



# SAVING BEHAVIORS OF LOW-INCOME HOUSEHOLDS IN EUROPE

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# Introduction

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- Households are faced with various types of uncertainties (risks) in their daily lives.
- The risks can change the household's consumption level over time, which can be fulfilled if households have suitable access to saving or credit facilities.
- The low-income households among others have limited saving and have less access to credit markets, so they are more likely to be affected by any unexpected financial shocks.





# Research process

Understanding the nature of the underlying risks faced by low-income households to define a robust precautionary saving for this group by:

- Looking at households as corporate firms and constructing their financial statements.
- Identifying the specific risks that the low-income households are exposed to.
- Assessing and measuring the identified risks
- Computing a precautionary saving level, in order to cover all the identified risks, with the certain confidence level.





# Data

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- Household Finance and Consumption Survey (HFCS) includes information on the assets, liabilities, income and consumption of European households.
- The HFCS survey (second wave) is based on 84,000 interviews conducted in 20-euro area countries, published in Dec 2016.
- Eurostat database to complete some missing values and computing the effective tax rate, and mortality rate for different ages for different countries.
- FactSet database for modelling the loss distributions.



# Summary Statistics

- We construct the balance sheet and cash flows statements of European households in the aggregated level, and for each country.
- The main asset in the portfolio of the low-income homeowner is houses, which is 82% of the total assets and for the low-income renters, the main asset is their deposit, which is 48% of the total asset.
- The low-income homeowners have only 5% of their assets as a deposit, which shows that they have a very illiquid assets in the portfolio.

Balance sheet of the EU low-income households

	Balance Sheet (€) Low income EU Homeowner Vs Renter <sup>±</sup>			Balance Sheet (%TA) Low income EU Homeowner Vs Renter		
	Total	Homeowner	Renter	Total	Homeowner	Renter
Value of household's main residence	55,070	98,498	0	47%	82%	0%
Value of other real estate property	12,037	15,686	7,221	6%	6%	5%
Value of household's vehicles	2,018	2,584	1,247	8%	2%	15%
Valuables	1,147	1,159	1,200	6%	1%	15%
Value of self-employment businesses	4,289	6,398	1,296	2%	2%	2%
<b>Total real assets 1 (incl. business wealth, vehicles and valuables)</b>	<b>74,561</b>	<b>124,326</b>	<b>10,964</b>	<b>70%</b>	<b>93%</b>	<b>38%</b>
Deposits	6,049	7,339	4,445	23%	5%	48%
Mutual funds, total	853	1,006	826	1%	0%	1%
Bonds	255	416	53	0%	0%	0%
Value of non-self-employment private business	44	69	4	0%	0%	0%
Shares, publicly traded	433	659	217	0%	0%	1%
Managed accounts	32	56	5	0%	0%	0%
Money owed to households	549	529	312	2%	0%	5%
Other assets	141	104	255	0%	0%	0%
Voluntary pension/whole life insurance	1,660	1,808	1,725	4%	1%	7%
<b>Total financial assets 1 (excl. public and occupational pension plans)</b>	<b>10,018</b>	<b>11,987</b>	<b>7,841</b>	<b>30%</b>	<b>7%</b>	<b>62%</b>
<b>Total assets 1, excl. public and occupational pension plans</b>	<b>84,579</b>	<b>136,312</b>	<b>18,805</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Outstanding balance of HMR mortgages	3,096	5,459	0	3%	5%	0%
Outstanding balance of mortgages on other properties	810	982	632	0%	0%	1%
Outstanding balance of mortgage debt	3,906	6,441	632	3%	5%	1%
Outstanding balance of other, non-mortgage debt	1,069	935	1,287	380%	4%	1086%
<b>Total outstanding balance of household's liabilities</b>	<b>4,974</b>	<b>7,376</b>	<b>1,919</b>	<b>384%</b>	<b>9%</b>	<b>1087%</b>
<b>Net wealth</b>	<b>79,588</b>	<b>128,906</b>	<b>16,886</b>	<b>-284%</b>	<b>91%</b>	<b>-987%</b>



# Summary Statistics

- The main cash inflows of the low-income homeowners are related to the income from pensions, which is around 57% of their total gross income.
- The main cash inflows of the low-income renters are related to the regular social transfer, which is around 31% of the total gross income.
- The main expenditure of the low-income homeowners is related to the utility cost.
- For the low-income renters, the main expenditure is related to the consumer goods and services.
- The total net cash flows for low-income households in two groups are enormously negative.

