

POPULATION WEALTH. DYNAMICS AND STRUCTURES

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Abstract: *Population is a major player in the structure of market economy. A part of its role in economic relations can be regarded through its total or net wealth and wealth structure, and also through the debts it accumulates. In Romania over the last decade, the overall economic dynamics has marked net wealth, total wealth, debts and their components. Statistics reveal major increases of the above-mentioned categories but unfortunately they have been partly erased by the financial crisis. One can also note the large share of real estate assets in the structure of the population's wealth maintained at a lower level, though, i.e. a low level of wealth liquidity. At the level of financial assets in recent years, with a higher share of total assets, one can notice the dependence on high volatility securities which induces this feature into total assets, too. At the level of debts, although their total volume remains relatively low in size, structural changes can be seen towards decreasing the debts generated by consumer loans and, in return, an increase in financial debts due to mortgage loans.*

Keywords: *balance household, net wealth, financial assets, real estate.*

JEL Classification: G12, M59.

1.Introduction

Population plays an important role in economy, not only as suppliers of work resources or consumers of gross domestic product, but also as owner of material assets and also as investor, thus owner of financial assets. Also, a great part of debt in economy is owned by the population.

Table no. 1. Model of household balance sheet

Balance sheet for Households	
1	Total assets (= 2 + 3)
2	Nonfinancial assets (= 3 + 4)
3	Residential and commercial real estate
4	Other
5	Financial assets (= 6+7+8+9+10)
6	Currency and deposits
7	Debt securities
8	Shares and other equity
9	Financial derivatives
10	Other assets
11	Liabilities (= 14 + 15)
12	Loans
13	Other liabilities
14	Debt (= 12 + 13)
15	Financial derivatives
16	Net worth (1 - 11)
17	Balance sheet total (= 11 + 16 = 1)

Source: IMF, Financial Soundness Indicators: Compilation Guide, 2006, www.imf.org, section "Publications"

Economic growth registered by Romania in the last decade has also made its mark on population wealth. Thus immovable assets have experienced a series of fluctuations after the year 2000, either because of the real estate boom after 2005, which upped the value of

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these goods, or, since 2008, because of decreases of prices on the real estate market, who depreciated this component of assets. Also, the financial assets of the household knew, on the one hand, price changes, but on the other hand, a number of adjustments in economic behavior of individuals, also led to a series of structural changes. Finally, the credit boom, which resulted in public debt led to adjustments in household net wealth.

As at the level of enterprises, their heritage is represented through a balance sheet, at the population level assets, claims and debts held by it can be represented by a balance sheet.

In order to represent the population wealth IMF recommends a balance sheet as in Table 1 (IMF, 2006).

2. Methodology

Evaluation of population wealth is a rather difficult mission. A series of components of population wealth assume complex operations of value assessment, especially, real estate wealth or the position „other nonfinancial assets”. In the absence of statistical information on population wealth and its components, this analysis is based on published values, usually annually by the National Bank of Romania, in particular the reports on financial stability. Much of the data used should be reviewed critically, as there are no publications that provide alternative information.

Initially, in 2005, NBR, for estimating real estate wealth of the population (the determination of prices of housing) used the method of updating annual flows of income made from property (rents) starting from „guidebooks with guide prices of real estate made by the expert evaluators for notarial use” (NBR, 2006 and Neagu F. & Mărgărit. A., 2005), because since 2008, the NBR to use to estimate the value of real estate assets "data provided by the Chambers of Public Notaries on standard three rooms apartment and price per square meter of rural housing"(NBR 2008). Similarly, assessing the value of financial assets was made by the NBR based on information from "national financial accounts", through taking into account the holdings of unlisted shares (NBR 2007).

3. Dynamics of net assets, net financial assets and real estate assets

Net wealth of households rose from 171 billion lei (current prices) in 2002 to 917 billion lei in mid 2015. So an increase of more than 5 times. At the level of main components, net financial assets increased from 50 billion lei to 338 billion, or more than 5 times, and the real estate assets from 121 billion lei to 578 billion lei, about 4.5 times. The largest percentage increases were recorded between 2004 and 2007, on average 40% annually due to higher prices at the level of financial assets, but especially in the real estate goods. The years of crisis have strongly eroded the value of population wealth. Regression was more pronounced at the level of net financial assets, which, in two years (2008 and 2009), have halved their value, from a peak of 252 billion lei in 2007 to 126 billion lei in 2009, while the value of real estate assets owned by the population decreased by about 40% and regression manifested on a much longer period of about 5 years (from a maximum of approx. 950 billion lei in 2007 to 550 billion lei in 2012).

