

Table 2

**Comparative table of stock indices correlations for 2008-2017 and 2012-2017**

<b>№</b>	<b>Indices</b>	<b>UXI, %, 2GG8-2G17</b>	<b>N=</b>	<b>Indices</b>	<b>UXI, %, 2G12-2G17</b>	<b>N=</b>
<b>1</b>	RTSI, %	<b>G,4831</b>	<b>2251</b>	RTSI, %	<b>G,2579</b>	<b>127G</b>
<b>2</b>	WIG, %	<b>G,3996</b>	<b>2211</b>	WSEI, %	<b>G,2136</b>	<b>1244</b>
<b>3</b>	FTSE 100, %	<b>G,3878</b>	<b>2227</b>	MSCI EM, %	<b>G,2G98</b>	<b>1287</b>
<b>4</b>	S&P500, %	0,248	2216	FTSE 100, %	0,1697	1244
<b>5</b>	DJIA, %	0,2433	2252	S&P500, %	0,1265	1243
<b>6</b>	Nikkei 225, %	0,2172	1896	DJIA, %	0,0802	1246
<b>7</b>	MSCI EM, %	0,2098	1287	NASDAQ, %	0,0657	1111
<b>8</b>	NASDAQ, %	0,169	1982	Nikkei 225, %	0,0596	1049

**References**

1. Trading results. Official site of PJSC Ukrainian Exchange [Electronic resource]. - Access mode : <http://www.ux.ua/ua/marketdata/marketresults.aspx>
2. Статистика : [навч.-метод. посіб.] / Н. Б. Кушнір, Т. В. Кузнецова, Ю. В. Красовська та ін. - К. : Центр учбової літератури, 2009. - 208 с.
3. Аналітичний огляд ринку [Електронний ресурс] / КІНТО. - Режим доступу : <http://www.ux.ua/en/m/12/29535/20161117-analtichniy-oglyad-rinku.aspx> (дата звернення: 17.11.2016).

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## **FINANCIAL SECURITY OF HOUSEHOLDS - THE ESSENCE AND SCALE OF THE PHENOMENON ON THE EXAMPLE OF POLAND**

**Introduction**

Household financial security is significant in terms of meeting the individual and common needs of the household members. The level of satisfaction of these needs is directly related to the current financial situation of the household as well as to the prospect of a change of the current situation and the knowledge that enables efficient and effective management of household finances (Kozera 2016, pp. 319). According to M. Piotrowska (2017, pp. 463) the financial security of households could mean the ability to achieve the income, which is essential to meet the needs of households at an appropriate level and create financial reserves which could be used in case of

unfavorable events such as illness, job loss, or family disintegration. A slightly different definition of household financial security, based on the theory of personal finances and allowing to measure this phenomenon, presents the National Bank of Poland (2017). In this matter, financial security is defined as "a situation in which a person / family has such financial resources that allow them to survive" normally "for 6-12 months without current income."

Due to the multidimensional nature and complexity of this phenomenon, the level of financial security of households should be analyzed through a number of variables representing different aspects of financial performance of these entities (Tab. 1).

Table 1

**Measures of financial security of households**

<b>Financial security areas</b>	<b>Measures of financial security of households</b>
Employment	The level of employment The level of unemployment
Income	The height and dynamics of the average salary in the country The proportion of wage growth to price increases relation The level of average disposable income of household Poverty hazard indicator
Savings	Value of household bank deposits Participation of long-term savings in the total amount of savings The value of funds accumulated in the third pillar pension system Ratio of pension funds to household deposits
Liabilities	The level of total debt of households and the liabilities from long-term loans Debt proportion to accumulated savings of households

*Source: own elaboration*

In analyzing the problem of financial security of households, it is possible to use the subjective measures (for example the opinion of the head of a household or other household members about their financial situation). Estimation of this issue could be also based on objective data derived directly from public statistics.

The main objective of the study is to evaluate selected aspects of financial security of households in Poland. The subject of the analysis will be the level of unemployment and employment of the population, the level and structure of household savings and the level and structure of their bank debt. On this basis, the findings and conclusions will be made regarding whether the particular aspects (areas) of financial security of the households in Poland have improved or deteriorated. Time frames of analysis cover the years 2005-2016. The source of the empirical data was the statistics of the National Bank of Poland (NBP), Central Statistical Office, EUROSTAT and other.

## Results of the research

There is no doubt that employment and unemployment have a direct impact on the financial security of households. Work is the main source of income and it allows all household members to meet their needs. In the years 2005-2016, the unemployment rate in Poland was highest in 2005. It reached almost double value of the average level of unemployment, which the other EU countries has been characterized (EU). In the following years, the unemployment rate in Poland has approached the average level characteristic for the countries of the European Union. In 2016, the level of unemployment was lower than the EU average (Figure 1).

