average price per square metre. Given the large heterogeneity across dwellings, this measure may better reflect the average valuation of the HMR. In particular, this measure avoids giving more weight to bigger HMRs. Figure 30 reports the evolution of this measure for both apartments and houses. It is consistent with the evolution observed with the other sources.

**Figure 30: HMR per square meter, by type and survey year**



Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021. Data are multiply imputed and weighted. Error bars represent the 95% confidence interval.

### 6. Concluding remarks

This technical report presents the main results of the fourth wave of the Luxembourg Household Finance and Consumption Survey (LU-HFCS) conducted in 2021 by the Banque centrale du Luxembourg (BCL) in collaboration with the Luxembourg Institute of Socio-

Economic Research (LISER). The fourth wave is based on a representative sample of more than 2,000 households residing in Luxembourg.

The 2021 LU-HFCS wave was subject to two important changes. First, the sampling frame was modified to improve the coverage of the target population. Second, due to the COVID-19 pandemic, the 2021 LU-HFCS was conducted via Computer Assisted Web Interviews (CAWI), although past waves were conducted via Computer Assisted Personal Interviews (CAPI). Both these changes affected the population of respondents, reducing the comparability of results to prior waves of the survey.

Results suggest a substantial increase in household income from 2018 to 2021, as well as in net wealth. This was the case across all quintiles of the distribution of gross income or of net wealth. The sharp increase in net wealth results from increases in both real assets and financial assets, linked to rapid growth in real estate prices and a strong stock market performance between 2018 and 2021, as well as “involuntary” savings during the pandemic. Wealth inequality remained essentially unchanged compared to 2018.

In 2021, slightly more than half of households in Luxembourg were in debt. Almost one third held mortgage debt and slightly more than one third held non-mortgage debt. While the overall share of indebted households was basically unchanged compared to 2018, averaging across all households the value of debt increased by more than one half. This increase reflects growth of both mortgage debt and non-mortgage debt.

Most debt burden indicators changed little since 2018. While mortgage debt increased with real estate prices, household incomes grew more slowly. Thus, the debt-to-asset ratio and outstanding loan-to-value ratio were relatively stable, but the debt-to-income ratio rose significantly. Interest rates were still very low at the end of 2021 so that the ratio of (mortgage) debt service-to-income remained stable. However, the 2021 HFCS was conducted before the sharp interest rate increases in 2022 and 2023.

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## 8. Appendix A: Selective list of publications using LU-HFCS or XB-HFCS data

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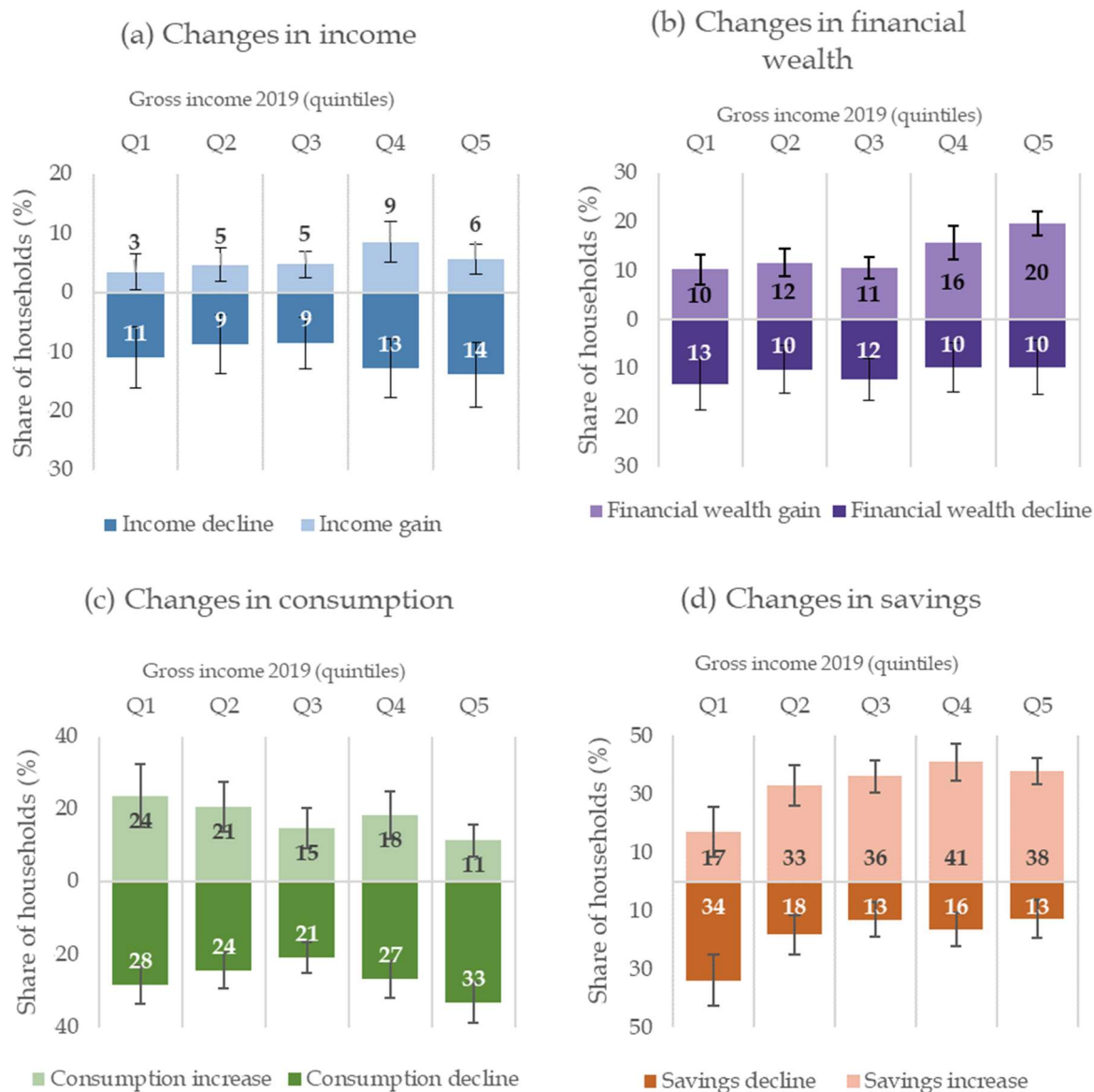
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## 9. Appendix B: COVID figures and tables

**Figure B1: COVID-19 and gross income, financial wealth, consumption and savings changes, by gross income quintiles of 2019, (in %)**



Note: The vertical axis denotes the share of households reporting either negative or positive changes expressed in percentages. Source: Own calculations based on the LU-HFCS wave 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table B1: COVID-19 responses for various household characteristics**

Variable	Income			Financial wealth			Savings			Consumption		
	Lower	Stable	Higher	Lower	Stable	Higher	Lower	Stable	Higher	Lower	Stable	Higher
All households	12	82	6	11	75	14	19	48	33	27	55	18
<i>Gender</i>												
Male	12	82	6	10	74	16	18	50	33	28	55	17
Female	13	80	6	12	77	11	22	45	21	21	58	22
<i>Age of reference person</i>												
16-34	12	76	13	13	74	12	27	37	36	27	43	30
35-44	11	81	8	9	72	19	26	46	28	30	47	23
45-54	16	78	5	10	79	11	19	55	26	25	58	17
55-64	13	84	3	11	77	12	13	49	38	29	61	10
65+	10	88	1	12	75	13	12	52	36	22	68	10
<i>Education level</i>												
Low (ISCED=0:2)	15	83	2	9	80	11	23	56	21	21	58	22
Middle (ISCED=3,4)	12	85	4	10	81	8	17	56	27	19	61	20
High (ISCED=5,6 or 5:8)	12	79	9	12	70	18	19	41	40	33	51	15
<i>Net Income Quintiles</i>												
Q1	16	80	4	13	76	11	32	51	17	28	49	24
Q2	12	82	5	10	79	10	22	47	31	28	52	21
Q3	11	84	5	12	75	13	17	47	36	18	66	17
Q4	12	80	8	10	76	13	14	46	39	27	57	16
Q5	11	81	8	9	69	22	10	49	41	34	53	13
<i>Net Wealth Quintiles</i>												
Q1	18	75	7	16	75	10	33	44	22	31	41	28
Q2	14	79	7	14	69	16	27	41	32	29	47	24
Q3	9	84	7	10	78	12	20	46	34	22	62	17
Q4	9	87	4	7	81	11	11	55	33	21	65	14
Q5	12	83	5	7	74	19	5	53	42	32	61	8

Source: Own calculations based on the LU-HFCS wave 2021; data are multiply imputed and weighted



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**Table C1: Main household characteristics**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Mean	Std. Err.	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)	49.2	(0.3)
Household size	2.5	(0.0)	2.4	(0.0)	2.4	(0.0)	2.4	(0.0)
Number of dependent children	0.7	(0.0)	0.6	(0.0)	0.6	(0.0)	0.6	(0.0)
<b>In (%)</b>								
Male	59.5	(1.4)	56.5	(1.1)	58.0	(1.0)	64.2	(1.1)
Civil status								
Single	24.7	(1.4)	27.2	(1.2)	26.7	(1.1)	34.3	(1.3)
Couple	52.8	(1.2)	49.6	(1.0)	50.2	(0.9)	48.3	(1.0)
Divorced	13.4	(1.3)	13.7	(1.0)	14.3	(1.0)	12.4	(1.0)
Widowed	9.1	(1.0)	9.5	(0.8)	8.8	(0.8)	4.9	(0.8)
Country of birth								
Belgium	3.4	(0.6)	3.6	(0.5)	5.0	(0.6)	6.7	(0.7)
Germany	2.7	(0.6)	3.2	(0.5)	2.6	(0.4)	2.7	(0.4)
France	7.0	(0.9)	7.9	(0.7)	8.5	(0.8)	9.2	(0.8)
Italy	3.1	(0.6)	3.2	(0.5)	2.8	(0.5)	3.5	(0.6)
Luxembourg	57.1	(1.3)	57.1	(1.1)	48.9	(1.1)	43.9	(1.1)
Portugal	13.7	(0.9)	11.9	(0.6)	13.6	(0.8)	11.1	(0.9)
Other countries	12.9	(1.0)	13.2	(0.8)	18.5	(1.0)	22.8	(1.3)
Education level								
Low (ISCED=0:2)	35.7	(1.7)	29.8	(1.2)	25.5	(1.2)	18.5	(1.3)
Middle (ISCED=3,4)	38.2	(1.8)	39.2	(1.5)	38.5	(1.5)	31.2	(1.4)
High (ISCED=5,6 or 5:8)	26.2	(1.4)	31.0	(1.2)	36.0	(1.3)	50.2	(1.5)
Employment status								
Employed	56.1	(1.2)	56.1	(1.1)	58.5	(1.0)	61.8	(1.2)
Self-employed	5.9	(0.6)	4.4	(0.4)	4.3	(0.5)	4.6	(0.6)
Unemployed	2.5	(0.5)	3.3	(0.5)	2.6	(0.5)	3.2	(0.6)
Retired	24.3	(1.1)	26.3	(0.8)	27.3	(0.9)	26.1	(0.9)
Other	11.1	(1.2)	9.8	(0.9)	7.2	(0.8)	4.2	(0.7)
Homeowner status								
Owner-outright	34.3	(1.4)	38.5	(1.2)	42.2	(1.3)	38.4	(1.4)
Owner with mortgage	32.8	(1.5)	29.1	(1.2)	26.8	(1.1)	27.2	(1.3)
Renter or other	32.9	(1.5)	32.4	(1.3)	31.0	(1.3)	34.4	(1.4)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C2: Median household net wealth  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Median	Std.Err.	Median	Std.Err.	Median	Std.Err.	Median	Std.Err.
All households	398,000	(17,100)	438,000	(17,500)	498,000	(23,400)	718,000	(30,700)
Gender								
Male	447,000	(34,100)	518,000	(27,500)	566,000	(35,400)	761,000	(36,100)
Female	359,000	(30,200)	367,000	(28,900)	404,000	(35,300)	608,000	(72,900)
Age of reference person								
16-34	59,000	(14,300)	109,000	(31,900)	161,000	(28,500)	183,000	(50,500)
35-44	286,000	(34,000)	277,000	(21,400)	323,000	(46,000)	464,000	(64,400)
45-54	427,000	(42,100)	545,000	(36,100)	520,000	(70,600)	824,000	(78,000)
55-64	562,000	(71,700)	629,000	(45,400)	680,000	(61,800)	1,003,000	(82,500)
65+	605,000	(40,100)	723,000	(40,600)	802,000	(54,100)	1,278,000	(107,600)
Civil status								
Single	93,800	(38,700)	256,000	(39,100)	248,000	(40,200)	310,000	(45,600)
Couple	510,000	(40,100)	723,000	(40,600)	802,000	(54,100)	947,000	(56,400)
Divorced	312,000	(47,000)	328,000	(44,900)	289,000	(74,700)	709,000	(96,200)
Widowed	511,000	(43,300)	523,000	(63,700)	694,000	(74,600)	1,268,000	(230,300)
Country of birth								
Luxembourg	522,000	(23,800)	568,000	(23,700)	706,000	(31,000)	960,000	(57,800)
Outside Luxembourg	161,000	(36,700)	246,000	(25,900)	261,000	(37,200)	423,000	(53,100)
Education level								
Low (ISCED=0:2)	277,000	(39,100)	290,000	(34,400)	335,000	(47,800)	557,000	(80,500)
Middle (ISCED=3,4)	445,000	(34,400)	488,000	(34,700)	508,000	(45,700)	789,000	(53,200)
High (ISCED=5-8)	519,000	(58,200)	539,000	(39,500)	632,000	(42,900)	737,000	(49,000)
Employment status								
Employed	273,000	(24,700)	328,000	(28,800)	380,000	(22,100)	510,000	(41,100)
Self-employed	495,000	(173,400)	839,000	(119,100)	617,000	(337,100)	1,171,000	(374,500)
Unemployed	17,000	(35,900)	15,800	(32,300)	36,200	(42,600)	40,900	(87,400)
Retired	642,000	(43,200)	696,000	(37,800)	848,000	(44,200)	1,213,000	(75,600)
Other	400,000	(60,500)	293,000	(94,600)	387,000	(111,600)	262,000	(310,300)
Housing status								
Owner-outright	680,000	(45,400)	769,000	(30,100)	845,000	(29,600)	1,242,000	(45,800)
Owner with mortgage	428,000	(23,800)	498,000	(29,600)	503,000	(32,200)	779,000	(45,200)
Renter or other	22,100	(4,100)	18,300	(3,600)	23,000	(4,400)	61,400	(9,900)
Gross Income quintile								
Q1	45,400	(31,300)	33,200	(18,600)	86,900	(40,300)	109,000	(51,800)
Q2	184,000	(93,900)	290,000	(49,400)	272,000	(90,300)	493,000	(102,200)
Q3	370,000	(47,500)	396,000	(47,400)	487,000	(61,500)	710,000	(62,000)
Q4	529,000	(31,900)	603,000	(31,100)	644,000	(40,600)	890,000	(64,600)
Q5	865,000	(65,800)	977,000	(48,500)	1,119,000	(68,800)	1,642,000	(146,200)
Net wealth quintile								
Q1	5,100	(1,600)	4,500	(1,200)	7,100	(1,100)	14,900	(3,800)
Q2	121,000	(18,400)	142,000	(12,500)	157,000	(11,100)	254,000	(18,100)
Q3	400,000	(9,900)	438,000	(9,900)	499,000	(15,200)	718,000	(18,800)
Q4	638,000	(18,300)	757,000	(13,100)	840,000	(16,500)	1,230,000	(21,500)
Q5	1,379,000	(58,700)	1,529,000	(61,200)	1,858,000	(95,400)	2,862,000	(148,700)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C3: Mean household net wealth  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Mean	Std.Err.	Mean	Std.Err.	Mean	Std.Err.	Mean	Std.Err.
All households	710,000	(58,200)	768,000	(53,400)	898,000	(46,800)	1,270,000	(62,800)
Gender								
Male	767,000	(70,400)	826,000	(58,300)	1,087,000	(76,200)	1,458,000	(85,900)
Female	626,000	(106,300)	694,000	(95,300)	636,000	(41,700)	966,000	(88,700)
Age of reference person								
16-34	209,000	(31,400)	278,000	(43,000)	348,000	(37,400)	420,000	(45,300)
35-44	503,000	(92,100)	486,000	(41,600)	688,000	(121,200)	715,000	(60,800)
45-54	851,000	(180,700)	913,000	(130,700)	812,000	(67,600)	1,216,000	(114,300)
55-64	895,000	(78,400)	1,155,000	(219,800)	1,108,000	(135,500)	1,654,000	(225,100)
65+	1,096,000	(171,900)	1,035,000	(88,900)	1,461,000	(179,600)	2,372,000	(239,300)
Civil status								
Single	435,000	(117,500)	502,000	(47,400)	535,000	(84,000)	643,000	(69,900)
Couple	904,000	(171,900)	1,035,000	(88,900)	1,461,000	(179,600)	1,516,000	(107,600)
Divorced	445,000	(65,300)	689,000	(159,500)	583,000	(73,400)	1,569,000	(268,900)
Widowed	723,000	(165,200)	835,000	(110,600)	1,646,000	(419,100)	1,921,000	(467,900)
Country of birth								
Luxembourg	933,000	(97,200)	920,000	(78,900)	1,183,000	(88,500)	1,484,000	(89,200)
Outside Luxembourg	413,000	(45,200)	567,000	(63,900)	625,000	(64,600)	1,102,000	(88,200)
Education level								
Low (ISCED=0:2)	434,000	(53,900)	505,000	(42,700)	479,000	(39,300)	848,000	(142,000)
Middle (ISCED=3,4)	742,000	(108,000)	706,000	(42,300)	975,000	(106,500)	1,113,000	(76,500)
High (ISCED=5-8)	1,040,000	(144,500)	1,100,000	(157,000)	1,113,000	(95,600)	1,517,000	(103,500)
Employment status								
Employed	535,000	(76,700)	603,000	(50,500)	651,000	(46,500)	869,000	(48,400)
Self-employed	1,530,000	(294,800)	1,444,000	(174,500)	1,920,000	(525,100)	2,043,000	(313,500)
Unemployed	141,000	(54,300)	219,000	(56,500)	206,000	(71,300)	359,000	(107,100)
Retired	1,077,000	(146,300)	1,119,000	(159,400)	1,429,000	(147,400)	2,229,000	(208,600)
Other	487,000	(68,100)	657,000	(127,000)	535,000	(105,800)	690,000	(145,000)
Housing status								
Owner-outright	1,353,000	(152,300)	1,266,000	(115,700)	1,452,000	(110,900)	1,985,000	(156,500)
Owner with mortgage	619,000	(65,600)	785,000	(80,700)	854,000	(89,800)	1,300,000	(100,000)
Renter or other	130,000	(20,900)	162,000	(26,700)	182,000	(38,700)	448,000	(69,000)
Gross Income quintile								
Q1	255,000	(46,300)	246,000	(29,200)	306,000	(47,200)	460,000	(68,200)
Q2	361,000	(61,700)	426,000	(41,600)	530,000	(110,800)	712,000	(72,500)
Q3	477,000	(46,500)	531,000	(47,100)	626,000	(48,000)	895,000	(61,200)
Q4	722,000	(107,500)	816,000	(60,100)	924,000	(68,800)	1,272,000	(122,000)
Q5	1,741,000	(266,300)	1,829,000	(240,400)	2,110,000	(188,900)	3,033,000	(249,400)
Net wealth quintile								
Q1	2,300	(2,600)	-3,400	(3,800)	9,200	(1,600)	9,000	(5,200)
Q2	134,000	(7,100)	152,000	(6,200)	175,000	(6,800)	262,000	(11,100)
Q3	393,000	(6,600)	439,000	(6,100)	499,000	(7,000)	713,000	(18,700)
Q4	655,000	(10,200)	773,000	(10,500)	853,000	(11,600)	1,249,000	(17,100)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C4: Total real assets, participation rate  
by household characteristic**

(In %) Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Part. rate	Std.Err.	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)	93.8	(0.9)
Gender								
Male	95.4	(1.1)	94.5	(1.1)	93.6	(1.0)	94.1	(1.0)
Female	91.1	(1.8)	93.0	(1.4)	94.4	(1.1)	93.4	(1.6)
Age of reference person								
16-34	92.2	(2.5)	92.7	(2.1)	94.8	(1.6)	86.1	(2.8)
35-44	92.4	(2.1)	92.7	(2.2)	89.9	(2.1)	89.9	(2.7)
45-54	92.3	(2.2)	93.9	(1.7)	94.6	(1.6)	97.2	(1.1)
55-64	95.1	(2.2)	94.0	(1.8)	95.6	(1.5)	98.7	(0.8)
65+	96.7	(1.6)	95.8	(1.6)	94.8	(1.7)	97.0	(1.3)
Civil status								
Single	84.9	(2.7)	87.5	(2.2)	90.5	(1.8)	85.8	(2.4)
Couple	98.3	(0.7)	98.2	(0.7)	97.2	(0.7)	97.9	(0.6)
Divorced	91.9	(3.0)	92.4	(2.3)	87.4	(3.0)	95.0	(2.1)
Widowed	93.1	(3.7)	91.4	(3.4)	95.8	(2.4)	98.9	(1.1)
Country of birth								
Luxembourg	96.1	(1.0)	95.7	(0.9)	97.7	(0.7)	97.9	(0.7)
Outside Luxembourg	90.4	(1.8)	91.4	(1.6)	90.3	(1.3)	90.7	(1.5)
Education level								
Low (ISCED=0:2)	90.0	(2.0)	91.9	(1.8)	88.5	(2.1)	96.8	(1.8)
Middle (ISCED=3,4)	94.2	(1.4)	94.7	(1.3)	95.4	(1.0)	94.6	(1.7)
High (ISCED=5-8)	97.8	(1.2)	94.7	(1.4)	96.2	(1.1)	92.3	(1.2)
Employment status								
Employed	93.0	(1.4)	94.8	(1.1)	94.3	(1.0)	92.5	(1.2)
Self-employed	99.5	(0.5)	100.0	-	96.1	(3.6)	100.0	-
Unemployed	83.4	(8.9)	70.9	(8.2)	78.5	(7.8)	85.0	(8.0)
Retired	97.7	(1.2)	96.4	(1.3)	95.8	(1.3)	99.0	(0.5)
Other	87.3	(4.0)	86.5	(3.8)	87.6	(3.7)	79.1	(7.8)
Housing status								
Owner-outright	100.0	-	100.0	-	100.0	-	100.0	-
Owner with mortgage	100.0	-	100.0	-	100.0	-	100.0	-
Renter or other	80.7	(2.7)	81.0	(2.3)	80.3	(2.3)	82.1	(2.4)
Gross Income quintile								
Q1	76.1	(3.9)	77.4	(3.4)	81.8	(2.9)	79.2	(3.6)
Q2	94.8	(2.2)	95.3	(1.9)	92.3	(2.0)	95.0	(1.8)
Q3	98.8	(1.4)	98.5	(1.0)	96.4	(1.3)	96.9	(1.6)
Q4	98.8	(1.0)	98.4	(1.1)	99.5	(0.4)	98.9	(0.9)
Q5	100.0	-	100.0	(0.1)	99.6	(0.4)	99.7	(0.4)
Net wealth quintile								
Q1	71.7	(4.0)	70.5	(3.4)	73.4	(3.3)	76.4	(3.6)
Q2	96.7	(1.8)	98.8	(0.9)	96.2	(1.6)	93.5	(2.2)
Q3	100.0	-	100.0	-	100.0	-	99.8	-
Q4	100.0	-	100.0	-	100.0	-	99.8	(0.3)
Q5	100.0	-	100.0	-	100.0	-	99.6	-

