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PROFITABILITY DETERMINANTS OF BANKS IN THE COUNTRIES WITH LOW INTEREST RATES

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ABSTRACT

The purpose of this study is to observe the effects of bank-specific and macroeconomic variables on the financial performance of conventional banks operating in new classified countries (countries with negative interest rates) over the period of 1997-2017.

Methodology. In order to empirically investigate profitability determinants, we employed OLS method (FGLS panel-data model).

The originality / value of the research is empirical research on determinants of profitability in the new classification of countries: countries with lowest interest rates in the world.

The findings show that bank specific and macroeconomic variables are very crucial in explaining the profitability. For example, capital adequacy negatively affects NIM which means that higher bank capital to total asset ratio may lead to decrease of net interest margin. Similarly, bank efficiency ratio is negatively related to NIM meaning that higher costs negatively influence to profitability of bank.

Keywords: Banks, Negative Interest Rate Policies, Inflation, Profitability.

INTRODUCTION

There are big transformations in banking operating system can be seen within the last two decades. Both external and internal factors significantly influence the structure and performance of banks. Banks are considered to play a major role in financing the economic activity and in separate segments of the market. Unlike unprofitable banks, profitable banking sector is better in resisting negative shocks. Moreover they are able to contribute into stability of the financial system in general. Hence, academics, bank management, financial markets, bank supervisors are deeply interested in bank determinants of bank performance. Linear models is used in most of the studies bank profitability, such as Short B. K. [1], Bourke P. [2], Molyneux P. & Thornton J. [3], Demirgüç-Kunt A. & Huizinga H. [4] and Goddard J. et al., [5] in order to assess the impact of numerous factors that may have a significant impact on explaining profits. In this study we investigate the effect of bank-specific and macroeconomic determinants on bank profitability. The group of the bank-specific determinants of profitability involves capital adequacy, efficiency, credit risk and liquidity. The second group of determinants relates to the macroeconomic environment within which the banking system operates. In this context, we include GDP growth, inflation rate, corruption rate, political stability and banking crisis dummy among the explanatory variables.

The paper is organized in the following manner. Section 2 represents the literature on bank profitability. Section 3 discusses stata and methodology. Section 4 shows empirical results. Section 5 summarizes the paper.

Literature review. Key determinants of banking sector performance call substantial attention of academia, financial markets and bank management [6]. According to the empirical findings and theoretical justifications, it was concluded that there were some internal and external factors that had a great influence on commercial banks. Concerning theoretical reasoning, researches (the late 1980s/early 1990s) began to implicate market power (MP) and efficiency structure (ES) theories [6]. Results of MP assert that market structure actually alters performance of banks. Businesses operating in highly concentrated industries can easily settle costs and heighten rates, that leads to spreading of their monopolistic power as well as attaining more lucrative rates in comparison with firms concentrated in small industries [7]. Conversely, ES theory suggests that developing

the efficiency of management and scale proficiency bring to higher concentrations and extra profit due to lower charges and economies of scale. As reported by Olweny T. & Mamba T. [8], the balanced portfolio model is the most applicable and significant in evaluation of bank performance; it supports the bank's portfolio conformation and asset diversification. In the literature, empirical studies investigating financial performance of banks apply variables, which are classified into three groups: (1) individual bank-specific factors (2) banking sector/industry specific factors and (3) macroeconomic indicators. Some empirical findings may underline the importance of one group's variables, while others consider two or all three categories. Furthermore, some researches were oriented towards specification of individual country's banking systems, while the rest have concentrated on countries panels [6], [9], [10], [11], [12], [13]. In the meantime, there are several investigations demonstrating the opposite results on the same studies with substantive distinctions. By way of illustration, this distinction may be seen in the case of bank size and relationship between size and profitability; some studies state that the bank size negatively effects on profitability of banks [13] whereas according to Alper D. & Anbar A. [9] growth of bank size increases the bank profitability. Apart from that, some studies demonstrated no statistically noticeable connection between bank size and profitability [12]. These conclusions refute the size hypothesis that asserts that there is a higher chance of large banks' benefit misuse of the economies of scale in their transactions.