The analyzed decade has also brought changes to the structure of household net wealth. Thus, if initially in 2002, the ratio of net financial assets and real estate assets was 30-70%, the crisis, a strong decrease of the value of financial assets and strong household indebtedness changed the ratio to 15-85%, for recent years to balance the situation, particularly due to the rapid recovery of financial wealth (due to indebtedness stability, increase of deposits and holdings of other securities), the proportion reaching nearly 40-60%.

A better perception of the value of the population wealth we can get by reporting it to GDP or converting it into euro. Thus, as a share of GDP, total net wealth increased on the whole range with just 15% from 112% of GDP in Romania, to just 129%, although at the onset of the crisis in 2007 almost reached a multiple of three times national GDP. Real estate wealth remained almost stable, 79% of GDP in 2002, 81% of GDP in mid-2015, although in 2007 it was 2.2 times higher than GDP. Financial net assets were the only that visibly rose by almost half from about 33% of GDP in 2002 to 47-48% of GDP in 2015, although in 2007 they represented 60% of Romania's GDP. But if we convert that wealth into euro, significant increases are noted at the level of all components. Thus, if we compare the end lines, net assets and financial net wealth grow four times and immovable assets three times though also here is remarkable the erosive effect of the crisis remarkable and the processes that accompanied it.

Table. 2. Dynamics of households' net wealth

Indicator	MU	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	T2 2015
Net financial assets	billion. lei	50	60	89	122	178	252	188	126	140	155	207	298	319	338
Real estate assets		121	206	293	431	636	948	835	704	624	554	550	553	560	578
Net wealth		171	266	382	553	814	1200	1023	830	764	709	758	851	879	917
Net financial assets	Annual growth - %	-	20	47	37	46	42	-26	-33	11	11	34	44	7	6
Real estate assets		-	71	42	47	47	49	-12	-16	-11	-11	-1	0	1	3
Net wealth		-	56	43	45	47	48	-15	-19	-8	-7	7	12	3	4
Net financial assets	structure - %	29	23	23	22	22	21	18	15	18	22	27	35	36	37
Real estate assets		71	77	77	78	78	79	82	85	82	78	73	65	64	63
Net wealth		100	100	100	100	100	100	100	100	100	100	100	100	100	100
GDP billion. lei		153	199	249	290	347	418	524	511	534	565	595	637	668	713
Net financial assets	Share in GDP %	33	30	36	42	51	60	36	25	26	27	35	47	48	47
Real estate assets		79	104	118	149	183	227	159	138	117	98	92	87	84	81
Net wealth		112	134	154	190	234	287	195	163	143	125	127	133	132	129
Annual average rate	lei/euro	3,13	3,76	4,05	3,62	3,52	3,34	3,68	4,24	4,21	4,24	4,46	4,42	4,44	4,45
Net financial assets	Equiv. euro (billion)	16	16	22	34	50	76	51	30	33	37	47	67	72	76
Real estate assets		39	55	72	119	180	284	227	166	148	131	123	125	126	130
Net wealth		55	71	94	153	231	360	278	196	181	167	170	193	198	206
Population mil.		21,7	21,6	21,5	21,4	21,3	21,1	20,6	20,4	20,3	20,2	20,1	20,0	19,9	19,9
Net financial assets	thousand lei	2,3	2,8	4,1	5,7	8,4	11,9	9,1	6,2	6,9	7,7	10,3	14,9	16,0	17,0
Real estate assets		5,6	9,5	13,6	20,2	29,9	44,9	40,5	34,4	30,8	27,4	27,4	27,6	28,1	29,1
Net wealth		7,9	12,3	17,7	25,9	38,3	56,8	49,6	40,6	37,6	35,1	37,7	42,5	44,1	46,1
Net financial assets	equivalent euro (thousand)	0,74	0,74	1,02	1,57	2,38	3,58	2,47	1,46	1,63	1,81	2,31	3,37	3,6	3,83
Real estate assets		1,78	2,54	3,36	5,57	8,49	13,4	11	8,13	7,31	6,47	6,15	6,25	6,32	6,55
Net wealth		2,52	3,28	4,38	7,14	10,9	17	13,5	9,58	8,94	8,28	8,46	9,62	9,92	10,4

Source: National Bank of Romania, Financial Stability Report, April 2016 and author's calculations

Average net wealth per person increases by 5 times, from 8000-46000 lei, between 2002 and 2015, reaching a maximum of 57 thousand in 2007 or in euro from 2,5 thousand euro to over 10 thousand euro. Also an increase of approx. 5 times undergo the real estate assets from 5,6 thousand to 29 thousand lei (or, in euro, from less than 2000 to 6500 euro). Financial net assets grow by about 7.5 times from 2300 to 17000 lei (or in euro, from less than one thousand euro to almost 4000 euro).

