



NÁRODNÁ BANKA SLOVENSKA  
EUROSYSTEM

# REGIONAL DIFFERENCES IN HOUSEHOLD WEALTH ACROSS SLOVAKIA

*Results from the first wave of the  
Household Finance and Consumption Survey*

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## ABBREVIATIONS

ECB	European Central Bank
EUR	euro
HFCS	Household Finance and Consumption Survey
HFCN	Household Finance and Consumption Network
HMR	household main residence
LTV	loan-to-value
NBS	Národná banka Slovenska / National Bank of Slovakia
NUTS	Nomenclature of territorial units for statistics
p.a.	per annum / yearly
SK	Slovakia

## SLOVAK REGIONS

BA	Bratislava region
BB	Banská Bystrica region
KE	Košice region
NR	Nitra region
PO	Prešov region
TN	Trenčín region
TT	Trnava region
ZA	Žilina region



# REGIONAL DIFFERENCES IN HOUSEHOLD WEALTH ACROSS SLOVAKIA<sup>1</sup>

*Results from the first wave of the  
Household Finance and Consumption Survey*

**Teresa Messner and Tibor Zavadil<sup>2</sup>**

## ABSTRACT

This report summarises the findings from the first wave of the Slovak Household Finance and Consumption Survey. The analysis is done at the regional level and presents results on household assets, liabilities, net wealth, income and consumption.

**JEL classification:** D12, D14, D31, R20

**Key words:** Household Finance and Consumption Survey, Slovakia, regional analysis, assets, liabilities, wealth, income, consumption

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# 1 INTRODUCTION

This report describes the financial situation of Slovak households by putting together various components of household finance, such as assets, liabilities, net wealth, income and consumption expenditures. We use Slovak data from the first wave of the Eurosystem Household Finance and Consumption Survey (HFCS)<sup>3</sup>, which were collected between September and December 2010. This data set was analysed earlier at the national level by Senaj and Zavadil (2012) and later compared with other euro-area countries by Zavadil (2013a). This paper examines the data at the regional level.

The remainder of this introductory chapter briefly describes each region in Slovakia and presents the applied methodology and the data. The second chapter deals with household assets (both real and financial). The following chapter looks at household debt, distinguishing mortgage and non-mortgage debt. After summarizing the findings from assets and debt positions, we logically move to household net wealth in the fourth chapter. Net wealth is defined as the difference between total gross assets and total liabilities. In the fifth chapter we address various sources of household income. The sixth chapter concludes with household consumption expenditures.

**Table 1.1 – General regional data**

Statistical Office Data from 2010										
Region	Abbreviation	Population total	Area (in km <sup>2</sup> )	Population density	GDP per capita (in EUR)	Unemployment rate	Av. gross nominal monthly wage (in EUR)	Average age	Average living area (m <sup>2</sup> )	Number of dwellings started in 2010
Bratislava	BA	628,686	2,053	306,3	43,100	6.1	990	40.1	73.4	4,700
Trnava	TT	563,081	4,146	135,8	20,100	12.0	710	39.5	67.6	2,593
Trenčín	TN	598,819	4,502	133,0	15,800	10.2	660	40.0	67.3	1,481
Nitra	NR	704,752	6,344	111,1	14,800	15.4	640	40.1	77.9	1,483
Žilina	ZA	698,274	6,809	102,6	15,800	14.5	690	38.0	66.2	2,004
Banská Bystrica	BB	652,218	9,454	69,0	13,200	18.6	640	39.4	71.8	914
Prešov	PO	809,443	8,973	90,2	10,100	18.6	600	36.4	76.4	1,703
Košice	KE	780,000	6,755	115,5	14,100	18.3	720	37.4	72.3	1,343
Slovak Republic	SK	<b>5,435,273</b>	<b>49,036</b>	<b>110,8</b>	<b>17,900</b>	<b>14.4</b>	<b>770</b>	<b>38.7</b>	<b>71.5</b>	<b>16,211</b>

Source: Statistical Office of the Slovak Republic – Regional Statistics Database

Note: GDP per capita in current prices PPP.

<sup>3</sup> More information about the Eurosystem Household Finance and Consumption Survey (HFCS) is available at [http://www.ecb.europa.eu/home/html/researcher\\_hfcn.en.html](http://www.ecb.europa.eu/home/html/researcher_hfcn.en.html).

## 1.1 REGIONAL SETUP

Slovakia is divided into the 8 following regions (according to NUTS 3 level): Bratislava (BA), Trnava (TT), Trenčín (TN), Nitra (NR), Žilina (ZA), Banská Bystrica (BB), Prešov (PO) and Košice (KE). Basic characteristics of Slovak regions are described in Table 1.1. Significant differences between regions originate from topography, geographic dispersion of larger towns and public infrastructure that drive trends in investment and economic development. Over the past years investment has concentrated in western and northern regions, where main industrial hubs emerged that attracted more services. This development is reflected by a higher GDP per capita and lower unemployment in these regions compared to the rest of the country. A detailed description of Slovak regions is available in Statistical Office of the Slovak Republic (2009).

## 1.2 METHODOLOGY

We summarise the data in a similar way as HFCN (2013b). All statistics are calculated using the *final weights* that were calibrated to the following margins:

- Gender structure of the Slovak population – number of males and females.
- Age structure of the Slovak population – number of people in the following age brackets: (0–17), (18–24), (25–49), (50–64), (65 and more) years.
- Size structure of Slovak households – number of households with 1, 2, 3, 4 and 5+ members.
- Regional structure of Slovak households – number of households in each Slovak region.
- Household structure by housing status – proportion of owners (outright and with mortgage), tenants and free users.

The population and household structures (first four margins) were estimated using 2001 census data. The distribution of households with regard to their housing status was taken from EU SILC 2010. The weights were calibrated in a way to enhance the representativeness of the data at both the national and the regional level.

Missing data from the survey were imputed using a *multiple imputation method* that assigns 5 different values – so called *implicates* – to each missing value. These values are randomly drawn from the estimated distribution of the variable of interest, conditional on a broad set of other relevant characteristics. All HFCS statistics presented in this paper are calculated as an average over all 5 implicates.<sup>4</sup> More information on the methodology of the HFCS data processing, editing and imputing is provided in HFCN (2013a).

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<sup>4</sup> A detailed description of how to calculate final estimators of interest and their standard errors using multiply imputed data is provided in HFCN (2013a, Section 7.3).



We will often refer to the *household reference person* that is uniquely determined according to the international standards of the so-called Canberra Group (UNECE 2011), using the following sequential steps:

1. a lone parent with dependent children or one of the partners in a registered or de facto marriage (with or without dependent children),
2. the person with the highest income,
3. the eldest person.

Whenever possible we compare the obtained results with available data from external resources, mainly from the Statistical Office of the Slovak Republic.

### 1.3 DATA

Our sample consists of Slovak households surveyed in the first wave of the Household Finance and Consumption Survey (HFCS). The data were collected in all regions of Slovakia between September and December 2010. Since most of the households (70%) were surveyed in October 2010, we use the 4<sup>th</sup> quarter of 2010 as the reference period.

The sample was designed by using stratification and quota sampling in a way to ensure representativeness at the national level. However, the population was stratified and quotas were prescribed for each region; therefore we expect some representativeness of the sample also at the regional level.

The population of Slovak households was split into 40 strata based on 8 Slovak regions and 5 municipality-size groups.<sup>5</sup> Within each stratum, municipalities and particular households were chosen randomly. If a stratum contained only one municipality, this municipality was self-representing. The main selection criterion for a household to be interviewed was its total disposable income.<sup>6</sup> In each stratum interviewers selected households by random walk in a way to fulfil prescribed income quotas that were determined for each region (and distributed randomly over strata within each region) based on the Slovak SILC data from 2009.

The final sample consists of 2,057 households. Each household is given a certain weight that reflects its importance in the sample, i.e. how many other Slovak households that particular household represents in the sample. Table 1.2 shows the distribution of households in the sample across Slovak regions and reflects that the original (unweighted) proportion of households in the sample closely aligns to the true (weighted) proportion of households in each Slovak region.

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<sup>5</sup> All municipalities in Slovakia were split based on their size in the following 5 groups: less than 2 000 inhabitants, 2 001 – 5 000, 5 001 – 20 000, 20 001 – 50 000, more than 50 000 inhabitants.

<sup>6</sup> We used the following 10 income groups: less than 331 €, 331 – 500 €, 501 – 660 €, 661 – 900 €, 901 – 1 330 €, 1 331 – 1 660 €, 1 661 – 1 990 €, 1 991 – 2 320 €, 2 321 – 2 660 €, more than 2 660 € per month.