Studies dealing with internal determinants employ variables such as bank adequacy, risk management (liquidity ratio & credit risk) and efficiency.

Risk management: The risk management is another important factor of the banking performance that controls an asset quality and levels of liquidity. In order to reduce risks, the majority of financial institutions are diversifying portfolios or increasing their liquidity during the crisis period. Regarding the situation, the risk may be classified as credit risk or liquidity risk. In the findings of Molyneux P. & Thornton J. [3] results have been shown that the levels of bank liquidity and profitability had negative and significant relationship. On the other hand, Bourke P. [2] found a contrary result, showing the negative relationship between credit risk and bank profitability [14]. The explanation of findings is that banks tend to expose more high-risk loans to customers, which in the future lead to the accumulation of more unpaid loans. It mostly implies these loans to produce minimum returns.

Capital adequacy: The capital adequacy is one of the fundamentals of ratio in the measuring of banks' capital capacity. The ratio consists of equity to total assets, and it can be explained as the higher the ratio, the higher bank performance and the lower the foreign findings in these banks. In other words, the high ratio depicts that bank is able to reduce its risk exposing with stakeholders and swallow the costs. Furthermore, the ratio can be positively related with bank profitability which explains that banks with higher capitalization have lower risk to go into bankruptcy that decreases its losses from funding and costs [15], [2], [16]. However, Beckmann R. [17] dispute that if capital is high, it produces lower profit, because well-capitalized bank are more risky, and they do not invest in potential projects with high returns, as a consequence, a low risk, in turn leads to low returns. According to Olweny T. & Mamba T. [8] the banks with higher CA ratio are considered as a well-performing and have lower level of default.

Turning to the external determinants of bank profitability, we consider variables, such as GDP Growth, Inflation, Corruption, Political Stability and Dummy.

GDP Growth: GDP Growth can measure the total economic activity, adjusted to inflation. Actually, it substantially affects to demand and supply of banks deposits and loans. According to studies, GDP Growth positively related to bank profitability [18]. At the meanwhile, studies of Alper D. & Anbar A. [9] also showed a positive relationship between bank profitability and GDP development in case of increasing demand on lending.

Inflation: This measurement is used for estimating changes in CPI for all goods and services. It has an effect on revenues and costs. According to the study of Perry P. [19] inflation can have positive or negative effect on profitability depending on it was anticipated or not. Therefore, in the case of anticipation, banks have a possibility to adjust interest rate in purpose of profit increase. In contrast, when inflation was not anticipated, there are no any bank adjustments and therefore, it leads to the situation when cost enhances faster than revenues [9]. In the study of Dietrich A. & Wanzenried G. [12] was found negative effect on profitability, when inflation was not predicted correctly [20].

Corruption: There is no clear connection between corruption and banks profitability, however, Bougatef K. [21] suggests that corruption may contribute to the issues with bad loans, which lead to negative profitability. On the other hand, Mauro P. [22] found that different varieties of corruption (e.g "speed money") may have even a positive effect as avoidance of bureaucratic delay. At the same time, Mongid A. & Tahir I. M. [23] in his study suggests that corruption may overstate the worth of crisis. The empirical study proposes that foreign banks have more lucrative profit on comparison with domestic ones in the environment of corruption.

Dummy: In order to differentiate the performance of Islamic banks and conventional banks, time variable will be used in the study. Additionally, during the crisis time, especially in 2009–2011, such dummies are widely used to identify the impact on both IB and CB performance. In 2007, the financial crisis has been occurred in the US and spread into the emerging countries by 2008 [24]. In the studies of Faizulayev A. et al., [20], similar indicator is used to cover the effect of the crisis on QISMUT+3 countries during 2009–2011.

To best of our knowledge, there is no study that empirically analyses the profitability determinants during 1997 -2017 in the countries with negative interest rates. In accordance with IMF report, there are five countries in the world that have negative interest rates: Japan, Sweden, Spain, Denmark and Switzerland. The main reason, to have negative interest rates was that to encourage banks to lend out more rather than keeping the funds in hand and paying for the park to the central bank [25].