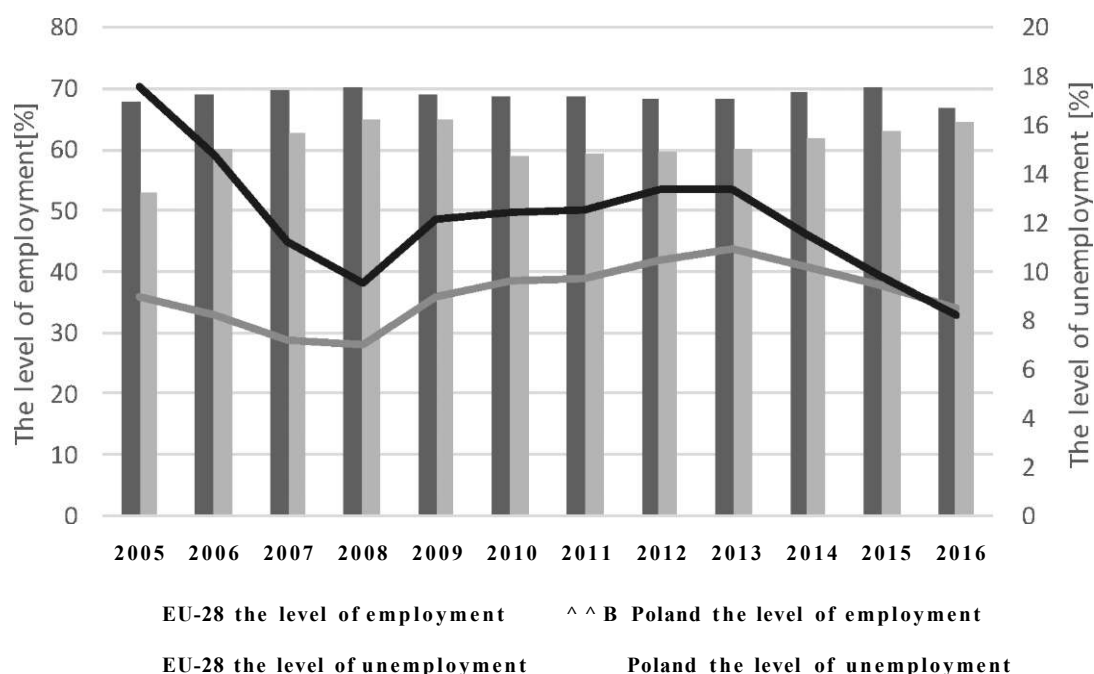


Fig. 1. Employment and unemployment in Poland and the European Union in 2005-2016 (%)

*Source: Own study based on data from the Central Statistical Office and Eurostat*

On the other hand, in terms of the employment rate, the level of employment was lower in Poland than in the European Union during the period considered. Nevertheless, in this case this difference has been reduced.

Throughout the period under review, the rate has increased by about 10 basis points, from 53% in 2005 to 64.5% in 2016. Taking into account the level of unemployment and the employment rate in Poland in 2005-2016 (Figure 1), there is no doubt that there have been favorable modifications in this area, suggesting that the level of financial security of households has improved significantly.

Another issue which is worth considering in the context of financial security is disposable income and household expenditure. Disposable income is the sum of current household income, less income taxes due (PIT and social security and health insurance contributions). Disposable income is allocated for expenses and increase of savings. From the point of view of the financial security of households, this increase in savings that is most important. It is a kind of security buffer that allows household members to

cover unexpected expenses and gives them the opportunity to keep their current level of consumption after retirement. In the case of households in Poland, both the increase in disposable income and expenditure can be noted. Expenditure grew at a slower rate (Figure 2), which from year to year enabled households to accumulate more and more savings from year to year. This demonstrates the improvement of the financial security of households.