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C5: Total real assets, conditional median  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.
All households	470,000	(15,600)	507,000	(12,700)	602,000	(16,500)	787,000	(34,000)
Gender								
Male	501,000	(20,200)	563,000	(25,600)	644,000	(20,500)	841,000	(43,800)
Female	443,000	(23,800)	454,000	(19,000)	535,000	(25,700)	714,000	(47,600)
Age of reference person								
16-34	243,000	(64,700)	305,000	(36,700)	384,000	(50,600)	397,000	(84,200)
35-44	465,000	(34,200)	447,000	(34,800)	575,000	(36,000)	704,000	(50,900)
45-54	496,000	(37,200)	582,000	(43,200)	637,000	(29,500)	841,000	(64,600)
55-64	549,000	(69,200)	658,000	(44,900)	674,000	(51,000)	915,000	(71,100)
65+	573,000	(43,200)	646,000	(43,700)	725,000	(54,100)	1,081,000	(81,900)
Civil status								
Single	285,000	(30,800)	376,000	(32,700)	397,000	(41,900)	495,000	(46,300)
Couple	548,000	(24,600)	612,000	(21,000)	726,000	(23,700)	979,000	(38,100)
Divorced	398,000	(44,400)	410,000	(44,000)	419,000	(45,900)	721,000	(71,900)
Widowed	491,000	(37,600)	481,000	(61,000)	614,000	(52,300)	940,000	(204,300)
Country of birth								
Luxembourg	538,000	(21,100)	597,000	(26,100)	746,000	(23,000)	964,000	(39,900)
Outside Luxembourg	291,000	(38,800)	361,000	(22,500)	447,000	(29,500)	628,000	(52,900)
Education level								
Low (ISCED=0:2)	381,000	(27,100)	368,000	(22,300)	478,000	(36,600)	657,000	(57,000)
Middle (ISCED=3,4)	494,000	(23,600)	530,000	(25,600)	613,000	(25,200)	851,000	(45,700)
High (ISCED=5-8)	609,000	(48,400)	675,000	(39,600)	738,000	(37,700)	842,000	(53,800)
Employment status								
Employed	421,000	(21,500)	479,000	(21,800)	565,000	(19,800)	694,000	(25,900)
Self-employed	630,000	(102,800)	958,000	(155,000)	926,000	(227,900)	1,084,000	(240,100)
Unemployed	8,500	(84,900)	85,000	(101,300)	170,000	(136,600)	111,000	(230,000)
Retired	603,000	(45,400)	647,000	(34,800)	774,000	(42,800)	1,030,000	(62,500)
Other	436,000	(46,500)	431,000	(58,800)	497,000	(66,400)	769,000	(281,500)
Housing status								
Owner-outright	616,000	(31,700)	685,000	(21,300)	762,000	(31,900)	1,052,000	(46,400)
Owner with mortgage	528,000	(19,400)	628,000	(27,200)	730,000	(23,700)	992,000	(42,200)
Renter or other	16,500	(4,200)	15,000	(2,100)	14,600	(2,000)	20,700	(2,700)
Gross Income quintile								
Q1	216,000	(62,300)	161,000	(101,200)	284,000	(59,000)	406,000	(104,900)
Q2	306,000	(41,600)	355,000	(25,200)	387,000	(40,800)	539,000	(47,800)
Q3	434,000	(36,800)	450,000	(27,000)	591,000	(38,800)	718,000	(53,600)
Q4	562,000	(33,500)	637,000	(28,200)	708,000	(26,900)	973,000	(61,700)
Q5	842,000	(33,600)	986,000	(40,300)	1,128,000	(58,100)	1,533,000	(96,000)
Net wealth quintile								
Q1	7,200	(1,200)	8,200	(910)	8,800	(1,500)	12,900	(3,100)
Q2	222,000	(27,500)	233,000	(25,100)	258,000	(29,200)	366,000	(43,000)
Q3	425,000	(15,800)	450,000	(11,400)	541,000	(14,400)	701,000	(18,500)
Q4	616,000	(14,600)	717,000	(13,200)	810,000	(13,700)	1,140,000	(40,100)
Q5	1,241,000	(67,000)	1,339,000	(65,000)	1,634,000	(79,800)	2,408,000	(154,600)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C6: Total real assets, conditional mean  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.
All households	751,000	(60,600)	781,000	(48,300)	939,000	(46,800)	1,182,000	(51,100)
Gender								
Male	778,000	(72,200)	819,000	(47,600)	1,109,000	(76,700)	1,288,000	(68,700)
Female	710,000	(111,700)	732,000	(92,000)	706,000	(40,600)	987,000	(76,500)
Age of reference person								
16-34	322,000	(38,700)	393,000	(46,500)	455,000	(39,000)	686,000	(70,900)
35-44	619,000	(100,100)	594,000	(42,200)	872,000	(127,300)	856,000	(55,200)
45-54	903,000	(191,900)	887,000	(99,500)	880,000	(64,300)	1,323,000	(154,200)
55-64	886,000	(85,000)	1,111,000	(209,500)	1,036,000	(129,200)	1,360,000	(109,500)
65+	1,001,000	(162,800)	934,000	(85,200)	1,376,000	(185,700)	1,700,000	(154,000)
Civil status								
Single	547,000	(141,900)	553,000	(49,800)	588,000	(85,700)	766,000	(72,000)
Couple	909,000	(91,100)	932,000	(85,800)	1,061,000	(62,900)	1,372,000	(67,700)
Divorced	489,000	(67,400)	621,000	(73,800)	687,000	(77,400)	1,275,000	(215,200)
Widowed	670,000	(130,000)	790,000	(105,600)	1,607,000	(438,900)	1,643,000	(348,800)
Country of birth								
Luxembourg	951,000	(98,700)	927,000	(75,300)	1,190,000	(88,700)	1,463,000	(86,100)
Outside Luxembourg	469,000	(48,100)	579,000	(45,800)	679,000	(67,100)	945,000	(60,100)
Education level								
Low (ISCED=0:2)	486,000	(49,500)	538,000	(41,200)	544,000	(41,800)	889,000	(114,400)
Middle (ISCED=3,4)	779,000	(113,300)	732,000	(41,800)	1,022,000	(110,100)	1,121,000	(91,300)
High (ISCED=5-8)	1,045,000	(144,700)	1,072,000	(138,000)	1,108,000	(90,900)	1,335,000	(76,500)
Employment status								
Employed	613,000	(81,600)	641,000	(38,300)	737,000	(46,300)	948,000	(49,400)
Self-employed	1,616,000	(306,300)	1,467,000	(172,900)	1,996,000	(514,300)	2,208,000	(480,900)
Unemployed	174,000	(71,400)	281,000	(75,600)	296,000	(96,700)	442,000	(126,300)
Retired	977,000	(139,000)	1,025,000	(149,000)	1,323,000	(149,500)	1,636,000	(123,100)
Other	549,000	(69,600)	722,000	(140,600)	630,000	(120,300)	910,000	(169,500)
Housing status								
Owner-outright	1,223,000	(147,400)	1,109,000	(105,300)	1,324,000	(106,900)	1,548,000	(83,800)
Owner with mortgage	744,000	(67,400)	898,000	(49,200)	1,033,000	(86,300)	1,590,000	(115,800)
Renter or other	151,000	(26,000)	170,000	(30,900)	183,000	(42,000)	291,000	(43,700)
Gross Income quintile								
Q1	324,000	(55,900)	300,000	(33,800)	365,000	(51,200)	562,000	(76,800)
Q2	408,000	(68,600)	430,000	(40,000)	562,000	(111,400)	647,000	(60,700)
Q3	505,000	(44,100)	552,000	(47,100)	645,000	(45,200)	848,000	(58,500)
Q4	737,000	(104,200)	825,000	(57,600)	937,000	(55,800)	1,198,000	(86,400)
Q5	1,661,000	(258,200)	1,676,000	(203,500)	2,049,000	(182,800)	2,507,000	(190,800)
Net wealth quintile								
Q1	38,100	(11,100)	54,900	(14,700)	45,100	(10,500)	71,800	(17,300)
Q2	224,000	(15,600)	242,000	(14,200)	286,000	(17,300)	366,000	(27,800)
Q3	443,000	(12,900)	483,000	(13,900)	576,000	(17,000)	736,000	(23,500)
Q4	640,000	(14,600)	746,000	(17,100)	851,000	(18,800)	1,182,000	(27,600)
Q5	2,199,000	(255,700)	2,165,000	(205,300)	2,680,000	(194,400)	3,249,000	(177,000)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C7: Household main residence, participation rate  
by household characteristic**

(In %) Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Part. rate	Std.Err.	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)	65.6	(1.4)
Gender								
Male	63.9	(2.2)	68.2	(1.8)	67.8	(1.7)	66.8	(1.8)
Female	71.8	(2.6)	66.9	(2.1)	70.6	(2.1)	63.7	(2.6)
Age of reference person								
16-34	45.7	(4.2)	49.7	(3.7)	53.3	(3.8)	45.3	(3.8)
35-44	62.1	(3.5)	60.7	(3.3)	62.7	(3.3)	60.2	(3.4)
45-54	65.0	(3.6)	70.1	(3.0)	72.2	(2.7)	67.4	(3.1)
55-64	77.9	(3.8)	73.6	(3.1)	67.3	(3.3)	71.5	(3.2)
65+	86.0	(3.2)	83.4	(2.6)	86.4	(2.4)	82.4	(3.0)
Civil status								
Single	47.1	(3.7)	54.7	(3.1)	55.3	(3.1)	49.9	(3.0)
Couple	75.7	(1.9)	74.5	(1.7)	76.6	(1.7)	74.0	(1.8)
Divorced	57.5	(5.4)	58.2	(4.1)	57.2	(3.9)	66.3	(4.4)
Widowed	86.1	(4.9)	81.7	(4.3)	86.6	(3.9)	76.2	(7.2)
Country of birth								
Luxembourg	83.6	(1.8)	79.5	(1.7)	85.7	(1.5)	84.0	(1.7)
Outside Luxembourg	45.1	(2.7)	51.8	(2.2)	53.0	(2.1)	51.2	(2.1)
Education level								
Low (ISCED=0:2)	59.2	(3.1)	62.9	(2.7)	63.3	(2.9)	67.8	(4.1)
Middle (ISCED=3,4)	72.4	(2.7)	71.1	(2.2)	72.1	(2.3)	74.2	(2.6)
High (ISCED=5-8)	70.2	(3.1)	67.7	(2.5)	69.8	(2.2)	59.6	(2.0)
Employment status								
Employed	61.5	(2.3)	63.9	(1.8)	63.6	(1.8)	60.8	(1.9)
Self-employed	54.8	(5.7)	77.9	(5.0)	71.0	(6.9)	58.3	(7.0)
Unemployed	25.5	(10.2)	28.1	(7.3)	39.0	(8.9)	37.0	(9.1)
Retired	83.9	(3.1)	82.2	(2.4)	84.9	(2.2)	84.1	(2.5)
Other	74.8	(4.7)	58.5	(4.9)	62.2	(5.8)	46.3	(9.4)
Housing status								
Owner-outright	100.0	-	100.0	-	100.0	-	100.0	-
Owner with mortgage	100.0	-	100.0	-	100.0	-	100.0	-
Renter or other	0.0	-	0.0	-	0.0	-	0.0	-
Gross Income quintile								
Q1	40.0	(4.8)	38.4	(3.5)	47.2	(3.7)	43.1	(4.2)
Q2	55.5	(4.8)	61.6	(3.8)	58.9	(3.9)	60.8	(4.1)
Q3	71.5	(4.1)	72.1	(3.2)	72.8	(3.6)	67.5	(3.4)
Q4	85.2	(3.1)	80.7	(2.7)	81.3	(2.8)	75.5	(3.0)
Q5	83.7	(2.9)	85.5	(2.2)	85.0	(2.2)	81.6	(2.7)
Net wealth quintile								
Q1	3.8	(1.6)	4.8	(1.6)	4.1	(1.4)	5.6	(2.1)
Q2	48.2	(4.2)	52.6	(3.5)	56.4	(3.5)	52.7	(4.6)
Q3	93.9	(2.3)	91.9	(2.0)	92.5	(1.9)	87.3	(2.7)
Q4	95.7	(1.5)	94.4	(1.7)	96.8	(1.0)	93.0	(1.8)
Q5	94.4	(1.5)	94.5	(1.4)	95.6	(1.2)	89.4	(2.4)

Source: Own calculations based LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C8: Household main residence, conditional median  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.
All households	500,000	(8,400)	556,000	(22,900)	652,000	(16,600)	858,000	(23,600)
Gender								
Male	500,000	(19,600)	600,000	(19,000)	700,000	(20,000)	874,000	(35,100)
Female	451,000	(22,000)	500,000	(20,900)	600,000	(24,400)	850,000	(30,600)
Age of reference person								
16-34	400,000	(23,000)	463,000	(30,200)	562,000	(38,000)	700,000	(44,500)
35-44	500,000	(13,100)	561,000	(38,600)	650,000	(36,300)	816,000	(41,300)
45-54	500,000	(36,100)	650,000	(35,800)	682,000	(39,600)	900,000	(42,400)
55-64	500,000	(22,900)	619,000	(30,800)	722,000	(35,800)	890,000	(36,000)
65+	514,000	(42,000)	543,000	(47,600)	676,000	(44,100)	906,000	(34,200)
Civil status								
Single	400,000	(23,300)	486,000	(27,300)	506,000	(24,100)	624,000	(41,700)
Couple	530,000	(29,300)	650,000	(19,400)	744,000	(27,400)	956,000	(32,300)
Divorced	440,000	(29,900)	500,000	(26,800)	514,000	(43,700)	806,000	(60,900)
Widowed	450,000	(33,800)	471,000	(39,300)	600,000	(45,400)	900,000	(80,900)
Country of birth								
Luxembourg	500,000	(7,900)	600,000	(17,000)	700,000	(20,500)	892,000	(27,300)
Outside Luxembourg	460,000	(39,200)	509,000	(29,700)	600,000	(21,100)	848,000	(25,600)
Education level								
Low (ISCED=0:2)	450,000	(25,700)	469,000	(20,600)	532,000	(35,000)	734,000	(51,400)
Middle (ISCED=3,4)	496,000	(22,100)	595,000	(27,900)	650,000	(21,000)	850,000	(26,900)
High (ISCED=5-8)	568,000	(36,900)	696,000	(31,600)	800,000	(25,300)	914,000	(28,900)
Employment status								
Employed	482,000	(19,400)	550,000	(21,700)	650,000	(17,000)	838,000	(26,100)
Self-employed	699,000	(87,000)	719,000	(71,000)	874,000	(98,600)	1,016,000	(191,600)
Unemployed	365,000	(124,600)	433,000	(121,500)	400,000	(50,300)	630,000	(150,100)
Retired	516,000	(39,700)	600,000	(35,800)	702,000	(32,000)	900,000	(25,500)
Other	450,000	(37,700)	500,000	(36,300)	562,000	(68,500)	958,000	(114,900)
Housing status								
Owner-outright	500,000	(18,000)	552,000	(27,000)	658,000	(24,700)	894,000	(29,500)
Owner with mortgage	459,000	(24,200)	571,000	(30,900)	650,000	(21,300)	850,000	(27,200)
Renter or other	-	-	-	-	-	-	-	-
Gross Income quintile								
Q1	434,000	(42,700)	400,000	(25,800)	456,000	(40,800)	664,000	(50,800)
Q2	400,000	(23,100)	440,000	(35,400)	496,000	(27,000)	654,000	(55,500)
Q3	450,000	(23,200)	498,000	(22,600)	600,000	(27,400)	814,000	(39,600)
Q4	500,000	(12,600)	624,000	(28,200)	700,000	(24,300)	902,000	(37,300)
Q5	700,000	(32,300)	775,000	(38,100)	930,000	(50,700)	1,160,000	(90,300)
Net wealth quintile								
Q1	216,000	(72,700)	375,000	(97,800)	396,000	(152,100)	492,000	(175,000)
Q2	300,000	(24,900)	342,000	(17,600)	352,000	(25,600)	484,000	(32,100)
Q3	400,000	(10,000)	432,000	(26,400)	502,000	(12,000)	678,000	(26,400)
Q4	550,000	(32,700)	654,000	(20,200)	750,000	(15,900)	992,000	(25,300)
Q5	800,000	(27,900)	900,000	(46,500)	1,000,000	(43,000)	1,360,000	(94,500)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.



**Table C9: Household main residence, conditional mean  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.
All households	612,000	(45,100)	648,000	(12,000)	740,000	(13,600)	968,000	(24,200)
Gender								
Male	598,000	(17,900)	675,000	(16,200)	783,000	(19,700)	977,000	(25,000)
Female	630,000	(102,000)	612,000	(19,400)	683,000	(19,500)	955,000	(50,600)
Age of reference person								
16-34	434,000	(25,600)	530,000	(27,500)	616,000	(26,100)	760,000	(45,400)
35-44	584,000	(54,800)	619,000	(23,800)	703,000	(28,300)	951,000	(65,200)
45-54	757,000	(190,100)	699,000	(26,600)	749,000	(27,400)	989,000	(38,800)
55-64	635,000	(45,700)	734,000	(34,100)	831,000	(39,100)	982,000	(34,300)
65+	585,000	(32,100)	627,000	(24,000)	763,000	(31,700)	1,058,000	(61,100)
Civil status								
Single	645,000	(234,100)	545,000	(21,700)	578,000	(22,100)	732,000	(33,000)
Couple	652,000	(30,600)	716,000	(17,200)	834,000	(19,900)	1,059,000	(31,600)
Divorced	492,000	(31,700)	596,000	(34,200)	664,000	(47,000)	912,000	(56,900)
Widowed	479,000	(32,500)	571,000	(43,000)	664,000	(37,600)	1,163,000	(211,100)
Country of birth								
Luxembourg	643,000	(61,200)	674,000	(15,400)	789,000	(18,500)	1,005,000	(38,000)
Outside Luxembourg	535,000	(30,800)	594,000	(19,900)	665,000	(20,300)	922,000	(29,000)
Education level								
Low (ISCED=0:2)	521,000	(30,200)	531,000	(19,800)	572,000	(23,700)	849,000	(64,400)
Middle (ISCED=3,4)	548,000	(23,100)	638,000	(18,300)	710,000	(19,300)	956,000	(49,600)
High (ISCED=5-8)	812,000	(152,700)	765,000	(24,300)	882,000	(27,200)	1,027,000	(29,900)
Employment status								
Employed	608,000	(80,500)	628,000	(14,800)	714,000	(15,700)	943,000	(30,400)
Self-employed	1,030,000	(227,100)	858,000	(68,700)	1,025,000	(116,300)	1,140,000	(135,400)
Unemployed	477,000	(152,700)	523,000	(76,500)	415,000	(45,000)	694,000	(116,700)
Retired	594,000	(27,900)	666,000	(24,400)	780,000	(27,000)	999,000	(44,300)
Other	521,000	(63,600)	599,000	(49,000)	633,000	(44,600)	1,002,000	(92,900)
Housing status								
Owner-outright	693,000	(86,100)	642,000	(16,500)	746,000	(19,000)	978,000	(36,700)
Owner with mortgage	527,000	(15,600)	656,000	(19,200)	731,000	(20,900)	955,000	(28,500)
Renter or other	-	-	-	-	-	-	-	-
Gross Income quintile								
Q1	497,000	(62,400)	474,000	(34,400)	530,000	(37,500)	814,000	(106,800)
Q2	441,000	(27,900)	504,000	(25,000)	538,000	(32,000)	728,000	(38,100)
Q3	490,000	(23,300)	569,000	(27,600)	648,000	(28,700)	863,000	(35,600)
Q4	578,000	(102,500)	680,000	(23,600)	771,000	(29,400)	1,001,000	(48,400)
Q5	920,000	(160,800)	867,000	(28,100)	1,046,000	(30,800)	1,289,000	(56,700)
Net wealth quintile								
Q1	233,000	(65,000)	463,000	(68,000)	469,000	(108,600)	507,000	(110,500)
Q2	333,000	(15,400)	354,000	(13,500)	398,000	(19,200)	513,000	(28,500)
Q3	416,000	(12,300)	452,000	(11,400)	534,000	(13,800)	712,000	(21,200)
Q4	560,000	(13,800)	676,000	(14,200)	745,000	(16,000)	1,009,000	(25,100)
Q5	1,018,000	(147,000)	985,000	(28,300)	1,148,000	(33,100)	1,475,000	(66,800)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C10: Other real estate property, participation rate  
by household characteristic**