## Cash Flow Statement of the EU low-income households

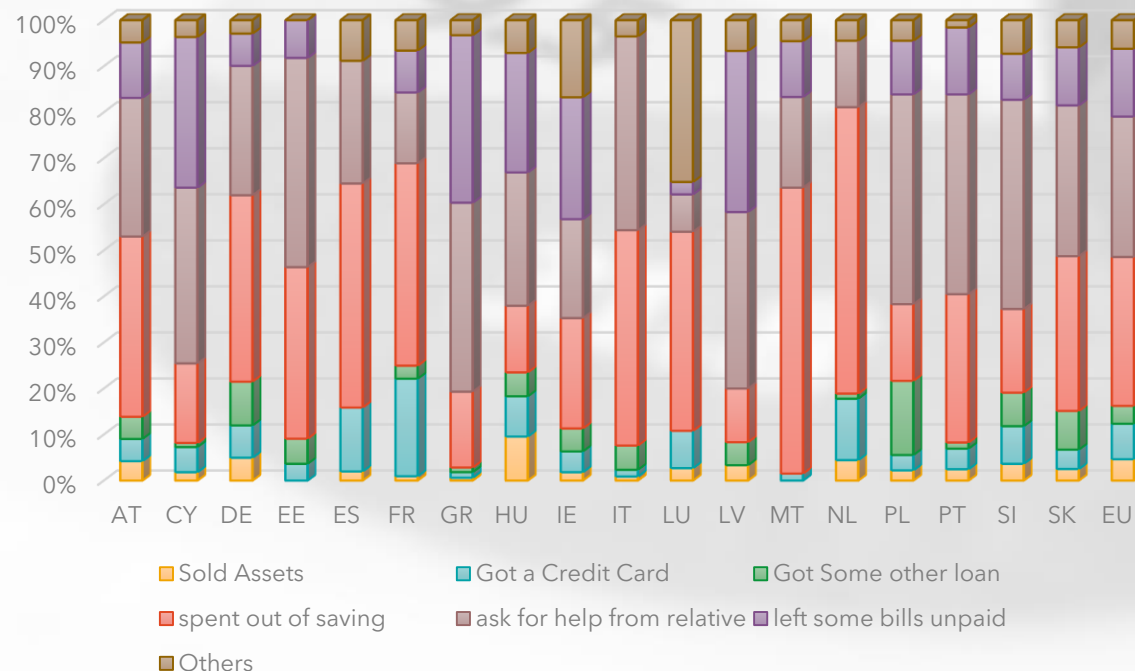
	Cash Flow Statement (€) Low Income EU Households			Cash Flow Statement (% of TGI) Low Income EU Households		
	Total	Homeowner	Renter	Total	Homeowner	Renter
<b>Cash inflows</b>						
Employee income	2,335	2,264	2,467	25%	22%	29%
Self-employment income	405	491	244	7%	9%	4%
Income from pensions	3,882	4,627	2,569	47%	57%	28%
Regular social transfers (except pensions)	1,151	538	2,465	14%	7%	31%
income from regular private transfers	181	92	337	3%	2%	5%
gross rental income from real estate property	15	40	4	0%	0%	0%
gross income from financial investments	110	137	79	2%	2%	2%
gross income from private business other than self-employment	5	9	1	0%	0%	0%
gross income from other sources	58	39	74	1%	1%	2%
<b>Total household gross income</b>	<b>8,140</b>	<b>8,236</b>	<b>8,238</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Payments for mortgages (flow)	342	555	64	6%	10%	1%
Payments for non- collateralized debt (flow)	201	198	200	12%	7%	25%
Payments for household's total debt (flow)	541	749	264	18%	17%	26%
amount of rent paid for partially owned household main residence	11	0	0	0%	0%	0%
amount paid as rent	1,186	0	3,736	104%	0%	332%
monthly leasing payments	21	22	21	1%	1%	0%
amount spent on food at home	2,915	3,000	2,854	431%	586%	233%
amount spent on food outside home	390	326	500	58%	55%	61%
amount given as private transfers	125	117	156	15%	3%	17%
amount spent on utilities	2,337	2,645	1,862	519%	858%	108%
amount spent on consumer goods and services	5,259	4,997	5,892	391%	257%	493%
<b>Total Expenses</b>	<b>12,785</b>	<b>11,855</b>	<b>15,283</b>	<b>1537%</b>	<b>1776%</b>	<b>1270%</b>
<b>Net Increase/Decrease in Cash</b>	<b>(4,645)</b>	<b>(3,619)</b>	<b>(7,045)</b>	<b>-1437%</b>	<b>-1676%</b>	<b>-1170%</b>



