AN EMPIRICAL EXAMINATION OF BANK DEPOSIT RATE: THE CASE OF WESTERN BALKANS

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Abstract

The banking system is one of the most important parts of the economy of a nation. It must be a well-developed and based in lawful rules in order to generate trust to the citizens. Based on the trust it raises, households interact in different ways; including having loans, depositing their savings, making transfers etc. The main purpose of this paper is to study the impact of various factors on the average rate of the savings that citizens deposit on the commercial banks, known as deposit rate for Western Balkan countries involving Albania, Kosovo, Bosnia and Herzegovina, Serbia, North Macedonia and Montenegro, which have almost similar historical developments and economic trends during the decades. Here we will carefully study the impact of three different aspects including macroeconomic, bank specific and demographic factors. To achieve this objective, an empirical study is done where the data set is defined as panel data. The model includes five independent variables; population growth, inflation rate, non-performing loans, liquidity ratio and GDP per capita. The data is taken for the 6 countries mentioned for the years starting from 2010 to 2017. The results of this paper conclude that population growth, GDP per capita and liquidity rate are the main determinants of the dependent variable, which is deposit rate. In addition, the analysis points out that the variable with the highest impact on the dependent variable is population growth. In addition, all of the variables have a direct relationship with deposit rate, except liquidity rate which has a negative impact. Moreover, non-performing loans and inflation rate have no effect on deposit rate.

Keywords: *Western Balkans, deposit rate, panel data, GDP per capita, liquidity and population growth.*

1. Main Text

A banking system is one of the main pillars of every country's economy. It plays an important role in economic growth and development. It has a crucial function to prosperity, new opportunities, new job vacancies and the overall welfare of the country. Thus, every citizen which believes in the way this system functions, carries various daily transactions in commercial banks such as; deposit funds, apply for loans, set up accounts according to our needs, use ATMs and much more (Banking System: Definition & Types, 2016).

As one of the ways the commercial banks can have an impact on the supply of the money is through deposits or loans (Tyler Lacome, 2019). A deposit is an important step for every citizen who has some amount of savings and is searching for safe and secure ways to have some benefits on their funds. A bank deposit can be defined as the process when the citizens trust their funds to a financial institution for a period of time and earn a percentage at the maturity date, for choosing this option compared to all the other options available in the market (Kagan, 2021). The percentage earned is known as deposit rate and plays an important role in the financial market (Gavurová et al., 2019). The interest margin is defined as the difference between the interest received and paid, and it accounts for a significant portion of the bank's earnings or in other words, it is the gap between the lending and deposit rate. This interest band has a high impact on the intermediation function of the banks.

Above said, the main purpose of this thesis is to develop a model, which examines the effect of potential indicators on Bank's deposit rate. As such, this research addresses the following research questions:
"To what extend are deposit rates, in Western Balkans, affected by microeconomic and macroeconomic variables?"

To answer the research question, the study will focus on the deposit rates of Albania, Kosovo, Montenegro, North Macedonia, Serbia, and Bosnia and Herzegovina. The reason why these countries are chosen is because their economic traits and historical events are very alike. Moreover, another similarity is that these countries are not part of the European Union and joined the monetary and economic union. The period considered for this research is 2010-2017 (Douglas, 2008).

2. Literature Review

Since 1935, Fisher has published a writing called "The design of experiments" where he mentions the relation between growth rate and saving decisions. In his writing, he states that the level of savings alters by age, thus a difference in population will influence savings as well as interest rates of a market. Moreover, Fisher mentions that interest rates significantly impact the decision of consumers regarding the consumption and their request for funds. In addition, in a research by Park and Peristani (1998), it was stated that GDP per capita and deposit rates have an adverse relation.

In contrast, deposit rate and inflation are most likely to have a positive correlation. This relation derives since it will be necessary for banks to raise deposit rates in order to encourage citizens to trust their funds in financial institutions. In another article, Keynes and Hansen state that a declining population is connected with a decline in consumer spending. The result will be a rise of saving rates and consequently a rise in deposit supply. Overall, they conclude that there is a direct correlation between population growth and deposit rates, since more supply lowers the price. Consequently, a rise in deposit supply lowers the deposit rates.

