Household Finances in V4 Countries – Convergence or Divergence?

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Abstract: Financial behavior of households attires attention of policymakers because of their impact on financial stability in economy. Factors that determine financial behavior of households are multiple. Economic integration can represent one determinant stimulating the convergence of the financial assets and liabilities of households in the member countries. Our paper examines the degree of convergence in household finance in the V4 countries. We use annual data from national accounting system - financial accounts of households - in order to identify their common and distinct features. Convergence in the behavior of households in V4 countries can, among other things, indicates the extent of impact of economic factors (post-transformation processes, economic integration, monetary integration, etc.) in comparison to impact of non-economic factors (culture) on the financial behavior of households.

Keywords: households, household finance, convergence, financial assets, financial liabilities, V4 countries

JEL Classification codes: D140, F36

1 INTRODUCTION

Financial behavior of households attires the attention of policymakers for multiple reasons. Firstly, this behavior has an impact on financial stability of the economy. The crisis which started in 2008 showed that the problems of a limited group of households can be amplified to the level of serious macroeconomic problems. Afterwards, the analysing of the development of financial wealth of household is an important part of understanding monetary transmission mechanism and designing the monetary policy, because of its eventual distributional consequences. Moreover, the challenges of future demographic situation motivate the governments to encourage households to be more in charge of their own financial situation, especially after retirement. Thus, the analysis of different processes of financial behavior like financial planning, risk taking or savings behavior are of growing interest of economic research (see for example Brounen, Koedjik and Pownall, 2016). In this context, the situation in V4 countries, sharing the same heritage of households attitudes coming from specific socio-economic background related to communism, is particularly interesting. In this line, the identification of the impact of economic factors (post-transformation processes, economic integration, monetary integration, etc.) in comparison to the impact of non-economic factors

(culture) on the financial behavior of households is important. There is an additional motivation for studying financial behavior of households in V4 region. The countries, who joined the EU in 2004, have a commitment to adopt euro. However, only Slovakia has joined it until today in the V4 region. Thus, the identification of an eventual impact of monetary integration on financial behavior of households can be interesting, too.

2 LITERATURE REVIEW

Empirical cross-country evidence on financial behavior of households and their determinants in V4 countries is missing. To our knowledge, some findings could be presented at the level of Central and Eastern European Countries (CEECs.) Bethlendi (2011) found that during booming years, national policymakers were strongly constrained to decrease or effectively manage the risks of unhedged foreign currency lending to households due to the economic characteristics of CEEC countries, including the V4 countries. Comparing different CEECs, the author founds out that euro membership could not automatically eliminates negative effects of foreign currency lending. Beckmann, Fidrmuc and Stix (2012) use survey data from nine CEECs to analyse an impact of foreign currency loans on financial vulnerability. They conclude that high rates of arrears among households in CEECs are caused to a significant extent by adverse income shocks and that these shocks exert a more important impact than installment shocks. Fidrmuc, Hake and Stix (2013) study the determinants of foreign currency loans of households, using data on the behavior of households in nine CEECs. Their results reveal that foreign currency loans are driven by households' lack of trust in the stability of the local currency and in domestic financial institutions. Moreover, special factors including remittances and expectations of euro adoption play an important role in selected CEECs regions. Bohle (2014) describes how institutional framework shaped the housing finance markets and to what extent they were able to mitigate the associated risks for citizens in Eastern Europe. The author uses the example of Estonia and Hungary to underline the fact that transnationalisation and EU convergence have provided common background for CEECs households' decision-making in the early 200s. However, the national policies started sharply to diverge in the wake of the global financial crisis.

Beckmann, Hake and Urvova (2013) propose an analysis of determinants of households' savings in CEECs. They use the data from Euro Survey of the Oesterreichische Nationalbank (OeNB) and found age and education as beeinf a relevant factor affecting saving decisions. On the contrary, the authors found no evidence for expectations regarding inflation of exchange rate nor trust in institutions to have a significant impact on savings of households in CEECs.