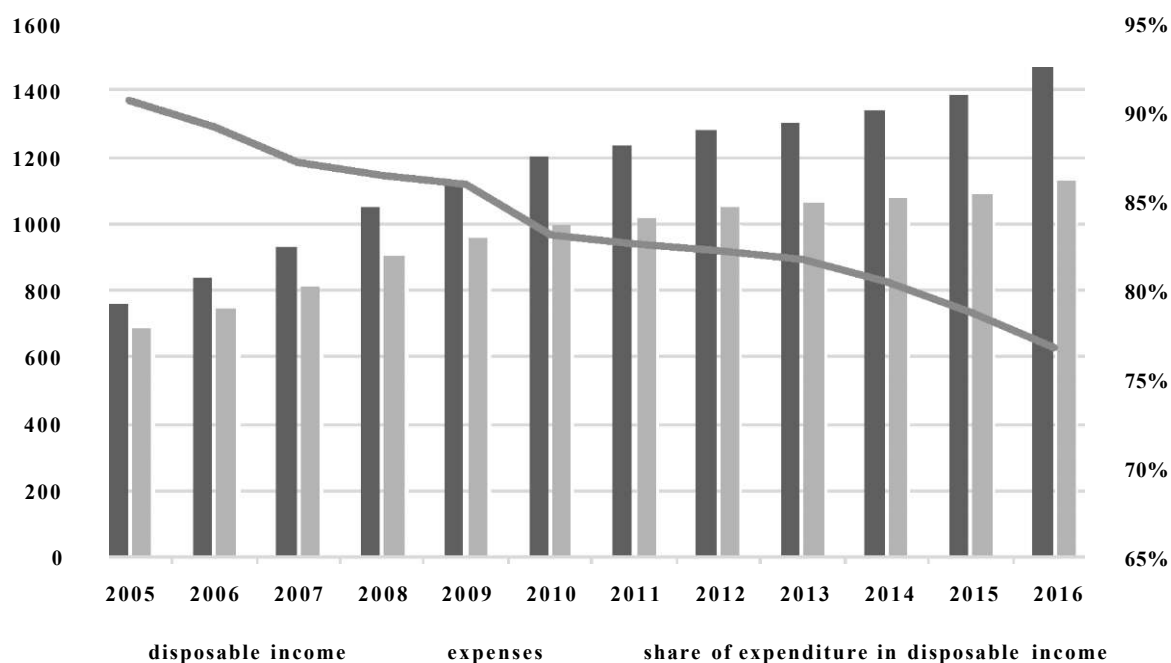


Fig. 2. Level of average monthly income and expenditure per capita in households (in PLN) and share of disposable income in 2005-2016 (%).

Source: own elaboration based on the data of the Central Statistical Office

In the years 2005-2015, the percentage of households with any savings increased twice (Table 2). In the structure of households in terms of scale of savings in relation to disposable income, The largest group consists of individuals with savings of up to three months' income. In this respect, the smallest percentage is still households whose savings are larger than their annual income.

Table 2

**Household savings in Poland in relation to their disposable income in 2005-2015 [%]**

Savings scale	Year					
	2005	2007	2009	2011	2013	2015
up to the monthly income of the household	16	24	23,7	23,8	25,6	19,7
monthly - up to 3 months income	27	30	32,6	32,8	32,6	32,1
over 3 months - up to half-year income	20	20	21,9	23,5	22,4	24,6
half yearly - to annual income	14	8	12,9	12,2	12,6	15,7
above the annual household income	8	8	9	7,7	6,8	7,9
hard to say	15	10	-	-	-	-

Source: own study based on: J. Czapinski, T. Panek (2015).