Additionally, in a study by Berument called "The impact of inflation uncertainty on interest rates in the UK" Inflation and GDP per capita were examined as two of the most essential macroeconomic metrics considered in their research. Every one of them yields the same result. Economic growth, as measured by GDP per capita, is predicted to have an adverse impact on deposit rates, as there will be higher demand for deposits from households.

Furthermore, Masahiro, Yasuaki, & Keiko (2009) and Murata & Hori (2006) state that deposit rate has a positive relation to bank risk in their research. Based on their results, citizens may be concerned about the safety of their savings, and will only incur the risk if the return is substantial. This means, for risky investments, financial institutions should offer higher rates as a return to cover the opportunity cost of investing in a safer alternative. McDermott (2013), in one of his speeches, noted that the reason behind the natural interest rate lowering is the drop-in population growth rates. Based on his research, slower population growth is converted to a smaller labor force, requiring less investment to employ the average worker. Meanwhile, a decrease in investment is converted to decreased interest.

In 2014, there was an argument by Sebastian Westie which suggests that a combination of decreasing and perhaps negative equilibrium real interest rates and a zero lower bound on nominal rates might make full employment hard to achieve. A substantially lower rate of interest is thought to be triggered by reduced population growth (Westie, 2019). Another study shows that the non-performing loans ratio appears to have a direct impact on deposit rates. In their research it is stated that the key explanation for this is that raising this percentage raises the bank's risk and the risk of default (Ojeaga, Paul & Odejimi, Omosefe, 2013). In a study of FK, Salami in 2018, the deposit rate was used as a key indicator of economic market and activity in his research. He looks into the significance of interest rates for the market and underlines the logical reasons for conducting more research in this field. According to Patton, deposit rates have an impact on the economy's level of saving and investment, and also the borrowing costs. The condition of a bank's liquidity is calculated as the financial institutions net excess reserves (NER) with the central bank. Banks' liquidity is a fundamental factor for implementing an effective monetary policy: to have the short-term rates under control and having a significant impact on other rates (Faure, Alexander Pierre, 2014).

Bikker investigates the effects of bank details on deposit rates in his work known as "Determinants of Interest Rates on Time Deposits and Savings

Accounts: Macro Factors, Bank Risk, and Account Features" (2017). Liquidity is expected to have a negative effect on deposit rates, based on his research. Because it has enough cash to deal with short-term liabilities, a liquid bank does not find it necessary to raise rates to entice new depositors. Furthermore, a liquid bank boosts citizens' trust in putting their funds there.

In a research named "Population growth and savings rates: Some new cross-country estimates", (Christopher, 2005) analyzes the movements of population rates and the interest rate trend. To conclude, the research states a rising age of a nation because of a decline in the population growth will cause a raise in savings and loans as well as a decrease in natural rate of interest. Therefore, this will be translated to a decrease of deposit rate.

3. Methodology

Deposit rates are determined by a multitude of elements. In this thesis we are going to study a few of them that we believe are the most important and have the highest effect. The variables considered are inflation, non-performing loans, GDP per capita, population growth and liquidity rate. We will define each variable in this part, as well as the projected influence they will have on our dependent variable. In our study we will carry a multiple regression analysis of panel data for six nations of Western Balkans for the years 2010 to 2017 included in this study. Albania, Kosovo, Bosnia and Herzegovina, North Macedonia, Montenegro, and Serbia are the countries studied. Data was acquired from reliable references, such as, the World Bank, International Monetary Fund, National Bank of Albania, and the Central Bank of Serbia and the Central banks of each of the countries involved. EViews is the statistical platform used to complete econometric analysis where you can easily manage your data, run model simulations, make predictions as well as generate high quality tables and graphs for publication or inclusion in other applications.