The bottom line, in terms of total net assets is that the population has a wealth of high potential of fluctuation, very dependent on phenomena and processes in the economy has a high degree of immobilization, of approximately two thirds and, in time, the liquid component (financial assets) record an improvement.

4. Structure of financial assets

The most important component of financial assets held by the population were and are bank deposits. Although they increased in absolute terms by about 50 billion (from 99 billion to 144 billion lei), as a share of total financial assets they have reduced their share from about 54% to 44%. As a share of GDP, deposit holdings remained at a fifth of it.

Table. 3. Dynamics of households' financial wealth

Year	Cash	Deposits	Debt instruments	Insurances	Pensions	Liquid shares	Listed shares	Unlisted shares	Total Financial assets
Absolute values-billion lei									
2009	17,9	98,7	0,9	6,2	2,6	6,8	6,9	43,4	183,5
2010	20,1	105,4	1,7	6,9	4,7	8,2	6,0	73,7	226,8
2011	23,5	114,1	3,8	7,5	6,9	9,2	9,3	75,5	249,7
2012	22,3	123,6	4,3	8,4	10,2	16,2	12,2	92,5	289,7
2013	25,2	132,3	3,6	8,9	14,8	18,9	7,3	85,0	295,9
2014	27,8	139,6	7,5	9,0	20,2	22,1	8,1	76,4	310,5
2015T3	31,1	143,5	8,4	8,3	24,3	21,6	5,1	81,0	323,2
structure-%									
2009	9,8	53,8	0,5	3,4	1,4	3,7	3,8	23,7	100,0
2010	8,9	46,5	0,8	3,0	2,1	3,6	2,7	32,5	100,0
2011	9,4	45,7	1,5	3,0	2,7	3,7	3,7	30,2	100,0
2012	7,7	42,7	1,5	2,9	3,5	5,6	4,2	31,9	100,0
2013	8,5	44,7	1,2	3,0	5,0	6,4	2,5	28,7	100,0
2014	8,9	44,9	2,4	2,9	6,5	7,1	2,6	24,6	100,0
2015T3	9,6	44,4	2,6	2,6	7,5	6,7	1,6	25,0	100,0
Annual growth-%									
2010	12,3	6,7	100,1	10,8	80,0	20,1	-13,1	69,8	23,6
2011	16,8	8,2	121,0	9,0	47,0	11,4	54,0	2,4	10,1
2012	-5,2	8,4	13,2	11,3	49,4	76,8	31,7	22,5	16,0
2013	13,1	7,0	-15,8	6,5	44,1	16,6	-40,5	-8,1	2,1
2014	10,2	5,5	106,7	0,8	36,7	17,4	11,2	-10,1	5,0
2015T3	12,1	2,8	12,2	-7,1	20,3	-2,5	-36,8	6,0	4,1
Share in GDP-%									
2009	3,5	19,3	0,2	1,2	0,5	1,3	1,4	8,5	35,9
2010	3,8	19,7	0,3	1,3	0,9	1,5	1,1	13,8	42,5
2011	4,2	20,2	0,7	1,3	1,2	1,6	1,6	13,4	44,2
2012	3,7	20,8	0,7	1,4	1,7	2,7	2,1	15,5	48,7
2013	4,0	20,8	0,6	1,4	2,3	3,0	1,1	13,3	46,4
2014	4,2	20,9	1,1	1,3	3,0	3,3	1,2	11,4	46,5
2015T3	4,4	20,1	1,2	1,2	3,4	3,0	0,7	11,4	45,3

Source: National Bank, Financial Stability Report, April 2016 and author's calculations

The second component is the financial securities: debt securities (bonds) and stocks. Bonds and stocks owned by the population had a value of about 58 billion lei in 2009 and reach 116 billion in 2015. As a share, in total, growth is much more modest from about 32 to 38%. However, it should be noted that most of the population securities holdings are illiquid, coming in the form of unlisted shares (about 70% of the total). As a share of GDP securities held by the population grow from 11% to 15% of GDP.

The largest increase was registered by the population assets owned by private pension funds as a result of the binding nature which these investments have. Between

2009 and 2015 they increased 10 times, from 2 billion to 24 billion lei, and as a share of financial assets from 1.5% to 7.5%.