(In %) Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Part. rate	Std.Err.	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)	29.8	(1.3)
Gender								
Male	32.1	(2.3)	29.4	(1.6)	30.4	(1.8)	33.4	(1.7)
Female	22.4	(2.5)	22.4	(1.8)	20.2	(1.7)	24.0	(2.2)
Age of reference person								
16-34	17.3	(3.2)	12.0	(2.3)	12.1	(2.1)	12.4	(2.2)
35-44	20.3	(2.8)	21.6	(2.6)	22.4	(2.6)	23.3	(2.7)
45-54	31.1	(3.6)	29.1	(2.7)	27.1	(2.6)	31.1	(2.9)
55-64	36.6	(4.0)	37.6	(3.1)	33.4	(3.3)	37.5	(3.2)
65+	37.1	(4.6)	32.1	(3.1)	34.2	(3.0)	43.9	(3.8)
Civil status								
Single	17.1	(2.7)	18.1	(2.1)	18.3	(2.2)	19.3	(2.1)
Couple	34.7	(2.3)	32.1	(1.8)	32.7	(1.9)	35.2	(1.9)
Divorced	25.1	(4.7)	22.7	(3.4)	17.1	(2.6)	27.2	(4.1)
Widowed	24.9	(6.2)	25.0	(4.7)	26.4	(4.7)	47.3	(8.2)
Country of birth								
Luxembourg	29.1	(2.2)	26.3	(1.7)	27.4	(1.8)	31.9	(2.1)
Outside Luxembourg	26.9	(2.5)	26.5	(1.9)	24.8	(1.8)	28.1	(1.9)
Education level								
Low (ISCED=0:2)	22.8	(2.9)	22.8	(2.2)	21.2	(2.4)	16.6	(3.2)
Middle (ISCED=3,4)	25.6	(2.7)	23.6	(2.0)	22.4	(2.0)	25.8	(2.5)
High (ISCED=5-8)	39.2	(3.1)	33.3	(2.4)	33.5	(2.2)	37.0	(1.9)
Employment status								
Employed	24.0	(2.1)	23.2	(1.6)	23.3	(1.6)	25.1	(1.6)
Self-employed	45.7	(5.5)	48.3	(5.8)	35.3	(6.4)	47.4	(6.9)
Unemployed	8.1	(5.5)	14.4	(5.5)	5.2	(3.6)	15.9	(6.4)
Retired	40.0	(4.0)	33.4	(2.7)	34.1	(2.7)	41.9	(3.1)
Other	18.7	(4.9)	20.0	(3.9)	20.3	(4.5)	10.5	(4.3)
Housing status								
Owner-outright	39.6	(3.2)	33.1	(2.1)	32.5	(2.1)	34.7	(2.5)
Owner with mortgage	21.0	(2.4)	22.5	(2.1)	25.1	(2.3)	31.7	(2.4)
Renter or other	23.4	(2.8)	21.8	(2.1)	18.2	(2.0)	22.8	(2.3)
Gross Income quintile								
Q1	11.6	(3.1)	12.1	(2.3)	7.4	(2.0)	10.8	(2.6)
Q2	17.3	(3.6)	16.6	(2.6)	18.7	(3.0)	21.8	(3.5)
Q3	26.5	(4.5)	23.6	(2.9)	24.0	(3.3)	28.7	(3.1)
Q4	35.9	(4.4)	32.8	(3.0)	33.0	(3.2)	37.3	(3.3)
Q5	49.7	(3.6)	46.9	(2.8)	47.6	(3.1)	51.0	(3.0)
Net wealth quintile								
Q1	5.1	(2.2)	4.2	(1.4)	2.9	(1.0)	4.1	(1.4)
Q2	23.8	(3.9)	19.6	(2.7)	15.7	(2.7)	16.3	(2.6)
Q3	17.2	(3.8)	18.4	(2.7)	20.2	(3.0)	21.6	(2.8)
Q4	24.7	(4.1)	24.9	(2.9)	25.5	(2.9)	34.0	(3.5)
Q5	70.4	(3.4)	64.7	(3.0)	66.5	(3.1)	73.1	(3.1)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C11: Other real estate property, conditional median  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. median	Std.Err.	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)	658,000	(55,900)
Gender								
Male	316,000	(41,200)	377,000	(43,000)	433,000	(44,700)	738,000	(68,800)
Female	300,000	(64,300)	322,000	(47,200)	269,000	(46,800)	500,000	(83,300)
Age of reference person								
16-34	250,000	(63,100)	277,000	(48,700)	400,000	(88,900)	416,000	(69,300)
35-44	305,000	(78,100)	310,000	(61,700)	369,000	(46,500)	398,000	(105,700)
45-54	231,000	(43,900)	278,000	(38,900)	318,000	(51,000)	603,000	(117,900)
55-64	364,000	(112,200)	450,000	(70,300)	400,000	(55,100)	792,000	(176,300)
65+	431,000	(167,200)	472,000	(82,500)	434,000	(105,000)	851,000	(170,200)
Civil status								
Single	245,000	(68,600)	406,000	(69,900)	291,000	(51,200)	323,000	(75,300)
Couple	340,000	(30,100)	350,000	(33,500)	400,000	(38,200)	779,000	(81,600)
Divorced	361,000	(130,600)	286,000	(78,600)	396,000	(115,700)	828,000	(223,400)
Widowed	300,000	(368,500)	350,000	(235,700)	316,000	(116,800)	684,000	(258,400)
Country of birth								
Luxembourg	388,000	(69,000)	456,000	(41,200)	421,000	(62,400)	775,000	(81,300)
Outside Luxembourg	200,000	(18,700)	270,000	(31,800)	280,000	(48,800)	504,000	(75,300)
Education level								
Low (ISCED=0:2)	197,000	(23,900)	184,000	(54,300)	162,000	(44,100)	548,000	(320,600)
Middle (ISCED=3,4)	352,000	(56,000)	395,000	(66,600)	432,000	(82,500)	570,000	(77,700)
High (ISCED=5-8)	382,000	(80,100)	410,000	(34,000)	445,000	(40,400)	716,000	(65,300)
Employment status								
Employed	229,000	(23,900)	300,000	(21,100)	375,000	(28,500)	542,000	(73,800)
Self-employed	707,000	(120,200)	654,000	(154,600)	480,000	(184,200)	684,000	(265,300)
Unemployed	135,000	(122,900)	110,000	(219,400)	170,000	(317,800)	350,000	(225,300)
Retired	385,000	(107,300)	400,000	(60,100)	414,000	(89,600)	765,000	(111,800)
Other	286,000	(158,100)	426,000	(222,800)	180,000	(95,300)	1,170,000	(706,800)
Housing status								
Owner-outright	361,000	(101,000)	456,000	(48,700)	428,000	(65,400)	728,000	(103,800)
Owner with mortgage	312,000	(65,200)	322,000	(45,000)	352,000	(42,200)	720,000	(115,600)
Renter or other	200,000	(27,600)	239,000	(47,800)	299,000	(111,300)	512,000	(106,100)
Gross Income quintile								
Q1	146,000	(70,400)	100,000	(40,900)	135,000	(39,400)	530,000	(242,000)
Q2	241,000	(106,900)	216,000	(82,800)	178,000	(63,000)	406,000	(104,900)
Q3	237,000	(99,300)	270,000	(33,800)	266,000	(55,200)	408,000	(89,000)
Q4	338,000	(78,000)	350,000	(41,200)	382,000	(42,600)	502,000	(87,300)
Q5	396,000	(76,600)	622,000	(90,100)	686,000	(74,400)	1,424,000	(136,300)
Net wealth quintile								
Q1	205,000	(75,900)	36,000	(108,200)	83,500	(146,800)	273,000	(191,400)
Q2	142,000	(24,600)	110,000	(21,200)	146,000	(23,300)	246,000	(40,200)
Q3	171,000	(55,600)	235,000	(54,000)	223,000	(43,200)	265,000	(62,100)
Q4	238,000	(64,000)	223,000	(40,300)	236,000	(36,300)	396,000	(66,500)
Q5	742,000	(64,300)	766,000	(63,600)	744,000	(56,700)	1,437,000	(97,300)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C12: Other real estate property, conditional mean  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.
All households	850,000	(145,700)	885,000	(136,000)	770,000	(59,800)	1,268,000	(99,400)
Gender								
Male	906,000	(179,800)	779,000	(90,500)	834,000	(72,600)	1,395,000	(120,700)
Female	731,000	(257,700)	1,067,000	(326,700)	635,000	(102,100)	983,000	(169,500)
Age of reference person								
16-34	403,000	(130,400)	619,000	(279,500)	531,000	(113,700)	540,000	(111,200)
35-44	696,000	(375,100)	525,000	(66,300)	708,000	(136,200)	824,000	(127,000)
45-54	859,000	(338,200)	803,000	(173,500)	659,000	(92,500)	1,355,000	(281,700)
55-64	798,000	(170,900)	1,147,000	(451,900)	866,000	(150,800)	1,377,000	(186,600)
65+	1,159,000	(345,300)	1,042,000	(191,400)	884,000	(126,100)	1,585,000	(206,700)
Civil status								
Single	719,000	(214,800)	709,000	(149,900)	542,000	(92,500)	652,000	(124,700)
Couple	958,000	(209,100)	938,000	(208,900)	814,000	(81,700)	1,372,000	(112,000)
Divorced	474,000	(96,300)	832,000	(228,500)	883,000	(205,100)	1,894,000	(548,500)
Widowed	774,000	(375,700)	964,000	(260,200)	822,000	(236,600)	1,158,000	(328,500)
Country of birth								
Luxembourg	1,109,000	(235,900)	1,069,000	(214,900)	977,000	(92,500)	1,504,000	(172,200)
Outside Luxembourg	477,000	(96,600)	643,000	(124,600)	550,000	(65,700)	1,059,000	(106,300)
Education level								
Low (ISCED=0:2)	417,000	(108,200)	588,000	(115,900)	423,000	(124,100)	1,257,000	(336,600)
Middle (ISCED=3,4)	1,101,000	(350,800)	797,000	(102,600)	924,000	(116,400)	1,151,000	(224,000)
High (ISCED=5-8)	952,000	(197,700)	1,160,000	(321,500)	815,000	(85,300)	1,320,000	(116,600)
Employment status								
Employed	654,000	(211,400)	601,000	(73,900)	658,000	(66,000)	1,024,000	(99,100)
Self-employed	1,537,000	(398,300)	1,120,000	(161,500)	1,054,000	(250,200)	1,736,000	(649,100)
Unemployed	201,000	(131,700)	290,000	(216,600)	395,000	(237,900)	454,000	(196,800)
Retired	1,048,000	(278,000)	1,199,000	(368,700)	937,000	(122,700)	1,544,000	(188,600)
Other	369,000	(106,400)	1,257,000	(474,400)	487,000	(166,900)	1,143,000	(350,100)
Housing status								
Owner-outright	1,172,000	(266,100)	1,183,000	(260,800)	969,000	(95,100)	1,381,000	(157,000)
Owner with mortgage	755,000	(283,300)	754,000	(143,100)	552,000	(59,500)	1,507,000	(224,100)
Renter or other	365,000	(58,100)	468,000	(72,100)	545,000	(112,300)	815,000	(111,500)
Gross Income quintile								
Q1	239,000	(79,900)	316,000	(144,300)	207,000	(90,300)	751,000	(302,200)
Q2	722,000	(293,500)	475,000	(151,200)	463,000	(153,400)	568,000	(86,000)
Q3	455,000	(95,700)	440,000	(92,600)	453,000	(102,400)	622,000	(76,500)
Q4	517,000	(89,600)	632,000	(117,400)	685,000	(130,700)	855,000	(115,700)
Q5	1,490,000	(383,700)	1,580,000	(349,800)	1,198,000	(126,000)	2,348,000	(229,800)
Net wealth quintile								
Q1	220,000	(56,600)	204,000	(106,300)	223,000	(110,900)	374,000	(105,300)
Q2	151,000	(20,100)	166,000	(23,700)	192,000	(31,800)	298,000	(35,600)
Q3	181,000	(40,700)	238,000	(40,600)	260,000	(38,500)	355,000	(46,500)
Q4	267,000	(36,400)	297,000	(40,000)	337,000	(50,600)	513,000	(44,100)
Q5	1,500,000	(282,000)	1,560,000	(264,400)	1,252,000	(108,800)	2,157,000	(175,900)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C13: Total financial assets, participation rate  
by household characteristic**

(In %) Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Part. rate	Std.Err.	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)	97.2	(0.6)
Gender								
Male	97.8	(0.7)	97.4	(0.7)	97.3	(0.7)	97.3	(0.8)
Female	99.3	(0.5)	96.6	(0.9)	97.2	(0.8)	97.2	(0.9)
Age of reference person								
16-34	97.0	(1.6)	95.4	(1.6)	97.9	(1.0)	93.2	(2.5)
35-44	97.9	(1.2)	97.5	(1.1)	97.7	(1.2)	98.0	(0.9)
45-54	100.0	(0.0)	98.8	(0.8)	97.5	(1.0)	97.8	(1.1)
55-64	96.3	(1.8)	96.1	(1.5)	96.7	(1.3)	98.1	(1.0)
65+	100.0	-	97.2	(1.2)	96.6	(1.3)	98.5	(0.9)
Civil status								
Single	97.8	(1.0)	95.4	(1.3)	96.3	(1.3)	95.0	(1.5)
Couple	98.9	(0.6)	98.5	(0.5)	98.2	(0.6)	98.3	(0.6)
Divorced	96.5	(2.1)	96.9	(1.6)	95.7	(1.7)	97.4	(1.7)
Widowed	100.0	-	94.5	(2.7)	97.2	(2.0)	100.0	-
Country of birth								
Luxembourg	99.2	(0.4)	98.3	(0.5)	98.8	(0.5)	97.9	(0.7)
Outside Luxembourg	97.3	(1.0)	95.4	(1.1)	95.8	(0.9)	96.7	(0.9)
Education level								
Low (ISCED=0:2)	97.6	(1.0)	92.8	(1.6)	95.4	(1.3)	95.7	(1.7)
Middle (ISCED=3,4)	98.3	(0.8)	99.0	(0.4)	97.4	(0.9)	97.5	(1.0)
High (ISCED=5-8)	99.6	(0.4)	98.7	(0.7)	98.5	(0.6)	97.6	(0.8)
Employment status								
Employed	97.7	(0.8)	97.6	(0.7)	97.5	(0.7)	97.6	(0.7)
Self-employed	98.9	(1.1)	98.5	(1.5)	98.8	-	100.0	-
Unemployed	95.5	(4.5)	94.9	(3.8)	100.0	-	95.0	-
Retired	100.0	-	96.0	(1.3)	96.3	(1.2)	98.3	(0.8)
Other	98.5	(1.0)	97.2	(1.6)	97.0	(1.5)	83.8	(7.6)
Housing status								
Owner-outright	100.0	-	97.5	(0.9)	96.8	(0.9)	98.0	(0.8)
Owner with mortgage	98.4	(0.9)	98.9	(0.6)	99.2	(0.4)	98.7	(0.7)
Renter or other	96.7	(1.2)	94.9	(1.3)	96.2	(1.2)	95.2	(1.4)
Gross Income quintile								
Q1	96.9	(1.4)	91.5	(2.1)	91.4	(2.2)	94.4	(2.1)
Q2	98.3	(1.1)	98.1	(1.1)	98.3	(1.1)	94.9	(1.8)
Q3	97.4	(1.5)	97.3	(1.6)	98.2	(1.0)	98.5	(0.8)
Q4	99.3	(0.7)	99.3	(0.8)	99.3	(0.5)	98.8	(0.9)
Q5	100.0	-	99.1	(0.8)	99.2	(0.6)	99.8	(0.3)
Net wealth quintile								
Q1	94.8	(1.9)	91.5	(2.2)	94.3	(1.8)	92.0	(2.3)
Q2	98.6	(1.1)	96.8	(1.2)	96.6	(1.3)	98.7	(1.0)
Q3	100.0	-	98.6	(0.9)	99.3	(0.5)	98.4	(0.9)
Q4	100.0	-	98.3	(1.0)	96.9	(1.3)	97.6	(1.2)
Q5	98.5	(1.0)	100.0	-	99.2	(0.9)	99.6	(0.3)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C14: Total financial assets, conditional median  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. median	Std.Err.	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)	80,400	(6,000)
Gender								
Male	36,900	(6,200)	39,700	(4,400)	39,900	(4,400)	97,700	(7,500)
Female	21,000	(3,100)	26,600	(3,400)	20,100	(2,900)	53,300	(7,300)
Age of reference person								
16-34	19,600	(4,300)	16,100	(4,100)	18,300	(4,100)	39,100	(7,200)
35-44	30,400	(5,600)	28,700	(5,600)	26,400	(5,000)	51,100	(8,400)
45-54	31,200	(7,600)	34,100	(6,400)	28,500	(5,100)	94,400	(12,300)
55-64	35,800	(10,600)	50,200	(8,800)	33,000	(7,400)	114,000	(18,800)
65+	32,800	(7,700)	55,000	(12,600)	65,600	(11,700)	152,000	(22,800)
Civil status								
Single	20,400	(3,400)	21,000	(5,900)	26,700	(4,400)	53,100	(7,200)
Couple	38,300	(4,700)	44,000	(5,200)	38,700	(4,400)	105,000	(8,900)
Divorced	22,800	(5,100)	24,700	(4,900)	15,800	(4,000)	63,300	(16,900)
Widowed	22,700	(9,300)	26,200	(11,200)	41,900	(14,300)	140,000	(51,000)
Country of birth								
Luxembourg	41,900	(3,900)	43,600	(5,300)	44,700	(6,000)	96,500	(8,200)
Outside Luxembourg	17,600	(2,500)	22,500	(3,100)	18,500	(2,700)	67,300	(7,700)
Education level								
Low (ISCED=0:2)	10,700	(2,600)	13,500	(2,400)	10,400	(2,900)	31,300	(8,400)
Middle (ISCED=3,4)	33,100	(6,700)	33,300	(5,600)	22,400	(3,700)	59,200	(8,300)
High (ISCED=5-8)	58,800	(11,800)	75,000	(10,000)	63,700	(6,600)	115,000	(11,400)
Employment status								
Employed	29,600	(4,100)	30,400	(2,800)	25,000	(2,800)	61,800	(5,000)
Self-employed	59,000	(15,200)	76,900	(18,000)	64,500	(17,900)	155,000	(40,100)
Unemployed	4,200	(4,200)	3,000	(3,100)	5,000	(2,100)	17,000	(12,800)
Retired	38,200	(8,500)	50,700	(7,900)	61,500	(11,400)	145,000	(18,200)
Other	10,500	(4,500)	15,900	(8,700)	6,900	(5,100)	37,600	(31,300)
Housing status								
Owner-outright	48,800	(7,200)	66,500	(9,400)	56,400	(7,700)	123,000	(12,600)
Owner with mortgage	37,200	(5,000)	37,500	(4,900)	31,700	(2,900)	86,100	(9,000)
Renter or other	10,600	(3,400)	10,100	(2,200)	8,400	(2,100)	39,600	(7,400)
Gross Income quintile								
Q1	4,700	(1,700)	5,500	(1,300)	5,800	(1,400)	20,200	(5,100)
Q2	14,600	(3,800)	21,100	(3,600)	14,100	(3,200)	46,900	(7,600)
Q3	22,800	(3,900)	29,800	(6,000)	32,400	(5,700)	82,500	(12,400)
Q4	53,800	(6,600)	56,100	(6,000)	50,800	(8,200)	115,000	(15,700)
Q5	108,000	(13,000)	125,000	(13,700)	110,000	(11,500)	217,000	(22,700)
Net wealth quintile								
Q1	3,200	(780)	2,600	(650)	3,500	(720)	11,100	(2,300)
Q2	27,900	(5,100)	26,600	(3,000)	28,900	(4,300)	58,300	(9,600)
Q3	25,200	(5,200)	27,800	(4,900)	24,200	(3,400)	75,000	(11,000)
Q4	50,600	(7,200)	74,700	(10,200)	58,100	(8,500)	131,000	(13,100)
Q5	135,000	(17,900)	209,000	(24,600)	169,000	(22,000)	412,000	(51,000)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C15: Total financial assets, conditional mean  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.
All households	89,900	(7,900)	136,000	(17,000)	125,000	(10,500)	331,000	(36,600)
Gender								
Male	109,000	(9,300)	159,000	(28,300)	158,000	(16,900)	419,000	(56,500)
Female	62,900	(13,900)	107,000	(13,300)	78,300	(9,400)	188,000	(27,800)
Age of reference person								
16-34	37,200	(4,700)	57,300	(11,300)	69,600	(17,200)	77,300	(9,100)
35-44	64,600	(7,100)	98,700	(13,700)	90,300	(16,200)	142,000	(27,500)
45-54	96,200	(14,500)	192,000	(73,300)	107,000	(14,300)	227,000	(28,300)
55-64	114,000	(18,400)	176,000	(29,200)	171,000	(33,200)	439,000	(175,900)
65+	139,000	(30,400)	156,000	(18,000)	183,000	(29,300)	776,000	(152,800)
Civil status								
Single	53,100	(8,200)	113,000	(14,600)	90,700	(13,600)	172,000	(28,000)
Couple	110,000	(9,700)	131,000	(11,800)	157,000	(19,500)	345,000	(76,500)
Divorced	66,500	(19,000)	209,000	(115,200)	67,500	(11,400)	578,000	(185,100)
Widowed	105,000	(56,200)	126,000	(33,100)	135,000	(32,200)	528,000	(176,300)
Country of birth								
Luxembourg	107,000	(12,400)	139,000	(11,600)	136,000	(15,800)	231,000	(23,200)
Outside Luxembourg	66,300	(7,700)	132,000	(37,400)	114,000	(13,300)	410,000	(63,200)
Education level								
Low (ISCED=0:2)	45,200	(15,600)	63,700	(9,200)	48,200	(7,100)	126,000	(42,000)
Middle (ISCED=3,4)	86,100	(9,800)	103,000	(10,300)	97,800	(16,200)	195,000	(26,100)
High (ISCED=5-8)	155,000	(16,200)	244,000	(52,100)	206,000	(22,900)	485,000	(67,300)
Employment status								
Employed	74,600	(7,000)	131,000	(28,000)	105,000	(10,500)	169,000	(21,200)
Self-employed	138,000	(22,700)	214,000	(41,500)	172,000	(40,100)	350,000	(73,100)
Unemployed	20,200	(10,400)	51,200	(18,200)	24,000	(7,400)	102,000	(35,200)
Retired	143,000	(26,100)	164,000	(22,700)	192,000	(29,300)	744,000	(141,900)
Other	38,700	(12,600)	86,500	(18,200)	39,600	(9,400)	120,000	(30,700)
Housing status								
Owner-outright	151,000	(20,600)	184,000	(17,200)	168,000	(20,900)	482,000	(111,200)
Owner with mortgage	73,900	(8,500)	157,000	(52,700)	124,000	(16,600)	192,000	(18,700)
Renter or other	39,700	(4,700)	59,600	(8,000)	65,300	(14,000)	271,000	(60,600)
Gross Income quintile								
Q1	24,800	(6,800)	38,000	(8,400)	32,500	(10,600)	84,400	(15,700)
Q2	35,000	(7,400)	82,700	(16,500)	60,900	(19,600)	186,000	(51,600)
Q3	51,700	(9,400)	82,100	(10,600)	92,200	(15,400)	187,000	(31,000)
Q4	101,000	(14,800)	124,000	(12,900)	139,000	(31,900)	290,000	(71,100)
Q5	234,000	(30,200)	348,000	(79,200)	291,000	(31,100)	891,000	(154,600)
Net wealth quintile								
Q1	8,500	(1,700)	8,000	(1,400)	8,300	(1,100)	23,700	(3,500)
Q2	39,700	(4,100)	43,500	(4,400)	46,000	(3,800)	91,200	(8,500)
Q3	44,500	(4,800)	58,700	(5,700)	51,000	(4,600)	120,000	(11,400)
Q4	76,500	(8,000)	118,000	(13,100)	96,800	(8,100)	192,000	(14,100)
Q5	279,000	(35,300)	439,000	(80,000)	414,000	(46,000)	1,197,000	(167,500)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C16: Deposits, participation rate  
by household characteristic**

(In %) Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Part. rate	Std.Err.	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)	91.5	(0.9)
Gender								
Male	97.4	(0.8)	97.0	(0.7)	97.0	(0.7)	92.5	(1.1)
Female	98.9	(0.6)	96.3	(0.9)	97.2	(0.8)	89.8	(1.7)
Age of reference person								
16-34	96.9	(1.6)	95.1	(1.7)	97.2	(1.2)	84.9	(3.1)
35-44	97.2	(1.4)	97.2	(1.2)	97.5	(1.2)	89.1	(2.3)
45-54	99.0	(0.9)	98.2	(0.9)	97.5	(1.0)	93.3	(1.8)
55-64	96.3	(1.8)	95.6	(1.6)	96.7	(1.3)	94.4	(1.6)
65+	100.0	-	96.9	(1.3)	96.6	(1.3)	95.2	(1.6)
Civil status								
Single	97.1	(1.2)	95.2	(1.3)	95.7	(1.3)	88.6	(2.0)
Couple	98.8	(0.6)	98.0	(0.6)	98.2	(0.6)	92.1	(1.2)
Divorced	94.8	(2.5)	96.9	(1.6)	95.7	(1.7)	95.1	(2.1)
Widowed	100.0	-	93.8	(2.7)	97.2	(2.0)	93.3	(4.1)
Country of birth								
Luxembourg	98.9	(0.5)	97.9	(0.6)	98.8	(0.5)	94.0	(1.1)
Outside Luxembourg	96.7	(1.1)	95.0	(1.1)	95.5	(0.9)	89.4	(1.3)
Education level								
Low (ISCED=0:2)	96.9	(1.2)	92.6	(1.6)	95.4	(1.3)	90.4	(2.5)
Middle (ISCED=3,4)	97.9	(0.9)	98.5	(0.5)	97.4	(0.9)	91.5	(1.8)
High (ISCED=5-8)	99.6	(0.4)	98.3	(0.8)	98.1	(0.7)	91.8	(1.3)
Employment status								
Employed	97.0	(0.9)	97.4	(0.7)	97.2	(0.7)	90.8	(1.2)
Self-employed	98.9	(1.1)	98.5	(1.5)	98.8	-	100.0	-
Unemployed	95.5	(4.5)	94.9	(3.8)	100.0	-	83.5	(7.6)
Retired	100.0	-	95.7	(1.3)	96.3	(1.2)	95.9	(1.2)
Other	98.5	(1.0)	95.2	(2.2)	97.0	(1.5)	69.0	(8.6)
Housing status								
Owner-outright	99.5	(0.5)	97.1	(0.9)	96.8	(0.9)	94.1	(1.2)
Owner with mortgage	98.3	(0.9)	98.9	(0.6)	99.2	(0.4)	94.1	(1.5)
Renter or other	96.0	(1.3)	94.2	(1.4)	95.7	(1.2)	86.4	(2.0)
Gross Income quintile								
Q1	95.3	(1.9)	90.7	(2.2)	90.9	(2.2)	85.3	(3.0)
Q2	98.0	(1.3)	97.5	(1.1)	98.3	(1.1)	89.4	(2.6)
Q3	97.3	(1.5)	97.3	(1.6)	98.0	(1.1)	92.0	(1.8)
Q4	99.3	(0.7)	99.0	(0.9)	99.3	(0.5)	93.3	(2.0)
Q5	100.0	-	98.9	(0.8)	99.2	(0.6)	97.3	(1.2)
Net wealth quintile								
Q1	93.6	(2.1)	90.4	(2.2)	94.1	(1.9)	81.8	(3.3)
Q2	98.6	(1.1)	96.8	(1.2)	96.1	(1.4)	91.8	(2.4)
Q3	99.1	(0.9)	97.9	(1.1)	99.3	(0.5)	93.0	(2.4)
Q4	100.0	-	98.3	(1.0)	96.9	(1.3)	92.2	(2.2)
Q5	98.5	(1.0)	100.0	-	99.2	(0.9)	98.5	(0.8)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.