# Summary Statistics

- The way of financing for households includes (i) selling assets (ii) getting a credit card (iii) getting a loan (iv) using the saving account (v) asking financial aid from relative (vi) leaving some bills unpaid and some other methods.
- Except for Belgium, spent out of saving, ask for help from relatives and left some bills unpaid are the main methods used by low-income households to meet their expenses.
- Methods 2 and 3 can be considered as external financing, which result in higher debt in their balance sheet while method 1 can be considered as internal financing which result in shrinkage of their balance sheets.
- Excessive use of these methods 2 and 3, will result in accumulation of debt in low income households' balance sheet and more vulnerability to income/cost shocks.

Financing Methods to Meet Expenses for 1st Quartile of households





# Methodology

## Risks Identification

- Households should be aware of all the material risks that they are exposed to or may be exposed to in future.
- There are a broad range of risk which may contribute to or threaten the financial status of low-income households.
- Without monitoring and active management, these risks may push households to the insolvent zone.



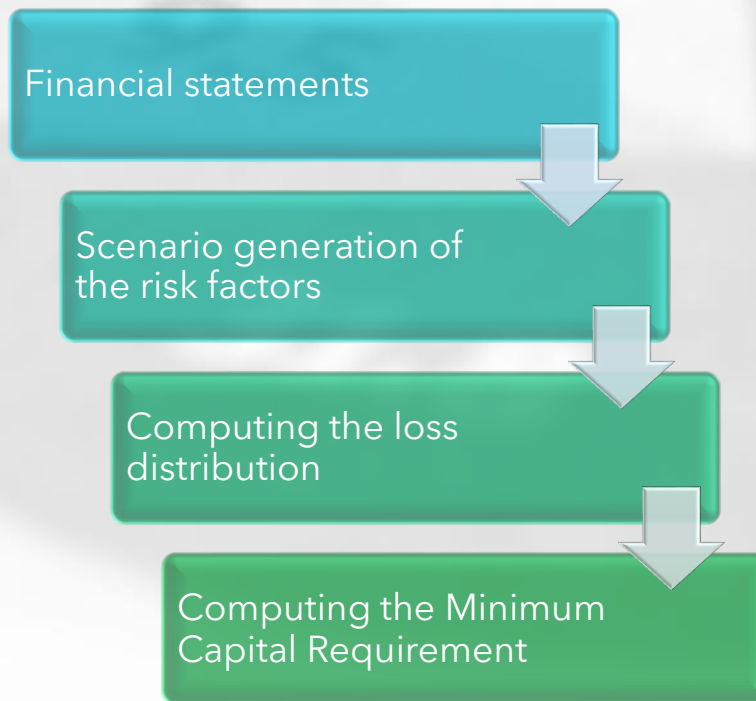




# Methodology

## Risks Assessment

- In this study, based on the adverse scenario analysis, we assess the impact of identified risks in different items of the financial statement of households and
- We then consolidate the impacts, and compute the minimum capital requirement as a financial buffer for the low-income households.
- The minimum capital requirement is enough to ensure that the household remain solvent if, during the next year, an adverse event occurs like unemployment, or financial crisis.