NIM: We use Net Interest Margin (NIM) as a dependent variable to proxy for profitability. NIM is well-known profitability indicator that illustrates whether bank has made reasonable decision while setting the loans. The measure of NIM ratio is net interest income to the total asset, and it is used in the literatures of Kosmidou K. & Zopounidis S. [26], Spathis C. et al. [27], and Dietrich A. & Wanzenried G. [28].

Overall, the using references gives detailed explanation of in-door and industry-specific indicators that impacts on bank profitability, while the macroeconomic determinants' results may vary depending on their proper estimation.

MAIN PART

Data and Methodology. We are investigating profitability determinants by observing the influence of bank-specific and macroeconomic variables (Table 1) on the financial performance of conventional banks operating in new classified countries by Vikram H. and Emanuel K. [25] (5 countries with negative interest rates) by employing Feasible Generalized Least Squares method. The countries are: Japan, Sweden, Spain, Denmark and Switzerland. The data is collected from the World Bank database over the period of 1997–2017. The following baseline will be estimated in order to determine the fundamental relationship between each variable:

$$Y = \beta_0 + \beta_{1TETA} + \beta_{2CTI} + \beta_{3NPL} + \beta_{4LIQ} + \beta_{5LGDP} + \beta_{6inf} + \beta_{7CRP} + \beta_{8POL} + \beta_{9DUM} + \varepsilon \quad (1)$$

Y = The financial performance of bank as expressed by the NIM.
β_0 = is the constant parameter.
$\beta_{1\text{-}9}$ = are model coefficient parameters.
ε = residual term

Dependent Variables: The net interest margin (NIM) is used as a measure of performance in the study. The NIM variable is defined as the net interest income divided by total assets. And it gives an estimation of the profit earned on interest activities [29].

The bank-specific characteristics proxied as internal determinants of bank profitability of banks. However, Macroeconomic variables are proxied as external determinants of profitability of banks.

Capital Adequacy: We use the ratio of equity to total assets (TETA) which represents the bank readiness to incur losses and get risk exposure with shareholders. We assume that if this ratio is high then the necessity in external funding is reduced and bank profitability becomes higher. The expected positive relation between TETA and performance concludes that well-capitalized banks encounter lessened cost of becoming bankrupt which leads to the decreased funding and risk costs [30], [2], [16].

Table 1 – Summary and measurement of the variables.

Symbol	**Variables**	**Proxy**	**Researchers**
Dependent variables			
NIM	Net interest margin	Net interest income/total assets	Naceur [29]
Independent variables:			
Bank specific variables			
TETA	Capital adequacy	Bank capital to total asset (%)	Boadi et al. [30], Bourke [2], Bashir [16]
CTI	Efficiency	Bank cost to income ratio (%)	Munyambonera [10]
NPL	Credit risk	Non-performing loans to gross loans (%)	Athanasoglou et al. [6]
LIQ	Liquidity ratio	Liquid assets/total assets (%)	Bourke [2], Molyneux & Thornton [3]
Macroeconomic variables			
GDP	GDP growth	GDP logarithm	Demirgüç-Kunt & Huizinga [18], Bikker & Haixia [31]
Inf	Inflation rate	Annual inflation based on CPI	Perry [19], Bourke [3]; Molyneux & Thornton [3], Bashir [16], Kosmidou & Tanna [32]
CRP	Corruption rate	Control of corruption: percentile rank	Mongid & Tahir [23], Chen & Liao [33]
POL	Political Stability	Political stability: percentile rank	Alesina & Perotti [34], Yalçinkaya et al. [35]
DUM	Banking crisis dummy	1=Banking Crisis, 0=None	Faizulayev et al. [20], Dietrich & Wanzenried [12], Mirzaei et al. [36]
Note – compiled by the authors			

Efficiency: We calculate efficiency by bank cost to income ratio (%) that represents how banks can be efficient in terms of allocation of resources and utilization as human and technological changes. In studies this link was found as a negative one. In theory such relationship can be explained by the assumption that higher costs negatively influence to profitability of bank. This conclusion can be explained by high operational costs among commercial banks [10].