**Table 1.2 – Distribution of households in the sample**

Region	Original sample		Weighted sample	
	Number of households	Share (%)	Number of households	Share (%)
Bratislava	307	14.9	235,326	12.3
Trnava	235	11.4	204,166	10.7
Trenčín	213	10.4	212,959	11.1
Nitra	247	12.0	261,707	13.7
Žilina	235	11.4	238,002	12.5
Banská Bystrica	227	11.0	246,605	12.9
Prešov	263	12.8	248,707	13.0
Košice	330	16.0	264,192	13.8
<b>Slovak Republic</b>	<b>2,057</b>	<b>100.0</b>	<b>1,911,664</b>	<b>100.0</b>

Source: HFCS Slovakia 2010

Note: This table shows the distribution of households in the sample across Slovak regions, both weighted and unweighted.

We also compare the distribution of households by their size in our sample with the true distribution that is available from the recent Population and Housing Census 2011 – see Table 1.3. We observe that small households (with 1 or 2 members) are overrepresented in Trnava region and underrepresented in Prešov region, which in turn results in an underrepresentation (resp. overrepresentation) of large households (with 5 or more members) in these regions. This is also reflected in the average household size, which is, compared to the census data, much smaller in Trnava region (2.0 / 2.9), and much bigger in Prešov region (4.3 / 3.4). Therefore we will have to interpret obtained results for these two regions with some care. To the extent possible, we will account for this discrepancy by adjusting household income and food consumption to the equivalised number of household members (see Chapter 5 and 6). In other regions of Slovakia we do not observe big differences between the household size structure in our data and in the census data.<sup>7</sup>

<sup>7</sup> Note that some discrepancies in household size structure between our HFCS sample and the census 2011 data are probably caused also by the fact that the household weights in the HFCS sample were calibrated to the population structure using the data from the previous census that took place in 2001. This is because the data from the recent census 2011 were not yet available when the HFCS data were processed.



**Table 1.3 – Comparison of household structure in Slovak HFCS sample with CENSUS 2011 data**

Region	Fraction of households (in %) with # members										Average size of household	
	1		2		3		4		5+			
BA	28.7	33.0	23.2	23.2	22.2	21.4	21.7	15.6	4.2	6.8	2.5	2.5
TT	39.1	24.0	34.6	21.9	16.0	20.4	10.2	20.4	0.1	13.4	2.0	2.9
TN	27.7	24.7	16.7	22.7	23.8	19.7	25.2	20.2	6.6	12.8	2.7	2.8
NR	18.3	25.9	28.7	23.1	27.7	20.4	20.5	18.9	4.9	11.8	2.7	2.8
ZA	18.7	22.4	24.4	20.0	18.1	18.4	26.0	19.8	12.9	19.4	3.0	3.1
BB	25.3	27.9	25.6	23.6	18.8	19.2	25.4	17.9	5.0	11.4	2.6	2.7
PO	8.5	20.5	14.5	18.0	15.6	17.1	19.9	19.9	41.5	24.5	4.3	3.4
KE	22.5	25.9	23.5	21.2	20.4	18.8	21.9	18.3	11.7	15.8	2.8	3.0
SK	23.1	25.7	23.8	21.7	20.4	19.4	21.5	18.8	11.2	14.4	2.8	2.9

Source: HFCS Slovakia 2010 (first number in each main column), Statistical Office of the Slovak Republic – CENSUS 2011 (second number in each main column, given in italics)

## 2 ASSETS

This chapter describes the distribution of household assets across Slovak regions. First, we discuss the regional distribution of real assets, such as real estate, vehicles, businesses and valuables, and then the distribution of financial assets, such as deposits in sight / saving accounts, investment in mutual funds, shares or bonds, money owned to households and private pension / life insurance policies. The reference period for the reported assets is the time of an interview (autumn 2010).

### 2.1 REAL ASSETS

Almost all Slovak households possess some kind of asset and 96% report real asset holdings. This share does not vary much across the regions and exceeds 93% in all regions (see Table 2.1).

**Table 2.1 – Median values (EUR) of and participations (%) in real assets by region and type of asset**

Region	TOTAL REAL ASSETS	Household main residence	Other real estate	Vehicles	Valuables	Self- employment business
BA	92,200 95.3	83,900 87.5	28,200 16.6	5,500 63.0	1,500 27.8	15,100 9.1
TT	72,500 94.4	75,000 83.9	N 1.5	6,000 62.6	N 7.6	N 3.4
TN	61,700 95.3	54,700 91.4	12,600 13.5	5,300 53.3	N 8.7	N 8.8
NR	47,700 99.2	42,100 96.2	9,200 13.6	4,000 65.4	1,000 29.5	6,200 13.9
ZA	76,000 96.1	61,200 91.2	27,100 29.8	3,700 55.2	N 8.8	11,100 13.8
BB	44,300 93.5	40,000 87.1	15,800 13.2	5,000 55.6	800 30.4	800 16.7
PO	54,700 97.4	56,800 86.7	N 11.0	4,400 73.4	1,600 21.6	2,900 6.9
KE	59,500 96.3	50,100 93.6	15,400 20.8	5,000 59.7	1,200 38.6	4,300 11.7
SK	<b>61,800</b> <b>96.0</b>	<b>55,900</b> <b>89.9</b>	<b>16,400</b> <b>15.3</b>	<b>5,000</b> <b>61.2</b>	<b>1,000</b> <b>22.4</b>	<b>4,600</b> <b>10.8</b>

Source: HFCS Slovakia 2010

Note: This table reports shares (in %, grey figures) and median values (in EUR) of real assets owned by households. N stands for "not calculated" because less than 25 observations are available.



The household main residence (HMR)<sup>8</sup> that constitutes the largest part of household real assets is owned by 90% of Slovak households (see Table 2.1, column 3). This share does not vary too much across Slovak regions and exceeds by far the share of HMR owners in the euro area (60%, see Table 2.1 in HFCN (2013b)). The high proportion of Slovak households owning their HMR results from the fact that households living in flats owned by the state or housing co-operatives in communist era could purchase these properties for a symbolic price during the early transition to market economy in 1990s.

Only 4% of households do not possess any real assets (see Table 2.1, column 2). The lowest share of households with no real assets is observed in the regions of Nitra and Prešov, which is, however, due to a higher ownership of vehicles in these two regions rather than the HMR ownership. Vehicles are owned by more than 60% of Slovak households, and concentrated mainly in larger households, since only 23% of single households have a car.

Other real estate property<sup>9</sup> is owned by 15% of Slovak households. We observe significant differences across regions. While in the region of Žilina almost 30% of households own additional real estate property, this share is only 1.5% in Trnava region.<sup>10</sup> An additional property is usually a house or a flat (33%), a garage (19%) or a building site (9%). Only few households own a farm or an office. Many households (over 30%) specified “other use”, which comprises gardens or recreational residences (e.g. weekend cottages).

Concerning other real assets, households owning valuables are observed particularly in Košice region (39%) and households with a self-employment business in Banská Bystrica region (17%). However, the observed ownership rates of these two types of assets should be taken with some caution since they usually suffer from underreporting by households.

The median value of total real assets ranges from EUR 44,300 in Banská Bystrica region to EUR 92,200 in Bratislava region and reaches EUR 61,800 at the national level, which is the lowest value compared to other euro area countries.<sup>11</sup>

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<sup>8</sup> The household main residence is defined as the dwelling where the members of the household usually live, typically a house or an apartment. A household can only have one main residence at any given time, although they may share the residence with people not belonging to the household. While the main residence of most households is clear, there are cases for which it is not, e.g. for frequent travellers or people living in multiple houses. In these latter cases, criteria for the identification of the household's main residence would consist mostly of guidelines rather than hard rules. For those cases, the main residence has to be determined on a case-by-case basis. Possible factors include: time spent at residence per year, mailing address, tax status, telephone listing, voting registration, location of personal effects, and stated purpose of residence on insurance policies.

<sup>9</sup> Respondents were asked to name the three most important properties in terms of value that do not fall under the definition of the household main residence, for example gardens, recreational houses, rental apartments, garages, offices, hotels, other commercial buildings, farms, lands, etc.

<sup>10</sup> Such a low share can be explained by the overrepresentation of single households in our sample.

<sup>11</sup> The median value of real assets owned by households in the whole euro area is EUR 144,800; see Table 2.2 in HFCN (2013b).

Information about business wealth (see the last column of Table 2.1) suggests the presence of different types of activities operating across Slovak regions. While there is a high density of small businesses among households with a very low median value in the region of Banská Bystrica (EUR 800; often characterised as “other” service activities), region of Bratislava, on the other hand, hosts smaller number of high valued businesses, which median value (EUR 15,100) is more than three times higher than the national median value (EUR 4,600). Such a large disparity in business wealth correspond to a search for alternative income to the unemployment-induced lack of regular employment opportunities in rural regions, and relatively well paying employers with higher value added in developed regions.

As the high share of households owning their HMR (90%) suggests, the ownership of real estate is linked to a historical transfer from state to households after 1990. Self-assessed HMR values at the time of their acquisition provide the evidence about net winners and losers of this event across the country as well as an overview of where large portion of household assets in Slovakia came from. While HMR values in some regions were increasing close to proportional speed with the price and wage level over time, in other regions the values of housing have risen very quickly and disproportionally; see Table 2.2.

