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ANALYSIS OF THE NON- BANK, NON-GOVERNMENT CUSTOMERS CREDITS, IN TERRITORIAL PROFILE

Case studies

Keywords

Loans in foreign exchange for economic agents
Loans in foreign exchange for households
Consumer loans
Housing loans

JEL Classification

G21, G23, C10

Abstract

The purpose of this paper is represented by the structural analysis of loans, by territorial profile, of the non-bank, non-governmental customers, between 2004 and 2013.

The choice of topic was the result of a careful observation and understanding of the loan mechanisms within the banking system, the loan representing an essential link in the functioning mechanism of the economy and the cornerstone of the general economic equilibrium which gives the impression of wealth.

Thus, the economic crisis has led to a major shift in thinking, i.e. the habit of an accelerated loan growth has been replaced by an accelerated decrease and by the decline of confidence in the banking system. The resumption of growth in 2013 has led to the need for the banking system in Romania to find, as soon as possible, an appropriate structure of loans, in order to continue without worries the crediting of reliable customers (households and economic agents). The present research was conducted at regional level, using the principal components method, which is a descriptive method of multidimensional analysis data that applied to the study of the link between numerical variables that for analysis are standardized and reduced.

Introduction

The lending activity is one of the basic activities of commercial banks, the loans holding the largest share within the overall bank assets.

The loan represents the essential part of the functioning mechanism of the economy and the fundamental element of the general economic equilibrium which gives the impression of wealth.

Given the changes within our contemporary reality and in the modern economic thinking, we can talk about a new concept of business efficiency based on: rationality, effectiveness, economy of forces, integration and contribution to the achievement of higher purposes, synergism and synergy, sustainable development and acceptance of risk in the construction and anticipation of the future.

The obsolescence of the lending products in terms of their flexibility in the favour of profitability, the renunciation to the traditional guarantee instruments and the growing needs of the business environment made room to the innovations in the sphere of the financial instruments held as modern lending means.

Unlike the traditional credit analysis, our research was conducted using modern and current methods, with an increased power of structural analysis in the territorial profile of the currency loans to non-bank, non-governmental customers between 2004 and 2013.

It is important to remember that, after the crisis and following the increase in the indebtedness degree over corporate and population power, the volume of foreign currency loans represented one of the engines of the economic growth in the CEE region; before the crisis, the local banking system has also significantly contributed to the increases registered on the national market.

In order to get a conclusive result within our research, we chose to report our data to the Euro exchange rate from 31st December, set by the National Bank of Romania.

The main types of loans by customer type exemplified in our research are: foreign currency loans for economic agents and foreign currency loans for the population, such as: consumer, housing and other needs.

Methodology and data for the year 2013

The factorial correspondence analysis (FCA) is a descriptive method of multidimensional data analysis that applies to the study of the connections between two non-numeric variables. In order to calculate the distance between two points, the 2 distance is used in the FCA (Kachigan, 1982).

The FCA method was developed by Paul Benzecri (Benzecri, 1992), who highlighted the algebraic properties of this method and emphasized both the use of the FCA method for testing the independence of variables, but also for the decrease of the associations between them.

Based on a large table, the FCA discloses a system of factorial axes which synthesizes the initial information in a graphical form easy to interpret. The factorial axes are "ranked" in a descending order, according to their importance in explaining the total variance of the cloud of points.

Basically, the FCA seeks to find the unrelated axes on which to project the point line cloud and the point column cloud. For this purpose, there are calculated the eigenvalues (λ_k) of the matrix of inertia and the coordinates of the eigenvectors associated to each λ_k value.

$$\sum_{k=1}^k \lambda_k = \frac{t^2}{n}$$

The calculation of the line points and column points coordinates on the factorial axes are performed using the coordinates of the eigenvectors associated with the eigenvalues of the matrix of inertia. In order to assess the distance between two points, the 2 distance is used. (Greene, 2003).

After processing the data in SPSS, using the factorial correspondence analysis, we

obtain the statistical indicators calculated for the line points and for the column points, and the graphical representation of these points in the factorial axes system. (Baltagi, 2008)

The presentation of the FCA methodology will be carried out considering the group of units in a contingency table (Table 1) that reveals the level of the currency loans per each Romanian county and per loan types (<http://www.bnr.ro>).