Recent empirical literature about financial behavior of households in fifteen European countries, which use data from Household Finance and Consumption Survey (HFCS), propose another step towards understanding the specificities of CEECs. Although these data have a weakness characterized by their geographical coverage, they have an important advantage of allowing to study other underlying motives for financial behavior of households (see for example Ampudia and Ehrmann, 2014). Thus, they propose additional possibility to explain heterogeneity in households' financial decisions by other determinants. Le Blanc, Porpiglia, Teppa, Zhu and Ziegelmeyer (2015) identifies three geographic areas according to determinants of households' financial behavior: Continental (6 countries), Mediterranean (6 countries) and "Other". The last one is formed by Slovakia and Slovenia. According to authors, these two CEECs differ from the rest of the sample considerably. For instance, the ability to get financial assistance from relatives and friends is extremely low (less than 40 %) in these two countries, what is not in line with other European countries (non CEECs).

Another outcome of studies using HFCS data is that they allow to compare different data sources about financial behavior of households – aggregated data from national accounts and survey data. Kavonius and Honkkila (2016) identifies the level of underrepresentation of different forms of financial assets in surveys comparing to their value in national accounts. According to their results, the level of underrepresentation is higher in Slovenia than in Slovakia, especially in case of bonds and mutual funds.

3 METHODOLOGY AND RESULTS

Financial accounts as a part of national accounts deal with harmonised data about financial activities of all economic sectors in European economies. As the purpose of the financial accounts is to provide information about financial assets (savings, financial wealth etc.) and liabilities (loans etc.), distributed over various financial objects, we choose these data to analyse financial behavior of households in V4 countries.. These aggregated macro-data have some advantages and disadvantages, comparing to micro-level survey data about financial behavior of households. The first advantage consists of their capacity to be used for international comparisons thanks to its geographical coverage (almost all EU Member States are involved) and harmonised principles of compilation. Another advantage rely on the fact that in national accounting, the data concerning households are balanced to data about other economic sectors (financial and non-financial corporations, general government etc.) for which the necessary reliable data are recorded and collected. Thus, the problems of nonresponse and underestimation, which usually occur in case of survey, are avoided by using data from national

accounting. Afterwards, the households sector in national accounting comprises all households and includes also household firms (sole proprietorships, partnerships that do not have an independent legal status, non-profit institutions serving households (NPISHs) like charities and trade unions). Some argue (see for example Kavonius and Honkkila 2016) that NPISHs should be excluded from the analysis about households finance. However, this procedures is necessary when trying to compare the micro and macro data (NPISHs are normally excluded from surveys). For our purposes, we consider it is meaningful to keep data about NPISHs because of their impact on financial strategies of households.

On the other hand, disadvantages of households financial behavior data derived from national accounting are multiple, too. Firstly, the aggregated data do not propose a possibility for distributional analysis. Secondly, the structure of data is limited by the definition of national accounts system (e.g. in Europe, we apply European System Accounts 2010 principles). For example, data provide information about "currency and deposits" as a form of households' assets, but are not proposing inside view into different forms of deposits like sight accounts, saving accounts, other accounts etc. Thirdly, as pointed by Roemer (2002), the macrodata suffer the problem of missing data due to illegal work and shadow economy. However, as being stressed by Andreach and Lindner (2016 p.2), both the aggregated data of national accounts and the survey measures represent a valid basis for empirical evaluations.

3.1 Stylised Facts about Financial Behavior of households in V4 countries

For the purpose of our analysis, data representing the sector "Households including NPISH (S.14+S.15)" were taken. As can be seen in Table 1 and Table 2, we used annual data representing the proportion of values of various forms of assets (Currency and deposits, Shares and other equities, Mutual fund shares, Life insurance and annuity entitlements, Other Assets) as a % of total financial assets, and values of chosen – most relevant- forms of liabilities (Short-term loans, Long-term loans, Other Liabilities) as % of total financial liabilities. The data for all EU Member States in the region of V4 are available for the period 1995 – 2015. The choice of 20 years difference in our analysis (the longest differential possible according to data availability) helps to identify the long-run changes in financial behavior, which is in line with the idea that changes in financial behavior of economic agents are not rapid, rather progressive and time-consuming.

