

The customers borrowing behavior during the financial crisis

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Abstract. *The global financial crisis determined the transition of the Romanian banking system from excess of liquidity to deficit, namely from an aggressive lending activity to a significant reduction of credit growth rate. In our country, the high indebtedness rate, especially in foreign currencies, is the main vulnerable spot of the population sector. The main objective of this paperwork is to analyze factors that influence the customers in their decision to borrow in foreign currencies or in Ron. In this matter, it was used a regional econometric model for panel data in order to see Romania's customers borrowing preferences and to analyze if the crises have changed their behavior.*

Keywords: financial crisis; banking system; borrowing behaviour; regional economy.

JEL Codes: R1, G21, E5.

REL Codes: 11C, 11E.

Introduction

The banks practice of an aggressive selling in foreign currency made the evolution of the exchange rate the new obsession of the Romanians. The big percentage of debts in foreign currency amplifies the vulnerability of the indebtedness. The main problem is that the flow for the new loans approved by banks is also in foreign currency (2011-2012).

The National Bank of Romania showed in its reports that the mortgage loans and the consumer ones are approved in majority in foreign currency. Also, the “First House” program contributed to this evolution.

This paper tries to identify the factors that influence the consumers in their decision of borrow a loan in another currency than RON.

Macroeconomic background

At the end of 2008, money market was affected by the global financial crisis and the reduction of the external financing forced the banks to rethink their strategies. Although in the first half of the year was registered a rapid expansion of the credit for private sector, this decreased in intensity in the last quarter, reaching 33.7% in December.

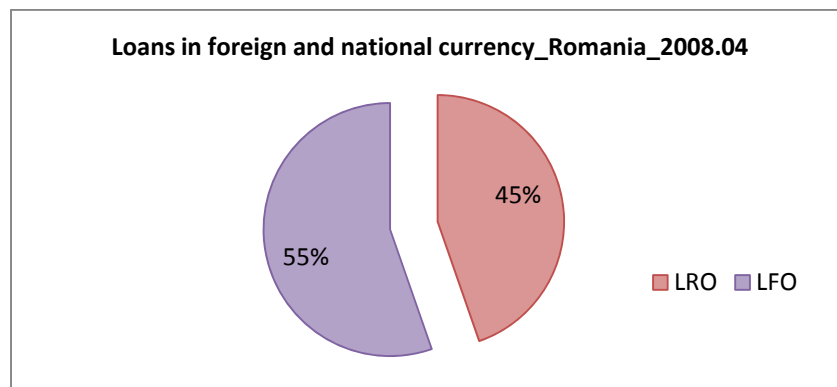


Figure 1. Loans in foreign and national currency in Romania at April 2008
(LFO-loans in foreign currency, LRO-loans in RON)

After analyses of the international financial crisis conjuncture and of the internal competition existing at the time, it can be said that the banking system during 2008 went from excess of liquidity to deficit, from excessive lending to significant restrain of the growth rate for credit and offers for deposits. In terms of credit growth rate, it was found an important reduction compared with 2007

but the deterioration of loan portfolio could not be avoided. This is why 2008 worth to be study.

National Bank of Romania (Annual Report 2008, p. 27) revealed that for retail sector the preferred loans are those on long term, in foreign currency and for consumption. Also, in 2008 the new offered products had promotional interest rates, indicating a delay of the debt impact in a future period.

The contagion effects of the external crisis revealed many of the unresolved internal problems of the Romanian economy and produced many changes in the labor market, not only at national level but at regional level, modifying the existing patterns. The majority of the counties in the same region seem to equalize their unemployment levels.

Reduced growth of household borrowing has become evident in the second quarter, reaching 63.3% compared to 70.9% in December 2007 (National Bank of Romania, Annual Report 2008, p. 39). First semester was dominated by the combined effect of extending the action of stimulating factors of supply and demand of credit and the emergence of inhibitory influences: increasing interest rates for new loans, massive indebtedness of the population, increasing costs with mother banks, the transfer of some credits in other countries. The demand for loans has been severely affected by the growth of interest rates for new loans but also to those already contracted, by RON depreciation and uncertainties on the evolution of the exchange rate.

A gradual decrease of the credit risk was registered and associated with RON loans substitution with those in foreign currency. Growth rate of the denominated component in Swiss francs (both for consumption and for housing) decreased drastically; banks almost dropped entirely the lending in this currency. However, the balance of foreign currency loans had higher growth rates relative to RON, mainly due to RON depreciation.