The table of row profiles (Row Profiles output) and the table of column profiles (Column Profiles output)

The table of row profiles (Table 2) includes the $n_{j|i}$ partial relative frequencies, calculated as the ratio of the n_{ij} partial absolute frequencies and the $n_{i..}$ marginal absolute frequencies for each value of the variable X.

$$f_{i|j} = \frac{n_{ij}}{n_{i..}}$$

A row profile shows, for each x_i value, the share of the statistical units for the y_j values of the Y variable (Kachigan, 1982). For our data, the values in this row profile table show the distribution on loan types of the currency loan value in a Romanian county.

Thus, at the level of 2013, the following situation regarding the structure of loans has been revealed:

- the loans given to economic agents hold shares between 40.3% (Gorj county) and 46.2% (DrobetaTurnuSeverin county); the nationwide average percentage is 44.9%;
- the consumer loans given to the population hold shares between 6.4% (Teleorman county) and 30.2% (Drobeta Turnu Severin county); the nationwide average percentage is 21.9%;
- the loans for houses given to the population hold shares between 16% (DrobetaTurnuSeverin county) and 35.9% (Teleorman county); the nationwide average percentage is 23%;
- the population's loans for other needs hold shares between 7.6% (Drobeta Turnu

Severin county) and 19.4% (Gorj county); the nationwide average percentage is 10.2%;

- in Bucharest, the following structure is registered: 45.9% loans given to economic agents; 25% population consumer loans; 20.9% population loans for houses; 8.2% population loans for other needs.

A statistical association between two counties (two row profiles) shows a similar distribution of the level of loans per loan types.

A column profile shows (Table 3), for each y_j value, the share of the statistical units per x_i values of variable X (the column profiles for the data presented in Table 1).

The values in this table show the distribution by counties of the currency loans in a loan category.

Thus, in 2013, the situation of the structure of each loan category per Romanian counties is as follows:

- Bucharest holds the largest share of the category of the loans given to economic agents, i.e. 45.8%, followed at a great distance by the following counties: Cluj 5%, Timisoara 4.6%, Iasi 3.8%, Constanta 3.6%, Bihor 3.3%, Covasna and Calarasi with shares smaller than 0.3%;
- the same hierarchy is maintained in the population household loans, Bucharest visibly detaching itself from the other Romanian counties.

A statistical association between two column profiles (types of loans) shows a similar distribution per counties. The points represented by the counties of Cluj, Timisoara, Iasi, Constanta, Bihor will be located at a small distance from each other in the first factorial axes system.

The value of the 2 statistic

In the Summary output, in the Chi-Square column, there is revealed the calculated value of the 2 test statistics used in testing the hypothesis of the independence between variables (Maddala, 2001).

Testing the hypothesis of the independence between the variables requires the formulation of the following hypotheses:

- the null hypothesis H_0 : the hypothesis of the independence between the statistical variables (there is no connection between the statistical variables);
- the alternative hypothesis H_1 : the hypothesis of dependence (there are connections between the statistical variables) (Verbeek, 2005).

In the output above, the calculated value of the test statistic is $\text{Sig.}=0,000<0,05$, which indicates that the hypothesis H_0 is rejected. We can guarantee by a 95% probability that there are connections between the variables considered. The description of these connections is achieved by interpreting the FCA results for the row profiles and for the column profiles.

The eigenvalues and the variance explained by each factorial axis

In the FCA, the maximum number of factorial axes is $\min(m-1; p-1)=\min(40, 3)=3$. As in principal component analysis, the largest eigenvalue shows the variance of the first factorial axis and the sum of the eigenvalues measures the total inertia of the point cloud. For the output shown in the Table Summary, the largest eigenvalue is $\lambda_1=0,17$. The inertia (variance) explained by each factorial axis is shown in column *Proportion of Inertia*. The first factorial axis explains 94.3% of the total variance. The choice of the number of factorial axes is performed in the FCA, taking into account the Benzecri criterion: there are chosen those factorial axes which explain at least 70 % of the total variance. In our case, therefore, we need a single factorial axis.