Tab. 1: Composition of assets and liabilities (as part of total financial assets/liabilities) in V4 in 1995

	Cash and deposits	Shares	Mutual funds	Life insurance	Other Assets	Short-term loans	Long-term loans	Other Liabilities

Czech republic	0,39	0,49	0,06	0,04	0,06	0,14	0,53	0,32
Hungary	0,53	0,26	0,01	0,02	0,07	0,06	0,59	0,35
Poland	0,67	0,24	0,00	0,02	0,03	0,39	0,56	0,05
Slovakia	0,71	0,10	0,08	0,05	0,08	0,01	0,51	0,48

Source of data: National accounts – Financial accounts, Annual data, Eurostat

Tab. 2: Composition of assets and liabilities (as part of total financial assets/liabilities) in V4 in 2015

	Cash and deposits	**Shares**	**Mutual funds**	**Life insurance**	**Other Assets**	**Short-term loans**	**Long-term loans**	**Other Liabilities**
Czech republic	0,50	0,29	0,06	0,05	0,04	0,05	0,86	0,09
Hungary	0,29	0,40	0,10	0,04	0,10	0,11	0,78	0,11
Poland	0,48	0,26	0,06	0,04	0,10	0,08	0,90	0,02
Slovakia	0,62	0,09	0,09	0,06	0,07	0,06	0,85	0,09

Source of data: National accounts – Financial accounts, Annual data, Eurostat

The role of cash and deposits in the structure of financial assets is remarkable in all V4 countries both in 1995 and in 2015. In 2015, its relative parts vary between 29% in Hungary and 62% in Slovakia. To compare, its relative part in the Euro area represents 34%. In all V4 countries, dominant role of this most liquid forms of wealth was unchanged within last decade. However, in Hungary, Poland and Slovakia, the tendency towards decreased role of cash and savings is obvious. The only country with the increasing relative role of currency and deposits is Czech republic (increase of 11 p.p.)

Shares (both quoted and unquoted) as a form of financial assets in case of households and household firms play an important role in V4 countries. They also represent a form of financial assets whose role is not stable and changed considerably in the analysed period, mostly with a negative tendency. In Hungary, the relative parts of shares increased in the analysing period considerably, while the opposite changes can be found in the Czech republic.

The relative parts of other forms of assets (mutual funds, life insurance and other assets) did not changed considerably between 1995 and 2015 in the V4 countries.

What concerns financial liabilities, short-term loans are used to lower extent than long-term loans in V4 countries. The same is true in other European countries (5 % for short-term loans and 85 % for long-term loans in the euro area in 2014, for instance). In the analysing period, the relative role of short-term loans declined significantly in Poland (31 p.p.) and in the Czech republic (11 p.p.). In two other V4 countries, this form of financial liabilities (representing mainly the consumer loans) have increased in the same period.

The relative role of long-term loans noticed an increase in the portion of long-term financing of households in all V4 countries. The most important increased was observed in Poland (34

p.p.) and in Slovakia (34 p.p.). These are the countries with the most dynamic changes in indebtedness of households due to mortgage debts financing of households.

3.2 Convergence of Financial Behavior of Households in V4 countries

As was presented in previous parts, the heterogeneity in financial behavior of households is obvious in V4 region. However, an eventual convergence in such behavior could indicate gradual process of decreasing heterogeneity in time. Following Wilhelm (2004), we applied the coefficient of variation as an appropriate measure to capture the convergence evidence. In addition, the Gini coefficient was also calculated for the whole period. The results in 1995 and in 2015 are presented in table 3. The gradual changes of coefficient of variation can be found in charts 1 and 2. Analogically, the gradual changes of the values of Gini coefficient are presented in charts 3 and 4.

Tab. 3: Convergence mesures of different forms of financial assets and liabilities

	Cash and deposits	Shares	Mutual funds	Life insurance	Other Assets	Short-term loans	Long-term loans	Other Liabilities
Coefficient of variation								
1995	0,28	1,03	0,89	0,68	0,51	1,73	0,45	0,15
2015	0,32	0,65	0,25	0,26	0,28	0,34	0,35	0,09
Gini coefficient								
1995	0,15	0,53	0,49	0,38	0,27	0,53	0,38	0,37
2015	0,18	0,35	0,14	0,14	0,15	0,04	0,03	0,21

Source of data: National accounts – Financial accounts, Annual data, Eurostat

Chart 1: Coefficient of variation of different forms of financial assets in V4 countries