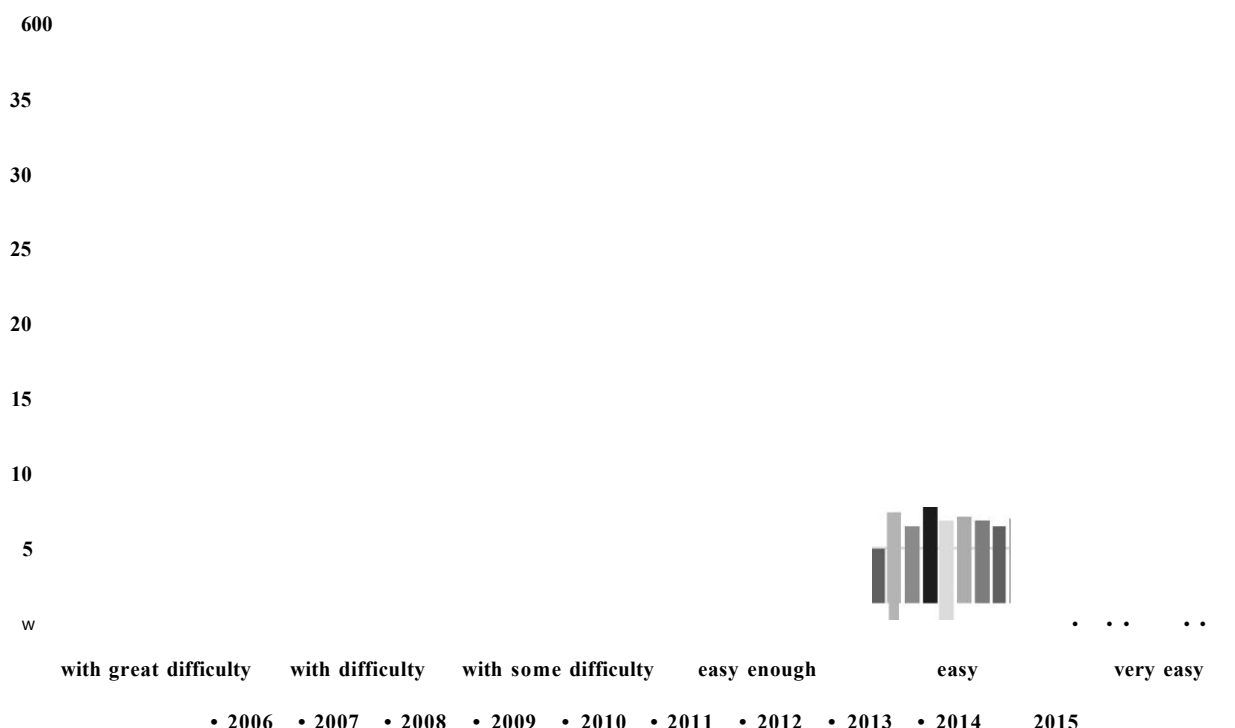


Fig. 3. Households that have determined that their current income is "bound to the end" (%)

Source: own elaboration based on data from the Central Statistical Office (2017)

According to the Central Statistical Office data, the number of households, which with great difficulty or difficulty "make ends meet", decreasing every year (Figure 3). The percentage of households, which "with some difficulty" succeeds in satisfying their needs with the current income, is growing. It is worth noticing, the number of households is growing, for which is quite easy to cover all expenses. Although still a significant percentage of households in Poland can be considered as threatened with loss of financial security (for example, in 2015 it was 68%), the percentage of households which with difficulties (bigger or smaller) are bound to end with decreasing.

In years 2005-2016, the increase in household indebtedness in Poland in relation to net disposable income was more than double (Table 3). In 2005, the value of 29.7% was one of the lowest in the European Union. Despite such a high growth, only three European Union countries in 2015 had a lower household debt ratio in the relation to the net disposable income (Table 3).

Table 3

**Participation of household debt in net disposable income in selected European Union countries (%)**

Country	Year						
	2005	2007	2009	2011	2013	2015	2016
1	2	3	4	5	6	7	8
Austria	87,5	88,6	90,4	93,5	90,8	93,5	-
Belgium	79,5	86,8	90,1	101,6	106,8	114,5	-
Czech Republic	39,4	52,9	60,4	64,6	68,3	68,7	-
Danmark	281,7	324,6	339,8	319,9	305,8	293,1	290,35

1	2	3	4	5	6	7	8
Finland	88,4	96,7	104,3	107,1	104,2	108,3	133,80
France	108,1	102,7	100,3	96,5	94,5	92,9	—
Greece	50,3	65,3	80,2	77,8	60,5	50,7	—
Spain	70,3	104,3	108,3	92,6	84,6	81,9	—
Netherlands	135,9	145,7	151,4	155,1	149,8	142,5	270,07
Ireland	71,3	80,2	86,5	89,9	90,7	89,2	—
German	67,6	82,7	87,6	111,9	122,4	118,6	—
<b>Poland</b>	<b>29,7</b>	<b>38,9</b>	<b>41,6</b>	<b>56,5</b>	<b>59,2</b>	<b>68,6</b>	—
Portugal	128,2	154,4	145,2	142,4	134,3	121,9	137,93
Slovakia	146,9	157,5	163,1	168,5	169,5	177,8	—
United Kingdom	156,9	173,3	161,4	156,9	150,3	149,5	152,34
Sweden	40,3	52,2	56,2	57,8	58,9	56,7	182,93
Hungary	200,2	234,2	239,6	235,9	216,0	177,9	—
Great Britain	54,7	85,8	85,0	84,0	63,7	52,0	—
Italy	257,2	265,1	286,8	287,7	280,5	276,1	—