The results of column points

For each category of the Y variable there are calculated the coordinates on the factorial axes, the contributions of the points to the inertia of an axis and the contributions of axes to the inertia of a point.

- The coordinates on the factorial axes (column *Score in Dimension*)

The coordinates of the column points on

the factorial axes show their position in the space represented by the axes. A positive coordinate on the first factorial axis indicates that the column point will be projected on the right side and a negative coordinate shows its projection the left side of this axis (Everitt, Dunn, 2001). The values in Table 5 show that the point “economic agents” has a positive coordinate on the first factorial axis (0.074) and a negative coordinate on the second factorial axis (-0.048); the point “households consumer loans” has a positive coordinate on the first factorial axis (0.513) and also a positive coordinate on the second factorial axis (0.119); the point “households housing loans” has a negative coordinate on the first factorial axis (-0.344) and also a negative coordinate on the second factorial axis (-0.206); the point “households loans for other purposes” has a negative coordinate on the first factorial axis (-0.653) and a positive coordinate on the second factorial axis (0.423).

- The contribution of points to the inertia of an axis (column *Contribution of point to Inertia of Dimension*)

These values show the contribution of the category (loan types) to the dispersion of the factorial axis. The points with higher contributions on an axis are those points that contribute to the formation of that axis. These are called explanatory points of axis formation. The first factorial axis is explained at a rate of 44.1% by point “households consumer loans”, at a rate of 33.2 % by “households loans for other purposes” and at a rate of 20.9% by “households housing loans”. We should note that point “economic agents”, representing the loans given to the economic agents, contributes with only 1.9%.

- The contribution of the factorial axis to the inertia of a point (column *Contribution of Dimension to Inertia of Point*)

This value expresses the contribution of a factorial axis in explaining the dispersion of a point. Thus, there are revealed the

points explained by the factorial axes. For the values shown in Table 5, it is observed that the inertia of point “households consumer loans” is explained at a rate of 98.7% by the first factorial axis and at a rate of 1.3 % by the second factorial axis.

The results of line points

The first factorial axis is explained at a rate of over 4% by the counties of Botosani, Constanta (8%), Gorj, Mehedinti, Suceava and Vaslui while, in contrast, contributions of less than 0.2% are recorded in the counties of Arges, Bistrita, Harghita, Maramures, Satu Mare, Sibiu, Timisoara, Tulcea, ValceaVrancea (Table 6).

The graphical representation of row profiles and column profiles

Figure 1 suggestively shows the associations and differences between the territorial units and the loan types.

Thus:

- Teleorman and DrobetaTurnuSeverin counties indicate the highest level differences;
- Buzau and Galati counties indicate a preference for consumer loans;
- Brasov, Constanta and Tulcea counties preferred household loans;
- the economic agents from Iasi, Sibiu, Timisoara, Galati have sought the greatest number of loans, while the economic agents from Teleorman, Gorj, Mehedinti, Vaslui, Botosani - the least number of loans.

Conclusions

A comparative loan analysis for 2004-2013 indicates a slow growth in Romania. The main factors for this phenomenon are represented by the problems of the main (“mother”) banks abroad and the changes in the funding strategies of local subsidiaries. Lending has been hampered by other supply side factors such as the affected balance of local banks and the tightening of the lending and supervision standards, together with the weak loan demand.

The growth of the loans given to the economic agents was slower after the onset of the crisis (from 28713.120 million Euros in 2009 to 30027.020 million Euros in 2013, compared to an increase from 6364.920 million Euros in 2004 to 28947.260 million Euros in 2008). Moreover, according to an IMF report, the loans to the private sector fell by 2% in real terms between Q3 2008 and Q4 2011, and, subsequently, it fell into the fast pace of 7% by June 2013.

The weak economic growth prospects, including due to the delays in implementing the structural reforms, have reduced the lending appetite and, with the continuation of the crisis, other factors contributed to the slow lending pace: stricter lending standards, more stringent supervisory requirements and increasingly precarious situations regarding the banks’ balance sheets as a result of the growing stock of underperforming loans.

Although interest rates have gradually declined from their maximum line in the outbreak of the crisis, the private sector balance sheets have been affected due to the significant borrowing of the population and companies and to the declining value of warranties. Small and medium enterprises (SMEs) continue to face difficulties due to the high debt burden, as evidenced by the high level of underperforming loans.