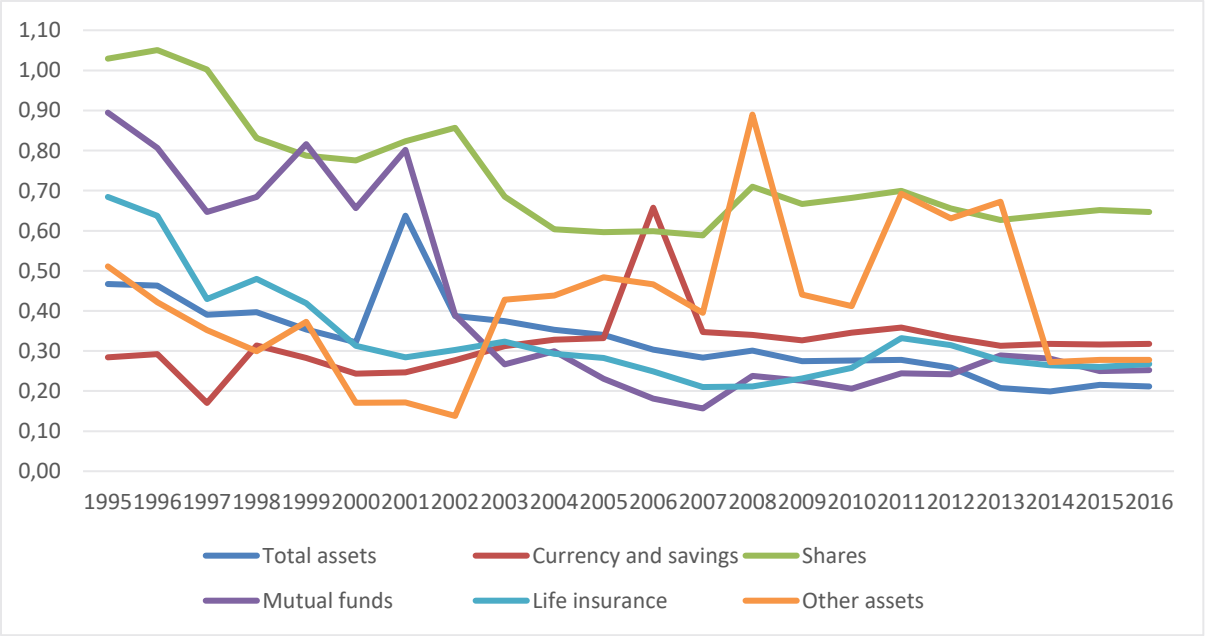


Chart 2: Coefficient of variation of different forms of financial liabilities in V4 countries

Chart 3: Gini coefficient of relative parts of different forms of financial assets in V4 countries