**Table 2.2 – Median values (EUR) of HMR at the time of its acquisition before and after 1990, average residential prices per m<sup>2</sup> (EUR) and their annual growth rates (%) by region**

Region	Median HMR value at the time of its acquisition		Average HMR price per m <sup>2</sup> (HFCS)	Average residential price per m <sup>2</sup> (NBS)*	Average annual growth rate of HMR price per m <sup>2</sup>
	before (& incl.) 1990	after 1990			
BA	3,500	54,000	1,434	1,713	12.6
TT	10,000	50,000	958	864	7.0
TN	10,000	34,600	856	706	7.5
NR	3,500	27,500	621	576	10.8
ZA	8,000	34,000	728	748	12.7
BB	4,000	20,100	535	737	6.8
PO	5,300	17,000	557	831	14.2
KE	6,000	20,000	721	993	18.7
SK	<b>5,700</b>	<b>30,000</b>	<b>788</b>	<b>1,270</b>	<b>11.6</b>

Source: HFCS Slovakia 2010, \* Source: National Bank of Slovakia – Residential property prices 4Q 2010

Note: The first two columns report median values of the household main residence (HMR) at the time of its acquisition in the period before and including 1990, and after 1990. The third column shows the average residential prices per square metre that were calculated from the observed current values and surfaces of HMRs, self-reported by households at the time of interview (mostly in October 2010). The fourth column gives the average residential property prices per square metre reported by the National Bank of Slovakia for the period of 4Q 2010. The last column presents the average annual growth rates of residential prices per square metre that were calculated from the HFCS data based on the initial and current prices of all HMRs acquired after 1990.



Outlying case of initial HMR prices in Bratislava region (the second row and column in Table 2.2) can be explained by the fact that urbanisation policy before 1990 succeeded to construct huge blocks of flats in the capital city of Bratislava and offered these to young households moving to the city, who could later purchase them for a symbolic price (Renaud, 1992). On the other hand, higher prices of real estate properties before 1990 in other regions of Slovakia are the consequence of the fact that personal property ownership during communism was basically attached only to family and recreational houses, which are more prevalent on the countryside (Smejkal, 2000).

Information from the survey on average HMR prices per square meter is cross-checked with real-estate prices collected by the National Bank of Slovakia from the National Association of Real Estate Offices of Slovakia (NARKS). Both statistics reveal large regional disparities topped by the region of Bratislava, where the most expensive residential properties are located. Considerable differences between the two statistics originate mainly from the difference between definitions used to extract residential prices.<sup>12</sup>

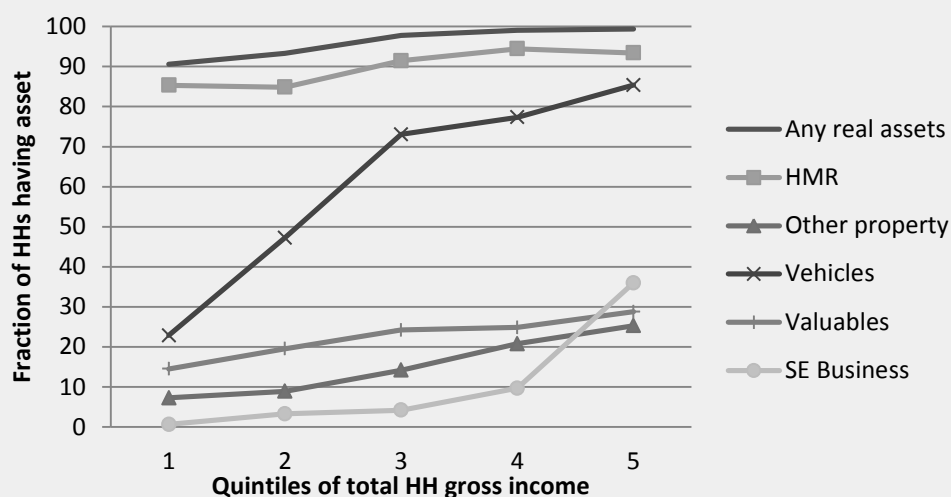
Table 2.2 also reports the average annual growth rate of the residential prices per square metre, which are calculated from the self-reported initial and current prices of all HMRs acquired after 1990. The nationwide average growth rate amounts to 11.6% per annum (p.a.). The residential prices grew the fastest in Košice region (average growth rate of 18.7% p.a.), and the slowest in Banská Bystrica region (6.8% p.a.).

In line with arguments regarding the sources of assets earlier in this chapter, chart 2.1 shows that income plays a minor role in the ownership of the HMR, but has a significant influence on the ownership of vehicles. Valuables, other real estate properties and self-employment businesses are also more likely to be owned by households with higher income. Especially self-employment businesses are much more prevalent among the households in the top income quintile, while there are almost no self-employed households in the lowest income quintile.

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<sup>12</sup> NBS residential prices are based on *offered* prices from newspaper advertisements, which are usually higher than the *realised* transaction prices. The difference between the two prices reflects the market imbalance between demand and supply. Therefore, average NBS residential prices exceed the self-reported HFCS ones in most of the regions. What concerns the residential prices for the whole Slovakia, the comparison with the NBS figure is not straightforward, since this figure is calculated as the weighted average across regions, in which weights are proportional to the number of transactions in each region (with the region of Bratislava having the highest weight of 0.52), while the HFCS figure is calculated as the weighted average across regions with the weights proportional to the number of households living in each region. More information about the NBS methodology on the calculation of average residential prices in Slovakia is available in the following on-line manual: [http://www.nbs.sk/img/Documents/Statistika/VybrMakroUkaz/metodicke\\_otazky\\_ceny\\_nehnutelnosti.pdf](http://www.nbs.sk/img/Documents/Statistika/VybrMakroUkaz/metodicke_otazky_ceny_nehnutelnosti.pdf)

**Chart 2.1 – Share of households (%) owning selected real assets by income**



Source: HFCS Slovakia 2010

Note: This chart plots the fraction of households having various types of real assets (in %) in each quintile of the total household gross income.

## 2.2 FINANCIAL ASSETS

In this section we describe the distribution of holdings of various categories of financial assets, such as deposits in current or saving accounts, financial investment products (mutual funds, shares or bonds), money owed to household, private pensions and life insurances.

Nearly all surveyed households (92%) claimed having some financial assets; the national median value is at EUR 2,500. The most frequent type of financial assets are bank deposits. Shares of households with bank deposits are similar across regions (close to 90%) and copy the total distribution of financial-asset holdings across regions (see Table 2.3).

Although financial investments are generally considered to be an important part of financial assets, we observe only very few households in Slovakia claiming to own investments in mutual funds (2.7%), bonds (1.0%) or shares (0.8%). More frequent financial assets in household balances are private pensions or life insurances, which are owned by 15% of Slovak households.

The last surveyed component of financial assets is defined as money that is owned to household, i.e. for instance loans to friends or relatives, other private loans or deposits on rents. This type of asset is declared by almost 10% of Slovak households and its median value of EUR 1,100 is quite high in relation to total financial assets.



**Table 2.3 – Median values (EUR) of and participations (%) in financial assets by region and type of asset**

Region	TOTAL FINANCIAL ASSETS	Deposits	Private pension / life insurance	Money owed to household
BA	3,000 94.9	2,400 94.5	5,500 17.4	800 11.8
TT	5,400 87.4	4,700 87.0	3,600 11.3	N 4.2
TN	2,000 92.0	1,500 91.7	1,800 21.6	N 8.5
NR	1,300 90.6	1,000 89.5	5,400 12.4	N 8.9
ZA	2,500 94.3	1,500 94.0	3,900 20.0	1,700 14.5
BB	2,000 89.9	1,800 89.2	3,700 11.6	800 14.0
PO	3,400 96.3	2,600 96.2	2,100 20.4	N 6.5
KE	2,600 88.4	1,800 87.6	4,300 13.6	900 8.2
SK	<b>2,500</b> 91.7	<b>2,000</b> 91.2	<b>3,200</b> 15.1	<b>1,100</b> 9.7