The international financial crisis has deepened and the authorized institutions in Romania had to intervene to maintain the stability of the banking system. No grant of public funds for credit institutions was needed as full responsibility returned to shareholders. Romanian banking system remained stable, with capitalization and solvency levels consistent with prudential standards.

In 2009 were registered variations in interest rates level, exchange rate, market value of land and buildings and the income reductions. Therefore, there has been registered a tightening of both supply and demand for loans and a deterioration of quality for banks credit portfolio.

The labor market was also affected by the economic crisis, reacting by an increase in unemployment to 7.8% and by the moderation of annual gross earnings growth that reached 1.9% in the last quarter of 2009. The private sector has made massive staff reductions especially in the first three quarters of

the year (the employee number reported by employers was compressed by about 400,000 people in 2009).

Some factors that influenced the restriction of the demand for loans were the decreased incomes, the uncertainty of job prospects and high interest rates. Because of tighter lending standards and terms the offer for loans suffered mainly, but reported a stimulating effect in the end of the year, when there were reduced the interest rates of loans in lei and Euro, especially because of the “first house” program. The most affected were the consumer loans, with a reduced growth to -5.7% (influenced both by RON and foreign currency).

Mortgages had a low annual growth of 27.8%, but remained positive and determined the growth of the percentage for this product in total share of population loans. The currency structure had no significant changes, the percentage of foreign currency in total share of population loans increased to 61.3%. The prudential effect was found mainly in short-term savings, less than two years, where growth in real terms was by 49.8%.

The 2010 challenges for the banking stability in Romania, as the quality of the loans portfolio and the high level of borrowing in foreign currency, continued to be the main discussed issues. From regulation point of view, was issued the Government Emergency Ordinance No. 131/2010 and the National Bank of Romania was involved in the drafting of it, concerning the Guarantee Fund of Deposit in the banking system that increases the provided coverage to 100,000 Euro/depositor.

The demand for loans in retail sector declined significantly, fact that is explained by the pessimism of the jobs prospects, while the banks offer reflected a prudential attitude. Annual growth rate of the contracted consumer loans reached -10.8% (according to the Annual Report of National Bank of Romania, 2010, p. 43) and mortgage loans registered a slight dynamic, this trend being a result of the implementation of the “First House” Program (a project between Romanian Government and NBR that offered smaller interest rates and tax cuts for customers that were buying their first home). The main component was the currency, the foreign currency loans registered a percentage of 64.8% and the share of mortgage loans in total loans recorded an upward trend.

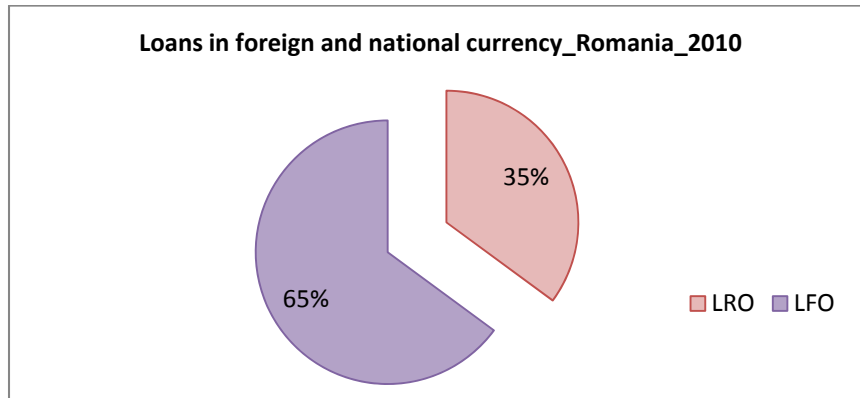


Figure 2. Loans in foreign and national currency in Romania in 2010 (LFO-loans in foreign currency, LRO- loans in RON)

Concluding, the lending activity in foreign currency represented in 2010 a big problem both in stock and flow. The National Bank of Romania closely monitored the evolution of lending activity and took the necessary measures to ensure appropriate conditions of risk. On mortgage loans for retail sector, the main vulnerabilities are the higher share of these products in banks' balance sheets and the risk of worsening the quality of these exposures.