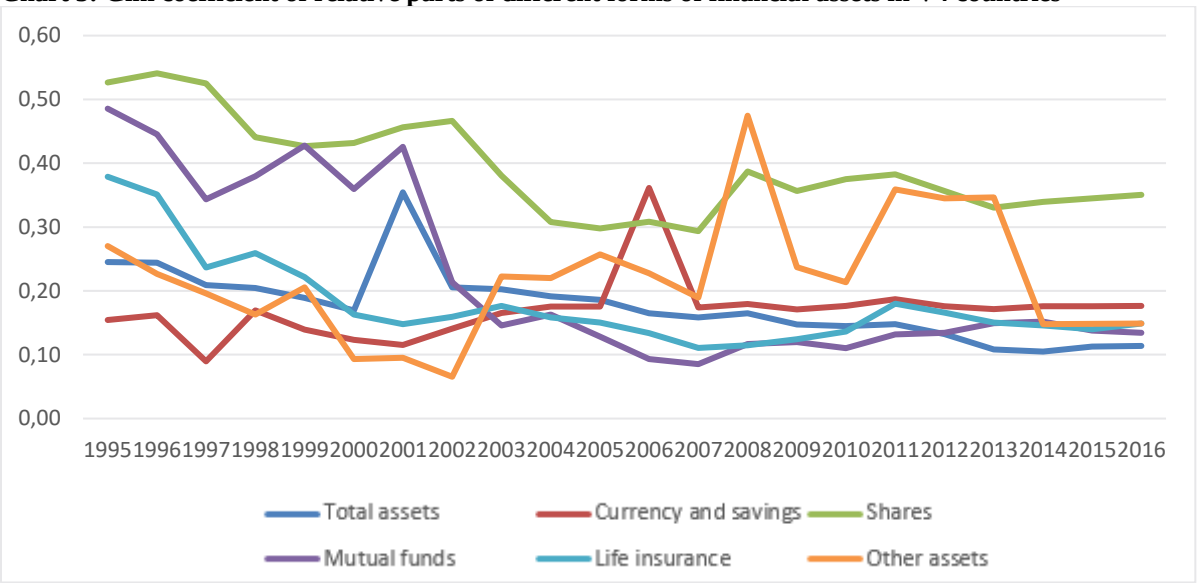
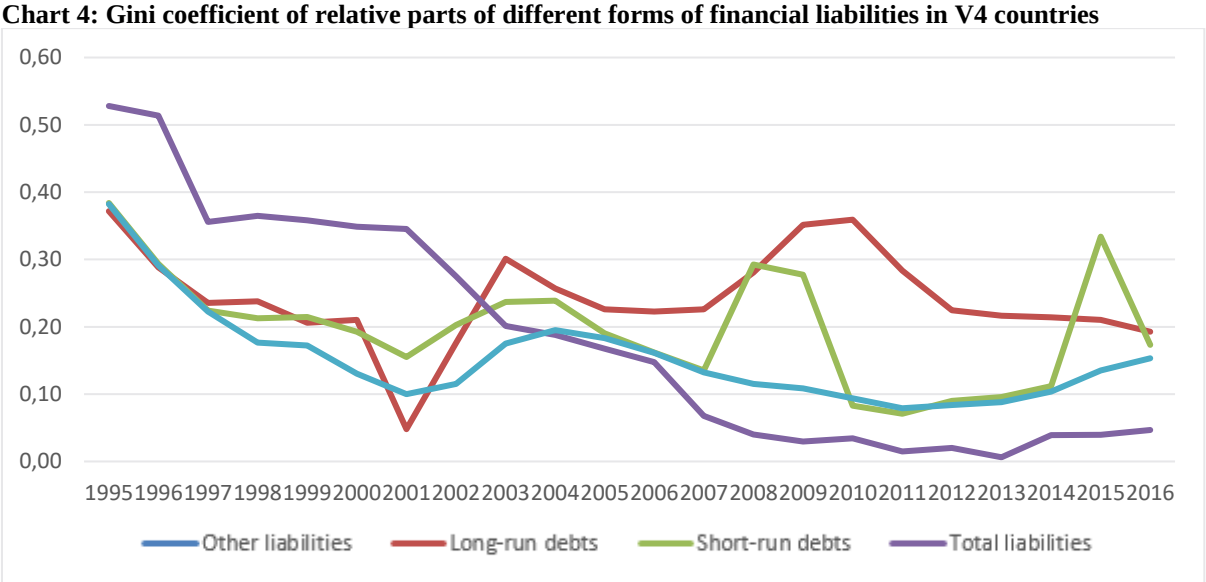


Chart 4: Gini coefficient of relative parts of different forms of financial liabilities in V4 countries



A decline in dispersion between 1995 and 2015 was found in almost all types of financial assets and liabilities under examination. The only exception consists of cash and deposits, for which the presented divergence seems to be dramatic and very unstable. It may be implied by different roles cash use plays in household behaviour of V4 households, but as well by the impact of factors which motivate households to make savings (monetary policy, commercial bank products appearance, income distribution, households financial literacy etc.).

CONCLUSIONS

The main goal of our paper was to get an insight view on household finance convergence in V4 countries between 1995-2015. Our findings lead to conclusion that, generally speaking, a convergence (rather than divergence) can be found both at the level of financial assets and liabilities. From this perspective, convergence concerning the behavior of households in V4 countries can, among other things, indicate the greater impact of non-economic factors (culture) than economic factors (post-transformation economic processes, economic integration, monetary integration, etc.) which we consider as becoming more variable in the V4 region in the last 20 years while cultural aspects prevailing the same. Such a conclusion should be confirmed by further research, which could eventually take into account some individual data about households in V4 countries (see for example Malmendier and Steiny, 2017 in case of Euro area Member states). Thus, our paper would contribute to the general efforts in economic research to combine the macro- and the microdata in order to better understand the financial behavior of households in CEECs (see for instance Kavonius and Honkkila 2016).

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