**Table C17: Deposits, conditional median  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. median	Std.Err.	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)	35,700	(3,400)
Gender								
Male	17,200	(1,700)	16,700	(1,400)	25,300	(2,800)	43,700	(4,400)
Female	10,400	(1,600)	14,100	(1,400)	13,700	(2,400)	29,400	(3,800)
Age of reference person								
16-34	10,800	(3,100)	11,200	(2,000)	9,900	(2,600)	20,400	(3,500)
35-44	12,100	(1,900)	11,400	(2,100)	17,000	(2,600)	23,600	(4,100)
45-54	13,100	(3,000)	13,100	(2,000)	16,200	(3,900)	39,600	(9,600)
55-64	19,200	(4,200)	20,000	(4,300)	19,600	(5,700)	47,200	(12,600)
65+	20,200	(3,900)	30,100	(6,300)	44,400	(7,900)	93,800	(14,200)
Civil status								
Single	11,500	(2,200)	10,400	(2,100)	15,800	(3,300)	28,600	(3,800)
Couple	17,700	(2,100)	18,200	(2,000)	24,100	(2,500)	42,500	(5,400)
Divorced	9,600	(2,500)	10,400	(1,900)	8,700	(2,700)	30,800	(7,100)
Widowed	16,700	(8,200)	20,400	(6,100)	36,800	(9,200)	121,000	(45,100)
Country of birth								
Luxembourg	19,300	(2,300)	18,700	(2,300)	32,600	(3,300)	50,000	(5,200)
Outside Luxembourg	8,800	(1,600)	11,400	(1,400)	10,900	(1,600)	30,000	(2,900)
Education level								
Low (ISCED=0:2)	6,200	(1,400)	7,600	(1,200)	8,100	(2,200)	12,900	(5,000)
Middle (ISCED=3,4)	14,700	(2,400)	14,300	(1,600)	15,000	(2,300)	28,800	(4,300)
High (ISCED=5-8)	30,200	(4,400)	32,600	(4,500)	36,800	(3,800)	54,900	(4,400)
Employment status								
Employed	13,400	(1,600)	14,900	(1,300)	16,000	(2,100)	28,300	(2,600)
Self-employed	19,200	(4,500)	26,800	(11,700)	32,400	(12,800)	70,400	(15,300)
Unemployed	4,000	(3,100)	1,700	(1,000)	5,000	(1,800)	2,300	(6,900)
Retired	21,400	(3,900)	26,800	(3,600)	42,700	(6,500)	86,800	(11,800)
Other	7,100	(2,600)	8,700	(2,500)	5,000	(3,200)	26,500	(27,000)
Housing status								
Owner-outright	24,300	(3,300)	32,300	(5,800)	39,300	(3,800)	62,000	(10,200)
Owner with mortgage	13,300	(1,900)	15,500	(1,400)	20,900	(2,200)	36,800	(5,600)
Renter or other	4,900	(1,200)	5,300	(1,100)	5,900	(800)	16,600	(3,700)
Gross Income quintile								
Q1	3,300	(1,300)	3,700	(790)	4,200	(990)	9,800	(2,700)
Q2	7,400	(1,300)	12,100	(2,800)	9,100	(2,500)	28,300	(4,900)
Q3	14,500	(2,500)	12,100	(2,500)	22,800	(3,900)	37,400	(8,300)
Q4	21,700	(4,000)	24,000	(3,600)	29,600	(4,900)	53,100	(6,700)
Q5	46,100	(6,500)	45,900	(6,100)	63,400	(7,100)	90,800	(10,000)
Net wealth quintile								
Q1	2,200	(650)	2,100	(410)	2,900	(440)	3,800	(1,300)
Q2	12,800	(2,100)	12,200	(1,800)	18,300	(4,100)	22,400	(4,000)
Q3	12,000	(3,000)	16,100	(2,400)	18,300	(3,300)	33,000	(6,400)
Q4	23,300	(3,100)	28,100	(5,800)	40,400	(6,300)	62,400	(9,200)
Q5	52,000	(10,900)	76,300	(14,800)	82,300	(7,900)	159,000	(22,600)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C18: Deposits, conditional mean  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. mean	Std.Err.	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)	127,000	(11,400)
Gender								
Male	46,100	(3,900)	67,800	(4,800)	71,300	(4,600)	141,000	(16,500)
Female	29,800	(4,000)	57,700	(6,900)	47,300	(4,400)	103,000	(13,300)
Age of reference person								
16-34	22,700	(3,200)	36,800	(8,900)	30,800	(3,700)	45,900	(7,200)
35-44	32,300	(3,700)	52,300	(10,000)	45,300	(5,900)	63,100	(7,700)
45-54	36,300	(5,200)	55,000	(6,200)	56,000	(5,400)	104,000	(11,600)
55-64	54,300	(8,100)	77,200	(8,700)	86,600	(11,500)	137,000	(19,500)
65+	54,300	(9,400)	95,700	(10,900)	85,800	(7,800)	277,000	(53,200)
Civil status								
Single	26,200	(3,700)	61,600	(10,400)	44,200	(4,800)	83,200	(9,300)
Couple	48,100	(4,300)	67,300	(4,900)	70,900	(4,700)	114,000	(8,500)
Divorced	21,700	(4,300)	48,900	(7,500)	48,800	(9,600)	225,000	(75,500)
Widowed	49,700	(12,400)	69,500	(16,000)	76,100	(11,000)	268,000	(75,400)
Country of birth								
Luxembourg	48,100	(4,400)	77,400	(5,800)	73,900	(4,400)	121,000	(9,900)
Outside Luxembourg	27,700	(3,200)	44,300	(4,200)	48,600	(4,600)	131,000	(19,000)
Education level								
Low (ISCED=0:2)	17,600	(3,200)	36,700	(5,500)	40,100	(6,700)	55,100	(8,200)
Middle (ISCED=3,4)	39,300	(4,600)	53,600	(5,300)	54,900	(5,200)	104,000	(14,900)
High (ISCED=5-8)	68,500	(7,600)	100,000	(9,800)	82,500	(6,000)	166,000	(20,400)
Employment status								
Employed	34,200	(2,800)	55,200	(5,400)	50,200	(3,400)	74,900	(4,900)
Self-employed	51,700	(9,400)	87,800	(15,700)	71,900	(15,500)	132,000	(27,700)
Unemployed	9,000	(3,400)	34,000	(17,700)	16,900	(5,700)	40,600	(13,700)
Retired	60,000	(8,600)	86,800	(9,400)	95,600	(8,500)	250,000	(38,900)
Other	20,300	(4,000)	47,300	(11,700)	31,700	(7,700)	80,100	(21,700)
Housing status								
Owner-outright	61,200	(6,700)	103,000	(8,700)	88,100	(6,200)	147,000	(11,900)
Owner with mortgage	34,100	(3,900)	51,600	(6,000)	53,600	(5,400)	82,200	(6,300)
Renter or other	21,400	(2,900)	26,100	(3,100)	31,000	(4,000)	140,000	(32,200)
Gross Income quintile								
Q1	14,500	(2,700)	24,200	(5,600)	21,800	(6,600)	38,900	(6,600)
Q2	22,400	(7,200)	56,600	(12,100)	37,800	(6,900)	99,400	(21,200)
Q3	30,200	(5,000)	49,800	(7,600)	51,300	(5,800)	98,800	(14,600)
Q4	44,100	(5,200)	64,800	(6,900)	62,800	(7,100)	115,000	(15,300)
Q5	84,600	(8,300)	119,000	(9,800)	129,000	(11,100)	269,000	(46,800)
Net wealth quintile								
Q1	5,900	(990)	5,400	(910)	6,700	(900)	14,400	(2,300)
Q2	24,500	(2,800)	24,000	(2,400)	35,100	(3,200)	48,300	(5,000)
Q3	23,500	(3,400)	40,800	(4,500)	38,400	(3,900)	68,800	(6,900)
Q4	43,300	(6,900)	69,800	(12,700)	68,500	(5,900)	110,000	(9,800)
Q5	98,800	(9,600)	170,000	(16,000)	154,000	(12,000)	364,000	(50,300)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C19: Risky assets, participation rate  
by household characteristic**

(In %) Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Part. rate	Std.Err.	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)	32.3	(1.4)
Gender								
Male	29.5	(2.1)	23.5	(1.6)	19.8	(1.4)	37.5	(1.7)
Female	16.8	(2.1)	13.6	(1.5)	10.3	(1.4)	23.8	(2.3)
Age of reference person								
16-34	17.0	(3.1)	10.6	(2.1)	10.8	(2.3)	25.4	(3.0)
35-44	24.9	(3.2)	17.7	(2.3)	15.8	(2.2)	26.3	(2.8)
45-54	29.5	(3.3)	21.6	(2.5)	14.9	(1.8)	29.8	(2.7)
55-64	26.7	(3.7)	23.1	(2.6)	14.9	(2.2)	34.2	(3.2)
65+	23.0	(3.9)	22.9	(2.9)	21.5	(2.5)	46.5	(3.7)
Civil status								
Single	19.8	(2.9)	17.1	(2.2)	13.7	(2.0)	29.8	(2.6)
Couple	30.0	(2.2)	22.3	(1.6)	19.0	(1.4)	34.1	(1.9)
Divorced	17.2	(3.8)	15.2	(2.8)	10.1	(2.0)	30.0	(4.2)
Widowed	14.3	(5.1)	14.7	(3.7)	12.9	(3.5)	33.9	(8.2)
Country of birth								
Luxembourg	27.6	(2.2)	20.8	(1.5)	18.4	(1.5)	31.2	(2.1)
Outside Luxembourg	20.0	(2.1)	17.0	(1.6)	13.3	(1.3)	33.0	(1.9)
Education level								
Low (ISCED=0:2)	8.1	(1.9)	6.4	(1.3)	6.8	(1.4)	16.8	(3.2)
Middle (ISCED=3,4)	23.5	(2.6)	18.3	(1.8)	10.7	(1.4)	26.0	(2.5)
High (ISCED=5-8)	47.6	(3.3)	32.6	(2.4)	27.6	(2.0)	41.6	(2.0)
Employment status								
Employed	25.0	(2.0)	17.6	(1.4)	14.6	(1.2)	29.2	(1.6)
Self-employed	42.7	(5.6)	29.9	(5.1)	21.4	(6.4)	29.0	(6.2)
Unemployed	12.7	(8.3)	9.8	(4.3)	3.2	(2.9)	17.6	(6.7)
Retired	26.2	(3.5)	22.4	(2.4)	21.4	(2.3)	44.8	(3.2)
Other	9.8	(3.8)	18.2	(3.7)	5.1	(2.4)	11.5	(5.0)
Housing status								
Owner-outright	31.7	(2.9)	26.3	(2.0)	19.9	(1.8)	39.9	(2.6)
Owner with mortgage	27.9	(2.8)	19.4	(1.9)	15.9	(1.7)	31.6	(2.4)
Renter or other	13.1	(2.1)	10.6	(1.7)	10.1	(1.5)	24.3	(2.3)
Gross Income quintile								
Q1	4.1	(2.0)	5.9	(1.8)	2.3	(1.2)	15.0	(3.2)
Q2	9.1	(2.7)	7.2	(2.3)	8.2	(2.3)	22.1	(3.8)
Q3	17.0	(3.5)	15.6	(2.8)	15.9	(2.6)	37.6	(3.7)
Q4	32.6	(4.2)	26.9	(3.1)	19.3	(2.5)	36.4	(3.4)
Q5	59.1	(3.6)	40.5	(2.7)	33.4	(2.7)	50.6	(3.2)
Net wealth quintile								
Q1	4.0	(1.9)	2.0	(1.1)	1.6	(1.1)	7.7	(1.7)
Q2	16.9	(3.2)	9.3	(2.2)	10.5	(2.0)	28.5	(3.2)
Q3	18.7	(3.3)	13.9	(2.3)	9.2	(1.9)	28.1	(3.2)
Q4	30.4	(4.0)	24.2	(3.0)	19.1	(2.8)	35.2	(3.7)
Q5	52.0	(4.1)	46.6	(3.1)	38.6	(3.1)	61.8	(3.2)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C20: Risky assets, conditional median  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.
All households	22,600	(4,300)	34,700	(7,400)	50,000	(8,900)	67,000	(10,000)
Gender								
Male	25,600	(7,500)	33,900	(8,100)	55,800	(11,100)	86,000	(11,400)
Female	16,900	(6,700)	39,200	(18,400)	42,900	(17,300)	35,900	(14,700)
Age of reference person								
16-34	4,900	(3,000)	8,700	(4,900)	20,800	(12,400)	13,500	(5,800)
35-44	14,800	(3,100)	25,000	(8,900)	23,000	(12,800)	34,200	(9,100)
45-54	27,400	(9,400)	33,600	(15,100)	34,800	(11,900)	55,200	(16,600)
55-64	32,300	(8,900)	56,900	(23,500)	62,600	(41,200)	139,000	(38,900)
65+	123,000	(87,200)	92,000	(31,700)	112,000	(41,100)	141,000	(39,100)
Civil status								
Single	15,300	(4,700)	29,700	(15,300)	41,800	(13,300)	36,400	(12,300)
Couple	22,700	(6,400)	32,400	(7,600)	63,000	(16,500)	93,000	(13,300)
Divorced	39,800	(25,200)	24,400	(27,600)	27,000	(16,600)	56,000	(42,800)
Widowed	63,200	(160,000)	183,000	(79,000)	82,000	(163,400)	200,000	(394,000)
Country of birth								
Luxembourg	29,200	(8,000)	33,000	(10,100)	57,800	(12,500)	54,900	(11,900)
Outside Luxembourg	18,400	(3,500)	36,000	(13,700)	43,500	(14,300)	81,800	(14,400)
Education level								
Low (ISCED=0:2)	19,500	(31,400)	33,600	(31,100)	36,400	(16,100)	34,800	(26,100)
Middle (ISCED=3,4)	31,100	(9,100)	36,800	(13,200)	61,600	(26,200)	58,500	(12,500)
High (ISCED=5-8)	20,000	(4,700)	36,100	(11,300)	52,000	(13,200)	81,900	(14,400)
Employment status								
Employed	16,500	(2,800)	25,000	(4,500)	36,300	(8,200)	39,200	(7,200)
Self-employed	26,300	(8,800)	25,300	(27,200)	61,200	(133,600)	112,000	(72,000)
Unemployed	9,300	(71,700)	81,100	(72,600)	8,000	(10,300)	40,000	(188,400)
Retired	74,000	(34,300)	80,200	(27,000)	102,000	(31,900)	138,000	(32,900)
Other	23,800	(50,400)	53,100	(33,200)	26,200	(70,400)	265,000	(213,200)
Housing status								
Owner-outright	59,800	(14,500)	63,900	(21,200)	89,000	(19,300)	98,400	(17,900)
Owner with mortgage	19,200	(3,500)	19,200	(5,300)	40,000	(14,300)	46,300	(9,000)
Renter or other	13,100	(3,000)	23,000	(12,200)	20,200	(6,500)	58,200	(19,500)
Gross Income quintile								
Q1	27,300	(133,400)	22,000	(51,900)	43,000	(172,700)	70,000	(34,000)
Q2	13,300	(9,200)	6,300	(31,100)	32,500	(47,300)	45,800	(36,100)
Q3	19,600	(13,200)	23,000	(18,200)	60,000	(23,000)	28,500	(9,800)
Q4	21,000	(10,400)	31,700	(10,700)	37,400	(17,400)	61,400	(16,200)
Q5	30,600	(7,900)	64,900	(19,900)	67,200	(21,500)	145,000	(31,800)
Net wealth quintile								
Q1	14,200	(6,300)	2,700	(7,500)	26,200	(21,200)	6,500	(2,900)
Q2	9,400	(3,400)	11,000	(12,800)	15,900	(7,200)	25,000	(12,000)
Q3	12,600	(7,800)	17,000	(6,100)	8,900	(8,200)	36,700	(18,300)
Q4	20,000	(4,600)	29,500	(14,300)	42,300	(10,800)	50,800	(12,400)
Q5	87,900	(20,300)	102,000	(17,900)	125,000	(38,300)	262,000	(49,800)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C21: Risky assets, conditional mean  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.
All households	101,000	(15,300)	147,000	(18,600)	210,000	(34,200)	431,000	(80,300)
Gender								
Male	107,000	(16,700)	160,000	(25,800)	228,000	(42,400)	515,000	(108,900)
Female	83,500	(35,700)	116,000	(22,600)	164,000	(60,100)	220,000	(64,100)
Age of reference person								
16-34	15,800	(5,500)	32,200	(21,600)	39,900	(9,600)	52,400	(15,900)
35-44	42,700	(11,000)	81,300	(16,900)	126,000	(55,000)	156,000	(77,800)
45-54	89,100	(25,200)	178,000	(59,100)	188,000	(62,000)	189,000	(59,000)
55-64	86,600	(23,100)	200,000	(45,700)	224,000	(41,400)	575,000	(308,700)
65+	254,000	(59,300)	171,000	(31,500)	348,000	(95,200)	864,000	(221,900)
Civil status								
Single	37,200	(14,900)	138,000	(40,400)	138,000	(53,700)	202,000	(64,200)
Couple	109,000	(17,400)	121,000	(15,800)	242,000	(54,200)	424,000	(142,600)
Divorced	137,000	(67,400)	209,000	(117,700)	78,500	(24,400)	932,000	(390,800)
Widowed	173,000	(124,300)	287,000	(92,000)	343,000	(172,900)	656,000	(296,000)
Country of birth								
Luxembourg	112,000	(22,400)	126,000	(18,900)	200,000	(49,300)	225,000	(43,400)
Outside Luxembourg	79,200	(16,200)	180,000	(40,600)	224,000	(45,200)	584,000	(136,900)
Education level								
Low (ISCED=0:2)	126,000	(56,800)	167,000	(58,700)	57,000	(23,700)	241,000	(161,100)
Middle (ISCED=3,4)	88,400	(20,300)	129,000	(26,300)	152,000	(40,200)	207,000	(44,000)
High (ISCED=5-8)	104,000	(22,000)	155,000	(30,200)	262,000	(53,400)	543,000	(117,900)
Employment status								
Employed	57,700	(13,100)	121,000	(26,600)	155,000	(32,100)	155,000	(54,600)
Self-employed	66,400	(14,300)	167,000	(72,700)	229,000	(125,100)	410,000	(157,900)
Unemployed	63,900	(53,700)	93,800	(47,300)	11,600	(9,500)	203,000	(126,000)
Retired	216,000	(44,200)	190,000	(36,900)	302,000	(79,100)	856,000	(218,800)
Other	66,900	(56,300)	142,000	(58,700)	34,400	(68,400)	234,000	(127,100)
Housing status								
Owner-outright	173,000	(32,000)	168,000	(24,400)	258,000	(59,400)	621,000	(189,400)
Owner with mortgage	44,200	(7,700)	140,000	(45,400)	177,000	(47,600)	138,000	(23,200)
Renter or other	38,400	(9,700)	92,900	(30,000)	129,000	(64,500)	385,000	(108,200)
Gross Income quintile								
Q1	146,000	(102,200)	82,900	(39,300)	126,000	(172,000)	180,000	(64,300)
Q2	22,400	(9,900)	115,000	(81,500)	199,000	(184,300)	325,000	(150,300)
Q3	50,100	(22,600)	107,000	(35,700)	156,000	(60,900)	133,000	(42,500)
Q4	104,000	(37,700)	95,400	(21,000)	166,000	(54,400)	343,000	(181,600)
Q5	122,000	(23,000)	210,000	(37,000)	269,000	(58,100)	843,000	(209,300)
Net wealth quintile								
Q1	12,600	(6,000)	7,700	(6,400)	22,700	(13,000)	25,900	(14,600)
Q2	17,700	(5,600)	30,800	(10,700)	28,600	(8,100)	61,900	(15,600)
Q3	26,500	(6,800)	32,200	(8,900)	33,300	(10,400)	66,300	(16,700)
Q4	39,800	(8,700)	75,300	(13,800)	76,000	(20,400)	107,000	(20,700)
Q5	197,000	(32,400)	247,000	(35,900)	377,000	(70,700)	1,004,000	(201,100)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C22: Total household debt, participation rate  
by household characteristic**