Credit Risk: We use the ratio of non-performing loans to gross loans (NPL). In literature, increased exposure to credit risk usually associated with low level of firm profitability and, hence, negative relationship is expected. However, banks take measures to monitor the credit risk and implement policies to foresee the future risk, and in the result, they can get an improved profitability level. Therefore, credit risk can be considered as a predetermined variable [6].

Liquidity: We use the ratio of liquid assets to total assets (LIQ) to measure a liquidity. The high percentage of this ratio shows a high level of bank liquidity. One of the biggest bank failure reasons is low level of liquidity. On the other hand, there is an opportunity cost of higher returns while keeping the liquid assets. According to study of Bourke P. [2] there is a positive relationship between bank liquidity and profitability. However, banks may grow cash holdings in order to decrease the risk level in times of insatiability. Oppositely, Molyneux P. & Thornton J. [3] state on negative correlation between liquidity and profitability levels.

Macroeconomic Variables: We use the following macroeconomic characteristics as external determinants of bank profitability:

GDP growth: We use GDP growth estimated by GDP logarithm (GDP) to measure the total economic activity adjusted inflation. It has a significant influence on numerous factors as demand and supply of deposits and loans. According to the literature there is a positive relationship between GDP and bank profitability due to increased level of the demand for lending [18], [31].

Inflation rate: Inflation rate (Inf) estimated by annual inflation based on Consumer Price Index (CPI) measures overall growth in CPI for all goods and services. Inflation has an impact on revenues and costs. The relationship between Inf and profitability has either positive or negative impact depending on whether it is expected or not [19]. Banks adjust interest rates in order to increase revenue in case of anticipation of Inf.

Contrarily, costs will increase faster than revenues of Inf is not expected. However, majority of studies states a positive link between Inf and profitability [2], [3], [16], [32].

Corruption rate: We use corruption rate to measure the level of public corruption (CRP). Mongid A. & Tahir I. M. [23] found an interesting result from corruption index (CRPIX) which was positive (0.04) and significant at 5 %. They suggest that operation of banks in environment of corruption may flourish on pricing regarding lending and deposit rates. In fact, banks enjoy profitability even if they are inefficient, because of ability of compensating higher cost due to corrupt environment and increasing more revenue. On the other hand, Chen S. H. & Liao C. C. [33] found an opposite negative impact of corruption on bank profitability.

Political stability: We use political stability variable to determine the profitability of the banking sector. In accordance with Alesina A. & Perotti R. [34] the consequences of political instability lead to increased risk in economy which comes from political risk. Because of tight link between these two sectors it also impacts microeconomic and macroeconomic performance of the country negatively. Therefore, the banking sector which is a fundamental of financial sphere should be exposed to influences either in supply and demand. Of course, we can see a particular impact on supply side due to increased risk, however, costs of banks are also rises in the same manner [35].

Banking crisis dummy: The dummy variable estimated 1=Banking Crisis, 0=None which is sign of financial distress in the banking system. Mirzaei A. et al. [36] in their study found that IBs surpasses their peer in terms of NIM or NNIM in the top nine Islamic finance-oriented countries. There is more negative impact of crisis on CB rather than IBs. Only one negative and statistically significant coefficient was found in 2011, while CBs had 7 significant coefficients for CBs. According to these results we may see that QISMUT+3 countries were not taking risky assets which triggered the financial crisis. The result shows the work of Dietrich A. & Wanzenried G. [28]. The elasticity of IBs can be explained by better capitalization and implication of non-interest-based activities. Therefore, they were able to resist in terms of global financial crisis during 2009–2011 suggested [20].

RESEARCH RESULTS

Before running regression analysis, we tested the model for the robustness:

- Multicollinearity test (independent variables are correlated – biased estimation)
- Autocorrelation (error terms are correlated)
- Heteroscedasticity (distribution of error term is not normally distributed).