3.1. Model Specification

To analyze the relationship among the dependent variable of Deposit rate and the five independent variables; inflation rate, liquidity rate, population growth, non-performing loans and GDP per capita we will conduct various tests including unit root, Heteroskedasticity, Multicollinearity, normality test etc. to make sure that our model satisfies all the determined statistical assumptions to derive conclusions.

Dep rate=f (inflation, NPL rate, liquidity rate, GDP per capita, pop growth)

In this paper, our research question is broken down into the following hypotheses:

H1: GDP per capita is expected to have a negative impact on Deposit rate

H2: inflation is expected to have a positive impact on Deposit rate

H3: Liquidity rate is expected to have a negative impact on Deposit rate

H4: Non-performing loan is expected to have a positive impact on Deposit rate

H5: Population growth rate is expected to have a positive impact on Deposit rate.

4. Empirical Findings

In this section we will see if all assumptions are accomplished and the determinants of the regression model in this statistical analysis are significant enough to provide necessary information regarding the deposit rate. The confidence level used as a benchmark through this research will be 5 percent. It is significant to emphasize that the regression is linear, which satisfies the assumption of the linearity of the regression.

4.1. Unit Root

The evidence taken by the tests using Dickey-Fuller unit root displayed that the non-stationarity problem is present for all variables. The next step we take to solve this issue is to transform all the variables into growth rate by taking the difference of one period before. In models will low observation this method may be an issue as we loss at least one observation but in our case the number of observations is enough huge not to concern about this issue.

The following is the hypothesis that will be tested:

Null hypothesis: Variables are not stationary

Alternative: Variables are stationary

The probability value must be lower than 0.05 so that we can reject the null hypothesis and state that the variables in our model are stationary as we would like them to be in order to have a proper model. The ADF test is used to test the stationary. One by one, the variables will be evaluated.

Table 1: Unit root test for deposit rate

Method	Statistic	Prob.**
ADF - Fisher Chi-square	21.8284	0.0395
ADF - Choi Z-stat	-1.47254	0.0704

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

The probability value is 0.0395 so less than 0.05. So, we can conclude that we reject the null hypothesis and that the deposit rate is stationary. The similar step will be followed for all variables. The results are the following:

Table 2: Unit root test for GDP per capita

Method	Statistic	Prob.**
ADF - Fisher Chi-square	20.8543	0.0105
ADF - Choi Z-stat	-1.3781	0.0421

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Table 3: Unit root test for inflation rate

Method	Statistic	Prob.**
ADF - Fisher Chi-square	23.6742	0.0116
ADF - Choi Z-stat	-1.3682	0.0358

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Table 4: Unit root test for liquidity rate

Method	Statistic	Prob.**
ADF - Fisher Chi-square	25.7642	0.0008
ADF - Choi Z-stat	-1.5681	0.0297

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Table 5: Unit root test for NPLs

Method	Statistic	Prob.**
ADF - Fisher Chi-square	16.3952	0.9912
ADF - Choi Z-stat	1.6983	0.8542

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Table 6: Unit root test for population growth

Method	Statistic	Prob.**
ADF - Fisher Chi-square	19.6795	0.00001
ADF - Choi Z-stat	-1.5736	0.00016

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

We notice that from five variables only the NPL rate is not stationary with a value of 0.9912 which is higher than the benchmark of 0.05. Meanwhile, the other variables are stationary. However, after integrating the variable in the first difference and since in this case it appears stationary with a p-value of 0.0234 we continue to run the regression, after we confirm that all the variables are stationary.

The Hausman test is also known and referred to by statisticians as a model misspecification test. The Hausman test allows to decide whether to choose a fixed effects model or a random effect one, in panel data analysis (data analysis across time for different entities). The best option is random effects, according to the null hypothesis; the alternative hypothesis is fixed effects, according to the alternate hypothesis. (Stephanie, 2020).

The following is the hypothesis that will be tested:
Null hypothesis: Random effects model is appropriate
Alternative hypothesis: Fixed effects model is appropriate

When the required modifications are done, the amount of cross sections is 6, which is the same as the number of independent variables. As a result, we cannot utilize random effect estimates or perform the Hausman Test.