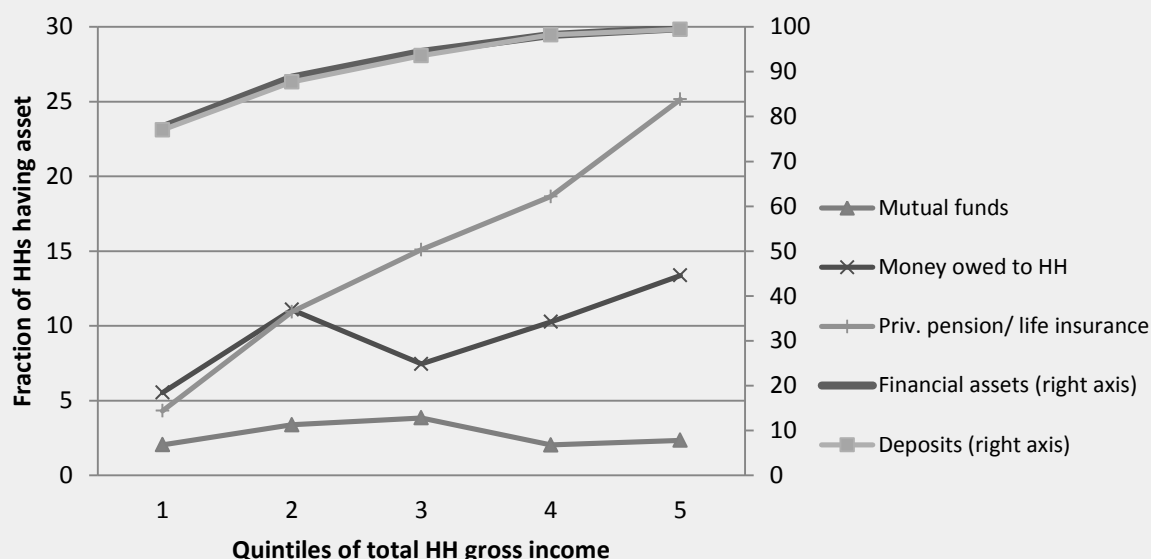
Source: HFCS Slovakia 2010

Note: This table reports the shares of households (in %, grey figures) owning various types of financial assets, and the median values (in EUR) of these assets among households that own them. N stands for "not calculated" because less than 25 observations are available.

In analogy to real assets, chart 2.2 shows how various types of financial assets depend on the total household gross income. Given the high share of deposits on total financial assets and their similar regional pattern outlined above, participation rate in bank deposits basically coincides with the share in total financial assets in a mildly upward sloping trend. Generally, we can observe that the participation in financial assets increases with income. It proves that households with higher income are more likely to generate savings that can be allocated into financial assets.

Additional survey information shown at Table 2.4 sheds more light into conservative nature of Slovak households reflected in low participation in financial investments. According to these responses, self-reported financial risk appetite of Slovak households is very low, i.e. almost 64% of Slovak households are risk-averse and not willing to take any financial risk and only a small number of households (6%) is willing to take substantial or above average risk. Higher risk is accepted mainly in more developed regions, such as Bratislava or Trnava.

**Chart 2.2 – Share of households (%) owning selected financial assets by income**



Source: HFCS Slovakia 2010

Note: This chart plots the fraction of households having various types of financial assets (in %) in each quintile of the total household gross income. Data for deposits and total financial assets are plotted on the right hand axis.

**Table 2.4 – Share of households with various financial risk appetite (%) by region**

Region	Take substantial or above average risk	Take average risk	Not willing to take any financial risk
BA	13.7	36.4	49.9
TT	10.5	23.3	66.2
TN	3.4	25.0	71.7
NR	2.0	18.9	79.1
ZA	7.2	46.8	45.9
BB	2.9	26.8	70.2
PO	2.8	36.0	61.3
KE	5.4	30.6	64.1
SK	5.8	30.5	63.6

Source: HFCS Slovakia 2010

## 2.3 TOTAL ASSETS

Table 2.5 summarises the breakdown of total assets and their respective median values. Although almost all Slovak households declared to own some type of asset, its median value across regions is quite dispersed. The highest median value of total assets (EUR 93,300) is



observed in the region of Bratislava, which is more than twice as much as the lowest median value of total assets in the region of Banská Bystrica (EUR 45,400).

Furthermore we can see that real assets form the most significant part of total assets (around 90%) in all regions. Hence, combined with the result that almost 90% of Slovak households own their HMR, we can conclude that HMR is the most important component of total household assets in Slovakia.

**Table 2.5 – Median values (EUR) and asset shares (%) of total assets by region**

Region	TOTAL ASSETS	Regional share of total assets	Real asset share in total assets	Financial asset share in total assets
BA	93,300 99.9	17.9	94.2	5.8
TT	79,200 99.9	9.9	88.7	11.3
TN	63,200 99.7	10.4	91.9	8.1
NR	51,300 100	10.7	92.7	7.3
ZA	77,500 100	14.9	93.4	6.6
BB	45,400 98.3	9.3	89.3	10.7
PO	60,800 99.5	11.2	87.4	12.6
KE	61,500 99.0	15.6	92.6	7.4
SK	<b>64,400</b> 99.5	<b>100</b>	<b>91.7</b>	<b>8.3</b>

Source: HFCS Slovakia 2010

Note: This table reports shares of households having any type of asset (in %, grey figures) and median values (in EUR) of total assets among households having assets by region.

## 3 DEBT

This chapter deals with the composition of debt among Slovak households. We distinguish mortgage debt that is collateralised by a property from non-mortgage debt, which includes credit lines, bank overdrafts, debt on credit cards and various types of consumer loans. The reference period for the reported household debt is the time of interview (mostly October 2010).

### 3.1 MORTGAGE DEBT

Mortgages are common debt instruments, used by the buyers of a real estate to raise money to do the purchase or to raise funds for any other purpose. The mortgage loan is collateralized by the borrower's property. Despite the high participation in homeownership (see Table 2.1), only 10% of Slovak households have mortgage debt (see Table 3.1).

**Table 3.1 – Median values (EUR) of and participations (%) in debt components by region**

Region	MORTGAGE DEBT	HMR mortgage debt	NON-MORTGAGE DEBT	Credit line / overdraft debt	Credit card debt	Consumer loans
BA	30,000 13.3	30,000 13.3	1,000 24.2	500 11.0	400 7.2	1,500 12.1
TT	N 6.9	N 6.9	N 1.6	N 0.1	N 0.0	N 1.6
TN	N 8.6	N 8.6	1,000 17.5	400 9.7	500 4.1	1,700 11.4
NR	25,900 11.5	25,900 10.9	1,200 29.0	500 14.1	1,500 11.1	2,000 15.3
ZA	26,200 12.5	26,100 11.9	1,900 32.7	300 11.1	500 7.7	2,500 25.4
BB	N 9.6	N 8.5	600 24.5	300 11.9	300 5.3	2,000 15.2
PO	7,500 6.9	7,500 6.1	900 16.1	100 2.6	400 4.8	2,400 9.5
KE	15,600 7.5	14,600 6.9	700 11.4	300 2.6	N 0.0	800 9.3
SK	25,000 9.6	25,000 9.3	1,000 20.0	400 8.0	500 5.1	2,000 12.6

Source: HFCS Slovakia 2010

Note: This table reports shares of indebted households (in %, grey figures) and median values of various types of debt among those households being indebted by region. N stands for "not calculated" because less than 25 observations are available.



Such a low number of indebted households does not allow us to make a proper regional breakdown due to insufficient number of observations, mainly in smaller and less developed regions. As expected, the highest share of households with mortgage debt (13.3%), as well as the highest median value of mortgage debt (EUR 30,000), is observed in Bratislava region, where the real estate market is the most liquid in the country. Around three out of four households with mortgage debt used this debt instrument to purchase their main residence.

### 3.2 NON-MORTGAGE DEBT

Non-mortgage debt is uncollateralised and usually involves much lower principals than mortgage debt. We distinguish credit line / overdraft debt, credit card debt and consumer loans that may be further broken down to: car loans, instalment loans, private loans (from relatives, friends, employers etc.) and other loans. Credit card debt relates to an outstanding balance, for which the cardholder is charged interest. Regular credit card transactions that are periodically paid back after each settling period (usually once per month) are not considered as credit card debt.

Some form of non-mortgage debt has been found among 20% of surveyed households, the median value of which is EUR 1,000 (see Table 3.1, column 4). The highest penetration of non-mortgage debt is observed among households in Žilina region (33%), where the median value of debt is also the highest (EUR 1,900).

Our data reveal that the occurrence of non-mortgage debt is also influenced by household size. While the share of households with non-mortgage debt is only 7.9% among single households and 13.8% among households with 2 members, it increases to 27.7% among households with 3 members, 29.3% among households with 4 members and 35.7% among households with 5 members. A similar pattern is also observed in the whole euro area; see Table 3.1 in HFCN (2013b).

Looking into the different types of non-mortgage debt, approximately one third of Slovak households have opened a credit line or an account with an overdraft facility with a financial institution, but only one quarter of these (8% of the total population – see the fifth column in Table 3.1) have a negative balance on their bank account. The highest share (14%) is observed in Nitra region, where the median value of negative balance is the highest (EUR 500). The same median value is observed also in Bratislava region; however, it is not much bigger than the national median value (EUR 400).

Penetration of credit cards among Slovak households is 28%, but only 18% of these (circa 5% of the total population – see the sixth column in Table 3.1) have an outstanding balance, for which they are charged interest. The highest share of households with credit card debt is observed in Nitra region (11%), where the median value of outstanding amount (EUR 1,500) is three times the national median value (EUR 500).



Finally, nearly 13% of Slovak households stated having some kind of consumer loan, with the median value of EUR 2,000 (Table 3.1, last column). The highest share of consumer loans (25%) as well as the highest median value of outstanding balance (EUR 2,500) is observed in Žilina region.