First of all, we declared the model by running time series analysis. Since we used the data for the 1996–2017 year period, the given data is not evenly distributed.

```
. correl NIM TETA CTI NPL DLIQ LGDP Inf CRP POL DUM
(obs=95)
```

	NIM	TETA	CTI	NPL	DLIQ	LGDP	Inf	CRP	POL	DUM
NIM	1.0000									
TETA	0.2876	1.0000								
CTI	-0.3947	-0.0017	1.0000							
NPL	0.0458	-0.0037	-0.2773	1.0000						
DLIQ	-0.2786	0.0219	0.4025	-0.3883	1.0000					
LGDP	-0.0456	-0.2335	-0.2278	0.3130	-0.7171	1.0000				
Inf	0.4013	0.2943	-0.1628	-0.2113	0.0171	-0.3267	1.0000			
CRP	-0.2274	-0.0712	0.0161	-0.2079	0.2185	0.0006	-0.0670	1.0000		
POL	-0.3994	-0.2924	0.2291	-0.2722	0.2933	-0.0339	-0.2761	0.8822	1.0000	
DUM	0.0056	-0.2108	-0.0009	0.2996	-0.1561	0.1668	0.0681	-0.0668	-0.1620	1.0000

Figure 1 – Correlation Analysis

Note – compiled by the authors

In order to satisfy the regression model and the coefficient values itself, we then test for multicollinearity

of each specific variables included in the model. As the multicollinearity reduces the robustness of coefficient values and weakens the statistical power of model, it is important to do the test through the VIF (Variance inflation factor).

As a result of correlation analysis in figure 1, we clearly see the relationship between dependent and independent variables, for example, NIM is positively correlated with TETA, NPL, inflation rate and dummy variable, while it is negatively correlated with CTI, LIQ, GDP, corruption rate and political stability variables.

Having supplied correlation result, now we move to determine how variables affected by the strength of correlation and independent variables. The figure 2 shows VIFs for the independent variables and it starts at a value of 1. In fact, the result of VIF can be valid if it will be accounted between 1 to 5. If the suggested result is greater than 5, so it represents the critical level of multicollinearity, indicating the poorly estimated coefficients and the p-value of them is uncertain. Looking at the table, we can see that the mean VIF for the model is equal to 4.14, which is explained as a moderate correlation between variables.

```
. estat vif
```

Variable	VIF	1/VIF
POL	12.35	0.080975
CRP	10.19	0.098144
LGDP	3.07	0.325288
DLIQ	3.06	0.326360
TETA	1.96	0.510797
Inf	1.85	0.540255
CTI	1.78	0.563235
NPL	1.53	0.654599
DUM	1.46	0.683917
Mean VIF	4.14	

Figure 2 – Variance Inflationary Factor (VIF)
Note – compiled by the authors

Furthermore, GLS panel-data model uses Wooldrigde test in figure 3 to indicate the autocorrelation, which normally shows the degree of similarity between time series and a lagged time interval. P-value should be less than 1 % or 5 % or 10 %, if there is autocorrelation. The supplied result rejects the null-hypothesis, meaning that there is a first-order autocorrelation.

```
Coefficients:  generalized least squares
Panels:        heteroskedastic
Correlation:   no autocorrelation

Estimated covariances      =        20          Number of obs     =         95
Estimated autocorrelations =         0          Number of groups  =         20
Estimated coefficients     =         9          Obs per group:
                                                              min =          3
                                                              avg =       4.75
                                                              max =          5
                                                Wald chi2(9)      =   2.03e+10
Log likelihood             =  12.42606          Prob > chi2       =     0.0000
```

NIM	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
TETA	-.0507096	.0237443	-2.14	0.033	-.0972474	-.0041717
CTI	-.0186394	.0007169	-26.00	0.000	-.0200445	-.0172342
NPL	-.0352242	.0067082	-5.25	0.000	-.048372	-.0220765
DLIQ	.8010557	.0765845	10.46	0.000	.6509529	.9511586
LGDP	.2361357	.0133426	17.70	0.000	.2099847	.2622866
Inf	.001494	.0123017	0.12	0.903	-.0226169	.0256049
CRP	.2475039	.2227351	1.11	0.266	-.1890488	.6840567
POL	-.8688988	.1375182	-6.32	0.000	-1.13843	-.5993681
DUM	.1433367	.0338886	4.23	0.000	.0769163	.2097572
_cons	0	(omitted)				