These changes are felt within the whole country and have had repercussions in the distribution of loans at the territorial level, as can be easily seen when comparing the graphics for 2004 and 2008 (the year of the outbreak of the world economic crisis coinciding with the boom year in Romania), 2009 (the year when Romania entered the crisis) and 2013 (the first year of economic growth in Romania).

A comparative analysis (Figure 2) of the distribution of loans by territorial units and by loan categories reveals the following facts:

- in 2004, the biggest disparities regarding the lending activity are between the

counties of Teleorman, Gorj and Bucharest, and, in terms of their structure, there are disparities between the loans given to the population for households and for other needs;

- in 2008 and 2009, there are significant differences between the counties of Teleorman, Gorj, Mehedinti on the one hand and DrobetaTurnuSeverin and Harghita, Bihor on the other hand; if, in 2004, an important element of the analysis is represented by the loans granted to the population for households, in 2008 and 2009, they are replaced by consumer loans, meaning that this category has the highest deviations compared to the loans given to the population for other needs. The categories “Loans for the economic agents” and “household loans” remain at a constant level.

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Table 1.

The level of loans per categories and per Romanian counties in 2013 (million Euro)

Correspondence Table					
The county	Type of loan				
	economic agents	households consumer loans	households housing loans	households loans for other purposes	Active margin
AB	348.560	158.580	189.970	104.260	801.370
AR	409.460	197.070	212.390	94.380	913.300
AG	555.840	213.320	342.530	172.710	1284.400
BC	392.980	190.820	202.160	92.310	878.270
BH	991.710	579.060	412.650	215.900	2199.320
BN	252.110	118.680	133.430	70.410	574.630
BT	176.290	51.000	125.290	77.630	430.210
BV	843.620	342.670	500.950	210.310	1897.550
BR	168.930	54.460	114.470	55.750	393.610
BZ	301.440	165.720	135.730	61.580	664.470
CS	112.790	34.710	78.080	47.030	272.610
CL	85.020	26.700	58.320	30.100	200.140
CJ	1513.640	681.600	832.040	350.070	3377.350
CT	1072.300	366.980	705.330	299.430	2444.040
CV	69.330	21.060	48.270	28.880	167.540
DB	245.420	160.190	85.230	40.370	531.210
DJ	653.530	272.940	380.590	178.310	1485.370
GL	521.970	274.930	247.040	99.600	1143.540
GR	88.510	41.910	46.590	27.130	204.140
GJ	107.730	20.360	87.370	51.800	267.260
HR	128.220	73.540	54.680	31.130	287.570
HD	234.010	80.850	153.160	90.010	558.030
IL	112.310	47.460	64.860	33.900	258.530
IS	1153.540	512.120	641.410	284.750	2591.820
MM	383.420	182.730	200.700	116.140	882.990
MH	158.600	41.170	117.430	69.840	387.040
MS	444.800	179.840	264.950	137.710	1027.300
NT	265.610	94.870	170.740	95.690	626.910
OT	222.960	114.250	108.710	66.100	512.020
PH	538.760	226.270	312.490	156.060	1233.580
SM	369.380	205.200	164.180	90.270	829.030
SJ	172.710	64.280	108.430	59.960	405.380
SB	693.230	340.690	352.530	142.960	1529.410
SV	333.260	118.070	215.190	124.950	791.470
TR	73.170	11.020	62.150	26.880	173.220
TM	1367.090	656.120	710.960	261.960	2996.130
TL	128.190	41.650	86.540	38.490	294.870
VS	149.020	40.460	108.550	62.820	360.850
VL	248.570	95.000	153.570	73.070	570.210

VR	195.300	74.780	120.520	72.040	462.640
B	13743.690	7480.270	6263.420	2458.000	29945.380
Active Margin	30027.020	14653.400	15373.600	6800.690	66854.710

Source: Own processing of data taken from the website <http://www.bnr.ro/Credite-si-depozite-in-profil-teritorial-3171.aspx>.