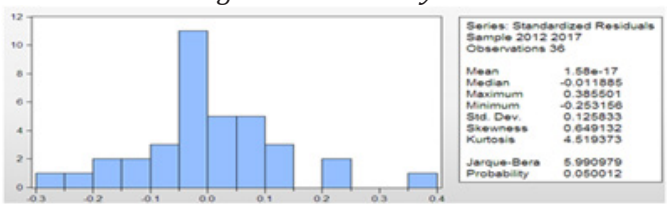
4.2. Normality test

We constructed the residual series just for the independent variables to check for the error-normality terms. The following is the hypothesis that will be tested:

Null hypothesis: Residuals are normally distributed
Alternative hypothesis: Residuals are not normally distributed

Jarque-probability Bera's value is 0.050012, which is slightly more than 0.05. As a result, we will be unable to reject the null hypothesis and will infer that the residuals are normally distributed. However, because the sample size is more than 30, even if the residuals are not normally distributed, this will not be an issue.

Figure 1: Normality test



4.3. Heteroscedasticity Test

The White test will be done using EViews statistical software to see if the assumption of homoscedasticity is met. The following is the hypothesis that will be tested:

Null hypothesis: Variance of the error term is constant (Homoskedastic)

Alternative hypothesis: Variance of the error term is not constant (Heteroskedastic)

The white test used to identify whether the model is homoscedastic or not provided enough evidence to not reject the null hypothesis, showing that the variance of the error term is the same. The result of the F- statistic test showed that the probability is 0.1352 and is more than the significance value of 0.05 applied throughout all this study (0.1352>0.05). The White test concluded that the model is homoscedastic.

Table 7: Heteroscedasticity test

Dependent Variable: RESID01^2
Method: Panel Least Squares
Sample (adjusted): 2012 2017
Periods included: 6
Cross-sections included: 6
Total panel (balanced) observations: 3(

Variable	Coefficient
DEPOSIT_RATE	-0.300102
GDP_PER_CAPITA	0.000802
LIQUIDITY_RATE	-0.002928
POP_GROWTH	0.135808
NPL_RATE	0.018812
INFLATION	0.027668
DEPOSIT_RATE(-2)	-0.015956
C	-3.234812
	Effects Spe
Cross-section fixed (dummy variables)	
Period fixed (dummy variables)	
R-squared	0.695988
Adjusted R-squared	0.408865
S.E. of regression	0.133100
Sum squared resid	0.318881
Log likelihood	33.99445
F-statistic	2.424011
Prob(F-statistic)	0.135250

4.4. Residuals analysis

The following tests are used in this part to establish the absence of heteroscedasticity and serial correlation, in order to approve and trust the regression model's results. The tests show whether the residuals contain any systematic information that could have a major impact on the explanation of the dependent variable but isn't involved in the regression model.

4.5. Auto correlation

The degree of correlation of the same variables between two successive time intervals is referred to as autocorrelation, or as also referred to as serial correlation. The autocorrelation value varies from -1 to 1. Negative autocorrelation is defined as a number between -1 and 0. Positive autocorrelation is defined as a value between 0 and 1. Autocorrelation can be beneficial in technical analysis for the equity market because it provides information about the trend of a set of historical data. Durbin Watson's value in the equation estimate output is 1.879, which is near to 2. This indicates that our model is free of autocorrelation.