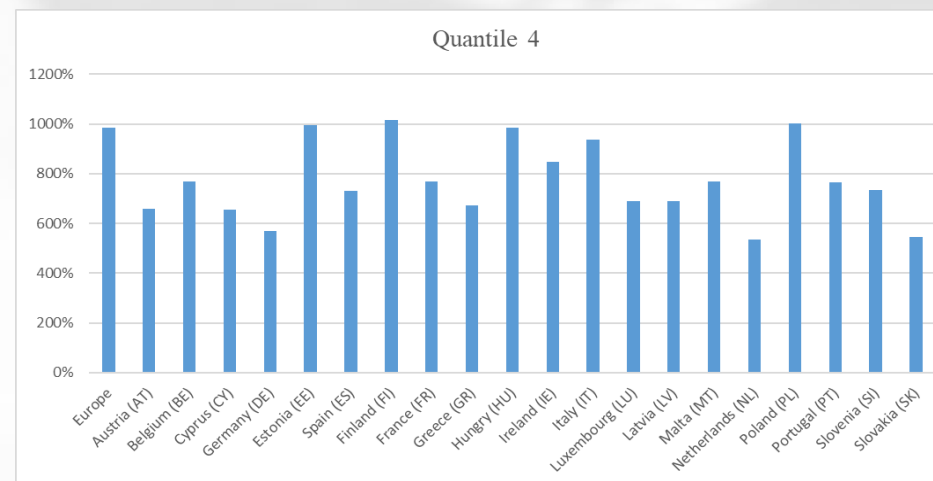
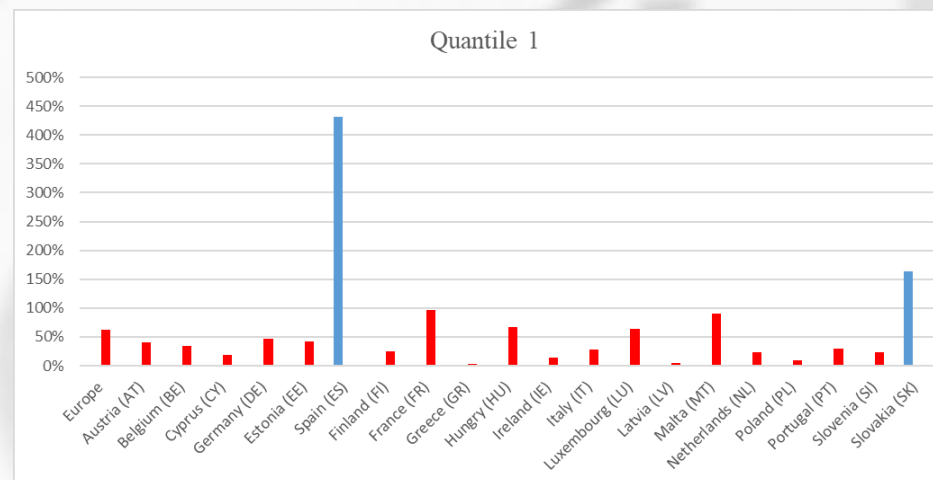




# Results

- Most of the low-income households in the first quantile, extremely poor family, except in the Spain, and Slovakia have a SCR ratio of less 100%, which means they are not able to cover all the future risks even if they use all their net wealth!
- On average, the extremely poor households in Europe, have the SCR ratio of 63%.
- The European households in the second, third and fourth quantiles of net wealth respectively, on average, have enough net wealth to cover the future financial risks.

## SCR ratio on the first and fourth net wealth quantile





# Results

- On average in Europe, around 17% of low-income households have lower net-wealth than their MCR limit, which means this group of households are not able to cover all their possible risks in future even if they use all the net wealth.
- The variation of this value among countries is high, for example, Spain has the lowest number of these households (around 9%) and Austria has the highest number (around 31%).