### 3.3 TOTAL DEBT

Overall, just one quarter of Slovak households claim to be indebted (see Table 3.2). The highest share of indebted households is observed in Žilina region (39.2%) and the lowest in in Trnava region (8.5%). In line with expectations, the highest median value of debt (EUR 4,100) is observed in the most developed region of Bratislava. Confronting this finding with those of Table 2.5 we can conclude that although households in Bratislava region own the largest share of assets in Slovakia, these assets are often financed by debt. On the other hand, households in less developed regions have lower median values of total debt and also claim less assets owned (see Tables 2.5 and 3.2). Among these, Prešov region has the lowest median value of total debt (EUR 2,000) and also takes the lowest regional share (6.8%).

**Table 3.2 – Median values (EUR) and debt shares (%) of total debt by region**

Region	TOTAL DEBT	Regional share of total debt	Mortgage share of total debt	Non-mortgage share of total debt
BA	4,100 32.6	21.4	90.4	9.6
TT	N 8.5	9.8	N	N
TN	3,100 24.3	8.3	79.1	20.9
NR	2,600 36.4	15.6	82.1	17.9
ZA	4,000 39.2	19.2	70.1	29.9
BB	2,100 31.8	10.5	71.8	28.2
PO	2,000 22.2	6.8	61.6	38.4
KE	2,500 16.7	8.3	93.1	6.9
SK	3,200 26.8	100	81.2	18.8

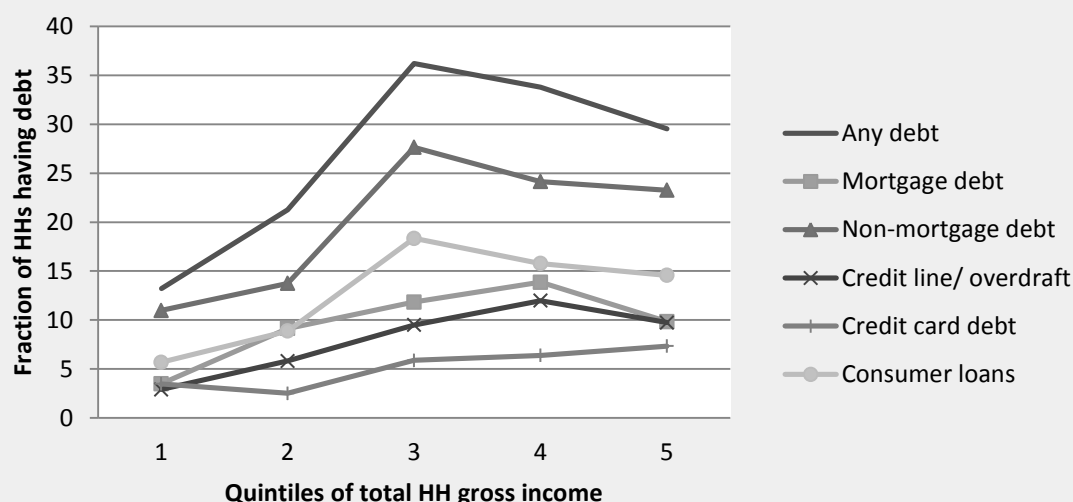
Source: HFCS Slovakia 2010

Note: This table reports shares of indebted households (in %, grey figures) and median values of total debt among indebted households in each region, together with regional and (non-) mortgage shares of total debt. N stands for "not calculated" because less than 25 observations are available.

Mortgage debt is the prevailing component of total debt mostly due to large volumes it encounters (see the fourth column in Table 3.2). The nationwide median share of mortgage debt in total household debt is 81%; ranging from 62% in Prešov region to 93% in Košice region.

Similarly as for assets, distribution of debt is in general higher with rising income. Chart 3.1, however, shows slightly different, hump-shaped pattern in relation to income over all types of debt (except for credit card debt). This quite unusual pattern is contradicting the evidence from other euro-area countries, where household participation in debt (especially in mortgage debt) increases with income (see e.g. Chart 3.1 in HFCN (2013b)). One explanation could be the convergence of the debt market in Slovakia to other euro-area countries. Middle income groups in Slovakia do not actually have enough resources to finance their housing. In the past decade they used to have a bright outlook due to dynamically growing economy and easily repayable loans. This has, however, changed since the beginning of the Great Recession in 2008. While at this moment our convergence hypothesis cannot be proved by using only the data from the first HFCS wave, we may get a clearer picture once the new data from the second HFCS wave will become available.<sup>13</sup>

**Chart 3.1 – Share of indebted households (%) with various forms of debt by income**



Source: HFCS Slovakia 2010

Note: This chart plots the fraction of households (in %) having various forms of debt in each quintile of the total household gross income.

<sup>13</sup> More information about the second wave of the HFCS in Slovakia can be found in Zavadil (2014). First results from this wave are anticipated at the beginning of 2015.

### 3.4 DEBT INDICATORS

In this section, we construct several widely used debt indicators that show the degree of financial pressure faced by indebted households. Table 3.3 shows the median values of various debt indicators for each Slovak region.

**Table 3.3 – Median values of various debt ratios (%) by region**

Region	Debt-to-asset ratio	Debt-to-income ratio	Debt-service-to-income ratio	Mortgage-debt-service-to-income ratio	Loan-to-value ratio of HMR	Net-liquid-assets-to-income ratio
BA	7.1	32.3	18.3	28.8	32.8	15.8
TT	N	N	N	N	N	35.6
TN	7.3	18.7	9.4	N	N	13.2
NR	6.5	19.9	12.0	17.6	50.7	5.8
ZA	5.8	29.7	12.0	22.7	39.4	10.2
BB	5.6	17.3	13.6	N	N	8.6
PO	4.0	20.0	10.5	10.9	14.6	19.5
KE	6.6	18.9	10.2	23.9	34.5	10.9
SK	6.6	22.7	12.5	20.4	37.3	12.1

Source: HFCS Slovakia 2010

Note: This table reports different measures of financial burden that the indebted households are facing. **Debt-to-asset ratio** is calculated as the ratio between total liabilities and total gross assets for indebted households. **Debt-to-income ratio** is the ratio of total debt to the household gross annual income, calculated only for indebted households. **Debt-service-to-income ratio** is defined as total monthly debt payments over household gross monthly income for indebted households, excluding credit card debt and overdraft debt, for which monthly debt payments are not observed. **Mortgage-debt-service-to-income ratio** is calculated only for households holding mortgage debt. **Loan-to-value ratio** features the outstanding amount of the HMR mortgage to the current value of the HMR for households that have mortgage debt on their HMR. The **net-liquid-assets-to-income ratio** is calculated for all households. Net liquid assets are defined as the sum of the values of all deposits, mutual funds, bonds, publicly traded shares, managed accounts and non-self-employment business wealth, net of non-mortgage debt (i.e. credit line / overdraft debt, credit card debt and other consumer loans).

N stands for "not calculated" in cases when less than 25 observations are available.

Debt-to-asset ratio (Table 3.3, column 2) informs about overall coverage of total debt by total assets and therefore serves to display the debt management given asset holding. The median value of debt-to-asset ratio is found to be quite low in Slovakia (6.6%), ranging from 4% in Prešov region to 7.3% in Trenčín region.

Debt-to-income ratio (Table 3.3, column 3) describes how easily the total debt can be paid back by annual income. A lower debt-to-income ratio implies that there is relatively sufficient income to pay back the debt. On the national level this ratio amounts to 23% and ranges from approximately 17% in Banská Bystrica region to 32% in Bratislava region. Less developed regions generally feature lower debt-to-income ratio in Slovakia mainly due to lower volumes of debt rather than higher income (see also Table 3.1). Households around the capital city of Bratislava hence have both the highest levels of debt in absolute terms (see Table 3.2 on the distribution of total debt), and also in relative terms with regard to their income.





Debt-service-to-income ratio (Table 3.3, column 4), defined as the ratio between monthly debt payments and monthly gross household income reflects the financial burden households are exposed to by the loan given their current income. In Slovakia the median value of this ratio amounts to 12.5%, with the highest value observed again in Bratislava region (18.3%) and the lowest in Trenčín region (9.4%).

Mortgage-debt-service-to-income ratio (Table 3.3, column 5) is a similar measure of financial burden putting into comparison the ratio of monthly mortgage debt instalments and monthly income for households having a mortgage. The nationwide median value is 20%; the lowest ratio is observed in Prešov region (11%) and the highest in Bratislava region (29%). Similarly to the previous ratio, such a high regional dispersion is due to significantly lower property prices in Prešov region (see Table 2.1), while the total gross household income is relatively high given larger size of households (see Table 5.1). On the other hand, the situation in Bratislava region is reversed: property prices are much higher and household income is relatively low due to smaller size of households.