Table 2.
 The table of row profiles

Row Profiles					
The county	Type of loan				Active margin
	economic agents	households consumer loans	households housing loans	households loans for other purposes	
AB	.435	.198	.237	.130	1.000
AR	.448	.216	.233	.103	1.000
AG	.433	.166	.267	.134	1.000
BC	.447	.217	.230	.105	1.000
BH	.451	.263	.188	.098	1.000
BN	.439	.207	.232	.123	1.000
BT	.410	.119	.291	.180	1.000
BV	.445	.181	.264	.111	1.000
BR	.429	.138	.291	.142	1.000
BZ	.454	.249	.204	.093	1.000
CS	.414	.127	.286	.173	1.000
CL	.425	.133	.291	.150	1.000
CJ	.448	.202	.246	.104	1.000
CT	.439	.150	.289	.123	1.000
CV	.414	.126	.288	.172	1.000
DB	.462	.302	.160	.076	1.000
DJ	.440	.184	.256	.120	1.000
GL	.456	.240	.216	.087	1.000
GR	.434	.205	.228	.133	1.000
GJ	.403	.076	.327	.194	1.000
HR	.446	.256	.190	.108	1.000
HD	.419	.145	.274	.161	1.000
IL	.434	.184	.251	.131	1.000
IS	.445	.198	.247	.110	1.000
MM	.434	.207	.227	.132	1.000
MH	.410	.106	.303	.180	1.000
MS	.433	.175	.258	.134	1.000
NT	.424	.151	.272	.153	1.000
OT	.435	.223	.212	.129	1.000
PH	.437	.183	.253	.127	1.000
SM	.446	.248	.198	.109	1.000
SJ	.426	.159	.267	.148	1.000

SB	.453	.223	.231	.093	1.000
SV	.421	.149	.272	.158	1.000
TR	.422	.064	.359	.155	1.000
TM	.456	.219	.237	.087	1.000
TL	.435	.141	.293	.131	1.000
VS	.413	.112	.301	.174	1.000
VL	.436	.167	.269	.128	1.000
VR	.422	.162	.261	.156	1.000
B	.459	.250	.209	.082	1.000
Mass	.449	.219	.230	.102	

Source: Table processed in the SPSS programme, based on the data from Table 1

Table 3.
The table of column profiles

Column Profiles					
The county	Type of loan				Mass
	economic agents	households consumer loans	households housing loans	households loans for other purposes	
AB	.012	.011	.012	.015	.012
AR	.014	.013	.014	.014	.014
AG	.019	.015	.022	.025	.019
BC	.013	.013	.013	.014	.013
BH	.033	.040	.027	.032	.033
BN	.008	.008	.009	.010	.009
BT	.006	.003	.008	.011	.006
BV	.028	.023	.033	.031	.028
BR	.006	.004	.007	.008	.006
BZ	.010	.011	.009	.009	.010
CS	.004	.002	.005	.007	.004
CL	.003	.002	.004	.004	.003
CJ	.050	.047	.054	.051	.051
CT	.036	.025	.046	.044	.037
CV	.002	.001	.003	.004	.003
DB	.008	.011	.006	.006	.008
DJ	.022	.019	.025	.026	.022
GL	.017	.019	.016	.015	.017
GR	.003	.003	.003	.004	.003
GJ	.004	.001	.006	.008	.004
HR	.004	.005	.004	.005	.004
HD	.008	.006	.010	.013	.008
IL	.004	.003	.004	.005	.004
IS	.038	.035	.042	.042	.039
MM	.013	.012	.013	.017	.013
MH	.005	.003	.008	.010	.006
MS	.015	.012	.017	.020	.015

NT	.009	.006	.011	.014	.009
OT	.007	.008	.007	.010	.008
PH	.018	.015	.020	.023	.018
SM	.012	.014	.011	.013	.012
SJ	.006	.004	.007	.009	.006
SB	.023	.023	.023	.021	.023
SV	.011	.008	.014	.018	.012
TR	.002	.001	.004	.004	.003
TM	.046	.045	.046	.039	.045
TL	.004	.003	.006	.006	.004
VS	.005	.003	.007	.009	.005
VL	.008	.006	.010	.011	.009
VR	.007	.005	.008	.011	.007
B	.458	.510	.407	.361	.448
Active Margin	1.000	1.000	1.000	1.000	

Source: Table processed in the SPSS programme, based on the data from Table 1

Table 4.