Source: own study based on OECD data

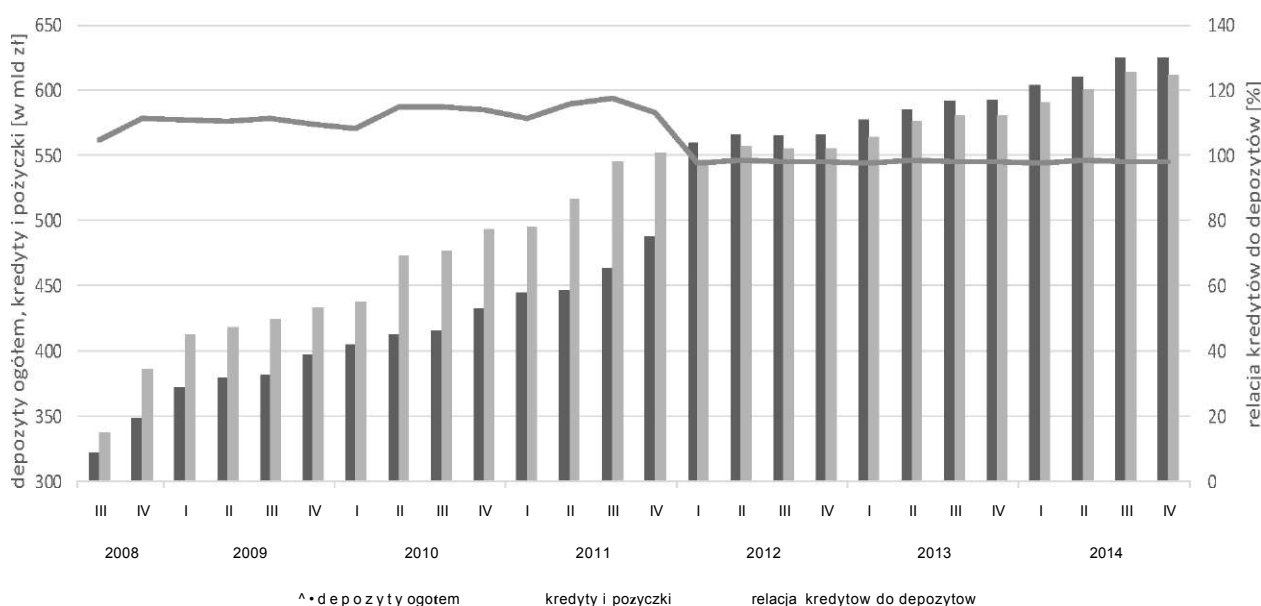


Fig. 4. Relation of loans to household deposits in 2008-2014

Zrodio: opracowanie własne na podstawie danych NBP

Interesting conclusions may be drawn from the analysis of the relationship between household loans and loans in relation to their short- and long-term deposits (Figure 4). In the years 2008-2014, both of these values were characterized by a rising trend, but only by the end of 2011 the value of credit and loans was higher. In the first quarter of 2012, this proportion was reversed. From that moment, deposits have surpassed household loans, and the relation between these two values remained relatively stable until the end of 2014. In the situation where the level of household savings exceeded

their liabilities, households in Poland are building their net capital and thus raising their level of financial security.

### Summary

- 1) The financial security of households in Poland has improved in the years 2005-2016, but in comparison with other European Union countries it is still at a relatively low level.
- 2) Improvements in the financial security of households were determined, inter alia, by the decrease in unemployment and the increase in employment during the period considered. The increase in the employment rate was a key factor in this area, as it allowed more households to meet their living needs without much difficulty. As a result, the number of households
- 3) Accumulation of household savings in Poland was associated by an increase in debt of this group of entities. This demonstrates the growing sense of financial security of households, which happens when with the systematically increasing savings, the natural tendency to make commitments is still high.

### Literature

1. Czapinski J., Panek T., (red.), *Diagnoza społeczna 2015. Warunki i jakość życia Polaków*, Raport. Rada Monitoringu Społecznego, Warszawa 2015.
2. *Dochody i warunki życia ludności Polski (raport badania EU-SILC)*, GUS, Warszawa 2017.
3. Kozera A., *Financial Security of polish households*, Journal of Agribusiness and Rural Development, Volume 3 (41) 2016.
4. Piotrowska M., *The impact of consumer behavior on financial security of households in Poland*, Contaduria y Administración, Volume 62, Issue 2, 2017.

## FINANCIAL STATISTICAL ANALYSIS OF TAX INFLOWS TO LOCAL BUDGETS

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According to the current situation we can see that even regions with higher tax inflows comparing to the expenditures of local budgets are getting significant transfers from state budget due to excessive extraction of revenues by state. It means that Ukrainian taxation system needs improvement not only in terms of enhancing of taxation potential on local level and reduction the number of taxes, but also optimize distribution of tax revenues between local and state budgets. The researches on the formation of budget revenues were conducted by V. Heiets, O. Demkiv, I.Zhalila,