(In %) Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Part. rate	Std.Err.	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)	53.9	(1.6)
Gender								
Male	59.6	(2.3)	55.6	(1.9)	52.4	(1.8)	54.4	(1.9)
Female	56.6	(2.6)	53.1	(2.2)	54.3	(2.2)	53.1	(2.8)
Age of reference person								
16-34	70.3	(4.0)	65.8	(3.6)	68.6	(3.5)	54.1	(3.8)
35-44	77.8	(3.3)	67.1	(3.2)	66.2	(3.4)	62.9	(3.5)
45-54	70.1	(3.6)	68.5	(2.9)	67.7	(2.8)	71.3	(3.0)
55-64	54.9	(4.4)	55.6	(3.4)	44.4	(3.4)	56.2	(3.6)
65+	16.2	(3.3)	17.0	(2.5)	21.7	(2.8)	22.4	(3.1)
Civil status								
Single	60.2	(3.7)	51.7	(3.2)	49.9	(2.9)	53.5	(2.8)
Couple	63.8	(2.2)	61.3	(1.8)	60.6	(1.8)	57.3	(2.0)
Divorced	64.3	(5.1)	59.5	(4.0)	54.6	(3.9)	51.5	(4.6)
Widowed	12.7	(4.2)	20.5	(4.3)	18.9	(3.9)	27.5	(7.7)
Country of birth								
Luxembourg	56.2	(2.2)	53.4	(1.8)	53.2	(1.9)	52.5	(2.4)
Outside Luxembourg	61.2	(2.9)	56.1	(2.2)	53.2	(2.1)	55.0	(2.1)
Education level								
Low (ISCED=0:2)	52.0	(3.2)	40.8	(2.7)	45.6	(2.8)	58.4	(4.2)
Middle (ISCED=3,4)	56.8	(2.8)	57.3	(2.3)	54.4	(2.4)	54.3	(2.9)
High (ISCED=5-8)	69.3	(3.3)	64.3	(2.6)	57.4	(2.4)	52.0	(2.0)
Employment status								
Employed	73.1	(2.2)	68.0	(2.0)	65.2	(1.9)	62.6	(1.9)
Self-employed	71.5	(5.3)	64.2	(5.2)	76.3	(6.4)	61.7	(6.8)
Unemployed	44.7	(11.6)	49.8	(8.2)	41.4	(9.7)	78.3	(7.7)
Retired	26.2	(3.5)	29.7	(2.7)	27.4	(2.5)	32.6	(3.1)
Other	50.2	(5.9)	41.4	(5.0)	44.0	(5.7)	39.6	(9.0)
Housing status								
Owner-outright	29.6	(2.8)	29.2	(2.1)	33.0	(2.1)	30.9	(2.6)
Owner with mortgage	100.0	-	100.0	-	100.0	-	100.0	-
Renter or other	46.8	(3.3)	43.9	(2.7)	40.1	(2.7)	43.0	(2.9)
Gross Income quintile								
Q1	39.6	(4.5)	30.7	(3.5)	32.8	(3.6)	47.3	(4.3)
Q2	51.5	(4.7)	46.7	(3.8)	51.8	(3.8)	49.8	(4.0)
Q3	59.9	(5.8)	64.8	(3.8)	52.6	(3.4)	53.3	(3.8)
Q4	68.4	(4.9)	62.7	(3.4)	62.9	(3.4)	59.2	(3.4)
Q5	72.5	(3.8)	68.2	(2.8)	66.1	(2.9)	60.0	(3.7)
Net wealth quintile								
Q1	47.3	(4.7)	42.1	(3.6)	41.8	(3.8)	47.4	(4.0)
Q2	68.6	(4.1)	67.1	(3.4)	62.8	(3.8)	61.4	(3.9)
Q3	70.4	(4.0)	57.5	(3.6)	58.6	(3.4)	60.9	(4.5)
Q4	53.0	(4.5)	55.2	(3.3)	52.3	(3.4)	52.7	(4.0)
Q5	52.4	(3.9)	50.9	(2.9)	50.4	(3.2)	47.1	(3.6)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C23: Total household debt, conditional median  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.
All households	73,400	(8,800)	89,800	(9,400)	91,700	(13,900)	129,000	(16,900)
Gender								
Male	66,500	(13,500)	90,000	(12,900)	92,500	(19,800)	149,000	(27,600)
Female	79,600	(13,700)	88,100	(16,800)	92,300	(19,500)	89,900	(32,200)
Age of reference person								
16-34	135,000	(32,200)	150,000	(31,900)	109,000	(54,800)	63,400	(53,400)
35-44	121,000	(17,500)	180,000	(31,600)	205,000	(25,700)	304,000	(42,100)
45-54	50,800	(14,200)	66,800	(19,400)	85,400	(15,400)	142,000	(30,200)
55-64	29,000	(7,200)	28,000	(6,000)	29,400	(12,100)	55,000	(17,000)
65+	36,400	(12,100)	23,600	(8,600)	19,000	(4,600)	49,600	(16,700)
Civil status								
Single	51,700	(21,100)	103,000	(26,900)	78,100	(29,300)	79,100	(32,500)
Couple	86,400	(8,400)	102,000	(14,600)	112,000	(17,700)	156,000	(31,300)
Divorced	59,000	(15,700)	50,700	(21,700)	57,400	(32,600)	102,000	(37,400)
Widowed	17,200	(13,900)	19,100	(6,000)	23,500	(23,800)	170,000	(129,000)
Country of birth								
Luxembourg	90,000	(10,800)	97,500	(16,400)	100,000	(18,400)	157,000	(24,200)
Outside Luxembourg	52,000	(13,300)	85,000	(12,600)	80,400	(20,400)	109,000	(25,600)
Education level								
Low (ISCED=0:2)	42,200	(9,900)	45,900	(10,400)	27,600	(15,400)	56,500	(26,300)
Middle (ISCED=3,4)	71,500	(12,400)	53,200	(13,800)	54,200	(19,700)	81,300	(20,100)
High (ISCED=5-8)	122,000	(20,200)	163,000	(23,000)	170,000	(30,300)	232,000	(28,200)
Employment status								
Employed	95,000	(11,000)	130,000	(12,100)	135,000	(15,100)	159,000	(27,100)
Self-employed	130,000	(60,500)	213,000	(67,600)	139,000	(60,700)	301,000	(90,000)
Unemployed	16,700	(33,800)	19,000	(20,500)	17,600	(54,500)	35,300	(48,400)
Retired	29,800	(7,300)	20,700	(4,600)	20,100	(3,500)	47,000	(11,400)
Other	35,000	(13,400)	22,200	(11,900)	32,000	(26,400)	16,900	(63,100)
Housing status								
Owner-outright	21,600	(4,200)	19,200	(3,900)	20,000	(2,400)	20,900	(3,600)
Owner with mortgage	145,000	(16,200)	220,000	(13,700)	246,000	(19,500)	349,000	(19,500)
Renter or other	10,000	(2,300)	16,700	(3,000)	9,700	(1,600)	20,100	(4,300)
Gross Income quintile								
Q1	8,600	(3,900)	13,400	(7,500)	12,100	(5,500)	29,900	(14,800)
Q2	42,100	(19,900)	57,600	(29,300)	19,000	(8,500)	44,200	(28,600)
Q3	73,300	(23,500)	85,600	(17,000)	98,200	(33,300)	76,000	(33,500)
Q4	96,200	(18,700)	98,800	(22,500)	142,000	(29,300)	246,000	(43,100)
Q5	132,000	(23,500)	195,000	(28,100)	214,000	(29,400)	318,000	(56,900)
Net wealth quintile								
Q1	9,000	(2,500)	12,600	(2,200)	7,900	(1,600)	17,500	(4,600)
Q2	154,000	(29,800)	166,000	(28,800)	199,000	(34,500)	216,000	(53,300)
Q3	88,400	(14,800)	94,300	(23,900)	172,000	(20,300)	155,000	(25,000)
Q4	66,400	(15,700)	81,800	(18,400)	60,700	(18,900)	90,200	(40,700)
Q5	78,100	(17,600)	109,000	(22,900)	104,000	(22,300)	313,000	(57,100)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C24: Total household debt, conditional mean  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.
All households	140,000	(8,400)	178,000	(8,500)	197,000	(10,000)	299,000	(25,800)
Gender								
Male	136,000	(11,100)	185,000	(12,100)	198,000	(13,000)	339,000	(37,700)
Female	147,000	(13,700)	170,000	(11,300)	196,000	(15,100)	220,000	(18,600)
Age of reference person								
16-34	176,000	(17,800)	215,000	(22,200)	221,000	(20,900)	258,000	(29,800)
35-44	170,000	(13,800)	240,000	(17,600)	278,000	(21,800)	358,000	(30,900)
45-54	112,000	(13,300)	160,000	(14,500)	185,000	(20,500)	378,000	(86,300)
55-64	104,000	(34,800)	105,000	(17,100)	108,000	(13,100)	205,000	(32,000)
65+	65,000	(19,500)	75,600	(19,900)	89,400	(26,700)	146,000	(35,200)
Civil status								
Single	135,000	(19,300)	174,000	(17,000)	170,000	(15,300)	204,000	(17,000)
Couple	154,000	(10,900)	199,000	(12,000)	224,000	(15,200)	331,000	(26,000)
Divorced	108,000	(15,900)	146,000	(18,900)	150,000	(19,900)	430,000	(177,300)
Widowed	42,700	(17,400)	29,900	(7,200)	132,000	(36,700)	323,000	(110,400)
Country of birth								
Luxembourg	154,000	(13,200)	195,000	(12,300)	213,000	(15,100)	331,000	(50,600)
Outside Luxembourg	123,000	(10,400)	157,000	(10,800)	182,000	(13,100)	274,000	(23,600)
Education level								
Low (ISCED=0:2)	91,900	(9,800)	119,000	(12,800)	106,000	(11,600)	185,000	(31,300)
Middle (ISCED=3,4)	135,000	(15,900)	155,000	(13,200)	174,000	(15,300)	281,000	(68,400)
High (ISCED=5-8)	196,000	(16,900)	241,000	(16,600)	271,000	(19,100)	357,000	(26,300)
Employment status								
Employed	147,000	(8,400)	194,000	(10,100)	225,000	(12,600)	307,000	(20,500)
Self-employed	300,000	(55,600)	365,000	(58,300)	221,000	(35,100)	735,000	(367,400)
Unemployed	53,500	(26,000)	57,800	(22,100)	122,000	(45,300)	87,000	(45,400)
Retired	78,400	(31,900)	89,800	(20,100)	87,600	(17,300)	180,000	(35,200)
Other	58,800	(10,200)	124,000	(29,700)	124,000	(26,400)	196,000	(70,300)
Housing status								
Owner-outright	71,700	(21,900)	77,600	(10,900)	106,000	(20,600)	115,000	(23,700)
Owner with mortgage	197,000	(11,200)	268,000	(12,400)	303,000	(12,500)	479,000	(46,600)
Renter or other	64,400	(11,800)	74,900	(12,800)	69,500	(14,500)	114,000	(17,800)
Gross Income quintile								
Q1	40,000	(10,800)	68,800	(15,200)	69,200	(15,300)	136,000	(25,500)
Q2	118,000	(25,700)	137,000	(18,800)	93,600	(14,500)	160,000	(26,000)
Q3	122,000	(17,100)	143,000	(15,500)	164,000	(18,800)	207,000	(29,500)
Q4	155,000	(16,600)	190,000	(19,900)	233,000	(28,400)	334,000	(29,200)
Q5	213,000	(20,400)	279,000	(20,400)	333,000	(28,100)	593,000	(106,400)
Net wealth quintile								
Q1	70,000	(18,400)	117,000	(29,600)	75,800	(20,300)	143,000	(31,500)
Q2	176,000	(15,500)	193,000	(13,100)	231,000	(17,900)	278,000	(31,300)
Q3	134,000	(13,800)	176,000	(19,100)	217,000	(22,800)	231,000	(18,500)
Q4	115,000	(16,100)	162,000	(20,500)	174,000	(27,800)	224,000	(28,600)
Q5	190,000	(32,200)	230,000	(23,400)	255,000	(30,700)	654,000	(131,700)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.



**Table C25: Total mortgage debt, participation rate  
by household characteristic**

(In %) Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Part. rate	Std.Err.	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)	32.6	(1.4)
Gender								
Male	38.7	(2.2)	35.8	(1.8)	31.3	(1.5)	34.5	(1.7)
Female	38.8	(2.5)	34.4	(2.0)	31.2	(1.9)	29.4	(2.3)
Age of reference person								
16-34	44.9	(4.3)	39.7	(3.6)	37.3	(3.6)	25.4	(3.2)
35-44	58.7	(3.7)	51.9	(3.4)	47.9	(3.5)	43.3	(3.4)
45-54	47.7	(3.9)	46.9	(3.0)	44.2	(2.8)	48.4	(3.4)
55-64	31.0	(4.1)	31.5	(3.0)	22.2	(2.5)	30.8	(3.3)
65+	7.6	(2.3)	5.6	(1.4)	5.8	(1.4)	11.4	(2.4)
Civil status								
Single	35.6	(3.7)	32.4	(2.9)	27.0	(2.6)	27.4	(2.4)
Couple	46.1	(2.2)	42.6	(1.9)	38.8	(1.8)	37.0	(2.0)
Divorced	38.3	(5.1)	34.0	(3.8)	28.8	(3.2)	32.3	(4.2)
Widowed	5.5	(2.0)	6.6	(2.4)	5.3	(1.8)	19.6	(6.5)
Country of birth								
Luxembourg	39.4	(2.2)	33.9	(1.6)	33.1	(1.7)	35.5	(2.2)
Outside Luxembourg	37.9	(2.7)	36.9	(2.0)	29.4	(1.8)	30.3	(1.9)
Education level								
Low (ISCED=0:2)	29.7	(2.8)	24.8	(2.3)	20.1	(2.2)	28.0	(3.9)
Middle (ISCED=3,4)	37.9	(2.8)	33.6	(2.2)	30.5	(2.2)	32.2	(2.5)
High (ISCED=5-8)	52.4	(3.4)	47.3	(2.6)	39.9	(2.3)	34.4	(1.9)
Employment status								
Employed	51.7	(2.5)	48.1	(1.9)	42.4	(1.7)	39.8	(1.9)
Self-employed	52.5	(5.7)	52.2	(5.4)	51.5	(7.3)	47.2	(7.2)
Unemployed	24.6	(9.9)	22.3	(7.2)	13.0	(5.4)	25.7	(7.9)
Retired	13.1	(2.5)	12.5	(1.8)	7.9	(1.4)	17.5	(2.5)
Other	25.7	(5.0)	18.9	(3.8)	24.2	(4.8)	13.9	(5.6)
Housing status								
Owner-outright	6.6	(1.3)	6.4	(1.0)	5.6	(0.9)	5.5	(1.1)
Owner with mortgage	100.0	-	100.0	-	100.0	-	100.0	-
Renter or other	11.3	(2.0)	11.3	(1.7)	6.6	(1.2)	9.4	(1.5)
Gross Income quintile								
Q1	12.1	(3.0)	12.7	(2.5)	11.0	(2.2)	17.6	(3.2)
Q2	30.8	(4.8)	26.4	(3.3)	20.4	(2.9)	22.8	(3.2)
Q3	40.3	(6.1)	39.7	(3.8)	32.6	(3.5)	29.8	(3.4)
Q4	54.2	(4.9)	43.3	(3.4)	41.2	(3.5)	44.6	(3.3)
Q5	56.8	(3.7)	54.1	(2.9)	51.1	(3.1)	48.5	(3.4)
Net wealth quintile								
Q1	8.4	(2.8)	5.7	(1.8)	5.4	(1.6)	7.0	(2.2)
Q2	51.2	(4.1)	52.1	(3.6)	44.5	(3.6)	43.5	(4.4)
Q3	56.2	(4.6)	41.8	(3.3)	39.9	(3.4)	43.2	(4.2)
Q4	41.0	(4.3)	37.3	(3.1)	30.6	(2.9)	30.1	(3.7)
Q5	37.2	(3.5)	39.1	(2.8)	35.9	(2.8)	39.0	(3.2)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C26: Total mortgage debt, conditional median  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.
All households	127,000	(10,900)	200,000	(16,600)	233,000	(15,700)	316,000	(23,300)
Gender								
Male	125,000	(14,800)	180,000	(20,500)	236,000	(19,000)	361,000	(32,100)
Female	133,000	(19,600)	216,000	(22,000)	231,000	(24,900)	270,000	(38,300)
Age of reference person								
16-34	230,000	(19,200)	280,000	(16,800)	350,000	(25,800)	388,000	(31,400)
35-44	169,000	(19,000)	242,000	(14,300)	289,000	(21,900)	414,000	(40,100)
45-54	90,000	(12,700)	150,000	(16,400)	161,000	(21,200)	243,000	(42,600)
55-64	48,000	(10,000)	84,000	(16,300)	125,000	(14,500)	171,000	(51,200)
65+	60,000	(37,700)	64,000	(61,400)	121,000	(66,700)	148,000	(105,800)
Civil status								
Single	138,000	(23,200)	210,000	(21,400)	249,000	(24,900)	284,000	(32,800)
Couple	127,000	(16,300)	200,000	(22,600)	232,000	(23,600)	350,000	(24,100)
Divorced	117,000	(29,600)	163,000	(47,100)	185,000	(31,800)	230,000	(62,300)
Widowed	85,400	(48,200)	42,900	(23,500)	350,000	(99,200)	322,000	(151,600)
Country of birth								
Luxembourg	134,000	(15,600)	230,000	(18,000)	234,000	(24,500)	274,000	(26,900)
Outside Luxembourg	119,000	(16,200)	150,000	(18,500)	233,000	(21,600)	368,000	(31,900)
Education level								
Low (ISCED=0:2)	104,000	(16,700)	111,000	(24,300)	164,000	(17,200)	190,000	(47,200)
Middle (ISCED=3,4)	119,000	(19,000)	165,000	(31,000)	210,000	(34,700)	270,000	(40,000)
High (ISCED=5-8)	176,000	(22,600)	238,000	(16,100)	289,000	(21,500)	382,000	(33,500)
Employment status								
Employed	150,000	(13,800)	214,000	(15,000)	242,000	(16,800)	340,000	(19,300)
Self-employed	250,000	(44,100)	312,000	(73,800)	301,000	(94,000)	420,000	(80,800)
Unemployed	61,000	(63,100)	62,800	(55,800)	308,000	(93,000)	286,000	(100,200)
Retired	42,500	(13,600)	72,000	(28,400)	138,000	(39,800)	129,000	(53,300)
Other	68,000	(15,800)	146,000	(78,800)	146,000	(64,000)	218,000	(173,000)
Housing status								
Owner-outright	65,500	(33,900)	149,000	(50,300)	240,000	(56,200)	295,000	(86,100)
Owner with mortgage	127,000	(13,400)	210,000	(15,700)	233,000	(17,800)	334,000	(20,500)
Renter or other	143,000	(39,500)	106,000	(35,100)	230,000	(93,500)	222,000	(46,500)
Gross Income quintile								
Q1	78,500	(39,400)	82,600	(46,500)	142,000	(30,700)	247,000	(74,100)
Q2	133,000	(29,200)	174,000	(33,300)	179,000	(26,000)	270,000	(61,400)
Q3	113,000	(26,900)	150,000	(34,600)	218,000	(40,700)	233,000	(47,700)
Q4	114,000	(21,600)	198,000	(33,600)	257,000	(30,200)	342,000	(34,200)
Q5	191,000	(27,900)	249,000	(16,500)	301,000	(30,200)	404,000	(39,000)
Net wealth quintile								
Q1	199,000	(54,500)	480,000	(183,200)	387,000	(160,700)	470,000	(80,700)
Q2	224,000	(24,900)	234,000	(22,100)	290,000	(31,200)	323,000	(39,800)
Q3	102,000	(17,200)	162,000	(36,500)	216,000	(20,300)	225,000	(37,500)
Q4	90,400	(15,500)	160,000	(31,300)	146,000	(29,300)	288,000	(52,600)
Q5	108,000	(26,300)	155,000	(28,100)	215,000	(41,300)	408,000	(57,300)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C27: Total mortgage debt, conditional mean  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.
All households	190,000	(10,800)	252,000	(11,300)	306,000	(14,100)	450,000	(39,600)
Gender								
Male	190,000	(16,200)	269,000	(18,200)	284,000	(13,500)	539,000	(70,300)
Female	182,000	(14,200)	250,000	(16,200)	309,000	(22,300)	322,000	(21,900)
Age of reference person								
16-34	260,000	(19,600)	347,000	(33,500)	372,000	(26,600)	477,000	(48,100)
35-44	206,000	(16,000)	310,000	(22,200)	365,000	(26,400)	471,000	(28,700)
45-54	139,000	(17,900)	214,000	(19,600)	214,000	(16,000)	547,000	(142,800)
55-64	122,000	(54,500)	124,000	(21,100)	177,000	(24,200)	352,000	(60,200)
65+	105,000	(40,100)	192,000	(56,500)	193,000	(85,100)	296,000	(84,900)
Civil status								
Single	197,000	(31,700)	250,000	(22,500)	277,000	(19,400)	322,000	(21,500)
Couple	189,000	(12,400)	274,000	(17,100)	309,000	(17,600)	475,000	(36,900)
Divorced	164,000	(21,700)	244,000	(32,300)	252,000	(32,300)	687,000	(314,500)
Widowed	107,000	(21,200)	72,100	(19,600)	371,000	(184,400)	509,000	(261,800)
Country of birth								
Luxembourg	190,000	(15,400)	283,000	(18,900)	289,000	(17,500)	453,000	(86,200)
Outside Luxembourg	181,000	(15,300)	231,000	(14,400)	301,000	(18,400)	473,000	(40,100)
Education level								
Low (ISCED=0:2)	135,000	(14,100)	184,000	(20,800)	200,000	(18,500)	312,000	(54,700)
Middle (ISCED=3,4)	175,000	(19,900)	233,000	(19,000)	276,000	(22,300)	473,000	(126,100)
High (ISCED=5-8)	240,000	(20,800)	328,000	(21,900)	348,000	(19,300)	509,000	(39,200)
Employment status								
Employed	196,000	(10,600)	264,000	(13,400)	305,000	(14,200)	441,000	(28,300)
Self-employed	378,000	(107,800)	443,000	(75,400)	293,000	(41,900)	1,276,000	(776,000)
Unemployed	103,000	(43,800)	126,000	(74,700)	370,000	(75,100)	281,000	(70,400)
Retired	79,600	(23,300)	127,000	(31,000)	193,000	(46,100)	310,000	(76,400)
Other	90,500	(18,400)	254,000	(60,800)	224,000	(43,500)	372,000	(92,300)
Housing status								
Owner-outright	-	-	-	-	-	-	-	-
Owner with mortgage	187,000	(11,000)	261,000	(12,400)	295,000	(12,400)	463,000	(46,400)
Renter or other	-	-	-	-	-	-	-	-
Gross Income quintile								
Q1	94,400	(24,700)	152,000	(31,300)	190,000	(33,900)	300,000	(46,400)
Q2	181,000	(46,100)	197,000	(22,400)	178,000	(23,000)	279,000	(44,500)
Q3	151,000	(18,700)	205,000	(19,800)	242,000	(21,800)	340,000	(42,200)
Q4	184,000	(20,100)	266,000	(28,700)	315,000	(23,300)	410,000	(35,700)
Q5	239,000	(21,900)	364,000	(28,500)	389,000	(28,900)	752,000	(154,700)
Net wealth quintile								
Q1	216,000	(97,800)	784,000	(199,300)	614,000	(171,100)	773,000	(226,600)
Q2	237,000	(17,500)	249,000	(14,300)	312,000	(19,700)	384,000	(32,400)
Q3	154,000	(16,700)	223,000	(22,900)	271,000	(22,600)	302,000	(23,800)
Q4	134,000	(20,400)	212,000	(24,800)	243,000	(36,400)	349,000	(37,700)
Q5	235,000	(46,100)	305,000	(36,600)	311,000	(39,000)	887,000	(219,700)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C28: HMR mortgage debt, participation rate  
by household characteristic**