The calculation of HMR loan-to-value (LTV) ratio is limited to the households having HMR mortgage and is calculated as an *outstanding amount* on the HMR mortgage over current value of the HMR (see Table 3.3, column 6). LTV ratio is a central indicator for creditors to assess the quality of collateral. A higher LTV ratio involves more risks for the creditor, as it aligns with a decrease in the amount of equity. The nationwide median value of LTV ratio for the HMR mortgage is 37% and ranges from 15% in Prešov region to 51% in Nitra region. These values are well below the regulatory limit on the *initial amount* of the LTV ratio for mortgages covered by bonds that is currently set at 70% in Slovakia.

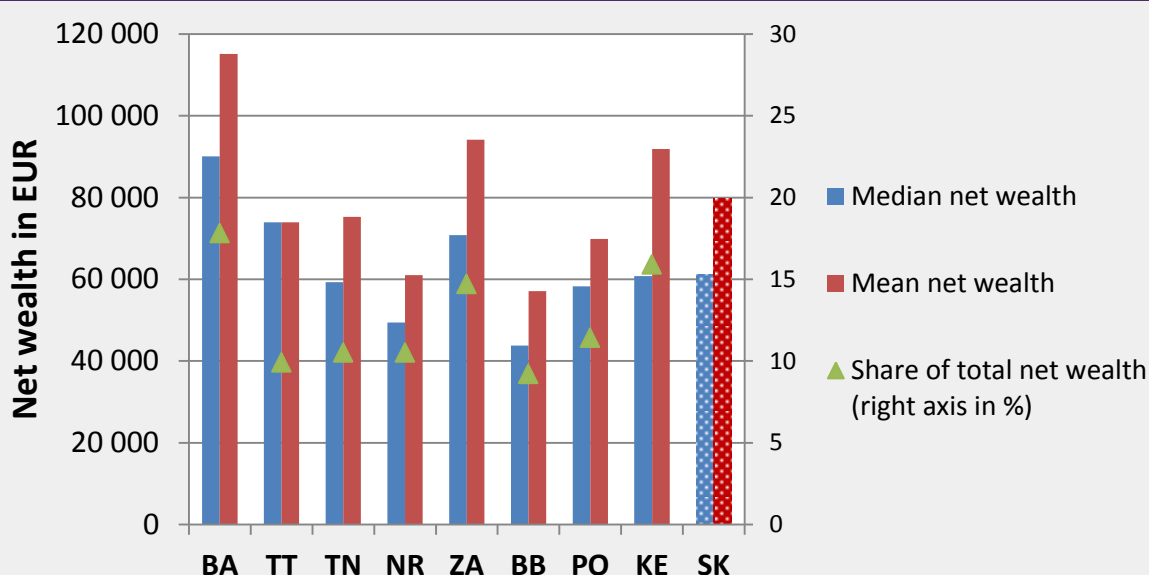
The last indicator we use to describe the financial soundness of Slovak households is net-liquid-assets-to-income ratio. This indicator shows what portion of the annual gross household income is available as liquid assets, reflecting the ability of a household to face adverse financial shocks with respect to available liquid resources. Net liquid assets are calculated as the sum of the values of all deposits, mutual funds, bonds, publicly traded shares, managed accounts and non-self-employment business wealth, net of the value of non-mortgage debt. The median value of this ratio is 12% in Slovakia and ranges from 6% in Nitra region to 36% in Trnava region. High ratios of liquid assets in Trnava region could be influenced by a high occurrence of small and young households from this region in our sample (see Table 1.3) that have a high level of savings (see Table 2.3) and a low incidence of debt (see Table 3.1).

Compared to other euro area countries (see Tables 3.1, 3.2 and 3.4 in HFCN, 2013b), we can conclude that Slovak households are in general less indebted and more financially stable in all regions of Slovakia.

## 4 NET WEALTH

Net wealth is defined as the difference between total assets and total liabilities. Its median and mean values for all Slovak regions are plotted in Chart 4.1.

**Chart 4.1 – Median and mean net wealth (EUR) and regional shares (%) of total net wealth by region**



Source: HFCS Slovakia 2010

Note: This chart reports median and mean net wealth (in EUR) of households in each region and the regional shares of total net wealth (in % on the right axis). Net wealth of a household is defined as the difference between its total (gross) assets and total liabilities.

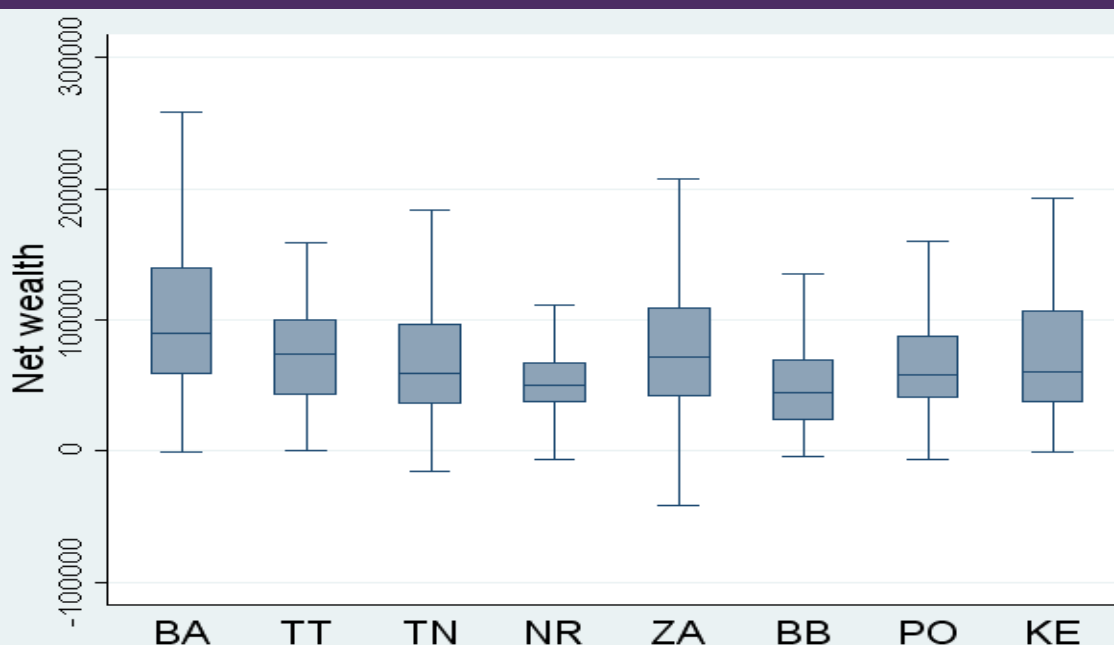
The median value of net wealth (blue bars) of Slovak households is EUR 61,200, whereas the mean value (red bars) is around 30% higher (EUR 79,700). In general, the larger the difference between median and mean value, the more unequally is wealth distributed. In international terms, net wealth in Slovakia is the most equally distributed among all euro-area countries (see Zavadil, 2013b).

The highest median and mean net wealth has been found in Bratislava region (EUR 90,100 and EUR 115,100, respectively), which also has the highest share (green triangles) of total household net wealth in Slovakia (18%). On the other hand, the lowest values of median and mean net wealth are observed in Banská Bystrica region (EUR 43,800 and EUR 57,100, respectively), which has the lowest share of total household net wealth in Slovakia (9%).

Regional view of net wealth dispersion suggests that household net wealth is the most dispersed, and thus the most unequally distributed, in Bratislava region. On the other hand, Nitra region shows the lowest net wealth dispersion. While in Bratislava region more than a

half of households live with the net wealth of above EUR 90,000, more than three out of four households in Nitra, Banská Bystrica and Prešov regions have net wealth below this level. Moreover, we observe some households with negative net wealth (altogether 1.2%; the largest share of such households (2.5%) can be found in Žilina region), which is however relatively small (median value at EUR -1,000 and the average at EUR -3,500).

**Chart 4.2 – Box plot of household net wealth by regions**



Source: HFCS Slovakia 2010

Note: This graph depicts box plot of household net wealth across Slovak regions. Net wealth is defined as the difference between household total (gross) assets and total liabilities. This chart was constructed using only one impute of imputed values; outliers are not displayed.

We also look at the regional disproportion of households in different net wealth quintiles that are calculated at the country level (see Chart 4.3). The dotted black line refers to the national quintiles, each of which has a share of 20% of Slovak households. From the first sight we can see that household net wealth is more unequally distributed in Western Slovakia than in the rest of the country, with Bratislava and Nitra regions lying in opposite positions. The chart conveys that the wealthiest households (in the top net wealth quintile) are mostly (resp. least) concentrated in Bratislava (resp. Nitra) region, while the poorest households (in the bottom net wealth quintile) are mainly situated in Banská Bystrica region. All the other regions do not deviate much from the nationwide proportions.

**Chart 4.3 – Distribution of net wealth (%) across Slovak regions**



Source: HFCS Slovakia 2010

Note: The displayed lines show, for each region, the fraction of households (in %) that appear in each quintile of net wealth that was calculated using the full sample of Slovak households. Net wealth is defined as the difference between household total (gross) assets and total liabilities.