4.6. Multicollinearity

Explanatory factors in a numerous econometric regression in some cases can be tightly related to one another, implying that one independent variable can be predicted by another independent variable involved in the regression. This behavior can forecast an incorrect estimator, lowering the total accuracy of the regression significantly. In cases When multicollinearity is detected, the standard error of the coefficients has the tendency to increase, and slight changes in the data found can sometimes amplify the results or change the sign of the coefficients in the model. It is critical to emphasize that the regression model's findings are used in other studies to solve or examine the effect of other economic or social concerns. As a conclusion, imprecise coefficient values might result in incorrect or divergent conclusions, causing responsible people to make poor decisions. Our research paper has a model with five independent variables. Thus, the chances of facing multicollinearity is higher. However, this problem was not part of our model since the results showed that there is no variable which is higher than the benchmark of 0.8. In this way, we can state that there is no multicollinearity in our econometric regression model. Therefore, the null hypothesis which states that there is no multicollinearity cannot be rejected. We can conclude that also this assumption is satisfied.

Table 8: Multicollinearity test

Correlation					
	GDP_PER_...	LIQUIDITY_...	NPL_RATE	POP_GROW...	INFLATION
GDP_PER_...	1.000000	-0.245057	0.400358	-0.175093	0.131859
LIQUIDITY_...	-0.245057	1.000000	-0.436740	0.398230	0.259860
NPL_RATE	0.400358	-0.436740	1.000000	-0.394418	0.193860
POP_GROW...	-0.175093	0.398230	-0.394418	1.000000	0.093429
INFLATION	0.131859	0.259860	0.193860	0.093429	1.000000

4.7. Cross sections dependence test

Cross section dependence can be caused by unobserved (or unobservable) common causes, or it can be caused by spatial or spillover effects. This challenge has been the subject of a lot of recent study on non-stationary panel data. The first-generation panel unit root and co-integration tests were clearly visible.

Null hypothesis: No cross sections correlation in residuals

Alternative hypothesis: There is cross section correlation in residuals

The probability value of Breusch Pagan Ml is equal to 0.2675 which is bigger than 0.05. Thus, we conclude that we do not reject the null hypothesis and conclude there is no serial correlation between residuals. Based on the test results, we can state that all of the economic assumptions predetermined and globally accepted are met and that our econometric model can provide valid estimators. BLUE estimations can be obtained correctly using our model. It has a high degree of precision in measuring the impact of each macroeconomic, demographic and bank features variable examined in this study on the deposit rate.

Table 9: Cross section dependence test

Residual Cross-Section Dependence Test
Null hypothesis: No cross-section dependence (correlation) in residuals
Equation: Untitled
Periods included: 6
Cross-sections included: 6
Total panel observations: 36
Cross-section effects were removed during estimation

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	17.90782	15	0.2675
Pesaran scaled LM	-0.564553		0.5724
Bias-corrected scaled LM	-1.164553		0.2442
Pesaran CD	-1.713671		0.0866

Dependent Variable: DEPOSIT_RATE
Method: Panel Least Squares
Sample (adjusted): 2012 2017
Periods included: 6
Cross-sections included: 6
Total panel (balanced) observations: 36

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP_PER_CAPITA	0.002418	0.000456	5.297258	0.0000
LIQUIDITY_RATE	-0.014997	0.005970	-2.511987	0.0212
POP_GROWTH	0.824265	0.306705	2.687484	0.0146
NPL_RATE	0.096791	0.075687	1.278836	0.2164
INFLATION	0.070309	0.098835	0.711384	0.4855
DEPOSIT_RATE(-2)	0.126375	0.137834	0.916863	0.3707
C	-10.68817	2.476509	-4.315822	0.0004

Effects Specification

Cross-section fixed (dummy variables)
Period fixed (dummy variables)

R-squared	0.971299	Mean dependent var	3.112557
Adjusted R-squared	0.947129	S.D. dependent var	1.888941
S.E. of regression	0.434338	Akaike info criterion	1.475378
Sum squared resid	3.584343	Schwarz criterion	2.223151
Log likelihood	-9.556800	Hannan-Quinn criter.	1.736371
F-statistic	40.18665	Durbin-Watson stat	1.879283
Prob(F-statistic)	0.000000		

The values for the p-value test must be lower than the benchmark of 5% in order to have significant variables in our model.