The calculated value of the 2 statistics, the eigenvalues and the inertia explained by each factorial axis

Summary								
Dimen sion	Singular Value	Inertia	Chi Square	Sig.	Proportion of Inertia		Confidence Singular Value	
					Account ed for	Cumu lative	Standard Deviation	Correlation 2
1	.131	.017			.943	.943	.004	.034
2	.032	.001			.057	1.000	.004	
3	.000	.000			.000	1.000		
Total		.018	1212.882	.000 ^a	1.000	1.000		

a. 120 degrees of freedom

Source: Table processed in the SPSS programme, based on the data from Table 1

Table 5.

The results of column points (loan types)

Overview Column Points ^a									
Type of loan	Mass	Score in Dimension		Inertia	Contribution				
		1	2		Of Point to Inertia of Dimension		Of Dimension to Inertia of Point		
					1	2	1	2	Total
economic agents	.449	.074	-.048	.000	.019	.032	.907	.093	1.000
households consumer loans	.219	.513	.119	.008	.441	.096	.987	.013	1.000
households	.230	-.344	-.206	.004	.209	.306	.919	.081	1.000

housing loans									
households loans for other purposes	.102	-.653	.423	.006	.332	.566	.907	.093	1.000
Active Margin	1.000			.018	1.000	1.000			