Cash, possession with the highest liquidity has increased also, from 18 to 31 billion between 2009 and 2015, although as a share both in total financial assets and GDP were relatively stable (fluctuations around 9% of total financial assets and around 4% to GDP).

Insurance, represented particularly by holdings of securities afferent to mathematical reserves for life insurance, are a negligible component, although they increased by 2 billion from 6 billion lei in 2009 to 8 billion in 2015, yet they represent about 3% of total financial assets and little over 1% of GDP.

The bottom line in terms of financial assets held by the population, is that banks are the main source of liquidity for the population that elements with high liquidity (securities, deposits, liquid stocks) increased from 123 billion lei in 2009 to approx. 200 billion lei, although as a share they reduced from 67% to 60%. So a relatively good liquidity, although declining and relatively low risk, due to banking exposure, basically guaranteed up to levels of 100 thousand euro.

5. The financial liabilities of the population and their structure

In the past decade, population debt to credit institutions and to NBFIs tripled from 40 billion in 2006 to over 120 billion in 2015. However, the largest increases occurred in the boom period of retail loan, before the crisis of 2008. After this year increases were very low (of 0, or, at most, 1%) or even, in two years (2009 and 2012) negative. Larger increases, of 7-8 percent, occurred in 2010 at the debut of the program "First Home", respectively, in 2015, based on the acceleration of lending process due to expectations that with the adoption of the put into payment law, market credit will be blocked.

Most of indebtedness comes from banks. Initially, at the beginning of the review period, banks were the only "official" provider of debt of the population, so that in the last year of the period under review it provided under 88% of the population loans. Since 2007, following the adoption of the legislation allowing NBFIs to function in Romania and their inclusion in the area of supervision of NBR, the credit provided by them measured a maximum of 7-9% of population loans, but the crisis has wiped off a few percentages of this value. Since 2010 in the portfolio of financial liabilities of the population appear also credits divested by banks, and not only, to recovery institutions (with low share of 5% in 2015) and in 2014 and 2015, loans written off by banks, as a result of the loss attribute of this funding.

A significant structure change should be noticed at the level of financial liabilities of the population. Thus, at the beginning of the period under analysis, more than 80% of loans were destined for consumption and less than 20% aimed real estate investments, in 2015 consumer credit falls below 50% and the mortgage exceeds 40%. To be mentioned that after 2008, the beginning of the crisis, mortgage lending was the one who supported the positive dynamics of lending to households, given that consumer credit showed negative dynamics. Interestingly, in the last year, at the level of indebtedness to NBFIs, the situation is different, here consumer credit increasing and mortgage decreasing. The explanation for this evolution (indebtedness of last year to NBFIs) is that lending terms of consumption for the population of NBFIs were more favorable compared to those from banks and for mortgage credit granted by NBFIs, the fact that they did not operate a program like "First Home", or in other words, NBFIs having more restrictive conditions, or without facilities, as the banks.

Structure change has important effects on population wealth. Consumer credit has an almost reduced impact on the wealth of the population and, even under the effects of increasing wealth, it should be noted that non - real estate goods depreciate and get

outdated quickly, that is why they must be replaced, so they disappear from the population wealth. While, the credit for real estate investments, although it affects the balance sheet of the population for much longer periods of time, through indebtedness, it leads to increasing population wealth, because it materializes in real estate assets, which usually have periods of use of several decades. In addition, real estate retain better their value over time (excluding periods of boom) and lead to a flattening of the risks which affect the population, allowing access to indebtedness, an a better supportability of it.