Figure 3 – Wooldrige test for autocorrelation.
Note – compiled by the authors

Turning to the heteroscedasticity in figure 4, generally, the time series model can experience significant error variance changes from the beginning to the end of series, which means that the independent variable NIM can change its value during the given period. The main problem with heteroscedasticity is that the standard error is biased. On the other hand, homoscedasticity can be explained when the error term has the same distribution across the variables (Figures 5, 6).

```
. local df=e(H_g)-1

. lrtest hetero homo, df(104)

Likelihood-ratio test                                 LR chi2(104)=   -117.64
(Assumption: hetero nested in homo)                   Prob > chi2 =    1.0000
```

Figure 4 – Test for heteroscedasticity.
Note – compiled by the authors

The findings show that “hetero nested in homo” and the prob > chi2 statistic for the model, which rejects null hypothesis stating as all of the regression coefficients (other than the constant term) are zero. LR chi2 (104) = -117.64; Prob > chi2 = 1.0000.

```
Coefficients:  generalized least squares
Panels:        heteroskedastic
Correlation:   common AR(1) coefficient for all panels  (0.2006)

Estimated covariances      =        20          Number of obs     =         95
Estimated autocorrelations =         1          Number of groups  =         20
Estimated coefficients     =        10          Obs per group:
                                                              min =          3
                                                              avg =       4.75
                                                              max =          5
                                                Wald chi2(9)      =  567417.94
                                                Prob > chi2       =     0.0000
```

NIM	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
TETA	-.0905886	.0255426	-3.55	0.000	-.1406511	-.040526
CTI	-.0150049	.0009676	-15.51	0.000	-.0169014	-.0131084
NPL	-.0333345	.0069014	-4.83	0.000	-.0468609	-.0198081
DLIQ	-.3024455	.1867803	-1.62	0.105	-.6685282	.0636371
LGDP	-.307552	.0858385	-3.58	0.000	-.4757924	-.1393116
Inf	-.0380869	.0144682	-2.63	0.008	-.0664441	-.0097297
CRP	.447795	.2454274	1.82	0.068	-.033234	.9288239
POL	-1.075953	.1489904	-7.22	0.000	-1.367969	-.7839372
DUM	.0429365	.0379534	1.13	0.258	-.0314509	.1173239
_cons	6.974445	1.101868	6.33	0.000	4.814823	9.134067

Figure 5 – Test for heteroscedasticity.
Note – compiled by the authors

```
Coefficients:  generalized least squares
Panels:        homoskedastic
Correlation:   no autocorrelation

Estimated covariances      =         1          Number of obs     =         95
Estimated autocorrelations =         0          Number of groups  =         20
Estimated coefficients     =        10          Obs per group:
                                                              min =          3
                                                              avg =       4.75
                                                              max =          5
                                                 Wald chi2(9)      =      60.40
Log likelihood             = -46.39575           Prob > chi2       =     0.0000
```

NIM	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
TETA	.0465568	.0514695	0.90	0.366	-.0543215	.1474351
CTI	-.0097727	.0042766	-2.29	0.022	-.0181546	-.0013908
NPL	-.0241868	.023663	-1.02	0.307	-.0705655	.0221919
DLIQ	-.8708769	.3656558	-2.38	0.017	-1.587549	-.1542047
LGDP	-.2661583	.1525033	-1.75	0.081	-.5650593	.0327427
Inf	.0583935	.0416115	1.40	0.161	-.0231637	.1399506
CRP	.2438939	.4397715	0.55	0.579	-.6180423	1.10583
POL	-.5601789	.469853	-1.19	0.233	-1.481074	.360716
DUM	-.0132149	.1341626	-0.10	0.922	-.2761688	.249739
_cons	5.360744	1.991596	2.69	0.007	1.457287	9.264201

Figure 6 – Regression Analysis by employing feasible generalized least square FGLS.

