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# Factors Influencing the Portfolio of Domestic Currency Loans in Albania

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**Abstract**
This study aims to analyze and detect the main factors that influence domestic currency lending in Albanian banking sector. After a large period of domination of loans portfolio by FX loans, it seems that this trend has changed direction in the few last years. The supervisory authority has taken initiatives to reduce the level of euroization in the financial system, through regulatory tools; banks have increased their efforts to orient the unhedged clients towards loans in the currency in which they generate their income; and borrowers have changed their attitude towards local currency loans, becoming aware of the risks that accompany FX borrowing. In this respect, we find it necessary to analyze the determinants of local currency loans, as this topic is almost untreated in the existing literature for Albania. The results show positive relationship of local currency loans with economic growth, the spread between lending and deposits interest rates, banks' sources of funds and lending interest rates. On the other side, we find negative coefficients for non-performing loans and for the differentials between lending interest rates in local and foreign currencies. All the relationships are statistically significant and the speed of adjustment of the dependent variable towards equilibrium differs between the two equations estimated.
**Keywords**: banking sector, domestic currency loans, determinants.

## 1. Introduction

Foreign exchange risk is considered as an important driver of risk that accompanies the portfolio of loans in foreign currencies. Its effect becomes more evident and accelerates when the borrower is in an unhedged position. The portfolio of loans of Albanian banking sector has been dominated by loans in foreign currencies (initially in dollars and then in euros), and this tendency has been evident since 2004, when credit started to grow at very high rates. There were two main reasons for this domination of loan portfolio by foreign currency loans: *first*, the lower costs of foreign currency loans, as interest rates were significantly lower for euro and dollar denominated loans, compared to domestic currency (Albanian Lek (ALL)); and *second*, the higher demand from borrowers, for foreign currency loans. Corporate borrowers needed funds denominated in foreign currencies to finance the purchase of raw materials (overdrafts or working capital loans), to invest in new technologies and production lines or to build/buy new buildings necessary for their business operations. On the other hand, individuals preferred foreign currency loans to finance home purchases, whose prices were quoted in foreign currencies (initially in dollars and then in euros). For the period when the exchange rate showed stability, the borrowers had the perception that the FX risk, would never materialize. But the sharp exchange rate fluctuations starting from 2008 evidenced the first problems of foreign currency lending. In that period, the supervisory authority undertook some regulatory changes to control the further growth of foreign currency loan portfolio. These provisions consisted in applying a 50% higher risk weight for unhedged foreign currency loans for capital adequacy ratio calculations, and setting a maximum exposure limit of 400 percent to regulatory capital, for these types of loans. In 2018, Bank of Albania continued its efforts to reduce the level of euroization in the financial system, through some regulatory changes which set tighter rules on foreign currency lending for banks, especially for unhedged loans. These initiatives seem to have an effect after their presentation, as the share of domestic currency loans has increased in the recent years. For this new trend of lending in the domestic currency, we consider it as appropriate to make some analysis and through empirical estimation, to investigate its main determinants. The results obtained are expected to draw valuable conclusions or recommendations for policy makers, and propose some possible tools that may be used to incentivize domestic currency lending in the near future, thus affecting the fulfillment of de-euroization initiatives of the Albanian economy and especially of the financial system.

## 2. Stylized facts

During the 2004-2008 period the exchange rate of Albanian Lek towards Euro and Usd, showed stability or even appreciation. Since 2009, the situation changed totally as the domestic currency began to experience a significant depreciation (please refer to figure 1). The volatility in the foreign exchange market affects the performance and financial results of the banking system, as it is reflected in the loan portfolio quality, largely denominated in foreign currency (see figure 2). In the recent years there has been a new tendency in the loan portfolio, which mitigates the exchange rate risk: an increase in the share of domestic currency loans, thus protecting both borrowers and banks during unfavorable situations. This trend is a consequence of central bank's policies for the

 

reduction of euroization in the economy and for the promotion of domestic currency loans, of improved banks' practices giving prior notice to their clients on the risks associated with borrowing in a currency other than that of income generation, as well as of the raising awareness of borrowers about the potential risk associated with foreign exchange loans.