(In %) Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Part. rate	Std.Err.	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)	27.2	(1.3)
Gender								
Male	31.9	(2.1)	29.3	(1.7)	25.7	(1.5)	28.7	(1.6)
Female	34.1	(2.5)	28.8	(1.9)	28.4	(1.9)	24.7	(2.2)
Age of reference person								
16-34	38.7	(4.1)	33.5	(3.5)	34.6	(3.4)	20.0	(3.0)
35-44	52.6	(3.7)	44.5	(3.3)	41.7	(3.4)	38.2	(3.3)
45-54	37.0	(3.7)	39.3	(2.9)	38.9	(2.8)	41.0	(3.1)
55-64	25.0	(3.9)	23.9	(2.8)	16.5	(2.3)	25.2	(3.0)
65+	7.1	(2.3)	3.7	(1.2)	3.5	(1.1)	8.2	(2.0)
Civil status								
Single	30.2	(3.5)	25.9	(2.8)	23.8	(2.5)	22.6	(2.3)
Couple	38.3	(2.2)	36.1	(1.8)	33.4	(1.7)	31.4	(1.9)
Divorced	36.0	(5.1)	26.2	(3.5)	24.2	(3.0)	28.1	(4.1)
Widowed	3.0	(1.2)	5.8	(2.3)	2.7	(1.3)	11.0	(4.5)
Country of birth								
Luxembourg	35.7	(2.1)	29.2	(1.6)	28.7	(1.6)	29.8	(2.0)
Outside Luxembourg	28.9	(2.5)	29.0	(1.9)	25.0	(1.7)	25.2	(1.8)
Education level								
Low (ISCED=0:2)	24.9	(2.6)	20.2	(2.2)	17.9	(2.1)	25.4	(3.6)
Middle (ISCED=3,4)	33.3	(2.7)	29.3	(2.1)	27.2	(2.1)	28.8	(2.4)
High (ISCED=5-8)	42.8	(3.4)	37.3	(2.5)	32.9	(2.2)	26.9	(1.7)
Employment status								
Employed	44.9	(2.4)	40.6	(1.9)	37.1	(1.7)	34.5	(1.8)
Self-employed	31.0	(5.4)	42.9	(5.3)	42.6	(7.0)	30.2	(6.6)
Unemployed	19.5	(9.2)	14.5	(6.3)	12.5	(5.4)	22.1	(7.3)
Retired	11.3	(2.4)	9.7	(1.7)	4.8	(1.1)	13.4	(2.2)
Other	22.9	(4.9)	14.1	(3.3)	22.7	(4.7)	11.6	(5.2)
Housing status								
Owner-outright	0.0	-	0.0	-	0.0	-	0.0	-
Owner with mortgage	100.0	-	100.0	-	100.0	-	100.0	-
Renter or other	0.0	-	0.0	-	0.0	-	0.0	-
Gross Income quintile								
Q1	9.4	(2.6)	9.6	(2.2)	10.1	(2.1)	14.9	(2.8)
Q2	25.3	(4.4)	22.8	(3.2)	17.8	(2.8)	19.3	(3.1)
Q3	35.1	(5.8)	35.9	(3.8)	28.4	(3.2)	25.8	(3.1)
Q4	49.0	(5.3)	35.5	(3.2)	36.7	(3.3)	37.7	(3.4)
Q5	45.3	(3.7)	41.9	(2.8)	41.3	(2.9)	38.8	(3.3)
Net wealth quintile								
Q1	3.5	(1.6)	4.6	(1.6)	3.6	(1.3)	4.3	(1.9)
Q2	43.6	(4.2)	42.1	(3.6)	40.7	(3.6)	38.0	(4.2)
Q3	52.1	(4.5)	37.2	(3.2)	38.3	(3.3)	40.5	(4.2)
Q4	37.4	(4.3)	34.5	(3.0)	26.6	(2.8)	26.5	(3.9)
Q5	27.5	(3.3)	27.1	(2.5)	25.0	(2.5)	26.9	(2.9)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C29: HMR mortgage debt, conditional median  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.
All households	122,000	(9,800)	190,000	(17,400)	206,000	(17,100)	302,000	(16,900)
Gender								
Male	114,000	(14,100)	165,000	(18,900)	202,000	(18,400)	324,000	(29,400)
Female	127,000	(18,000)	216,000	(25,000)	212,000	(25,500)	264,000	(35,300)
Age of reference person								
16-34	241,000	(18,300)	280,000	(15,400)	350,000	(27,100)	394,000	(28,200)
35-44	152,000	(21,900)	240,000	(14,300)	259,000	(22,200)	372,000	(35,500)
45-54	81,300	(14,300)	130,000	(17,000)	140,000	(14,900)	225,000	(33,000)
55-64	47,000	(7,800)	48,000	(16,100)	125,000	(16,700)	159,000	(49,700)
65+	60,000	(41,500)	72,900	(114,700)	49,500	(52,900)	120,000	(98,000)
Civil status								
Single	133,000	(24,900)	208,000	(21,400)	249,000	(25,700)	288,000	(32,200)
Couple	122,000	(13,900)	183,000	(25,200)	200,000	(18,300)	324,000	(23,700)
Divorced	111,000	(26,900)	167,000	(46,400)	180,000	(27,700)	242,000	(72,500)
Widowed	108,000	(27,700)	52,600	(23,200)	369,000	(132,700)	300,000	(114,800)
Country of birth								
Luxembourg	125,000	(12,700)	214,000	(21,300)	200,000	(23,100)	254,000	(27,500)
Outside Luxembourg	117,000	(19,900)	155,000	(19,500)	210,000	(21,200)	350,000	(23,900)
Education level								
Low (ISCED=0:2)	103,000	(16,500)	126,000	(28,600)	160,000	(14,900)	191,000	(51,300)
Middle (ISCED=3,4)	105,000	(15,800)	147,000	(21,600)	192,000	(25,900)	264,000	(40,200)
High (ISCED=5-8)	172,000	(27,300)	240,000	(16,700)	265,000	(23,500)	352,000	(22,400)
Employment status								
Employed	148,000	(14,400)	201,000	(15,500)	220,000	(18,100)	330,000	(19,500)
Self-employed	160,000	(79,000)	243,000	(64,900)	212,000	(68,400)	410,000	(114,300)
Unemployed	112,000	(64,200)	85,000	(55,900)	295,000	(82,800)	240,000	(111,800)
Retired	40,500	(10,400)	48,000	(20,500)	101,000	(51,200)	120,000	(38,300)
Other	68,000	(18,300)	222,000	(77,700)	178,000	(66,300)	352,000	(181,300)
Housing status								
Owner-outright	-	-	-	-	-	-	-	-
Owner with mortgage	122,000	(9,800)	190,000	(17,400)	206,000	(17,100)	302,000	(16,900)
Renter or other	-	-	-	-	-	-	-	-
Gross Income quintile								
Q1	75,700	(36,700)	89,400	(50,600)	147,000	(31,600)	254,000	(87,800)
Q2	139,000	(35,200)	166,000	(28,200)	175,000	(23,300)	244,000	(79,500)
Q3	113,000	(25,000)	133,000	(24,800)	219,000	(38,300)	232,000	(53,300)
Q4	115,000	(20,900)	217,000	(37,800)	251,000	(28,100)	338,000	(29,800)
Q5	154,000	(29,900)	230,000	(24,300)	226,000	(37,700)	374,000	(43,900)
Net wealth quintile								
Q1	183,000	(69,600)	501,000	(161,000)	470,000	(180,100)	514,000	(154,300)
Q2	230,000	(19,200)	243,000	(17,200)	285,000	(24,800)	358,000	(34,600)
Q3	101,000	(15,400)	153,000	(33,300)	210,000	(21,700)	235,000	(40,300)
Q4	85,400	(15,500)	148,000	(28,100)	130,000	(27,100)	260,000	(46,800)
Q5	99,300	(22,700)	126,000	(21,300)	145,000	(33,700)	314,000	(58,400)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C30: HMR mortgage debt, conditional mean  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.
All households	169,000	(8,100)	230,000	(10,200)	265,000	(10,100)	350,000	(17,100)
Gender								
Male	167,000	(11,200)	231,000	(14,500)	257,000	(11,500)	382,000	(24,400)
Female	170,000	(12,700)	228,000	(13,900)	274,000	(17,900)	291,000	(19,800)
Age of reference person								
16-34	253,000	(17,600)	318,000	(25,700)	359,000	(23,900)	420,000	(26,900)
35-44	190,000	(13,900)	268,000	(16,800)	310,000	(17,800)	424,000	(25,400)
45-54	122,000	(14,900)	184,000	(17,600)	191,000	(14,700)	342,000	(41,400)
55-64	70,900	(15,300)	106,000	(18,300)	161,000	(22,100)	218,000	(30,200)
65+	104,000	(40,200)	189,000	(56,800)	155,000	(66,900)	250,000	(71,100)
Civil status								
Single	160,000	(16,600)	235,000	(19,700)	259,000	(17,800)	300,000	(19,600)
Couple	176,000	(11,100)	233,000	(13,300)	275,000	(14,000)	376,000	(24,000)
Divorced	154,000	(20,200)	226,000	(31,900)	227,000	(24,000)	352,000	(62,700)
Widowed	107,000	(21,200)	64,900	(16,400)	249,000	(80,500)	241,000	(73,200)
Country of birth								
Luxembourg	166,000	(10,100)	245,000	(15,200)	263,000	(15,000)	301,000	(20,000)
Outside Luxembourg	173,000	(14,200)	209,000	(12,800)	267,000	(14,500)	397,000	(27,800)
Education level								
Low (ISCED=0:2)	134,000	(14,100)	177,000	(20,200)	186,000	(17,400)	254,000	(38,000)
Middle (ISCED=3,4)	155,000	(13,400)	200,000	(14,800)	252,000	(19,000)	312,000	(28,900)
High (ISCED=5-8)	211,000	(17,000)	286,000	(17,900)	306,000	(14,600)	408,000	(25,200)
Employment status								
Employed	185,000	(9,500)	237,000	(11,200)	274,000	(11,300)	373,000	(19,900)
Self-employed	218,000	(40,200)	310,000	(50,800)	270,000	(40,000)	405,000	(65,300)
Unemployed	103,000	(43,800)	94,400	(48,800)	274,000	(72,100)	264,000	(68,100)
Retired	76,400	(22,900)	121,000	(29,500)	167,000	(36,500)	215,000	(47,500)
Other	87,900	(17,900)	239,000	(58,000)	215,000	(42,800)	349,000	(88,300)
Housing status								
Owner-outright	-	-	-	-	-	-	-	-
Owner with mortgage	169,000	(8,100)	230,000	(10,200)	265,000	(10,100)	350,000	(17,100)
Renter or other	-	-	-	-	-	-	-	-
Gross Income quintile								
Q1	94,400	(24,700)	149,000	(31,400)	181,000	(28,700)	294,000	(46,400)
Q2	144,000	(22,600)	191,000	(21,400)	177,000	(23,700)	271,000	(45,600)
Q3	148,000	(17,700)	187,000	(17,000)	232,000	(21,100)	299,000	(32,900)
Q4	179,000	(19,000)	237,000	(22,500)	293,000	(21,500)	363,000	(30,300)
Q5	203,000	(18,800)	299,000	(24,200)	320,000	(22,200)	434,000	(45,400)
Net wealth quintile								
Q1	193,000	(62,100)	645,000	(140,500)	557,000	(131,800)	688,000	(177,200)
Q2	235,000	(16,400)	246,000	(14,500)	301,000	(19,500)	369,000	(30,700)
Q3	150,000	(16,600)	201,000	(19,200)	258,000	(20,700)	282,000	(22,000)
Q4	124,000	(17,900)	196,000	(21,700)	217,000	(31,100)	294,000	(26,000)
Q5	155,000	(20,500)	217,000	(26,500)	223,000	(26,300)	432,000	(60,700)

Source: Own calculations based LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C31: Other real estate property mortgage debt, participation rate  
by household characteristic**

(In %) Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Part. rate	Std.Err.	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)	10.1	(0.8)
Gender								
Male	9.2	(1.4)	10.2	(1.1)	8.2	(1.0)	11.7	(1.2)
Female	7.1	(1.3)	8.3	(1.2)	5.7	(0.9)	7.4	(1.2)
Age of reference person								
16-34	8.7	(2.5)	9.0	(2.1)	4.2	(1.4)	7.5	(1.8)
35-44	10.5	(2.1)	13.1	(2.2)	12.5	(2.2)	10.6	(1.7)
45-54	13.1	(2.5)	13.2	(2.0)	9.9	(1.5)	15.7	(2.3)
55-64	8.2	(2.2)	9.3	(1.8)	6.8	(1.3)	11.7	(2.1)
65+	0.8	(0.4)	2.1	(0.8)	2.5	(0.9)	4.2	(1.5)
Civil status								
Single	6.6	(1.8)	8.4	(1.6)	4.6	(1.1)	6.9	(1.3)
Couple	11.2	(1.4)	11.1	(1.2)	9.4	(1.1)	12.2	(1.2)
Divorced	4.6	(2.1)	10.5	(2.5)	6.8	(1.7)	9.0	(2.2)
Widowed	2.5	(1.6)	1.1	(0.9)	3.0	(1.3)	10.8	(5.3)
Country of birth								
Luxembourg	6.9	(1.1)	8.1	(1.0)	6.9	(0.9)	10.7	(1.3)
Outside Luxembourg	10.3	(1.7)	11.0	(1.3)	7.4	(1.0)	9.6	(1.1)
Education level								
Low (ISCED=0:2)	5.5	(1.5)	5.6	(1.3)	3.8	(1.0)	4.5	(1.7)
Middle (ISCED=3,4)	6.2	(1.3)	7.3	(1.2)	5.4	(1.0)	7.2	(1.2)
High (ISCED=5-8)	15.6	(2.3)	15.6	(1.8)	11.5	(1.4)	13.9	(1.3)
Employment status								
Employed	10.0	(1.5)	11.8	(1.2)	8.9	(1.0)	10.9	(1.1)
Self-employed	29.0	(5.0)	23.3	(4.7)	15.0	(4.8)	28.1	(6.4)
Unemployed	5.1	(4.6)	9.0	(4.4)	5.2	(3.6)	5.9	(3.4)
Retired	2.3	(0.9)	3.0	(0.9)	3.2	(0.9)	6.7	(1.7)
Other	3.2	(2.0)	6.3	(2.2)	4.3	(2.3)	3.0	(2.2)
Housing status								
Owner-outright	6.6	(1.3)	6.4	(1.0)	5.6	(0.9)	5.5	(1.1)
Owner with mortgage	7.3	(1.5)	11.1	(1.6)	10.3	(1.6)	17.4	(1.9)
Renter or other	11.3	(2.0)	11.3	(1.7)	6.6	(1.2)	9.4	(1.5)
Gross Income quintile								
Q1	2.7	(1.6)	3.3	(1.4)	1.1	(0.6)	3.5	(1.6)
Q2	5.8	(2.2)	4.0	(1.5)	3.2	(1.3)	4.5	(1.8)
Q3	6.8	(2.4)	6.8	(2.0)	6.2	(1.9)	6.9	(1.9)
Q4	8.1	(2.1)	11.3	(2.1)	7.0	(1.6)	13.0	(2.1)
Q5	18.6	(2.7)	21.5	(2.3)	18.4	(2.2)	22.8	(2.5)
Net wealth quintile								
Q1	5.1	(2.2)	2.3	(1.0)	1.9	(0.9)	3.2	(1.0)
Q2	8.2	(2.4)	11.3	(2.4)	6.2	(1.6)	8.5	(2.1)
Q3	5.4	(2.1)	8.2	(1.9)	3.8	(1.2)	6.0	(1.6)
Q4	7.2	(2.1)	5.9	(1.5)	6.8	(1.6)	7.4	(1.8)
Q5	16.0	(2.5)	19.2	(2.2)	17.1	(2.2)	25.3	(2.8)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C32: Other real estate property mortgage debt, conditional median by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.
All households	116,000	(19,500)	150,000	(19,300)	235,000	(35,900)	238,000	(41,100)
Gender								
Male	111,000	(19,500)	150,000	(25,200)	250,000	(40,300)	265,000	(62,400)
Female	131,000	(51,300)	150,000	(30,500)	165,000	(59,200)	214,000	(42,500)
Age of reference person								
16-34	95,000	(43,800)	210,000	(72,400)	254,000	(130,100)	216,000	(73,100)
35-44	136,000	(34,300)	190,000	(35,100)	304,000	(86,900)	338,000	(97,500)
45-54	120,000	(37,600)	142,000	(27,000)	222,000	(39,200)	272,000	(69,700)
55-64	62,000	(82,200)	170,000	(56,900)	132,000	(39,400)	194,000	(68,700)
65+	34,500	(62,300)	40,000	(27,700)	256,000	(110,300)	230,000	(166,400)
Civil status								
Single	153,000	(72,500)	157,000	(59,400)	150,000	(115,100)	196,000	(59,400)
Couple	108,000	(21,400)	170,000	(20,800)	239,000	(38,400)	270,000	(53,000)
Divorced	128,000	(119,300)	136,000	(39,600)	166,000	(68,000)	188,000	(98,700)
Widowed	25,000	(7,600)	14,500	(50,200)	350,000	(136,900)	450,000	(343,300)
Country of birth								
Luxembourg	120,000	(33,800)	204,000	(29,600)	257,000	(35,100)	288,000	(68,900)
Outside Luxembourg	117,000	(24,800)	112,000	(21,600)	158,000	(47,400)	210,000	(42,900)
Education level								
Low (ISCED=0:2)	85,000	(46,800)	50,900	(35,400)	144,000	(69,100)	204,000	(175,200)
Middle (ISCED=3,4)	141,000	(37,200)	208,000	(46,300)	314,000	(52,900)	195,000	(65,600)
High (ISCED=5-8)	111,000	(21,100)	160,000	(23,100)	222,000	(44,900)	259,000	(57,300)
Employment status								
Employed	105,000	(22,600)	153,000	(22,300)	242,000	(39,400)	254,000	(45,200)
Self-employed	250,000	(55,300)	210,000	(74,900)	263,000	(122,100)	339,000	(131,400)
Unemployed	15,000	-	46,200	(102,900)	140,000	(170,100)	226,000	(119,400)
Retired	146,000	(249,800)	156,000	(81,200)	250,000	(68,100)	210,000	(140,300)
Other	45,000	(28,800)	100,000	(73,600)	34,000	(47,600)	180,000	(193,600)
Housing status								
Owner-outright	65,500	(33,900)	149,000	(50,300)	240,000	(56,200)	295,000	(86,100)
Owner with mortgage	99,900	(30,500)	183,000	(22,600)	242,000	(45,600)	243,000	(79,900)
Renter or other	143,000	(39,500)	106,000	(35,100)	230,000	(93,500)	222,000	(46,500)
Gross Income quintile								
Q1	150,000	(64,900)	42,000	(83,800)	87,000	(143,900)	187,000	(149,400)
Q2	110,000	(173,800)	300,000	(166,800)	218,000	(196,100)	288,000	(196,900)
Q3	72,000	(79,200)	162,000	(61,600)	131,000	(69,900)	195,000	(110,800)
Q4	67,800	(36,800)	122,000	(30,100)	230,000	(78,200)	208,000	(70,500)
Q5	149,000	(34,800)	174,000	(25,600)	262,000	(29,300)	295,000	(70,500)
Net wealth quintile								
Q1	247,000	(106,200)	145,000	(331,200)	225,000	(294,000)	450,000	(141,200)
Q2	106,000	(44,800)	113,000	(36,100)	126,000	(105,100)	170,000	(61,300)
Q3	147,000	(61,500)	175,000	(43,500)	194,000	(75,800)	172,000	(36,700)
Q4	94,000	(27,800)	185,000	(70,900)	171,000	(96,400)	264,000	(132,700)
Q5	87,400	(37,600)	170,000	(30,800)	276,000	(31,200)	340,000	(76,800)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.