Table. 4. Dynamics of households' financial debt

Year	Consumer loan CI	Mortgage CI	Consumer loan NBFIs	Mortgage NBFIs	Divested loans ballance-consumer	Divested loans ballance - mortgage	Written off loans	Total debt
Absolute values - billion lei								
2006	34,8	8,4	0,0	0,0	0,0	0,0	0,0	43,3
2007	57,3	14,2	5,5	0,6	0,0	0,0	0,0	77,6
2008	78,3	20,9	6,6	1,7	0,0	0,0	0,0	107,5
2009	76,0	24,2	5,7	0,4	0,0	0,0	0,0	106,4
2010	73,2	28,9	5,3	0,4	5,0	2,4	0,0	115,2
2011	70,9	33,4	4,8	0,4	4,5	2,0	0,0	116,0
2012	67,4	37,1	4,8	0,5	4,4	1,9	0,0	115,9
2013	62,4	40,8	5,3	0,5	4,0	1,7	0,0	114,7
2014	57,4	44,7	5,0	0,2	2,6	1,8	3,1	114,8
2015	56,0	52,0	5,2	0,2	2,8	2,6	4,1	122,8
Yearly growths - %								
2007	64,5	68,9	-	-	-	-	-	79,4
2008	36,6	47,2	21,5	169,8	-	-	-	38,6
2009	-3,0	16,0	-13,5	-75,4	-	-	-	-1,1
2010	-3,7	19,4	-8,3	6,1	-	-	-	8,3
2011	-3,1	15,3	-8,1	0,6	-10,5	-17,1	-	0,7
2012	-4,9	11,0	-1,4	3,5	-1,7	-6,3	-	0,0
2013	-7,4	10,2	12,0	6,1	-9,7	-9,2	-	-1,0
2014	-8,1	9,6	-6,8	-55,6	-35,1	9,3	-	0,1
2015	-2,4	16,1	4,4	-13,4	8,0	39,9	32,7	7,0
structure - %								
2006	80,6	19,4	0,0	0,0	0,0	0,0	0,0	100,0
2007	73,9	18,3	7,0	0,8	0,0	0,0	0,0	100,0
2008	72,8	19,4	6,2	1,6	0,0	0,0	0,0	100,0
2009	71,4	22,8	5,4	0,4	0,0	0,0	0,0	100,0
2010	63,5	25,1	4,6	0,4	4,3	2,1	0,0	100,0
2011	61,1	28,8	4,2	0,4	3,9	1,7	0,0	100,0
2012	58,1	32,0	4,1	0,4	3,8	1,6	0,0	100,0
2013	54,4	35,6	4,7	0,4	3,5	1,5	0,0	100,0
2014	50,0	39,0	4,3	0,2	2,2	1,6	2,7	100,0
2015	45,6	42,3	4,2	0,2	2,3	2,1	3,3	100,0
Shares in GDP - %								
2006	10,0	2,4	0,0	0,0	0,0	0,0	0,0	12,5
2007	13,7	3,4	1,3	0,2	0,0	0,0	0,0	18,6
2008	14,9	4,0	1,3	0,3	0,0	0,0	0,0	20,5
2009	14,9	4,7	1,1	0,1	0,0	0,0	0,0	20,8
2010	13,7	5,4	1,0	0,1	0,9	0,4	0,0	21,6
2011	12,5	5,9	0,9	0,1	0,8	0,4	0,0	20,5

Year	Consumer loan CI	Mortgage CI	Consumer loan NBFIs	Mortgage NBFIs	Divested loans ballance-consumer	Divested loans ballance - mortgage	Written off loans	Total debt
2012	11,3	6,2	0,8	0,1	0,7	0,3	0,0	19,5
2013	9,8	6,4	0,8	0,1	0,6	0,3	0,0	18,0
2014	8,6	6,7	0,7	0,0	0,4	0,3	0,5	17,2
2015	7,9	7,3	0,7	0,0	0,4	0,4	0,6	17,2

Source: National Bank, Financial Stability Report, April 2016 and author's calculations

For an economy where in 1990, the population could contract financial loans only from the network of credit unions and the MHH (Mutual Help House), which inherently had, as a total, a very small value, being neglected by statistics, to reach in 26 years a volume of 120 billion lei is a huge progress. However, if we compare households' financial debt to annual GDP, the progress is not so great. Thus, for the period under review, growth of households' financial debt is relatively modest, from 12% in 2006 to 17% in 2015, the maximum value, occurring in 2010, approx. 22%. As a share of GDP, debt to NBFIs does not exceed 1%, and loans transferred to the recovery institutions and those written off from the balance sheet of banks, currently 1.5%.

6. Conclusions

Net wealth of the population has increased from 171 billion lei (current prices) in 2002 to 917 billion lei in mid 2015. So an increase of more than 5 times. Unfortunately, given the structure of populations' net wealth, it has a wealth with a high degree of immobilization, of about two-thirds, although in recent years the liquid component (financial assets) have registered an improvement.

Regarding financial assets held by the population, the conclusion is that elements with high liquidity (securities, deposits, liquid stocks) increased from 123 billion lei in 2009 to around 200 billion lei, although that as a share they reduce from 67% to 60%. So a relatively good liquidity, although declining.

Finally, the financial indebtedness of the population, although consistent as a nominal value, still has a modest share as percentage of GDP. This indebtedness is dominantly debt to banks, so the risk of ill-payment will be mostly borne by banks. If initially population indebtedness was due to consumption, the effects being minor on population wealth, because consumer goods wear out physically and morally quickly, currently in population indebtedness is increasingly the effect of acquisition of real estate, which lead to increased real estate wealth of the population and reduce potential risks attached to the debtor position of the population.

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