Deposits are the most important source of funds for Albanian banks. They make up more than 75% of total liabilities of the banking sector. Moreover, the banks operating in Albania have a particular characteristic as they are mainly financed from domestic deposits, providing greater protection during the global financial crisis.

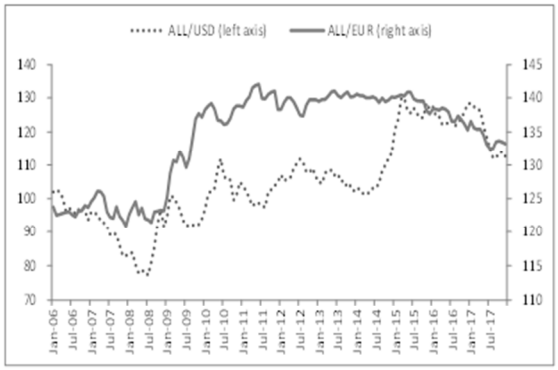


Figure 1: Foreign exchange rate of ALL towards Eur and Us dollar. Source: Bank of Albania.

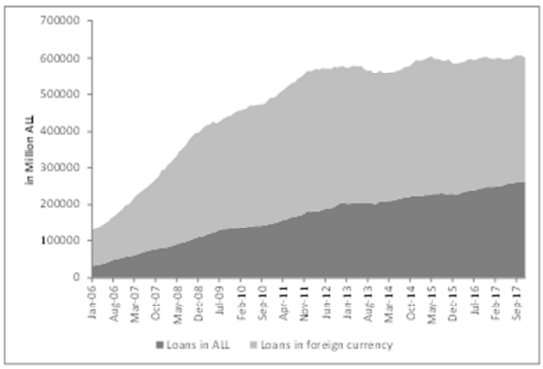


Figure 2: Decomposition of loans portfolio per currencies. Source: Bank of Albania.

## 3. Literature Review

A large literature is dedicated to identification of credit determinants, especially for the developing and transition countries. The analyses for this type of countries have covered also the FX loans portfolio, but rarely are focused on the determinants of domestic currency loans. The reason for separating two sub-portfolios firstly is related to the high share of foreign currency loans, typical for transition countries, and secondly is based on the impression that loans in different currencies may be determined and influenced in different ways by specific factors. Moreover, examining only the total portfolio of loans may drive biased results, as it does not differentiate the effects of specific factors in domestic or foreign currency loan portfolio.

*Rosenberg and Tirpák (2008)* identify foreign currency credit determinants for some CEE countries, new EU member states, finding significant positive relationship with foreign deposits and the interest rates differentials. At the same time, the results show that foreign currency lending is negatively affected by exchange rate fluctuations and regulatory requirements/measures that discourage foreign currency lending. *Albulescu (2009)* estimated two equations through OLS method for identifying the factors influencing the growth rate of domestic currency and foreign currency loans in the case of Romania and then used the coefficients generated for predicting the values of this indicator for the future periods. When estimating the equation of domestic currency loans, he found a positive relationship of the credit growth rate with the country's economic growth, with the growth rate of deposits in local currency and with unemployment rate; and a negative correlation with interest rates and wages growth rate. From the estimation of the second equation, the performance of foreign currency loans is explained by the positive trend of foreign currency deposits and net wages. Meanwhile, loans to deposits ratio in foreign currency is negatively correlated with the growth rate of foreign currency loans. *Bogoev (2011)* in a study for Macedonia investigates the bank lending channel, constructing two loan supply functions, segregated according to domestic and foreign currency loan portfolios. The results evidence the existence of a bank lending channel through foreign currency loans, which react to foreign reference rate changes. On the other hand, the supply function of domestic currency loans reacts weakly to domestic reference rate changes. These results imply that the functioning of the bank lending channel is mainly supported by the reaction of foreign currency loans to foreign reference rate, while the domestic reference rate shows a limited effect.