a. Symmetrical normalization

Source: Table processed in the SPSS programme, based on the data from Table 1

Table 6.
The results of line points

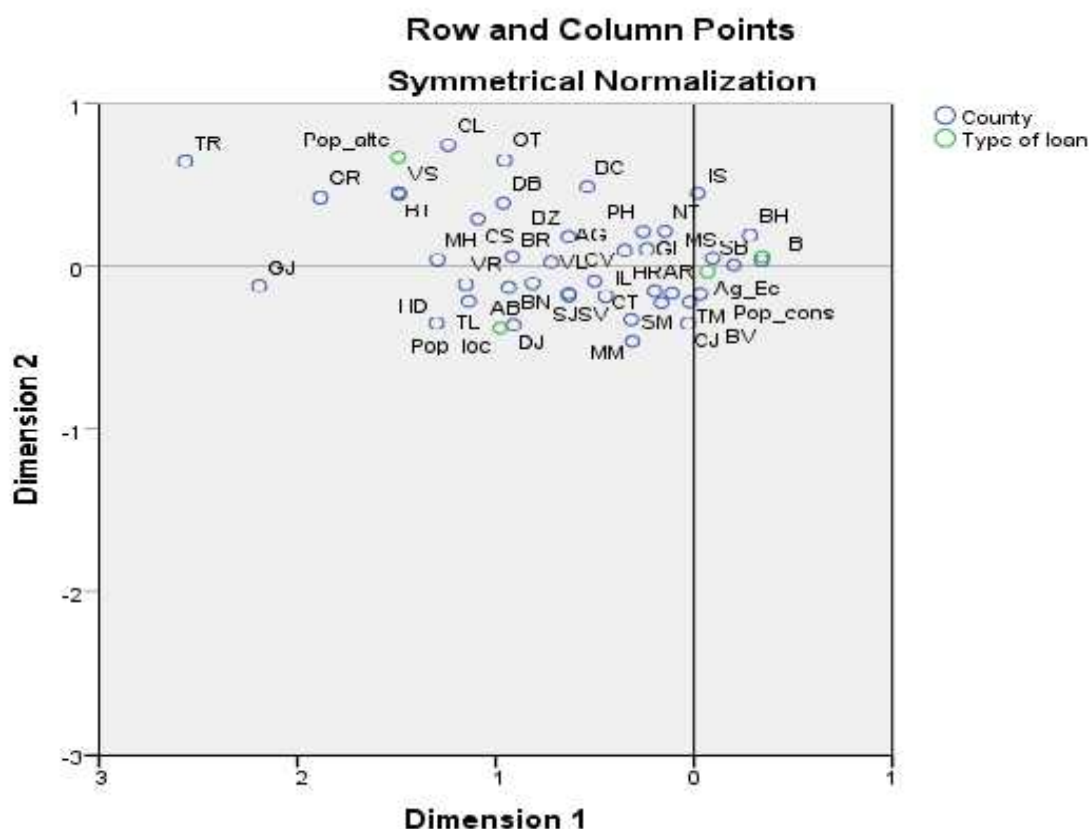
Overview Row Points ^a									
The county	Mass	Score in Dimension		Inertia	Contribution				
		1	2		Of Point to Inertia of Dimension		Of Dimension to Inertia of Point		
					1	2	1	2	Total
AB	.012	-.252	.271	.000	.006	.027	.779	.221	1.000
AR	.014	-.029	-.007	.000	.000	.000	.986	.014	1.000
AG	.019	-.478	.023	.001	.034	.000	.999	.001	1.000
BC	.013	-.026	.039	.000	.000	.001	.649	.351	1.000
BH	.033	.303	.386	.001	.023	.153	.716	.284	1.000
BN	.009	-.165	.228	.000	.002	.014	.681	.319	1.000
BT	.006	-.971	.330	.001	.046	.022	.972	.028	1.000
BV	.028	-.289	-.235	.000	.018	.049	.861	.139	1.000
BR	.006	-.688	-.135	.000	.021	.003	.991	.009	1.000
BZ	.010	.234	.151	.000	.004	.007	.907	.093	1.000
CS	.004	-.882	.283	.000	.024	.010	.975	.025	1.000
CL	.003	-.755	-.035	.000	.013	.000	.999	.001	1.000
CJ	.051	-.121	-.143	.000	.006	.032	.747	.253	1.000
CT	.037	-.535	-.343	.002	.080	.134	.908	.092	1.000
CV	.003	-.892	.264	.000	.015	.005	.979	.021	1.000
DB	.008	.642	.393	.000	.025	.038	.916	.084	1.000
DJ	.022	-.305	-.045	.000	.016	.001	.995	.005	1.000
GL	.017	.197	-.036	.000	.005	.001	.992	.008	1.000
GR	.003	-.214	.394	.000	.001	.015	.547	.453	1.000
GJ	.004	-1.302	.130	.001	.052	.002	.998	.002	1.000
HR	.004	.214	.482	.000	.002	.031	.445	.555	1.000
HD	.008	-.723	.268	.001	.033	.019	.967	.033	1.000
IL	.004	-.350	.143	.000	.004	.002	.961	.039	1.000
IS	.039	-.174	-.079	.000	.009	.008	.952	.048	1.000
MM	.013	-.198	.387	.000	.004	.062	.517	.483	1.000
MH	.006	-1.051	.207	.001	.049	.008	.991	.009	1.000
MS	.015	-.417	.107	.000	.020	.006	.984	.016	1.000
NT	.009	-.646	.185	.001	.030	.010	.980	.020	1.000

OT	.008	-.082	.509	.000	.000	.062	.097	.903	1.000
PH	.018	-.333	.063	.000	.016	.002	.991	.009	1.000
SM	.012	.157	.410	.000	.002	.065	.375	.625	1.000
SJ	.006	-.580	.178	.000	.016	.006	.978	.022	1.000
SB	.023	.056	-.105	.000	.001	.008	.537	.463	1.000
SV	.012	-.681	.253	.001	.042	.024	.967	.033	1.000
TR	.003	-1.231	-.660	.001	.030	.035	.934	.066	1.000
TM	.045	.055	-.247	.000	.001	.085	.170	.830	1.000
TL	.004	-.625	-.296	.000	.013	.012	.948	.052	1.000
VS	.005	-.988	.156	.001	.040	.004	.994	.006	1.000
VL	.009	-.449	-.080	.000	.013	.002	.992	.008	1.000
VR	.007	-.591	.342	.000	.018	.025	.924	.076	1.000
B	.448	.278	-.027	.005	.265	.010	.998	.002	1.000
Active Margin	1.000			.018	1.000	1.000			