## 5 INCOME

Household income is a crucial factor for the financial well-being of all household members and strongly influences their investment decisions. This chapter describes various sources of household income and its distribution across Slovak regions. The data report the *total household gross income* received within 12 months prior to the time of interview. In the most of the cases, this applies for a period between November 2009 and October 2010.

**Table 5.1 – Median and mean household total annual gross income and equivalised household income (EUR) by region**

Region	Median annual household income	Mean annual household income	Median annual equivalised household income	Mean annual equivalised household income	Mean disposable equivalised household income*
BA	10,800	13,500	6,600	8,000	8,760
TT	10,000	10,700	6,800	7,300	6,960
TN	11,300	13,200	6,200	7,200	6,840
NR	11,500	13,200	6,500	7,400	6,600
ZA	11,800	13,900	6,200	7,500	6,840
BB	10,400	13,700	6,200	7,700	6,360
PO	13,300	14,800	5,600	6,000	5,880
KE	11,900	14,200	6,400	7,500	6,360
SK	<b>11,200</b>	<b>13,500</b>	<b>6,400</b>	<b>7,300</b>	<b>6,840</b>

Source: HFCS Slovakia 2010; \*Source: Statistical Office of the Slovak Republic

Note: **Equivalised household income** equals the total gross household income divided by the equivalised number of household members, which is calculated in the following way: the reference person of the household is weighted with 1, every additional adult member with 0.5 and each child under the age of 16 with 0.3. The last column reports the mean disposable equivalised household income provided by the Statistical Office of the Slovak Republic.

As remarked earlier, household income across Slovak regions is relatively equally distributed (Table 5.1). Results convey partly surprising message that Prešov region has the highest median and mean household income, while Trnava has the smallest. This is again caused mainly by the overrepresentation of small households in Trnava region and large households in Prešov region (see Table 1.3) since the total household income usually increases with household size, as it can be seen from Table 5.2.<sup>14</sup>

<sup>14</sup> A similar pattern is also observed in the HFCS data for the whole euro area; see Table 5.1 in HFCN (2013b).

**Table 5.2 – Median and mean household total income (EUR) by household size**

Household size	Median annual household income	Mean annual household income
1	5,800	6,900
2	10,500	11,900
3	13,700	16,000
4	14,500	16,400
5+	16,200	18,000

Source: HFCS Slovakia 2010

To adjust for the household size, we calculated *equivalised household income*, which is the total household income divided by equivalised number of household members that is calculated by weighting the household reference person with 1, every additional adult member with 0.5 and each child under the age of 16 with 0.3. By doing so, we observe a clearer picture. The median and mean values of the equivalised household income in Prešov region are now the lowest (EUR 5,600 and EUR 6,000, respectively), which seems to fit better with the indicators mentioned earlier in this report. On the other hand, the highest median value of the equivalised household income is observed in Trnava region (EUR 6,800) and the highest mean value in Bratislava region (EUR 8,000), which are economically the most developed regions in Slovakia (in terms of GDP per capita – see Table 1.1).

We compare these results with the regional data on the mean disposable equivalised household income available from the Statistical Office (see the last column of Table 5.1). Comparing the two, it may be seen that the mean values of the household disposable income (given in the last column) are smaller than the mean values of the household gross income (given in the last but one column) in all regions, except for Bratislava. The difference may be attributed to netting for taxes. This suggests that our results are broadly consistent with the regional data from the Statistical Office.<sup>15</sup>

<sup>15</sup> The equivalised number of household members in the regional data of the Statistical Office is calculated using a modified OECD scale, which is slightly different from the scale that we apply here to the HFCS data (according to the ECB guidelines). While we attribute the weight of 0.3 to each child below the age of 16, the OECD scale attributes this weight only to children below the age of 14 (children 14+ years old get the same weight as adults, i.e. 0.5). For robustness check, we also calculated the equivalised household income using this modified OECD scale, but the differences in the median and mean equivalised household income were negligible. Therefore we decided to keep the ECB scale.

**Table 5.3 – Median values (EUR) of and participation shares (%) in various income sources by region**

Region	Household income from employment	Household income from self-employment	Regular social transfers (excl. pensions)	Regular private transfers	Pension income
BA	10,800	12,000	1,400	N	5,000
	77.5	10.9	17.2	6.8	34.7
TT	10,300	N	N	N	4,900
	69.3	3.4	5.2	0.3	33.6
TN	10,900	N	N	N	4,100
	75.9	10.6	10.1	9.2	42.9
NR	10,600	12,300	1,800	N	5,000
	73.4	14.2	15.7	2.2	43.1
ZA	9,600	10,600	800	N	5,700
	73.8	16.9	21.6	6.0	51.5
BB	8,800	10,300	1,600	N	4,600
	75.5	20.6	11.9	4.4	38.5
PO	11,200	13,400	2,300	N	6,300
	77.1	9.7	30.5	2.6	46.9
KE	10,800	13,000	1,600	N	5,200
	69.5	13.4	9.4	3.9	50.1
SK	10,400	12,000	1,500	700	5,000
	74.0	12.7	15.4	4.4	42.9

Source: HFCS Slovakia 2010

Note: This table reports the median values (in EUR) of and the participation rates (in %, grey figures) in various income sources of Slovak households across regions. **Employment income** is the sum of gross employee incomes of all employed household members. It is defined as the monetary component of the compensation of employees in cash including any social contributions and income taxes. **Self-employment income** is the sum of gross self-employment incomes of all self-employed household members. Self-employment income is defined as income received by individuals, for themselves or in respect of their family members, as a result of their current or former involvement in self-employment jobs. **Regular social transfers** include any regular transfers to individuals, families or households from social security, such as illness subsidies, maternity leave, child benefits etc. It also includes unemployment benefits, but excludes income from public pension schemes. **Regular private transfers** cover among others compulsory or voluntary alimony and child support, any support from charities, scholarships and regular payments from households in other countries. The last column gives the median values of **pension income** that includes old-age, partial-retirement, survivor's and disability pensions, including private pensions. N stands for "not calculated" because less than 25 observations are available.

Table 5.3 shows median values of and participation shares in various income sources. The second column gives figures for household employment income, which is received by most households in Slovakia (74%). The median value of the total annual household gross employment income amounts to EUR 10,400 for the whole Slovakia, and ranges from EUR 8,800 in Banská Bystrica region to EUR 11,200 in Prešov region.



The third column of Table 5.3 reports figures for household self-employment income, which is received by 12.7% of Slovak households, with the highest share observed in Banská Bystrica region (20.6%) and the lowest share in Trnava region (3.4%). The regional differences in the median values of the total annual household gross self-employment income are not considerably high, taking values between EUR 10,300 in Banská Bystrica region and EUR 13,400 in Prešov region.

Besides the personal income from (self-) employment, some households also receive public support in the form of regular social transfers, such as family-related or unemployment benefits (see the detailed description of social transfers in the notes of Table 5.3). The proportion of households receiving regular social transfers is 15.4% in the whole sample, and ranges from 5.2% in Trnava region to 30.5% in Prešov region.<sup>16</sup> The median value of these transfers is EUR 1,500 per year in the whole country, with the highest value observed in Prešov region (EUR 2,300) and the lowest value in Žilina region (EUR 800).

Only 4.4% of Slovak households received regular income from private sources in the last 12 months. This income featured compulsory or voluntary alimony, child or charity support, scholarships or regular payments from other households living abroad. The share is the highest in Trenčín region (9.2%) and negligible in Trnava region (0.3%). The median income received from this source is lower than that from public sources, and amounts to EUR 700 in the whole Slovakia. Comparison between regions is, however, not possible due to a low number of households that received this kind of income.

The last source of income discussed in this report is pension, which includes old-age, partial-retirement, survivor's and disability pensions, including private pensions. Such income was received by almost 43% of Slovak households; this share ranges between 33.6% in Trnava region and 51.5% in Žilina region. The median value of the annual household pension income is EUR 5,000 for the whole country, with the highest value observed in Prešov region (EUR 6,300) and the lowest value in Trenčín region (EUR 4,100).

The HFCS also investigates how households perceive their current income situation by asking, whether their income within the last 12 months has been normal, higher or lower compared to what is expected in a "normal" year. More than a half of households considered their income to be normal, 41% to be lower than in a usual period and the remaining 6% stated having higher than usual income (see Table 5.4). The share of households considering their income to be higher than normal is the highest in Bratislava and Trenčín region (both 9%), and the lowest in Prešov region (2%), where (and also in Košice region) almost a half of households considered their income to be lower than in a "normal" year.

<sup>16</sup> The big difference in the proportion of households receiving regular social transfers in Trnava and Prešov region is probably caused by the overrepresentation of small households in Trnava region and large households in Prešov region (see Table 1.3). Taking these two regions away, the proportion of households receiving regular social transfers varies between 9.4% in Košice region and 21.6% in Žilina region, which is much narrower range than before.