The literature for Albanian banking sector's loan portfolio has increased during the last decade. Different authors have analyzed the determinants of loan portfolio, seen from different angles. Even the time span and the variables analyzed differ significantly. As the focus of the studies varies, even the explanatory variables used and the dependent variable alter from one study to the other. So, *Vika (2009*), using the GMM, identifies several factors that influence credit to the private sector in total and in local currency for Albanian banking sector, during the period 2004-2006. The results show that the dependent variable is positively related to GDP, nominal effective exchange rate (NEER), liquidity level of the banking sector, and the interaction term between monetary policy and liquidity indicators (the last two factors are statistically insignificant). Also the results show that the dependent variable has a negative relationship with the repo rate, bank's size, and the interaction term between the monetary policy indicators and bank's size. *Shijaku and Kalluci (2013),* through VECM method, estimated

 

the determinants of credit to private sector in the long run for Albania, including in a single equation, demand and supply side factors. The results showed that lending is positively related to economic growth, to real effective exchange rate, to the increase in financial intermediation, as well as to the level of financial liberalization (measured by the reduction in interest rates differentials). On the other hand, a long-term negative relationship is evidenced with the government's domestic debt, the NPLs growth and the increase in the level of incomes (wages). The results show that there is an error correction mechanism, which returns bank credit back to equilibrium within 3-4 quarters. *Shijaku (2016),* using the ARDL approach, estimated the foreign currency lending determinants (supply and demand side) for the period 2004-2013. The results showed that foreign currency loans were positively influenced by the level of foreign currency deposits and by the banks behavior towards lower risk portfolios. Also, the results showed that foreign currency lending is more preferable when the spread between domestic and foreign currency loans interest rates is positive. The study shows that there is a long term and stable co-integrating relationship and the process of returning to equilibrium is relatively faster than what is observed in other comparative studies.

As seen from the literature review, generally other studies have identified the factors that determine total credit or that part of portfolio which is denominated in foreign currency. Studies focusing on identification of factors that affect domestic currency loans for Albania is very rare, or almost inexistent. In the circumstances when the share of domestic currency loans is increasing and recently comprises nearly half of the total loan portfolio (Note 1), the individual assessment of the factors that will encourage its further increase is of particular interest, especially in the current situation, when the supervisory authority has taken concrete steps for de-euroization of the Albanian financial system.

In this respect, this article aims to bring a new contribution to the very rare literature for the identification of domestic currency lending factors and the results generated will create the possibility of drafting some recommendations for policymakers.

## 4. Methodology and data

### 4.1 Equation specification

With the increasing share of local currency loans in banks' loan portfolio in the recent years, an important question arises for the identification of macroeconomic or bank specific factors that influence this subcategory of loans. We will estimate two equations: equation (1) and (2), where some of the explanatory variables of equation (1) are substituted with other variables in equation (2).

***LOANS_ALL*** = *f* (*GDP; SPREAD_ALL; DEPOSITS_ALL; SPREAD_ALL_FX*) ***(1)***

and

***LOANS_ALL*** = *f* (*GDP; SPREAD_ALL; INTEREST_ALL; NPL_ALL*) ***(2)***

where:

*LOANS_ALL* – is the ratio of ALL loans to GDP;
*GDP* – is real GDP;
*SPREAD_ALL* – is the difference between interest rates of loans and deposits in ALL;
*DEPOSITS_ALL* – is the ratio of ALL deposits to GDP;
*SPREAD_ALL_FX* – is the difference between interest rates of loans in ALL and loans in FX;
*INTEREST_ALL* – is the weighted real interest rate of new loans in ALL;
*NPL_ALL* - is the ratio of NPLs in ALL to total loans in ALL;

### 4.2 Hypothesis testing

Based on the literature of this field, on general theories of demand and supply, but also on our judgment, in this study we raise the hypothesis as below explained, which would be tested through equations estimations.