Frequency of Households in Insolvent Zone (Households with Net wealth lower than MCR)

	Number of Households in Insolvent Zone	Total number of households	Percentage	Median (SCR)	Median (Gross income)	Median (Net wealth)	Median (MCR)
EU	2,916	17,396	17%	7,062	7,124	1,192	6,029
AT	134	430	31%	7,724	12,109	1,515	6,644
BE	102	438	23%	10,527	12,950	1,625	9,593
CY	41	262	16%	11,578	10,000	2,000	10,514
DE	148	639	23%	6,784	9,820	800	5,538
EE	116	497	23%	4,652	3,474	326	4,150
ES	117	1,335	9%	6,780	8,580	1,300	5,985
FI	422	1,670	25%	8,810	14,277	1,130	7,508
FR	462	2,073	22%	10,608	11,915	2,837	9,040
GR	129	630	20%	9,468	5,923	1,040	8,515
HU	186	1,364	14%	5,006	3,137	776	4,139
IE	182	854	21%	9,671	13,680	1,763	8,956
IT	418	1,779	23%	8,504	8,555	1,737	6,854
LU	49	308	16%	20,144	23,000	3,986	16,512
LV	58	241	24%	2,590	3,364	371	2,524
MT	27	225	12%	5,926	6,606	1,425	4,501
NL	61	238	26%	35,087	16,934	5,550	29,682
PL	119	707	17%	3,445	3,734	358	3,035
PT	242	1,372	18%	6,029	6,350	561	5,163
SI	110	551	20%	7,396	6,100	1,094	6,759
SK	47	464	10%	6,016	3,360	1,663	4,329



# Results

- On average in Europe, around 4% of low-income households have net-wealth between SCR and MCR limit.
- Among all European countries, Austria has the highest number of these households (around 16%).

Frequency of Households in Warning Zone (Households with Net wealth lower than SCR and greater than MCR)

	Number households in Warning Zone	Total number of households	Relative percentage	Median (SCR)	Median (Gross income)	Median (Net wealth)	Median (MCR)
EU	780	17,396	4%	10,466	8,659	8,110	4,224
AT	70	430	16%	8,294	15,323	6,120	3,155
BE	29	438	7%	16,276	18,800	12,000	6,234
CY	13	262	5%	15,416	9,300	12,000	5,433
DE	65	639	10%	16,777	11,100	11,240	6,507
EE	33	497	7%	9,427	3,917	7,470	2,787
ES	32	1,335	2%	14,687	9,768	11,286	4,725
FI	133	1,670	8%	13,197	15,927	9,540	5,328
FR	173	2,073	8%	14,496	14,890	10,520	6,369
GR	14	630	2%	10,941	7,845	8,086	6,016
HU	31	1,364	2%	4,611	3,463	3,313	2,497
IE	34	854	4%	11,570	14,132	10,100	6,798
IT	111	1,779	6%	10,467	11,034	8,500	4,797
LU	21	308	7%	34,589	25,600	22,100	14,870
LV	4	241	2%	3,720	3,435	3,348	2,724
MT	34	225	15%	11,879	8,122	9,203	4,808
NL	16	238	7%	28,791	21,768	18,963	11,136
PL	22	707	3%	10,538	4,206	7,726	3,173
PT	62	1,372	5%	12,130	7,227	9,700	4,151
SI	14	551	3%	11,346	7,128	10,224	5,418
SK	8	464	2%	9,920	3,759	7,300	3,478



# Conclusion

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By constructing and analysing the financial statements of the households and assessing several types of risks that they are face to, we offer scientifically grounded risk management advice to the low-income European households.

## **From the Balance sheet and the Cash flow statements:**

- On average in Europe, 72% of total assets of households is related to the real assets and only 28% of their assets is associated with the financial assets.
- For the low-income households, the main asset in the portfolio is houses, which is 82% of the total assets and for the low-income renters, the main asset is their deposit, which is 48% of the total asset.
- The low-income homeowners have only 5% of their assets as a deposit!
- 48% of total cash inflows is related to the employee income, but the main cash inflows of the low-income renters are related to the social transfer.

## **From the financial buffer (as a precautionary saving) of low-income households**

- For the extremely poor family, the net wealth of the households is lower than the SCR level,
- The low-income households in higher bucket of wealth, have sufficient net wealth to cover all the potential risks.
- The SCR (MCR) level is positively related to the homeowners with mortgages and renters, and it is negatively related to expenditure and financial assets.
- Our results call for more monitoring of the extremely poor European households and the low-income homeowners with a mortgage in a case of financial recession in future.



Thank you!

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Q&A!