**Table 5.4 – Shares of households (%) with different opinions and expectations on their current and future income by region**

Region	Compared to a “normal” year, household income in the reference period was			Expected income over the next year will rise		
	higher	normal	lower	more than prices	less than prices	about the same as prices
BA	9.2	53.7	37.0	12.1	27.8	60.1
TT	8.4	57.4	34.2	5.9	59.9	34.2
TN	9.0	56.4	34.6	7.2	37.0	55.8
NR	3.5	56.4	40.1	5.2	55.7	39.1
ZA	4.7	59.1	36.2	14.7	48.4	36.9
BB	5.4	49.9	44.7	22.5	41.3	36.2
PO	2.1	50.1	47.9	3.1	44.1	52.9
KE	5.2	46.9	47.9	6.7	59.8	33.6
SK	<b>5.8</b>	<b>53.6</b>	<b>40.7</b>	<b>9.7</b>	<b>46.9</b>	<b>43.4</b>

Source: HFCS Slovakia 2010

Note: This table reports the shares of households (in %) with self-reported opinions and expectations regarding their current and future income for each region.

Furthermore, the survey asked households about their future income expectations, i.e. whether the household income will rise more than prices, less than prices or about the same as prices (see the right-hand side of Table 5.4). Almost a half of the surveyed households expect their income to rise less than prices. This view is especially popular in Trnava and Košice regions, where the share of such households reaches 60%. On the other hand, only around 10% of households think that their income will increase more than prices. The highest share of such households has been found in Banská Bystrica region (23%) and the lowest in Prešov region (3%). Bratislava region has the lowest share of households expecting their income to increase less than prices (28%) and the highest share of households expecting an equal increase of prices and income (60%).

The share of households expecting their income to increase less than prices tends to fall with household size. While there is no particular relationship between the housing status and the future income expectations, we observe that households with higher income are more optimistic about their future income development.

## 6 CONSUMPTION

Consumption completes the picture of the financial situation of households and helps to comprehend the decisions made by households. The HFCS provides information on the household consumption of food at home and outside home.

A standard Slovak household spends EUR 300 (median) per month on food at home and outside, e.g. in cafes or restaurants. The difference between the median value (EUR 3,600) and the mean value (EUR 3,800) of the annual expenses on food is quite low, suggesting that the consumption of food is even more equally distributed across households than wealth or income (see e.g. the Lorenz curve of household net wealth, income and consumption in Chart 6.1 of HFCN (2013b) for the whole euro area).

The highest food consumption is observed in Prešov region, where a median (resp. average) household spends around EUR 4,200 (resp. EUR 4,600) per year on food. The lowest median and mean amount spend on food is observed in Trnava region (EUR 2,100 and EUR 2,500). Again, this is the effect of small households in Trnava region and large households in Prešov region (see Table 1.3). Applying the same procedure as in the previous chapter (see Table 5.1), we calculate the equivalised household food consumption and arrive to dramatically decreased regional dispersion reported in the fourth column of Table 6.1.

**Table 6.1 – Annual expenses (EUR) on food by region**

Region	Annual expenses on food at home and outside			
	Median	Mean	Equivalised food expenses	Share of income (%)
BA	3,100	3,600	1,900	26.2
TT	2,100	2,500	1,600	22.2
TN	3,600	3,900	2,000	32.1
NR	3,600	3,800	2,000	31.6
ZA	3,900	4,300	2,000	33.3
BB	3,400	3,500	1,800	32.5
PO	4,200	4,600	1,900	27.7
KE	3,700	4,200	2,000	31.4
SK	<b>3,600</b>	<b>3,800</b>	<b>1,900</b>	<b>29.4</b>

Source: HFCS Slovakia 2010

Note: The table shows median values of the **equivalised food expenses** that are calculated as the total household expenses on food over the equivalised number of household members in the following way: the household reference person is weighted with 1, every additional adult member with 0.5 and each child under the age of 16 with 0.3. The last column reports the median share of income that is spent on food in each region.

The last column of Table 6.1 reports the median share of income that is spent on food in each region. This share is the lowest in Trnava region (22%) and the highest in Žilina region (33%). In total, Slovak households spend nearly 30% of their income on food, which is a relatively high share of income compared to other euro area countries.<sup>17</sup>

The HFCS also informs on how consumption develops in time and in relation to income (see Table 6.2). Regarding the question, whether expenses on consumption in the last 12 months were higher, equal or lower than the average expenses in a “normal” year, more than a half of households answered that their expenses were about as high as usual, 31% stated that their expenses were lower than normally, and only 13% claimed that their expenses were higher than on average. Here we observe some diversity across regions. While in Trenčín region, 23% of the surveyed households stated that their expenses were higher than on average, this share is only 5.5% in Nitra. In Trnava region, almost a half of households claimed that their expenses were lower than usually, while this share was found to be only 18% in Žilina region.

**Table 6.2 – Shares of household opinions (%) on their expenses and ability to get financial assistance by region**

Region	Are expenses higher / lower than on average?			Did expenses exceed income?			Ability to get financial assistance from relatives and friends
	Higher than on average	Lower than on average	Just about average	Expenses exceeded income	Expenses about the same as income	Expenses less than income	
BA	11.7	34.8	53.5	2.4	65.4	32.2	54.0
TT	6.1	48.9	45.0	0.5	49.1	50.4	34.7
TN	23.0	25.6	51.5	4.8	59.1	36.1	31.2
NR	5.5	31.8	62.6	1.6	67.2	31.2	29.4
ZA	16.5	18.0	65.6	7.3	45.5	47.2	61.2
BB	13.5	23.7	62.9	8.3	52.3	39.4	36.4
PO	14.0	31.7	54.3	6.1	54.5	39.4	22.7
KE	16.3	35.5	48.2	7.0	61.6	31.4	61.2
SK	<b>13.3</b>	<b>31.0</b>	<b>55.7</b>	<b>4.8</b>	<b>57.1</b>	<b>38.1</b>	<b>39.2</b>

Source: HFCS Slovakia 2010

Note: This table reports the shares of households (in %) with various opinions on their current expenses compared to a “normal” year and relative to the household total income, and the shares of households (in %) being able to get financial assistance of EUR 5,000 from relatives and friends.

The follow-up question, related to household’s propensity to save, asked whether expenses over the past 12 months exceeded income. Approximately 5% of Slovak households claimed that their expenses exceeded income, which means that these households were in need to

<sup>17</sup> The median share of income spent on food in the whole euro area is 18.4% and ranges between 12.6% in the Netherlands and 29.8% in Portugal; see Table 6.1 in HFCN (2013b).



borrow or dissave. On the other hand, 38% of households said that their expenses were lower than their income, which allowed them to save. The remaining 57% of households stated that their expenses were approximately equal to their income. The highest share of households, whose expenses exceeded income, were observed in Banská Bystrica region (8.3%), and the lowest in Trnava region (0.5%), where over a half of households were saving. This may be related to the low share of indebted households in this region (see Table 3.1).

Finally, the HFCS asked households whether they would be able to get financial assistance of EUR 5,000 from relatives and friends. Over 39% of households answered positively; especially so in Žilina and Košice regions, where this share exceeded 60%. In contrast, only 23% of households in Prešov region would have such an opportunity.



## 7 CONCLUSION

This report summarised regional differences in household wealth across Slovakia, using the Slovak data from the first wave of the Household Finance and Consumption Survey (HFCS) that were collected between September and December 2010. Although the sample was designed to make the data representative mainly at the national level, the stratification of population, determination of quotas and calibration of weights were performed at regional level, which should also enhance the regional representativeness of the data.

The obtained results helped us explaining socio-economic differences among Slovak regions. The comparison of our findings with external sources confirmed good representativeness of the Slovak HFCS data in all regions. Even for Trnava and Prešov regions, where the household size structure differs from the census data, the results are consistent with the external sources, when adjusted for household size (see Chapters 5 and 6).

We found that the vast majority of Slovak households (around 90% in all regions) own their main residence that constitutes the most significant part of household wealth (see Chapter 2). Despite that, only a small share of Slovak households (around 10% in all regions) has mortgage debt (see Chapter 3). The most valuable assets are held by households from Bratislava region, although these assets are often financed by debt. The least indebted households are observed in Banská Bystrica and Prešov regions, which also have the lowest level of accumulated assets. Compared to other euro-area countries, Slovak households in all regions are less indebted (see Section 3.4). Concerning net wealth (i.e. the difference between the household total assets and total liabilities; see Chapter 4), households are the richest in Bratislava region, where we also find the highest wealth inequality. On the other hand, households are the least wealthy in Nitra and Banská Bystrica regions, where the wealth inequality is the lowest. Mean household income (adjusted for household size) is the highest in Bratislava region and the lowest in Prešov region (see Chapter 5). Finally, we find that a standard household in Slovakia spends around EUR 300 each month on food, which constitutes around 30% of its total income; this share does not vary much across regions (see Chapter 6).



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