Note – compiled by the authors

The results of FGLS panel-data model in figure 6 indicate that increasing capital adequacy negatively affects NIM which means that higher bank capital to total asset ratio may lead to decrease of net interest margin. This finding contradicts with the expected positive relation between TETA and bank performance shown in the study of Boadi E. K. et al. [29], Bourke P. [2], Bashir A. H. [16]. Similarly, bank efficiency ratio is negatively related to NIM meaning that higher costs negatively influence to profitability of bank, which support the study about high operational costs among commercial banks of Munyambonera E. F. [10]. In terms of credit risk, NPL is negatively related to NIM, which expects the increased exposure to credit risk associated with low level of firm profitability. This results supports the study of Athanasoglou P. P. et al., [6]. Likewise, LIQ has negative relationship with NIM, meaning that the higher percentage of this ratio, a higher level of bank liquidity. Thus this finding contradicts the study of Bourke P. [2] stated a positive relationship between bank liquidity and profitability. However, the study of Molyneux P. & Thornton J. [3] maintains the suggestion with negative correlation between liquidity and profitability levels. Regarding macroeconomic variables, there is a negative relationship between GDP and bank profitability due to decreasing level of the demand for lending, which is contrary to the study of Demirgüç-Kunt A. & Huizinga H. [18], Bikker J. H. & Haixia Hu [30]. Moreover, the relationship between Inf and profitability has been expected either positive or negative impact depending on whether it is expected or not according to Perry P. [19]. Since banks adjust interest rates in order to increase revenue in case of anticipation of Inf, which may impact on costs to increase faster than revenues of Inf. However, the regression results counter a positive link between Inf and profitability [2]; [3], [16], [31]. POL is negatively correlated with NIM, because the consequences of political instability lead to increased risk in economy which comes from political risk [33] and this results supports the expectation. As for the CRP and dummy (bank crisis), the results show positive relationship, which suppose that bank performance, in environment of corruption, may flourish on pricing regarding lending and deposit rates [23], although the result is contrary to Chen S. H. & Liao C. C. [32], which found an opposite negative impact of corruption on bank profitability. Whereas the dummy variable which estimated 1 = Banking Crisis, 0 = None, having positive relation with NIM because if increasing number of banks peer. However, the study of Mirzaei A. et al. [35] found the negative correlation, showing that IBs surpasses their peer in terms of NIM or NNIM in the top nine Islamic finance-oriented countries.

CONCLUSION

To sum up, this study identified the empirical basis to analyze the impact of bank-specific, industry-specific, and macroeconomic variables on the bank profitability. We observed the conventional banks, operating in countries with negative interest rates (Switzerland, Denmark, Japan, Sweden and Spain) over the period of 1997-2017 and applied FGLS panel-data model. The results show that capital plays an important role in bank's profitability and increased exposure of credit risk may lead to losses. Moreover, the impact of macroeconomic variables also had significant sign on the bank's performance, indicating that the banks usually adjust interest rates in order to increase revenue in case of inflation growth. In addition, we considered the impact of political stability in those counties, which resulted in negative sign as well as GDP growth.

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ТӨМЕН ПАЙЫЗДЫҚ МӨЛШЕРЛЕМЕДЕГІ ЕЛДЕРДЕГІ БАНКТЕРДІҢ КІРІСТІЛІК ДЕТЕРМИНАНТТАРЫ

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АҢДАТПА

Зерттеу мақсаты 1997-2017 жылдар кезеңінде жаңа жіктелген елдерде (теріс пайыздық ставкалары бар елдерде) жұмыс істейтін дәстүрлі банктердің қаржылық нәтижелеріне ерекше банктік және макроэкономикалық айнымалылардың әсерін бақылау болып табылады.

Әдіснамасы. Табыстылықты анықтайтын факторларды эмпирикалық зерттеу үшін біз OLS әдісін қолдандық (панельдік деректердің FGLS моделі).