*4.2.1. Economic growth*

Gross Domestic Product (GDP) is the most widely used variable in the literature as one of the determinants of lending, because it captures the economic development effect of a country. There are arguments in favor of a positive as well as a negative relationship of lending with economic growth. The rationale for a positive relationship stems from positive expectations for higher incomes and profits and for a more favorable financial situation of individuals and businesses, during times of economic growth. This would increase the demand for loans, as during the economic growth, the capital intensity of production increases (Kiss et al., 2006). During these periods of better macroeconomic situation, banks also tend to expand the loan portfolio (the loans supply increases). The negative relationship is supported by the fact that during economic growth periods, both individuals and businesses generate more income and profits, increasing their capital, thus relying more on their own funds. This would affect negatively the demand for new loans. In this study our hypothesis is:

**H1:** Loans in domestic currency (ALL) are expected to have a positive relationship with GDP.

*4.2.2. Spreads between lending and deposit rates in domestic currency*

Speaking from the demand side, an increase in the spread of interest rates of ALL loans and deposits would

 

impose higher costs for the borrowers and would decrease the demand for such loans, thus increasing the demand for FX loans. Seen from the supply side, the increase in the SPREAD_ALL would generate more profits for banks, thus increasing the supply for this type of loan. In these circumstances, the relationship of ALL loans with interest rate differences between loans and deposits, is ambiguous and should be tested empirically. In this respect we hypothesize that:

**H2:** The variable SPREAD_ALL is expected to have a significant impact on the portfolio of ALL loans.

*4.2.3. Main source of funds on domestic currency lending*

Albanian banking sector's deposits are the most important source of funds the banks have at their disposal to grant more loans. Also, the positive developments in the banking sector make the latter more credible to attract more deposits from clients, increasing the opportunity for more funds available to borrowers. In this respect, we expect a positive effect of local currency deposits on loans of the same currency. The hypothesis for this variable would be:

**H3:** Loans in domestic currency (ALL) are expected to have a positive relationship with deposits in ALL.

*4.2.4. Interest rate differentials in domestic and foreign currency*

The greater the interest rate differentials between ALL-FX denominated loans, we expect that the higher will be the borrowers' tendency to orient towards FX loans and avoid ALL loans. A domestic currency loan avoids the exchange rate risk, but this fact usually is not visibly perceived by the borrower, at the time of applying for a new loan. On the other hand, the higher borrowing costs related to local currency loans, are more visible to customers at the time of application, and this would have a direct impact on their decision. In this case, we set the hypothesis that:

**H4:** The variable SPREAD_ALL_FX is expected to be negatively related to ALL loans.

*4.2.5. Cost of borrowing*

The loan interest rate, simultaneously determines the loan demand and supply. Intuitively we expect a negative link between domestic currency credit and its cost. However, depending on whether the level of lending is determined by demand or supply factors, the interest rate sign will also differ. If the sign would be positive, it means that the resultant effect on lending would be decided by the supply side, and vice versa, a negative relation, would indicate that demand-driven factors are those who determine local currency lending. Generally speaking, we expect that:

**H5:** Loans in domestic currency are expected to be negatively related to lending interest rates in the same currency.

*4.2.6. Quality of loan portfolio*

The variable of NPLs becomes more important, mainly during the periods of deterioration in the quality of loan portfolio. It is an indicator of the banking system's stability and can affect the volume of loans granted by banks. The increase in non-performing loans in the bank's portfolio would increase the provisions for these loans, which would translate into lower profits for banks, and fewer funds at their disposal to generate new loans. So we expect that:

**H6:** Loans in domestic currency are negatively related to non-performing loans in the same currency.

4.3 Data

The dataset covers quarterly data for 2006Q4-2017Q4 period. The dependent variable is domestic currency loans to GDP, and a set of explanatory variables is used, sometimes substituting one variable with another, to capture different effects. The estimation includes a considerable range of years of post-crisis period, to draw important conclusions on what would foster local currency lending in the near future, with the new tendencies noticed in the recent years. The main sources of data are: Bank of Albania (for loans, deposits, interest rates on loans and deposits, non-performing loans) and INSTAT (for GDP, Consumer Price Index and Inflation).

Data on domestic currency loans to GDP, real GDP (Note 2), domestic currency deposits to GDP, NPL ratio for local currency loans, are expressed as logarithm. The SPREAD_ALL_FX is included in the equation as a rate. Meanwhile, the real interest rate of loans and the spread between ALL loans and deposits interest rates are calculated as annual difference, to capture the effect of their change over the year.