• The value of probability of GDP per capita is 0.000 which is smaller than 0.05 so we reject the null hypothesis. This means that GDP per capita is significant at 5% significance level and has a positive impact. Meanwhile from the previous studies, we were expecting a negative impact. This may be explained, since during the period studied, GDP per capita has high values for all the countries. For instance, a GDP per capita level, means that citizens will be more willing and able to make investments. Therefore, an increase in GDP per capita will also increase deposit rates, so that the banks can attract more citizens to trust their funds on them and no other options available.

• The value of probability for Inflation rate is 0.4855 which is bigger than 0.05 so we do not reject the null hypothesis and conclude that inflation is not significant at the 5% significance level. It seems that inflation is not a significant as we thought it could be to deposit rate. A reason for this may be the fact that except Serbia, the other countries do not show drastic fluctuations in inflation rate during the period studied.

• The value of probability for Liquidity rate is equal to 0.0212 which is less than 0.05 so we reject the null hypothesis and conclude that liquidity rate is significant at 5% significance level and has a negative impact.

• The value of probability of Non-performing rate is equal to 0.2164 which is bigger than 0.05 so we fail to reject the null hypothesis and conclude that NPL rate is not significant at 5% significance level. In contrary of what we expected, non-performing rate is not significant for the deposit rate. Maybe because the fact that the debtor did not make the payment at the determined time does not affect the deposit rate directly and does not impact as much so that the policy makers make changes on the rate of deposit because of this factor, even though it has a positive effect.

• The value of probability for Population growth is equal to 0.0146 which is smaller than 0.05 so we reject the null hypothesis and conclude that Population growth rate is significant at 5% significance level and has a positive impact as it was expected.

• The value of probability for Deposit rate is equal to 0.3707 which is bigger than 0.05 so we

fail to reject the null hypothesis and conclude that the Deposit rate (-2) is not significant at 5% significance level.

4.9. Coefficient Interpretation

The Coefficient of GDP per capita is 0.0024 which means that for one unit increase in Deposit rate, it will have a direct impact on GDP per capita, which will increase by 0.0024 units, ceteris paribus.
The coefficient of Liquidity rate is -0.0149, which means that for one unit increase in Deposit rate, it will have a negative impact on liquidity rate, which will cause a decrease of 0.0149 units, ceteris paribus.
The Coefficient of population growth is 0.8242 which means that for one unit increase in Deposit rate, it will have a direct impact on population growth, which will increase by 0.8242 units, ceteris paribus.
Thus, we can conclude that the only negative relationship in this model is between deposit rate and liquidity rate. The other variables, as supported by different literature reviews, have a positive and direct relationship, ceteris paribus.

5. Conclusions

The purpose of this research paper is to have a clear picture of the factors which have a significant effect on the deposit rates for the Western Balkans countries for the period 2010-2017. Overall, the tests confirm that our research is a good model since it satisfies all the econometric assumptions. The analysis is conducted in three perspectives including: macroeconomic, demographic and bank features. In addition, each factor is analyzed carefully to have a better understanding of each country's conditions. After giving an overall view for each variable and detailed analysis the following conclusions are derived:

The above-mentioned perspectives are all significant to the deposit rate, which is the dependent variable. Consequently, none of these perspectives can be neglected if it is necessary to study the deposit rate on all of the dimensions it involves. Moreover, from the econometric analysis we notice that the population growth rate is the variable with the highest influence out of all the factors considered. This means that the demographic feature has a higher impact on further changes that may happen to deposit rate compared to macroeconomic and bank features, even though it is a factor whose significance in the economic factors is discovered and involved during the last years in empirical analysis.

In addition, GDP per capita is the variable with the highest statistical influence in our model at all the confidence levels considered. On the contrary, NPL and inflation are two variables that are not considered as having a significant impact on deposit rate according to the empirical analysis. So, we can conclude that these two factors do not have a high influence on the rates of Western Balkans countries. Moreover, four out of five variables part of this empirical analysis have a positive impact on the deposit rate, which means if an increase or decrease happens to them, it will directly affect the deposit rate. On the other hand, the fifth variable, which is the liquidity rate, has a negative effect on the deposit rate.