**Table C33: Other real estate property mortgage debt, conditional mean  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.	Cond. mean	Std.Err.
All households	220,000	(36,900)	234,000	(21,700)	345,000	(42,000)	508,000	(106,700)
Gender								
Male	208,000	(44,800)	258,000	(32,500)	352,000	(54,700)	582,000	(148,700)
Female	243,000	(71,600)	195,000	(24,400)	331,000	(67,500)	320,000	(48,100)
Age of reference person								
16-34	182,000	(70,500)	271,000	(47,500)	373,000	(113,300)	371,000	(83,200)
35-44	229,000	(48,900)	248,000	(45,800)	346,000	(58,500)	500,000	(105,500)
45-54	183,000	(37,500)	197,000	(28,100)	402,000	(111,200)	699,000	(313,300)
55-64	353,000	(201,500)	282,000	(67,500)	213,000	(40,200)	415,000	(102,100)
65+	88,300	(41,500)	67,300	(21,800)	381,000	(152,500)	263,000	(96,300)
Civil status								
Single	376,000	(140,700)	257,000	(58,200)	305,000	(80,100)	295,000	(58,300)
Couple	191,000	(36,500)	246,000	(26,500)	370,000	(59,700)	463,000	(58,500)
Divorced	164,000	(97,900)	165,000	(36,200)	256,000	(50,400)	1,156,000	(882,800)
Widowed	17,600	(6,000)	46,100	(42,900)	420,000	(117,600)	527,000	(271,300)
Country of birth								
Luxembourg	286,000	(74,500)	284,000	(31,000)	389,000	(69,900)	656,000	(218,900)
Outside Luxembourg	161,000	(22,500)	185,000	(30,100)	306,000	(48,700)	379,000	(48,500)
Education level								
Low (ISCED=0:2)	142,000	(38,700)	112,000	(22,200)	186,000	(42,200)	442,000	(227,700)
Middle (ISCED=3,4)	275,000	(107,100)	290,000	(46,600)	329,000	(54,700)	786,000	(450,800)
High (ISCED=5-8)	226,000	(42,700)	243,000	(29,900)	390,000	(66,200)	430,000	(51,000)
Employment status								
Employed	148,000	(22,900)	215,000	(24,000)	375,000	(53,200)	446,000	(52,100)
Self-employed	462,000	(120,300)	412,000	(96,000)	282,000	(81,100)	1,107,000	(764,400)
Unemployed	15,000	-	113,000	(74,700)	253,000	(127,600)	213,000	(67,800)
Retired	358,000	(267,300)	278,000	(121,600)	328,000	(98,600)	338,000	(106,500)
Other	60,900	(25,000)	139,000	(47,500)	56,000	(40,000)	218,000	(159,000)
Housing status								
Owner-outright	200,000	(90,100)	193,000	(29,600)	429,000	(105,900)	440,000	(109,500)
Owner with mortgage	246,000	(90,900)	281,000	(36,800)	292,000	(46,000)	648,000	(220,300)
Renter or other	216,000	(35,900)	220,000	(41,600)	319,000	(60,700)	348,000	(57,400)
Gross Income quintile								
Q1	126,000	(48,000)	140,000	(87,300)	198,000	(115,700)	236,000	(115,400)
Q2	339,000	(218,100)	330,000	(148,000)	296,000	(126,800)	296,000	(90,600)
Q3	178,000	(102,100)	230,000	(71,100)	218,000	(68,700)	328,000	(94,800)
Q4	106,000	(36,300)	202,000	(42,500)	370,000	(163,500)	323,000	(44,200)
Q5	263,000	(52,200)	248,000	(28,300)	395,000	(62,400)	755,000	(228,700)
Net wealth quintile								
Q1	314,000	(102,900)	414,000	(250,500)	412,000	(195,600)	500,000	(151,600)
Q2	147,000	(39,400)	153,000	(32,800)	208,000	(60,700)	214,000	(47,100)
Q3	146,000	(49,500)	219,000	(51,600)	305,000	(174,300)	231,000	(55,000)
Q4	115,000	(42,700)	262,000	(76,700)	373,000	(149,700)	395,000	(73,900)
Q5	304,000	(91,600)	258,000	(35,900)	381,000	(70,600)	708,000	(209,400)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C34: Non-mortgage debt, participation rate  
by household characteristic**

(In %) Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Part. rate	Std.Err.	Part. rate	Std.Err.	Part. rate	Std.Err.	Part. rate	Std.Err.
All households	36.9	(1.8)	33.9	(1.3)	35.4	(1.4)	34.4	(1.4)
Gender								
Male	38.8	(2.4)	35.1	(1.8)	32.6	(1.8)	34.0	(1.8)
Female	34.2	(2.8)	32.3	(2.0)	39.4	(2.2)	35.1	(2.7)
Age of reference person								
16-34	41.7	(4.5)	42.6	(3.7)	46.6	(3.6)	38.6	(3.7)
35-44	45.1	(3.8)	36.8	(3.1)	39.9	(3.3)	38.1	(3.3)
45-54	45.5	(3.9)	40.7	(3.1)	44.0	(3.0)	41.2	(3.3)
55-64	40.6	(4.2)	37.1	(3.3)	31.7	(3.4)	38.2	(3.4)
65+	11.8	(3.0)	13.6	(2.4)	16.9	(2.5)	15.2	(2.5)
Civil status								
Single	38.7	(3.8)	29.5	(2.9)	33.1	(2.7)	36.2	(2.8)
Couple	40.3	(2.3)	37.8	(1.9)	39.4	(1.9)	36.5	(1.9)
Divorced	40.1	(5.2)	39.5	(3.9)	39.1	(3.9)	30.9	(4.2)
Widowed	8.4	(3.8)	18.0	(4.2)	14.2	(3.6)	10.7	(4.6)
Country of birth								
Luxembourg	35.1	(2.4)	34.6	(1.8)	35.3	(1.9)	31.0	(2.1)
Outside Luxembourg	39.5	(2.9)	32.9	(2.2)	35.5	(2.1)	37.1	(2.1)
Education level								
Low (ISCED=0:2)	37.7	(3.3)	28.2	(2.4)	35.5	(2.7)	45.2	(4.2)
Middle (ISCED=3,4)	36.2	(2.8)	38.8	(2.3)	39.0	(2.4)	36.5	(2.8)
High (ISCED=5-8)	37.1	(3.4)	33.1	(2.5)	31.6	(2.2)	29.2	(1.9)
Employment status								
Employed	43.5	(2.5)	40.2	(1.9)	42.2	(1.9)	38.8	(1.8)
Self-employed	46.7	(5.8)	24.6	(4.7)	46.2	(7.1)	31.6	(6.5)
Unemployed	27.1	(10.5)	32.4	(7.6)	34.0	(9.2)	64.3	(9.1)
Retired	19.9	(3.3)	22.9	(2.6)	21.6	(2.3)	22.0	(2.5)
Other	38.3	(5.8)	32.0	(4.8)	27.2	(5.1)	31.4	(8.8)
Housing status								
Owner-outright	25.0	(2.7)	24.9	(2.0)	29.2	(2.1)	27.2	(2.4)
Owner with mortgage	47.2	(3.2)	42.6	(2.6)	44.8	(2.6)	41.9	(2.7)
Renter or other	39.2	(3.3)	36.8	(2.7)	35.8	(2.7)	36.5	(2.8)
Gross Income quintile								
Q1	31.3	(4.4)	22.3	(3.1)	25.7	(3.4)	37.1	(4.5)
Q2	32.4	(4.5)	30.0	(3.5)	41.3	(3.8)	36.6	(4.1)
Q3	37.4	(4.9)	42.1	(3.9)	34.8	(3.2)	34.3	(4.5)
Q4	43.8	(4.6)	40.1	(3.5)	42.8	(3.2)	33.6	(3.4)
Q5	40.0	(3.7)	35.1	(2.6)	32.7	(2.8)	30.2	(3.5)
Net wealth quintile								
Q1	42.6	(4.4)	39.4	(3.4)	38.7	(3.6)	45.1	(4.0)
Q2	39.1	(4.3)	41.0	(3.5)	39.6	(3.7)	36.8	(4.0)
Q3	42.8	(4.6)	31.7	(3.3)	38.2	(3.5)	36.9	(3.7)
Q4	31.5	(4.1)	33.0	(3.2)	35.9	(3.3)	30.9	(3.3)
Q5	28.6	(3.4)	24.1	(2.6)	24.8	(2.8)	22.3	(2.9)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C35: Non-mortgage debt, conditional median  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.	Cond. median	Std.Err.
All households	10,000	(1,000)	10,100	(920)	10,000	(990)	15,900	(1,600)
Gender								
Male	10,500	(1,300)	10,100	(1,500)	11,900	(1,700)	18,000	(1,700)
Female	9,800	(1,600)	10,300	(1,300)	9,000	(930)	14,400	(2,700)
Age of reference person								
16-34	8,700	(1,900)	13,000	(2,500)	10,000	(1,500)	17,900	(2,300)
35-44	12,200	(1,400)	10,700	(2,400)	9,600	(1,800)	17,700	(3,600)
45-54	11,000	(1,900)	11,000	(1,600)	10,200	(1,900)	15,100	(3,500)
55-64	9,500	(2,200)	8,200	(1,700)	13,800	(3,400)	14,000	(2,500)
65+	9,900	(9,400)	7,700	(3,600)	8,100	(3,800)	20,000	(3,000)
Civil status								
Single	7,700	(1,100)	10,000	(1,800)	9,500	(1,200)	15,500	(2,200)
Couple	13,000	(1,000)	13,200	(1,900)	11,500	(1,600)	18,500	(1,900)
Divorced	9,500	(2,700)	7,000	(1,700)	7,800	(2,000)	8,800	(3,200)
Widowed	10,000	(10,900)	7,100	(4,800)	18,000	(8,600)	13,200	(11,000)
Country of birth								
Luxembourg	12,200	(1,200)	12,900	(1,700)	14,400	(1,400)	18,200	(1,800)
Outside Luxembourg	9,000	(960)	9,100	(1,200)	8,000	(670)	13,000	(2,700)
Education level								
Low (ISCED=0:2)	9,000	(840)	10,000	(2,100)	9,000	(1,300)	17,200	(3,000)
Middle (ISCED=3,4)	12,000	(1,700)	10,000	(1,200)	10,700	(2,100)	12,600	(1,800)
High (ISCED=5-8)	12,400	(3,000)	12,900	(2,800)	10,800	(1,500)	18,000	(2,000)
Employment status								
Employed	11,700	(1,300)	12,200	(1,300)	11,400	(1,500)	17,200	(1,900)
Self-employed	13,700	(4,200)	3,700	(4,300)	9,200	(3,600)	50,000	(39,100)
Unemployed	8,300	(4,700)	3,700	(3,000)	7,200	(3,600)	9,200	(11,600)
Retired	9,500	(3,100)	7,400	(1,800)	9,900	(3,000)	15,200	(2,500)
Other	8,600	(1,700)	10,500	(4,400)	3,000	(2,800)	5,800	(5,500)
Housing status								
Owner-outright	16,800	(2,500)	11,300	(2,600)	15,100	(2,400)	17,500	(2,300)
Owner with mortgage	11,800	(1,300)	11,000	(1,900)	10,600	(1,800)	16,900	(2,200)
Renter or other	8,000	(950)	10,000	(1,400)	8,000	(1,100)	14,600	(2,800)
Gross Income quintile								
Q1	5,800	(1,000)	5,800	(1,400)	5,400	(1,800)	13,600	(4,300)
Q2	9,000	(2,200)	8,000	(2,800)	7,300	(1,600)	13,100	(3,000)
Q3	12,400	(3,200)	10,800	(2,100)	9,900	(1,800)	16,000	(3,100)
Q4	10,700	(1,900)	14,900	(2,300)	19,100	(2,000)	17,800	(3,000)
Q5	16,800	(2,300)	15,000	(2,300)	14,200	(2,900)	20,800	(3,600)
Net wealth quintile								
Q1	8,100	(1,300)	10,800	(1,800)	6,700	(1,600)	11,400	(3,800)
Q2	8,400	(1,300)	9,800	(2,300)	9,800	(1,700)	17,300	(2,800)
Q3	11,300	(2,100)	9,800	(2,400)	15,900	(3,400)	19,000	(3,000)
Q4	15,200	(2,300)	11,000	(2,100)	12,100	(2,400)	14,300	(3,000)
Q5	15,600	(3,100)	14,400	(3,400)	18,000	(3,100)	17,000	(4,900)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C36: Non-mortgage debt, conditional mean  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Cond. mean	Std.Err.	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)	41,500	(4,800)
Gender								
Male	21,300	(3,000)	25,700	(3,300)	27,000	(3,500)	47,300	(6,800)
Female	22,500	(4,400)	25,500	(4,400)	23,700	(3,800)	32,600	(6,500)
Age of reference person								
16-34	24,600	(7,300)	25,200	(4,600)	25,100	(5,900)	42,700	(9,400)
35-44	18,000	(2,600)	25,700	(4,400)	27,800	(6,200)	43,200	(10,300)
45-54	21,100	(4,600)	29,200	(5,900)	25,200	(3,900)	38,100	(7,800)
55-64	25,800	(7,000)	18,500	(5,400)	22,300	(3,800)	34,500	(7,600)
65+	21,200	(6,100)	32,000	(15,000)	26,900	(9,300)	61,900	(31,800)
Civil status								
Single	20,700	(5,900)	24,300	(5,100)	26,900	(6,300)	40,500	(7,400)
Couple	23,600	(3,100)	27,200	(3,400)	24,100	(2,600)	41,100	(5,700)
Divorced	16,400	(4,200)	26,900	(8,600)	25,200	(8,400)	50,000	(26,100)
Widowed	21,800	(11,600)	10,400	(2,800)	38,100	(15,200)	17,200	(8,500)
Country of birth								
Luxembourg	21,500	(3,200)	27,800	(3,600)	30,400	(4,000)	45,900	(6,300)
Outside Luxembourg	22,100	(3,900)	22,600	(4,200)	20,800	(3,300)	38,700	(6,900)
Education level								
Low (ISCED=0:2)	17,500	(3,400)	23,000	(5,700)	22,700	(4,400)	34,500	(8,600)
Middle (ISCED=3,4)	21,900	(3,700)	23,300	(3,800)	21,900	(3,900)	25,600	(3,800)
High (ISCED=5-8)	27,500	(5,700)	31,200	(5,300)	32,400	(5,200)	57,500	(9,700)
Employment status								
Employed	22,700	(3,300)	25,400	(2,700)	27,300	(3,200)	38,900	(4,700)
Self-employed	27,300	(6,400)	21,400	(12,500)	24,200	(8,800)	119,000	(37,500)
Unemployed	11,000	(2,700)	13,900	(12,500)	9,000	(2,400)	38,000	(28,700)
Retired	17,800	(3,600)	28,100	(8,900)	25,000	(6,200)	39,300	(15,800)
Other	19,300	(6,800)	27,900	(13,200)	12,400	(5,200)	15,200	(8,600)
Housing status								
Owner-outright	32,100	(6,900)	41,900	(7,400)	38,000	(5,600)	42,500	(8,100)
Owner with mortgage	22,000	(3,500)	16,800	(1,500)	18,600	(2,000)	37,800	(6,600)
Renter or other	14,700	(3,200)	21,700	(4,400)	19,000	(4,700)	44,200	(10,100)
Gross Income quintile								
Q1	11,300	(4,100)	9,500	(2,100)	8,800	(1,900)	32,400	(7,700)
Q2	13,800	(2,600)	24,200	(8,100)	18,600	(5,900)	38,700	(11,400)
Q3	24,200	(6,300)	23,200	(4,500)	20,000	(3,800)	30,700	(6,200)
Q4	23,200	(5,500)	31,100	(6,500)	30,500	(4,700)	57,400	(16,400)
Q5	32,700	(6,900)	33,800	(6,600)	46,800	(9,200)	51,900	(14,000)
Net wealth quintile								
Q1	24,800	(6,900)	27,900	(6,700)	9,700	(1,600)	50,600	(13,500)
Q2	16,200	(4,700)	21,100	(4,500)	24,600	(6,600)	34,200	(8,100)
Q3	20,100	(5,200)	27,300	(7,300)	42,800	(8,800)	33,700	(6,500)
Q4	20,500	(2,900)	19,500	(3,100)	22,300	(3,700)	34,900	(10,500)
Q5	28,800	(7,000)	35,900	(8,700)	29,600	(5,700)	57,200	(14,900)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C37: Median household gross income  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Median	Std.Err.	Median	Std.Err.	Median	Std.Err.	Median	Std.Err.
All households	64,800	(1,800)	64,600	(1,600)	71,100	(2,000)	89,600	(2,500)
Gender								
Male	69,900	(2,300)	71,500	(2,700)	79,000	(2,600)	98,600	(3,500)
Female	52,900	(4,100)	58,700	(2,300)	60,300	(3,000)	74,800	(4,100)
Age of reference person								
16-34	53,300	(4,000)	57,500	(3,500)	65,700	(4,000)	70,700	(4,300)
35-44	72,000	(4,600)	71,500	(4,000)	78,900	(4,300)	87,600	(6,300)
45-54	75,100	(5,900)	81,900	(5,000)	83,700	(4,700)	103,000	(6,800)
55-64	72,100	(5,400)	70,200	(7,900)	72,400	(6,000)	107,000	(7,400)
65+	53,900	(4,500)	52,100	(2,900)	58,800	(4,100)	90,200	(4,800)
Civil status								
Single	49,700	(4,000)	54,400	(2,800)	61,400	(3,200)	67,500	(4,000)
Couple	77,600	(4,500)	52,100	(2,900)	58,800	(4,100)	117,000	(5,300)
Divorced	51,300	(8,700)	48,400	(6,600)	49,300	(2,900)	70,400	(6,000)
Widowed	36,000	(5,600)	44,200	(4,900)	49,600	(4,900)	69,600	(12,200)
Country of birth								
Luxembourg	70,400	(2,800)	73,800	(2,800)	80,800	(2,900)	99,600	(3,300)
Outside Luxembourg	55,500	(3,600)	57,600	(1,900)	60,500	(2,300)	81,200	(3,600)
Education level								
Low (ISCED=0:2)	48,000	(3,700)	46,200	(2,400)	47,800	(1,600)	65,100	(7,100)
Middle (ISCED=3,4)	61,700	(3,400)	64,100	(2,000)	65,600	(2,600)	85,700	(4,500)
High (ISCED=5-8)	107,000	(4,100)	97,500	(5,200)	108,000	(5,000)	105,000	(5,100)
Employment status								
Employed	70,500	(2,400)	73,500	(2,900)	79,300	(2,700)	89,700	(3,300)
Self-employed	103,000	(16,000)	124,000	(19,100)	106,000	(24,500)	133,000	(12,900)
Unemployed	40,300	(8,200)	38,700	(6,000)	38,300	(12,200)	50,400	(15,900)
Retired	60,600	(3,800)	57,500	(2,500)	64,500	(3,300)	93,800	(5,100)
Other	42,500	(5,800)	48,000	(3,900)	38,000	(4,700)	39,900	(14,000)
Housing status								
Owner-outright	69,000	(3,700)	73,200	(3,500)	76,000	(3,000)	93,900	(4,000)
Owner with mortgage	84,200	(3,900)	85,400	(4,600)	99,200	(4,100)	119,000	(5,700)
Renter or other	41,600	(2,800)	42,700	(2,400)	48,300	(2,800)	65,700	(3,700)
Gross Income quintile								
Q1	22,900	(830)	24,000	(620)	25,500	(1,200)	29,300	(1,700)
Q2	42,900	(1,100)	44,900	(900)	48,000	(680)	60,000	(790)
Q3	64,800	(1,100)	64,800	(970)	71,200	(1,300)	90,000	(1,500)
Q4	92,900	(1,500)	97,200	(2,100)	106,000	(1,700)	132,000	(2,100)
Q5	155,000	(5,100)	169,000	(4,000)	177,000	(3,400)	227,000	(6,700)
Net wealth quintile								
Q1	34,600	(3,500)	34,400	(2,200)	40,000	(2,000)	48,100	(4,200)
Q2	59,800	(4,500)	58,900	(2,600)	64,700	(3,700)	73,600	(4,800)
Q3	62,400	(4,200)	61,700	(2,500)	69,100	(3,800)	90,000	(4,000)
Q4	77,600	(5,200)	84,600	(5,600)	81,500	(3,100)	102,000	(6,500)
Q5	113,000	(5,900)	118,000	(5,700)	135,000	(7,700)	167,000	(10,900)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Note: Income from family and friends is not included.

**Table C38: Mean household gross income  
by household characteristic**

Variable	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Mean	Std.Err.	Mean	Std.Err.	Mean	Std.Err.	Mean	Std.Err.
All households	83,700	(2,300)	87,200	(2,000)	93,100	(1,900)	116,000	(2,900)
Gender								
Male	92,400	(3,500)	95,400	(3,000)	104,000	(3,000)	127,000	(3,800)
Female	70,800	(3,300)	76,500	(2,500)	77,600	(2,300)	99,400	(4,500)
Age of reference person								
16-34	66,500	(3,700)	68,300	(3,400)	81,600	(3,800)	90,600	(5,800)
35-44	88,400	(5,600)	92,600	(4,500)	93,400	(3,600)	104,000	(5,800)
45-54	97,300	(5,900)	107,000	(5,500)	109,000	(5,500)	129,000	(6,400)
55-64	102,000	(8,500)	98,900	(6,000)	101,000	(6,200)	135,000	(7,300)
65+	65,500	(6,100)	69,800	(3,800)	80,700	(4,800)	123,000	(9,400)
Civil status								
Single	63,400	(3,400)	73,700	(4,000)	71,900	(2,800)	85,500	(4,000)
Couple	104,000	(6,100)	69,800	(3,800)	80,700	(4,800)	141,000	(5,000)
Divorced	63,300	(5,300)	72,700	(5,600)	69,200	(4,500)	102,000	(10,200)
Widowed	50,600	(5,900)	62,200	(6,400)	64,500	(5,000)	96,500	(12,100)
Country of birth								
Luxembourg	87,100	(3,100)	92,100	(2,500)	103,000	(2,900)	124,000	(4,200)
Outside Luxembourg	79,100	(3,900)	80,700	(3,500)	83,700	(2,900)	110,000	(4,300)
Education level								
Low (ISCED=0:2)	57,100	(3,000)	59,100	(2,700)	57,000	(2,200)	83,400	(5,600)
Middle (ISCED=3,4)	75,400	(3,700)	79,700	(2,700)	83,300	(3,100)	99,600	(3,900)
High (ISCED=5-8)	132,000	(6,600)	124,000	(5,000)	129,000	(4,600)	138,000	(4,900)
Employment status								
Employed	88,700	(3,200)	93,000	(2,600)	98,300	(2,400)	116,000	(3,300)
Self-employed	154,000	(17,500)	167,000	(15,800)	155,000	(21,400)	150,000	(12,500)
Unemployed	39,800	(5,200)	49,700	(6,200)	60,900	(11,300)	87,100	(27,700)
Retired	75,000	(5,300)	76,800	(3,900)	86,000	(4,100)	123,000	(7,300)
Other	50,100	(5,000)	59,000	(5,000)	53,200	(5,500)	73,900	(14,100)
Housing status								
Owner-outright	90,100	(4,800)	94,000	(3,600)	99,800	(3,600)	125,000	(5,700)
Owner with mortgage	98,000	(3,400)	109,000	(4,000)	117,000	(4,100)	142,000	(5,700)
Renter or other	62,600	(4,600)	59,900	(3,000)	63,200	(2,600)	86,400	(4,500)
Gross Income quintile								
Q1	20,700	(900)	22,200	(720)	24,400	(870)	28,500	(1,200)
Q2	43,000	(720)	44,600	(530)	48,400	(520)	60,400	(740)
Q3	64,300	(630)	65,800	(670)	71,500	(630)	90,700	(1,500)
Q4	93,500	(1,200)	98,500	(970)	107,000	(1,100)	135,000	(1,400)
Q5	198,000	(8,800)	206,000	(6,500)	215,000	(6,700)	270,000	(9,600)
Net wealth quintile								
Q1	40,000	(2,500)	41,800	(1,900)	48,100	(2,600)	64,300	(4,900)
Q2	65,100	(3,500)	68,500	(3,200)	74,000	(3,700)	91,200	(5,400)
Q3	74,000	(3,900)	72,800	(3,200)	81,800	(4,100)	102,000	(6,100)
Q4	96,000	(7,600)	96,900	(4,000)	96,900	(3,500)	125,000	(5,800)
Q5	144,000	(8,100)	156,000	(7,700)	165,000	(8,000)	200,000	(10,200)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C39: Median Debt-to-Asset ratio  
by household characteristics**