Table 1 presents some descriptive statistics for the variables presented in equations (1) and (2), for the period taken into consideration in the estimations.

 

Table 1: Descriptive statistics of variables for equations (1) and (2).

| Variable | Mean | Median | Maximum | Minimum | St.Deviation | No. of obs. |
|---|---|---|---|---|---|---|
| LOANS_ALL | 0.1295 | 0.1424 | 0.1766 | 0.0563 | 0.0334 | 41 |
| GDP (real) | 1,373,590 | 1,411,205 | 1,605,207 | 1,010,554 | 132,495 | 41 |
| SPREAD_ALL | 0.0692 | 0.0671 | 0.0911 | 0.0547 | 0.0083 | 41 |
| DEPOSITS_ALL | 0.3518 | 0.3479 | 0.4225 | 0.2898 | 0.0297 | 41 |
| SPREAD_ALL_FX | 0.0370 | 0.0386 | 0.0621 | 0.0134 | 0.0144 | 41 |
| INTEREST_ALL | 0.0803 | 0.0830 | 0.1191 | 0.0437 | 0.0195 | 41 |
| NPL_ALL | 0.1434 | 0.1554 | 0.2051 | 0.0382 | 0.0476 | 41 |

(Source: author's calculations)

4.4 The model

Vector Error Correction Mechanism (VECM) approach will be used for estimating equations (1) and (2) explained above. This method is considered as appropriate in this case, as our aim is to identify short-term, but most importantly, long-term relationships between variables. It is presented below:

$$\Delta X_{it} = \beta_0 + \alpha_i\left(X_{i\,t-1} + \sum_{i=1}^{p-1}\beta_i\ X_{i\,t-1}\right) + \sum_{i=1}^{p-1}\beta_j\ \Delta X_{i\,t-1} + \beta_j\, Z_{i\,t-1} + \varepsilon_{it} \quad \textbf{(3)}$$

where, $\mathbf{\Delta X}$ is the first difference; $\boldsymbol{\beta_0}$ is a vector of constant terms; $\boldsymbol{\alpha_i}$ is the parameter that measures the speed of adjustment towards equilibrium; $\mathbf{X_{it}}$ is a vector of k endogenous variables that explain the trend of lending in domestic currency; $\boldsymbol{\beta_i}$ and $\boldsymbol{\beta_j}$ are the coefficient matrixes that measure the short-term and long-term effect of the variables on each-other; $\mathbf{Z_{it}}$ is a series of exogenous variables; $\varepsilon_t = [\varepsilon_{st}, \varepsilon_{bt}]$ is a vector of error terms; and $\varepsilon_t \sim iid(0,\sigma^2)$.

The main condition of using VECM, is that the variables should be integrated of first order I(1). Thus unit root tests are performed, for identifying the characteristics of different series of variables and estimating if the variables are I(1), and also to prove that VECM is the appropriate method for estimating the equations (1) and (2).

For unit root tests we performed Augmented Dickey Fuller (ADF) and Phillips Perron (PP) test, with a null hypothesis that the series of the variables are non-stationary (have a unit root), and the alternative hypothesis that the series are stationary. If the null hypothesis is not rejected (meaning that the series is not stationary at level), then the same tests are performed for the first difference of the variables. All the variables used in the equations (1) and (2) are integrated of first order I(1) and therefore using the VECM method seems convenient. The results are shown in table 2, for the values of probabilities of each variable's unit root test.

We can see that for the variables used in the estimated equations, the null hypothesis is not rejected, thus the series is not stationary at level. In this circumstances, we test for stationarity of the first difference of the series, and according to the probabilities presented in table 2, we may draw the conclusion that all the series are integrated of first order I(1).