REFERENCES

Bikker, Jacob & Gerritsen, Dirk. (2017). Determinants of Interest Rates on Time Deposits and Savings Accounts: Macro Factors, Bank Risk, and Account Features. International Review of Finance. 18. 10.1111/irfi.12143.
Booth, G. and Ciner, C. (2001), "The relationship between nominal interest rates and inflation: international evidence". Journal of Multinational Financial Management (11), pp. 269-280.
ClearTax. (2021, June 24). Deposit Interest Rate. Definition, Understanding, and How it Works?
Cook, Christopher. (2005). Population growth and savings rates: Some new cross-country estimates. International Review of Applied Economics. 19. 301-319.
Corporate Finance Institute (Ed.). (n.d.). Deposit - Overview, Contextual Definitions, and Types. Corporate Finance Institute.
Coskun, Ali & Ilgün, Erkan. (2021). Reconstruction and Developments in the Banking Sector of Bosnia and Herzegovina.
Dushku, E. (2010). Financial Development and Economic Growth: The Albanian Case. Bank of Albania.
Faure, Alexander Pierre. (2014). Interest Rates 5: Bank Liquidity & Interest Rate Discovery. SSRN Electronic Journal.

Fink, Gerhard & Haiss, Peter & Varendorff, Mina. (2007). Serbia's Banking Sector Reform: Implications for Economic Growth and Financial Development. Southeast European and Black Sea Studies.
Fisher Irving (1896), "Appreciation and Interest, new York.
Fisher Irving (1907), "The rate of interest, new York, Macmillan.
FK, Salami. (2018). Effect of Interest Rate on Economic Growth: Swaziland as a Case Study. Journal of Business & Financial Affairs.
Gavurová, Beáta & Kočišová, Kristína & Rozsa, Zoltan & Haláskova, Martina. (2019). What Affects the Interest Rate on Deposit From Households?
Ghasemi, A., & Zahediasl, S. (2012). Normality tests for statistical analysis: a guide for non-statisticians. International journal of endocrinology and metabolism.
Ghasemi, A., & Zahediasl, S. (2012). Normality tests for statistical analysis: a guide for non-statisticians. International journal of endocrinology and metabolism.
John L. Douglas, The Role of a Banking System in Nation-Building, 60 Me. L. Rev. 511 (2008).
Kagan, J. (2021, July 6). Deposits: What You Need to Know. Investopedia.
Kosovo - Banking SystemsKosovo - Banking Systems. Kosovo - Banking Systems | Privacy Shield.
IMF. External Relations Dept. (2003). Finance & Development, December 2003. Finance & Development
Nipun, S. (2017, January 13). Role of Banks in the Economic Development of a Country. Economics Discussion.
Ojeaga, Paul & Odejimi, Omosefe. (2013). The Impact of Interest Rate on Bank Deposit: Evidence from the Nigerian Banking Sector. Mediterranean Journal of Social Sciences. Vol 5. 232-238.
Stephanie. (2020, September 16). Hausman Test for Endogeneity (Hausman Specification Test). Statistics How To.
The Importance of Bank Deposits in the Money Supply. sapling.
UKEssays. (November 2018). Why to use panel unit root tests?.
Uvalić, M., & Cvijanović, V. (2018). Towards A Sustainable Economic Growth and Development in the Western Balkans.
Uvalić, M., & Cvijanović, V. (2018). Towards A Sustainable Economic Growth and Development in the Western Balkans.
Weiske, Sebastian (2019) : Population growth, the natural rate of interest, and inflation, Arbeitspapier, No. 03/2019,
Were, M., & Wambua, J. (2014). What factors drive interest rate spread of commercial banks? Empirical evidence from Kenya. Review of Development Finance, 4(2), 73–82.
Zeneli, V. (2014). Economic Development in the Western Balkans: On the Road to Competitive Market Economies? Connections, 13(4), 53-64. Retrieved July 9, 2021, from http://www.jstor.org/stable/26326377