a. Symmetrical normalization

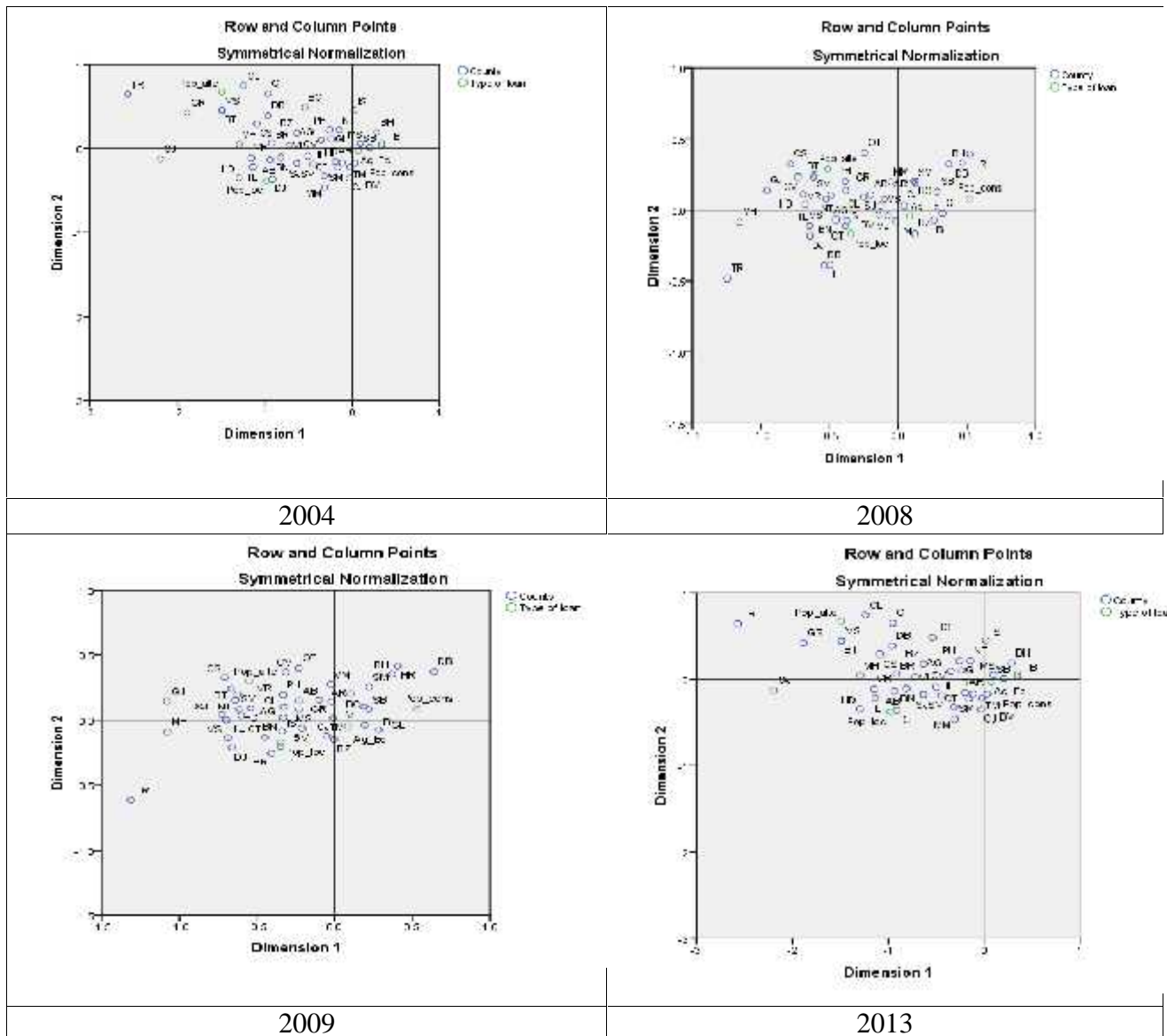
Source: Table processed in the SPSS programme, based on the data from Table 1

Figure 1. The graphical representation of row profiles and column profiles



Source: The author's processing of the data provided by the website <http://www.bnr.ro/Credite-si-depozite-in-profil-teritorial-3171.aspx>

Figure 2. Comparative analysis of the distribution of loans by territorial units and categories of loans for 2004, 2008, 2009 and 2013



Source: The author's processing of the data provided by the website <http://www.bnr.ro/Credite-si-depozite-in-profil-teritorial-3171.aspx>