 

Table 2: Results of unit root tests for the variables used in equations.

| **Variable** | | **Augmented Dickey Fuller Test** | | | **Phillips Perron Test** | | |
|---|---|---|---|---|---|---|---|
| | | Intercept | Trend and intercept | None | Intercept | Trend and intercept | None |
| LOANS_ALL | Level | 0.0000 | 0.1180 | 0.0042 | 0.0002 | 0.9983 | 0.0000 |
| | First Diff. | 0.5851 | 0.0124 | 0.3316 | 0.0000 | 0.0000 | 0.0000 |
| GDP (real) | Level | 0.0162 | 0.7872 | 0.9178 | 0.0242 | 0.0000 | 0.9982 |
| | First Diff. | 0.4194 | 0.0016 | 0.1318 | 0.0001 | 0.0001 | 0.0000 |
| SPREAD_ALL | Level | 0.1206 | 0.1314 | 0.4236 | 0.1238 | 0.1301 | 0.4331 |
| | First Diff. | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| DEPOSITS_ALL | Level | 0.1086 | 0.0824 | 0.3898 | 0.0000 | 0.0000 | 0.4976 |
| | First Diff. | 0.0318 | 0.0743 | 0.0028 | 0.0001 | 0.0001 | 0.0000 |
| SPREAD_ALL_FX | Level | 0.5205 | 0.0081 | 0.1514 | 0.3799 | 0.0091 | 0.1297 |
| | First Diff. | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| INTEREST_ALL | Level | 0.3466 | 0.0140 | 0.2014 | 0.4362 | 0.0106 | 0.0807 |
| | First Diff. | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| NPL_ALL | Level | 0.3573 | 0.9988 | 0.9880 | 0.5165 | 0.9987 | 0.9925 |
| | First Diff. | 0.0001 | 0.0160 | 0.1475 | 0.0001 | 0.0001 | 0.0002 |

(Source: author's calculations)

As VECM identifies long-term relationships between the dependent variable and the explanatory variables, we also tested if the variables are cointegrated. Variables that are stationary of the same order (in our case they are I (1)) and have a stationary linear combination, are considered as cointegrated. This combination is called the cointegrating equation and is considered as a long-term equilibrium relationship between the variables. To identify the existence of cointegration, the error correction term (ECM) is used, which in case of a cointegration relationship, should be statistically significant and have negative values between 0 and 1. The results of Johansen Cointegration Test show the existence of a cointegration relationship.

## 5. Results

The results of the equations (1) and (2) are presented in table 3 and are explained below.

Loans in domestic currency, as expected, have a positive relationship with the country's economic development. An increase of GDP by 1% would cause an increase ranging from 0.96 to 1.22 percentage points (pp) in the ratio of ALL loans to GDP. The coefficient is statistically significant for both equations. A value of higher than one unit for the coefficient in equation (2) evidences the importance of economic development in determining the level of credit to the economy. A certain change in the country's GDP would be amplified to a greater extent in the growth rate of lending in domestic currency.

Table 3: The results of estimations for equations (1) and (2).

| Variable | Equation (1) | | Equation (2) | |
|---|---|---|---|---|
| | Coefficient | t-statistics | Coefficient | t-statistics |
| **GDP** | 0.9646 | [-24.0695] | 1.2252 | [-8.6340] |
| **SPREAD_ALL** | 0.4424 | [-7.1781] | 1.3213 | [-4.6347] |
| **DEPOSITS_ALL** | 1.0227 | [-5.7568] | | |
| **SPREAD_ALL_FX** | -1.2256 | [ 0.9676] | | |
| **INTEREST_ALL** | | | 0.1620 | [-0.8860] |
| **NPL_ALL** | | | -0.1710 | [ 2.3820] |
| **Constant** | -50.1105 | | -64.8356 | |
| | | | | |
| **ECM** | -0.6711 | [-14.7256] | -0.2733 | [-6.8092] |
| **Adj.$R^2$** | 0.9726 | | 0.7927 | |
| **AIC** | -5.012 | | -3.062 | |
| **BIC** | -4.450 | | -2.701 | |

(Source: author's equations estimations)

 

An interesting result relates to the sign of coefficient for SPREAD_ALL. The relationship is positive and statistically significant. Based on this result, we may draw the conclusion that the supply side effect has dominated the demand side effect. The decrease in interest rate differentials of loans and deposits reduces the loan supply from banks. The coefficient value differs notably between the two estimated equations, from 0.44 to 1.32.