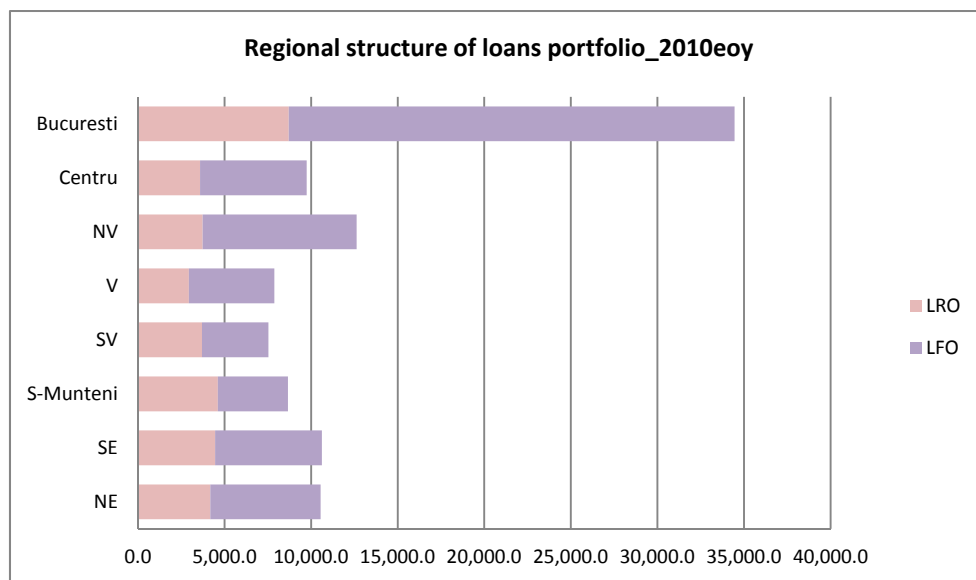


Figure 3. Regional structure of loans at the end of 2010

As you may see in the above figure, the territorial structure of the loans and deposits portfolio in Romania shows a clear preference of the population for loans in foreign currency (LFO). At the end of 2010, most loans were obtained in Bucharest (Romania's capital) followed by the North West Region. The same situation is kept in case of deposits portfolio structure but the preferred currency for these products is the local one.

Borrowing behavior – econometric analysis

It is now known that one of the main problems of the banking system in the crises period was the bad loans, especially those in foreign currency. This is the reason for which we are challenged to understand the factors that determined the customers to choose lending products in foreign currency. One explanation for this behavior is that banks develop marketing campaigns for loans in EUR/USD in order to have a better result for external balance. On the other hand, customers ask for loans in foreign currency because the interest rate is smaller than for RON products and because the inflation volatility is even higher than exchange rate fluctuations.

Starting from this hypothesis, there were considered for the econometric analysis the following factors: balance of loans in foreign currency in retail sector (LFO_i), balance of deposits in foreign currency with maturity term and redeemable at notice (DFO_i), balance of deposits in local currency with maturity term and redeemable at notice (DRO_i), medium net wage (SMN_i) and the unemployment rate (RS_i). All the variables used in the model are expressed in RON.

In 2008 the financial crises started to be a certain thing also in Romania. For this model it was used a panel data with monthly frequency for the period between May 2008 and December 2010. The panel was build using data for all the 41 counties in Romania and the total number of observations in this model was 1312.

The first regression obtained after applying the panel least squares method is the following one:

$$\text{LOG(LFO}_i) = 0.91295 - 0.62468 \times \text{LOG(SMN}_i) - 0.59537 \times \text{RS}_i (-1) + 0.75434 \times \text{LOG(DFO}_i) \quad (1)$$

Dependent Variable: LOG(LFO_)
 Method: Panel Least Squares
 Date: 11/21/12 Time: 20:05
 Sample (adjusted): 2008M05 2010M12
 Cross-sections included: 41
 Total panel (balanced) observations: 1312
 LOG(LFO_)=C(1)+C(2)*LOG(SMN_)+C(3)*RS_(-1)+C(4)*LOG(DRO_)
 +C(5)*LOG(DFO_)

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	9.206911	0.649927	14.16606	0.0000
C(2)	-0.736128	0.080611	-9.131888	0.0000
C(3)	-0.326583	0.083395	-3.916117	0.0001
C(4)	0.279564	0.039898	7.006981	0.0000
C(5)	0.576322	0.027458	20.98909	0.0000
R-squared	0.807021	Mean dependent var		20.45182
Adjusted R-squared	0.806431	S.D. dependent var		0.925291
S.E. of regression	0.407096	Akaike info criterion		1.044267
Sum squared resid	216.6050	Schwarz criterion		1.064005
Log likelihood	-680.0388	F-statistic		1366.443
Durbin-Watson stat	0.737715	Prob(F-statistic)		0.000000