	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Median	Std.Err.	Median	Std.Err.	Median	Std.Err.	Median	Std.Err.
All households	18.2	(2.1)	22.1	(2.1)	19.4	(2.1)	19.6	(1.4)
Gender								
Male	16.4	(2.1)	21.3	(2.5)	18.2	(1.8)	18.9	(1.9)
Female	22.6	(3.8)	23.4	(3.2)	25.1	(4.9)	20.0	(2.3)
Age of reference person								
16-34	54.9	(5.2)	50.3	(4.6)	41.6	(6.3)	39.2	(6.5)
35-44	25.2	(4.4)	32.7	(3.7)	34.3	(2.4)	29.1	(3.2)
45-54	13.1	(2.5)	15.9	(2.3)	13.9	(2.4)	18.0	(2.2)
55-64	5.7	(1.2)	6.5	(1.4)	8.6	(2.4)	7.8	(1.7)
65+	4.3	(1.9)	4.0	(1.8)	1.6	(0.7)	7.5	(3.1)
Civil status								
Single	32.7	(6.7)	31.4	(4.5)	31.4	(4.9)	23.4	(3.6)
Couple	14.8	(1.1)	18.7	(2.8)	16.2	(2.4)	18.1	(2.0)
Divorced	18.6	(4.5)	20.9	(4.0)	31.8	(6.4)	19.1	(3.2)
Widowed	8.3	(47.9)	4.2	(2.3)	3.3	(4.8)	22.1	(10.5)
Country of birth								
Luxembourg	14.4	(2.0)	16.3	(2.8)	14.5	(1.9)	16.4	(1.7)
Outside Luxembourg	25.0	(3.7)	27.3	(3.1)	28.9	(3.5)	22.6	(2.9)
Education level								
Low (ISCED=0:2)	26.1	(6.1)	22.9	(4.7)	18.7	(3.4)	17.5	(4.1)
Middle (ISCED=3,4)	14.9	(2.5)	17.9	(2.9)	18.4	(4.0)	19.0	(2.4)
High (ISCED=5-8)	18.8	(3.0)	25.3	(2.6)	21.1	(3.5)	21.2	(2.3)
Employment status								
Employed	25.0	(3.3)	28.1	(2.5)	26.1	(2.8)	21.7	(1.9)
Self-employed	13.7	(3.6)	20.9	(6.1)	17.4	(7.0)	17.5	(5.0)
Unemployed	52.4	-	24.1	(6.9)	11.9	-	41.9	(67.5)
Retired	4.7	(1.3)	5.3	(1.6)	2.9	(0.9)	6.2	(1.2)
Other	7.7	(4.7)	18.0	(8.3)	27.0	(12.7)	60.2	-
Housing status								
Owner-outright	2.8	(0.5)	1.8	(0.4)	2.0	(0.3)	2.3	(0.3)
Owner with mortgage	22.6	(2.3)	28.2	(1.9)	33.0	(1.9)	27.2	(1.6)
Renter or other	39.9	(7.5)	41.4	(6.8)	36.3	(6.6)	25.3	(6.4)
Gross Income quintile								
Q1	26.7	(13.9)	28.8	(7.6)	28.7	(9.7)	37.3	(10.1)
Q2	37.6	(10.6)	34.6	(6.2)	19.6	(8.2)	13.0	(5.3)
Q3	21.8	(7.1)	26.1	(5.0)	23.4	(8.2)	18.4	(3.5)
Q4	15.7	(2.4)	15.2	(4.5)	22.5	(5.1)	21.0	(2.2)
Q5	13.8	(2.1)	14.6	(1.6)	16.0	(2.4)	16.4	(2.1)
Net wealth quintile								
Q1	84.0	(15.5)	91.1	(12.6)	64.3	(7.5)	89.3	(16.7)
Q2	52.2	(5.8)	47.4	(3.8)	50.5	(3.3)	40.8	(5.6)
Q3	17.7	(3.1)	18.2	(3.5)	27.4	(3.2)	18.8	(2.7)
Q4	8.9	(2.1)	9.8	(2.2)	6.0	(1.8)	7.1	(2.9)
Q5	4.4	(0.8)	5.6	(1.2)	5.2	(0.9)	9.0	(1.5)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C40: Median Debt-to-Income ratio  
by household characteristics**

	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Median	Std.Err.	Median	Std.Err.	Median	Std.Err.	Median	Std.Err.
All households	86.9	(11.2)	114.1	(10.6)	95.5	(14.4)	133.1	(18.0)
Gender								
Male	73.5	(12.0)	99.9	(14.5)	85.7	(17.2)	147.3	(15.3)
Female	117.0	(22.4)	128.6	(16.5)	108.4	(20.7)	89.6	(30.3)
Age of reference person								
16-34	190.6	(56.2)	195.6	(49.0)	144.5	(73.5)	84.8	(43.3)
35-44	149.1	(15.6)	198.6	(25.7)	234.1	(24.4)	245.8	(35.9)
45-54	58.7	(9.6)	83.4	(14.9)	86.9	(17.7)	147.8	(19.5)
55-64	27.0	(8.1)	36.2	(6.4)	37.8	(14.1)	49.4	(13.6)
65+	38.4	(17.6)	34.9	(16.8)	22.8	(6.2)	62.5	(22.8)
Civil status								
Single	88.3	(30.0)	141.7	(32.0)	112.5	(38.3)	118.1	(39.3)
Couple	88.4	(10.3)	112.5	(12.1)	91.8	(16.6)	142.0	(21.1)
Divorced	128.5	(38.8)	106.1	(25.8)	116.3	(37.7)	108.0	(50.2)
Widowed	19.0	(18.0)	32.6	(20.1)	41.8	(26.3)	198.3	(245.5)
Country of birth								
Luxembourg	98.0	(15.9)	111.6	(16.4)	105.1	(15.4)	137.8	(21.4)
Outside Luxembourg	62.8	(18.8)	115.9	(13.7)	82.8	(23.3)	126.8	(26.2)
Education level								
Low (ISCED=0:2)	61.7	(19.4)	94.1	(22.4)	53.5	(21.0)	84.7	(43.2)
Middle (ISCED=3,4)	88.7	(16.9)	69.0	(19.3)	75.0	(20.8)	90.4	(23.4)
High (ISCED=5-8)	109.6	(20.1)	145.7	(12.2)	133.9	(20.4)	173.7	(19.7)
Employment status								
Employed	125.7	(14.0)	143.4	(11.5)	129.7	(16.0)	159.6	(16.4)
Self-employed	84.4	(39.5)	162.5	(46.3)	114.4	(43.4)	249.1	(71.1)
Unemployed	55.1	(58.6)	27.9	(26.4)	30.7	(133.1)	56.3	(96.2)
Retired	33.1	(9.5)	31.8	(8.8)	25.3	(5.8)	50.1	(11.5)
Other	53.9	(17.4)	44.7	(20.7)	100.5	(75.1)	79.0	(108.1)
Housing status								
Owner-outright	23.8	(4.4)	19.6	(5.3)	21.9	(3.1)	24.0	(3.9)
Owner with mortgage	171.1	(16.2)	239.1	(18.4)	270.1	(14.7)	276.1	(22.7)
Renter or other	24.6	(4.6)	31.1	(5.0)	17.3	(2.6)	32.5	(12.1)
Gross Income quintile								
Q1	45.2	(29.0)	83.8	(44.1)	45.9	(27.6)	146.1	(99.4)
Q2	92.1	(48.9)	139.6	(64.3)	35.2	(17.9)	75.3	(44.1)
Q3	115.3	(32.4)	138.3	(25.6)	133.4	(44.2)	78.7	(39.3)
Q4	103.4	(20.9)	106.2	(23.6)	133.3	(26.7)	183.8	(28.6)
Q5	71.4	(15.6)	100.4	(13.4)	111.1	(14.9)	126.9	(24.2)
Net wealth quintile								
Q1	30.6	(8.6)	32.3	(6.1)	16.0	(3.4)	28.5	(17.0)
Q2	262.8	(42.0)	280.3	(30.3)	289.8	(36.3)	239.8	(63.8)
Q3	121.1	(23.3)	143.5	(25.5)	195.6	(29.7)	157.9	(25.5)
Q4	72.9	(19.5)	79.5	(20.1)	70.1	(21.2)	71.6	(28.7)
Q5	61.7	(11.4)	73.3	(13.6)	64.2	(14.9)	164.9	(35.3)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.



**Table C41: Median Debt Service-to-Income ratio  
by household characteristics**

	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Median	Std.Err.	Median	Std.Err.	Median	Std.Err.	Median	Std.Err.
All households	16.2	(0.8)	15.0	(0.7)	13.4	(0.8)	14.6	(0.8)
Gender								
Male	14.7	(1.1)	14.4	(0.7)	12.5	(1.1)	14.6	(1.0)
Female	17.5	(0.9)	16.7	(1.1)	14.3	(1.4)	14.5	(1.5)
Age of reference person								
16-34	18.5	(2.5)	17.1	(2.0)	15.6	(2.2)	12.1	(2.3)
35-44	18.4	(1.3)	19.7	(1.3)	17.2	(1.5)	19.5	(2.0)
45-54	14.0	(1.9)	14.7	(0.8)	13.7	(1.1)	15.7	(1.9)
55-64	11.3	(1.5)	9.2	(1.3)	8.5	(1.6)	11.2	(1.9)
65+	11.0	(4.8)	10.3	(2.2)	7.6	(1.6)	12.1	(2.0)
Civil status								
Single	16.0	(2.3)	17.4	(1.7)	12.6	(1.6)	13.6	(1.4)
Couple	16.1	(0.8)	14.8	(0.9)	13.6	(0.9)	14.9	(1.1)
Divorced	17.9	(3.3)	14.8	(1.6)	15.3	(2.5)	14.5	(2.8)
Widowed	6.2	(5.0)	7.4	(3.7)	10.1	(3.1)	13.3	(9.8)
Country of birth								
Luxembourg	16.8	(0.9)	15.6	(0.9)	13.5	(1.0)	14.6	(1.1)
Outside Luxembourg	14.9	(1.0)	14.6	(0.9)	13.2	(1.2)	14.4	(1.2)
Education level								
Low (ISCED=0:2)	15.4	(1.5)	18.4	(1.5)	11.6	(1.4)	16.1	(2.8)
Middle (ISCED=3,4)	16.9	(1.8)	14.1	(1.0)	12.9	(1.2)	13.1	(1.2)
High (ISCED=5-8)	16.2	(1.1)	14.7	(0.8)	14.6	(1.1)	14.9	(1.1)
Employment status								
Employed	17.1	(1.0)	17.1	(0.8)	15.0	(1.0)	15.8	(1.0)
Self-employed	14.7	(2.6)	14.0	(3.9)	12.9	(5.4)	22.1	(4.8)
Unemployed	17.5	(7.0)	9.6	(4.3)	7.3	(5.8)	0.0	(4.2)
Retired	12.4	(2.6)	8.8	(1.0)	7.5	(1.3)	12.2	(1.4)
Other	13.1	(2.9)	9.7	(3.6)	11.4	(5.6)	6.8	(7.0)
Housing status								
Owner-outright	8.3	(1.2)	6.9	(0.7)	7.1	(0.8)	7.4	(0.9)
Owner with mortgage	20.1	(0.9)	21.2	(0.6)	21.4	(0.7)	21.5	(1.0)
Renter or other	10.6	(1.2)	9.2	(0.9)	5.8	(0.8)	7.2	(1.4)
Gross Income quintile								
Q1	17.0	(4.1)	19.8	(3.5)	11.2	(4.1)	20.1	(6.0)
Q2	20.3	(2.1)	19.6	(3.3)	10.2	(1.7)	15.6	(2.7)
Q3	18.7	(2.7)	17.8	(1.9)	16.8	(2.3)	14.3	(2.2)
Q4	17.2	(1.6)	14.6	(1.0)	16.1	(1.1)	15.2	(1.4)
Q5	11.4	(1.2)	11.7	(0.9)	12.2	(1.0)	11.8	(1.0)
Net wealth quintile								
Q1	11.9	(1.7)	9.9	(1.5)	5.4	(1.0)	5.6	(2.0)
Q2	21.3	(1.7)	21.6	(1.3)	19.7	(2.1)	19.3	(3.1)
Q3	17.0	(1.2)	17.8	(1.3)	17.5	(1.7)	16.6	(1.5)
Q4	12.7	(1.8)	13.8	(1.4)	13.6	(1.9)	12.0	(1.7)
Q5	13.0	(1.8)	11.3	(1.1)	11.4	(1.3)	15.4	(2.4)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C42: Median Mortgage Debt Service-to-Income ratio  
by household characteristics**

	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Median	Std.Err.	Median	Std.Err.	Median	Std.Err.	Median	Std.Err.
All households	16.3	(0.7)	17.6	(0.7)	17.8	(0.8)	18.0	(0.8)
Gender								
Male	14.9	(1.2)	16.0	(1.2)	16.9	(1.0)	18.0	(0.9)
Female	17.0	(1.2)	18.3	(0.9)	19.1	(1.2)	18.4	(1.9)
Age of reference person								
16-34	20.9	(1.7)	21.3	(1.9)	22.9	(1.3)	20.3	(2.5)
35-44	16.7	(1.0)	19.0	(1.3)	18.0	(1.1)	20.5	(1.5)
45-54	13.3	(1.7)	14.8	(1.1)	15.2	(1.2)	18.0	(1.3)
55-64	13.3	(1.3)	14.0	(1.4)	14.0	(1.8)	14.0	(2.5)
65+	22.0	(4.9)	20.2	(4.8)	23.3	(6.9)	13.0	(3.0)
Civil status								
Single	18.6	(2.6)	21.6	(1.4)	19.5	(2.1)	18.6	(1.7)
Couple	15.2	(0.9)	15.4	(0.9)	17.3	(0.9)	17.2	(1.0)
Divorced	19.9	(2.6)	17.5	(1.8)	21.4	(2.5)	20.6	(3.5)
Widowed	5.7	(6.2)	11.1	(7.7)	17.9	(5.6)	14.8	(15.2)
Country of birth								
Luxembourg	16.6	(0.9)	18.3	(0.8)	16.6	(1.3)	17.4	(1.1)
Outside Luxembourg	15.1	(1.1)	16.1	(1.0)	18.7	(1.0)	18.4	(1.4)
Education level								
Low (ISCED=0:2)	15.6	(1.5)	19.2	(1.5)	21.3	(2.1)	17.9	(2.7)
Middle (ISCED=3,4)	18.2	(1.7)	17.6	(1.3)	18.3	(1.6)	17.3	(1.5)
High (ISCED=5-8)	14.8	(1.1)	15.9	(1.1)	16.8	(1.1)	18.4	(1.2)
Employment status								
Employed	16.4	(0.7)	17.9	(0.7)	17.6	(0.9)	18.1	(0.9)
Self-employed	17.1	(3.3)	16.3	(4.3)	20.1	(3.4)	23.3	(5.6)
Unemployed	18.0	(7.4)	11.0	(5.8)	21.4	(5.8)	21.9	(153.5)
Retired	14.1	(2.6)	13.9	(2.7)	14.1	(2.9)	15.2	(2.6)
Other	15.5	(3.8)	20.3	(5.1)	25.0	(11.9)	14.8	(13.3)
Housing status								
Owner-outright	9.9	(2.5)	8.6	(2.2)	12.8	(2.3)	13.9	(5.6)
Owner with mortgage	16.4	(0.7)	18.3	(0.6)	18.3	(0.9)	18.3	(1.0)
Renter or other	16.9	(3.3)	13.2	(3.1)	16.1	(5.5)	14.4	(3.2)
Gross Income quintile								
Q1	36.0	(8.7)	29.5	(11.5)	45.2	(17.1)	39.6	(13.4)
Q2	22.6	(2.3)	25.6	(2.7)	24.3	(1.7)	24.3	(2.7)
Q3	19.4	(1.8)	20.8	(1.5)	20.6	(1.9)	18.0	(0.9)
Q4	14.6	(1.1)	15.3	(1.6)	16.5	(1.0)	16.3	(1.3)
Q5	10.9	(1.1)	11.7	(0.8)	13.0	(0.9)	10.8	(1.1)
Net wealth quintile								
Q1	28.2	(7.5)	41.0	(11.4)	25.3	(4.3)	36.3	(13.3)
Q2	20.6	(1.9)	21.7	(1.3)	22.1	(1.2)	21.2	(2.5)
Q3	15.5	(1.1)	17.4	(1.0)	17.5	(1.3)	17.0	(1.3)
Q4	13.5	(1.3)	14.2	(1.1)	15.1	(1.4)	16.2	(1.8)
Q5	12.7	(1.6)	11.3	(1.1)	14.6	(1.6)	16.8	(2.9)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C43: Median outstanding Loan-to-Value ratio of HMR (stock)  
by household characteristics**

	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Median	Std.Err.	Median	Std.Err.	Median	Std.Err.	Median	Std.Err.
All households	84.1	(4.6)	78.5	(1.7)	87.8	(1.9)	90.5	(1.6)
Gender								
Male	80.4	(5.8)	77.8	(2.4)	85.8	(2.3)	90.7	(1.8)
Female	86.6	(5.6)	79.9	(3.3)	94.0	(4.3)	90.6	(5.0)
Age of reference person								
16-34	100.0	(1.4)	85.2	(5.2)	89.8	(3.3)	98.6	(5.9)
35-44	80.7	(5.7)	85.5	(2.9)	90.8	(3.4)	92.8	(2.2)
45-54	75.0	(4.7)	71.3	(3.6)	79.5	(5.4)	87.8	(4.0)
55-64	57.2	(13.6)	62.4	(10.0)	88.5	(9.8)	87.5	(8.4)
65+	92.0	(100.9)	89.1	(28.3)	64.9	(32.8)	83.2	(20.6)
Civil status								
Single	78.9	(10.9)	79.6	(4.4)	87.3	(3.9)	89.4	(4.4)
Couple	85.6	(4.6)	80.0	(2.0)	87.6	(2.5)	91.5	(2.0)
Divorced	77.1	(13.3)	68.9	(8.0)	91.2	(6.3)	89.1	(8.4)
Widowed	74.1	(27.6)	66.1	(36.1)	86.2	(19.7)	66.7	(22.3)
Country of birth								
Luxembourg	79.7	(5.5)	74.7	(3.2)	86.1	(3.2)	87.8	(5.8)
Outside Luxembourg	88.5	(5.6)	84.8	(2.4)	89.6	(2.5)	91.1	(1.7)
Education level								
Low (ISCED=0:2)	97.5	(7.4)	89.2	(7.1)	91.8	(5.8)	93.1	(8.5)
Middle (ISCED=3,4)	81.8	(6.8)	76.4	(3.4)	87.5	(3.7)	89.1	(7.5)
High (ISCED=5-8)	77.6	(6.1)	76.8	(2.4)	86.9	(2.4)	90.4	(1.6)
Employment status								
Employed	85.3	(4.2)	78.0	(1.7)	87.7	(1.9)	91.1	(1.6)
Self-employed	66.7	(10.2)	79.1	(6.6)	88.6	(8.6)	88.2	(19.0)
Unemployed	100.0	(34.5)	77.2	(32.2)	112.5	(11.0)	239.8	(94.5)
Retired	60.6	(25.3)	55.1	(13.8)	85.0	(21.8)	79.6	(9.7)
Other	100.0	(12.6)	100.0	(24.0)	84.4	(15.9)	93.5	(61.1)
Housing status								
Owner-outright								
Owner with mortgage	84.1	(4.6)	78.5	(1.7)	87.8	(1.9)	90.5	(1.6)
Renter or other								
Gross Income quintile								
Q1	55.5	(13.9)	85.0	(17.0)	80.8	(9.5)	100.3	(13.9)
Q2	96.1	(7.5)	92.2	(9.5)	92.1	(6.2)	90.4	(6.6)
Q3	97.9	(7.6)	84.0	(6.1)	91.2	(5.0)	93.5	(3.9)
Q4	85.1	(6.2)	74.4	(6.6)	90.9	(5.7)	89.7	(3.1)
Q5	73.4	(5.0)	75.8	(2.3)	85.1	(2.8)	88.7	(3.8)
Net wealth quintile								
Q1	160.1	(127.4)	125.8	(22.2)	116.2	(13.6)	152.5	(94.8)
Q2	100.0	(1.6)	99.7	(2.8)	99.1	(2.1)	100.3	(3.2)
Q3	76.1	(7.5)	74.7	(3.8)	82.0	(5.3)	88.5	(2.5)
Q4	69.7	(8.2)	66.8	(7.9)	69.1	(6.0)	77.4	(7.6)
Q5	70.3	(7.8)	60.0	(3.1)	70.9	(8.2)	86.7	(7.5)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights.

**Table C44: Median Net Liquid Assets to Income ratio  
by household characteristics**

	Wave 2010		Wave 2014		Wave 2018		Wave 2021	
	Median	Std.Err.	Median	Std.Err.	Median	Std.Err.	Median	Std.Err.
All households	12.2	(2.2)	11.5	(1.7)	10.6	(2.3)	17.9	(3.7)
Gender								
Male	14.9	(2.9)	10.9	(1.8)	16.6	(3.2)	21.6	(4.7)
Female	7.1	(3.2)	12.8	(3.2)	4.7	(2.1)	10.4	(5.9)
Age of reference person								
16-34	10.5	(4.8)	5.5	(3.1)	7.3	(3.1)	1.7	(4.9)
35-44	12.3	(3.4)	11.4	(2.6)	15.3	(4.3)	15.5	(4.1)
45-54	10.9	(6.2)	9.7	(2.8)	9.0	(3.7)	26.6	(10.4)
55-64	9.5	(6.5)	25.0	(7.6)	6.7	(5.2)	33.0	(16.7)
65+	28.2	(18.7)	23.9	(17.9)	36.0	(30.4)	42.8	(20.2)
Civil status								
Single	12.7	(6.3)	8.6	(2.8)	10.1	(4.8)	12.0	(5.9)
Couple	13.7	(2.5)	12.9	(2.0)	13.4	(2.8)	19.9	(4.8)
Divorced	5.3	(4.8)	6.8	(5.1)	1.2	(2.9)	16.6	(9.9)
Widowed	12.7	(44.7)	21.5	(16.4)	10.5	(17.1)	69.1	(54.0)
Country of birth								
Luxembourg	20.6	(5.2)	12.6	(3.1)	16.7	(3.6)	24.3	(5.5)
Outside Luxembourg	5.9	(2.4)	10.5	(2.1)	5.3	(2.5)	13.2	(4.4)
Education level								
Low (ISCED=0:2)	-0.3	(1.9)	2.1	(2.5)	1.7	(2.2)	-0.8	(3.8)
Middle (ISCED=3,4)	16.5	(3.5)	8.0	(2.9)	6.0	(2.8)	12.0	(4.1)
High (ISCED=5-8)	29.3	(5.3)	26.5	(4.2)	24.5	(3.8)	40.3	(7.1)
Employment status								
Employed	11.4	(3.0)	12.1	(1.9)	10.2	(2.2)	18.4	(3.5)
Self-employed	19.3	(10.4)	18.3	(14.6)	26.9	(9.6)	12.8	(20.6)
Unemployed	-6.1	(31.6)	3.9	(20.5)	-7.3	(9.4)	-0.8	(11.7)
Retired	26.2	(14.1)	16.5	(8.9)	19.9	(10.0)	39.9	(18.2)
Other	2.3	(5.3)	1.8	(8.2)	2.2	(3.5)	-11.9	(33.3)
Housing status								
Owner-outright	26.1	(10.2)	19.2	(9.3)	7.2	(6.1)	16.3	(10.6)
Owner with mortgage	16.5	(2.8)	15.6	(2.1)	18.9	(2.9)	35.6	(5.8)
Renter or other	-1.4	(3.2)	-2.9	(2.0)	-1.1	(2.1)	-0.9	(3.0)
Gross Income quintile								
Q1	-0.7	(5.0)	1.5	(6.7)	-2.1	(1.9)	-5.6	(8.1)
Q2	8.1	(7.0)	5.6	(2.9)	2.1	(3.7)	7.8	(6.9)
Q3	6.2	(4.1)	7.8	(3.2)	8.9	(5.6)	21.4	(7.4)
Q4	20.5	(6.9)	14.1	(4.6)	14.9	(5.5)	20.0	(8.7)
Q5	28.6	(7.3)	30.3	(5.5)	26.5	(4.0)	45.5	(6.9)
Net wealth quintile								
Q1	-12.3	(4.1)	-14.9	(3.2)	-4.7	(1.9)	-10.2	(4.1)
Q2	10.1	(4.1)	7.5	(2.2)	7.2	(3.3)	12.8	(6.2)
Q3	10.6	(3.1)	13.9	(3.1)	7.1	(3.6)	13.9	(7.5)
Q4	25.7	(6.3)	20.8	(6.7)	22.4	(8.4)	39.0	(9.3)
Q5	69.6	(14.3)	75.8	(13.8)	61.0	(15.8)	100.0	(12.2)

Source: Own calculations based on the LU-HFCS waves 2010, 2014, 2018 and 2021; data are multiply imputed and weighted; variance estimation based on 1,000 replicate weights. Conditions on indebted households.





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