Зерттеудің бірегейлігі / өзектілігі – елдерді пайыздық саясат бойынша жіктеу.

Зерттеудің нәтижесі – банкке тән және макроэкономикалық айнымалылардың кірістірілікті түсіндіруде өте маңызды рөл атқаратынын көрсетеді. Мысалы, капиталдың жеткіліктілігі ТПМ-ға (таза пайыздық маржа) теріс әсер етті, яғни банктік капиталдың жиынтық активтерге қатынасы таза пайыздық маржаның төмендеуіне әкелуі мүмкін. Сол сияқты, банктің тиімділік коэффициенті оған теріс байланысты, яғни жоғары шығындар банктің кірістілігіне теріс ісер етеді.

Түйін сөздер: банктер, теріс пайыздық саясат, инфляция, кірістілік.

ДЕТЕРМИНАНТЫ ПРИБЫЛЬНОСТИ БАНКОВ В СТРАНАХ С НИЗКИМИ ПРОЦЕНТНЫМИ СТАВКАМИ

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АННОТАЦИЯ

Целью настоящего исследования является изучение влияния специфических банковских и макроэкономических переменных на финансовые показатели традиционных банков, работающих в новых классифицированных странах (странах с отрицательными процентными ставками) в период 1997–2017 гг.

Методология. Для того, чтобы эмпирически исследовать факторы, определяющие рентабельность, мы использовали обобщенный метод наименьших квадратов (ОМНК) (панельная модель данных FGLS).

Оригинальность / ценность исследования заключается в классификации стран по процентной политике.

Результаты исследования показывают, что специфические для банка и макроэкономические переменные играют очень важную роль в объяснении прибыльности. Например, достаточность капитала отрицательно влияет на процентную маржу (далее – NIM), что означает, что более высокое отношение банковского капитала к совокупным активам может привести к снижению чистой процентной маржи. Аналогичным образом, коэффициент эффективности банка отрицательно связан с NIM, что означает, что более высокие затраты отрицательно влияют на прибыльность банка.

Ключевые слова: банки, отрицательная процентная политика, инфляция, рентабельность.

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ҚҰРЫЛЫСТАҒЫ КІРІСТІ ЕСЕПКЕ АЛУДЫҢ ЗАМАНАУИ ӘДІСТЕРІ

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АҢДАТПА

Зерттеудің мақсаты ҚЕХС (IFRS) 15 «Сатып алушылармен жасалған шарттар бойынша түсім» жаңа стандартын енгізудің нәтижесінде құрылыстағы түсімді есепке алуға және соның салдарынан ұйымдардың қаржылық есептілік көрсеткіштеріне ықтимал әсерін анықтау болып табылады.

Әдіснамасы – мақала абстракталық-логикалық тәсіл негізінде жүргізілді. Әдістемелік негіз жүйелік талдау болып табылады.

Зерттеудің бірегейлігі / құндылығы. Мақалада ХҚЕС-ның негізінде дайындалған келісімшарт бойынша кірісті тану кезінде әдіснамалық және әдістемелік сипаттағы өзгерістер қарастырылған. 15 «Сатып алушылармен жасалған шарттар бойынша түсім» ХҚЕС (IFRS) және құрылыстағы түсім бойынша қолданыстағы стандарттарға салыстырмалы талдау жүргізілді.

Зерттеу нәтижелері. Мақалада құрылыс ұйымдарында ҚЕХС (IFRS) 15 қолдану қажеттілігі қарастырылған; есепке алу мен параметрлердің әлеуетті есепке алушы – инвесторға әсеріне байланысты заңдылықтар анықталып, ҚЕХС (IFRS) 15 жаңа стандартының ұзақ мерзімді құрылыс мердігерлік шарттары бойынша түсімдерді есепке алуға және соның салдарының компанияның қаржылық қызметінің көрсеткіштеріне ықтимал әсері айқындалған.

Түйін сөздер: ҚЕХС 15, кірісті тану, инвестициялар, құрылыс, құрылыс шарттары.