Even so, the results generated by the first estimation were not complete. The borrowing decision may also be influenced by the money placed in current account or in deposits by the customers. This is why, it was also generated the following equation:

$$\text{LOG(LFO}_i) = 0.90691 - 0.73612 \times \text{LOG(SMN}_i) - 0.32658 \times \text{RS}_i(-1) + 0.57632 \times \text{LOG(DFO}_i) + 0.27956 \times \text{LOG(DRO}_i) \quad (2)$$

Dependent Variable: LOG(LFO_)

Method: Panel Least Squares

Date: 11/21/12 Time: 20:20

Sample (adjusted): 2008M05 2010M12

Cross-sections included: 41

Total panel (balanced) observations: 1312

LOG(LFO_)=C(1)+C(2)*LOG(SMN_)+C(3)*RS_(-1)+C(4)*LOG(DRO_)

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	6.319964	0.734217	8.607755	0.0000
C(2)	-1.088169	0.091136	-11.94001	0.0000
C(3)	0.480300	0.085541	5.614866	0.0000
C(4)	1.054431	0.017489	60.29147	0.0000
R-squared	0.741975	Mean dependent var		20.45182
Adjusted R-squared	0.741384	S.D. dependent var		0.925291
S.E. of regression	0.470551	Akaike info criterion		1.333218
Sum squared resid	289.6147	Schwarz criterion		1.349008
Log likelihood	-870.5909	F-statistic		1253.761
Durbin-Watson stat	0.511957	Prob(F-statistic)		0.000000

The coefficients maintain their effect on the foreign currency loans and the coefficients have almost the same value in both equations. Also, it must be said that the probabilities associated to the coefficients are 0 and the R-squared is around 0.80 for each case. Consolidated, the results are:

Table 1

Results of the econometric model

Equation	R-squared	C(1)	C(2)	C(3)	C(4)	C(5)	DW
(1)	0.799	0.912	-0.624	-0.595	0.754	-	0.74
(2)	0.807	0.906	-0.736	-0.326	0.576	0.279	0.73

Because they are provided from external sources of the mother banks, the foreign currency loans tend to have an inertial importance. They are positive correlated with the deposits in RON but also with the savings accounts in foreign currency. One explanation for this is the advance asked by banks when customers contract a mortgage loan. So, this correlation might show the fact that the saving decision could be based actually on a borrowing intention. Even

so, it is possible to need a longer term for RON deposits in order to offset exchange rate fluctuations.

In Romania, an important volume of foreign currency loans is destined to be used for home construction/acquisition. In the rural area (dominant in Romania), many houses are built by the householders and not contracted from a builder. So, if the medium wage will increase, the people will not ask for additional loans but they will pay on installments, considering the stage of the constructions or they will even try to build without borrowing money from the bank. This is the reason for which, analyzing the results, it is observed that the average wage (SMN_) has a negative effect on lending in foreign currency.

Also, it must be said that in Romania the vast majority of people get their income in local currency and exchange rate fluctuations (especially in terms of the ratio RON/EUR) is the main concern of those who take foreign currency loans. Most unperformed loans were based on inability of the debtors to pay the rates in foreign currency considering the trend of depreciation of the domestic currency.

The same negative influence was obtained in case of the unemployment rate. This is a common sense result considering the eligibility criteria asked by the banks regulations and, of course, because of the impossibility of accessing loans in a period when no wage is obtained.

Conclusions

After more than three years of economic fluctuations generated by the global financial crisis, the population perceives loans as riskier but even so, the foreign currency products are preferred. The causes are diverse (generated by the demand and supply) and the borrowing conditions seem to be the reason for this aspect. The interest rate is smaller for loans in EUR/USD and the individual indebtedness rate is on a reduced level.

The weak point of borrowing in other currency than that of the wage is the volatility of the exchange rate. It is well known the situation of the CHF loans and the boom of bad loans generated by the appreciation of this currency.

For this reason, NBR proposed in August 2012 a new regulation in order to condition the bank to offer only loans in RON and to ask for special condition in case of foreign currency products. In this matter it will try to make a better loan portfolio and will reduce the possibility of default.

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