The relationship of loans with the main source of banks' funds (deposits), as expected is positive. For 1 pp increase in the ALL deposits/GDP ratio, the effect on ALL loans will be more than that. This reaction is explained *firstly* by the fact that the deposits are the main and most stable source of financing where the Albanian banks rely on; and *secondly*, by the fact that credit-to-deposit ratio is relatively low for domestic currency portfolio, so the Albanian banking system has still a lot of space to grant loans in ALL, based on available funds of the same currency.

The sign of the variable SPREAD_ALL_FX is negative as expected. This means that the higher the differentials in loans' interest rates between domestic and foreign currencies, the lower would be the demand for ALL loans and the higher would be its substitution by FX loans. The decreasing trend of difference between ALL and FX loans, has positively affected the increase of ALL loans in the credit portfolio in the recent 3-4 years.

In equation (2), we presented another measure of cost of borrowing: the interest rate - an alternative variable, compared to SPREAD_ALL_FX, which aims to estimate the direct effect that interest rates have in granting new loans. The supply-side effect seems to have dominated the effect on the volume of domestic currency loans. Banks may have influenced their clients' decisions for choosing the local currency loans, through raising their awareness on the risks associated with foreign currency borrowing. The type of currency in which the loans are taken from the borrowers, depend also on the object/usage of the loan by them (consumer, mortgage, investment, working capital, etc). The relationship is positive, which can be explained by the fact that despite the higher costs of domestic currency loans, borrowers have selected this type of loan for their financing needs, in order to mitigate FX risk. This seems to contradict the result obtained for SPREAD_ALL_FX, where the borrowers showed an opposite behavior towards higher costs. The confirmation of this attitude may require further and in-depth research in the future.

The performance of non-performing loans negatively influences the tendency of banks to grant new loans. The sign of the coefficient meets our expectations and the variable significantly affects the reduction of ALL loans by 0.17pp for 1pp increase in NPL ratio. This is a supply side variable, which captures the banks' behavior in granting new loans.

Based on the results of estimations of equations (1) and (2) presented in the table above, there exists an error correction mechanism (ECM), which is statistically significant, has the expected negative sign and fluctuates between -0.27 and -0.67. This means that for each economic shock, affecting the portfolio of loans in domestic currency, the latter will return to equilibrium after a few quarters. The speed of adjustment is higher for the first equation (-0.67) which is comparable to other study results (see Shijaku and Kalluci, 2013).

## 6. Conclusions

The aim of this article was the identification and empirical estimation of the factors influencing the portfolio of domestic currency (ALL) loans in Albanian banking sector. This is an additional contribution to the existing literature on credit determinants, which is a topic increasingly treated over the last two decades. For Albania, this field of research is relatively new and a special attention is dedicated only in the last years. Defining the determinants of local currency loans, is an innovation, as such a treatment is almost absent for Albanian banking sector, and this article covers a relatively long period, including the years after the financial crisis, when some new equilibriums are set.

Macroeconomic factors such as economic growth show a positive and significant impact on the ALL loans, a conclusion which is aligned with the expectations and hypotheses raised in the introduction of this paper. Deposits have a large effect on determining portfolio of loans in domestic currency, as the main source of banks' funds. In the circumstances when the credit-to-deposit ratio is low, banks still have the space and funds available to grant new loans.

An interesting behavior is observed for ALL loans towards interest rates, which despite the high values of the latter, started to increase significantly in recent years. This is explained by the fact that borrowers have become more cautious in their decision-making regarding the consideration of foreign exchange risk associated with foreign currency lending, but also by the reason of taking such loans. The results showed that an increase in the difference between lending rates for Albanian lek and foreign currency loans will be translated into a decline in demand for ALL loans and its substitution with foreign currency loans.

For the estimated equations, we found the existence of an error correction mechanism that brings the dependent variable back to its equilibrium. The adjustment speed in equation (1) seems relatively high, but this cannot be confirmed for the second equation estimated.

 

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## Notes

Note 1. As of December 2017, it comprises 44% of total loans portfolio.

Note 2. Deflated by consumer price index.