

# Foreign Direct Investment and Bank Performance in Uzbekistan

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## Abstract

Several studies have used different methodologies to establish the link between foreign direct investment and bank performance. This study includes literature on the impact of foreign direct investment on the performance of commercial banks in Uzbekistan. Therefore, the relationship between foreign direct investment and bank performance is to be analyzed. The study used secondary data of FDI from the Data Stream while extracting financial data from the annual reports of commercial banks over a period from 2006 to 2017. This study will be conducted using the ARDL technique. The empirical analysis shows that FDI has an insignificant relationship with bank performance in Uzbekistan. Therefore, it is recommended to conduct a study on the same topic in all Central Asian Countries due to the transition of economies of these countries.

**Keywords:** foreign direct investment (FDI), bank performance, ARDL model, Uzbekistan

## I. INTRODUCTION

The financial performance involves different methods that evaluate how effective an organization is in utilizing its resources to make a profit. One of the most popular financial performance of firms is the earnings before taxes and interest, net asset value, and operating income (Periu, 2019). However, there is a range of measurements of financial performance and any businesses should consider them all (Kenton, 2019). Therefore, it depends on the objective of business in choosing an appropriate specific measurement. For example, in the banking sector, financial performance means an ability to generate sustainable profitability (Adam, 2014). Hence, a bank financial performance refers to an ability to use its available resources effectively to increase the wealth of shareholders and generate sustainable profits to

improve the bank's strength of capital base via retained earnings (Mishra and Modi, 2015).

Bank performance is rated as strong when satisfactory financial conditions are achieved, and bank operations are improved even though there is increased competition in the market as enterprises compete for market shares (Dhanabhakym and Kavitha, 2012). As a result of increased competition, there are new or foreign products available in the market. In the banking system of Uzbekistan, the capital adequacy ratio was 23.3 percent while total capital of banks was 7.8 trillion soum (Uzbek currency) in 2016. The assets grew by 25.1 percent to 65.2 trillion soum in their respective order (Muminova and Umaraliev, 2017).

Foreign direct investments and activities of

multinational banks in developing countries have dramatically increased. Moreover, scholars are motivated to conduct researches regarding the topic of the increased interest of foreign banks in developing countries. The provision of credit by international banks was increased in Uzbekistan to 42.7 trillion SUM (Muminova and Umaraliev, 2017) and, moreover, the foreign capital in banks is also increased in Uzbekistan. The role of foreign banks with foreign capital in the banking sector plays an important role in developing and developed countries (Kim and Mah, 2018). Some people argue that banks with foreign capital have a positive impact on competition and efficiency, capital ratio, technology, innovation, management skills, and credit availability. However, at the same time, others believe that there is a negative effect of the bank with foreign capital as these banks have caused destabilization of the national banking industry. The past literature suggests that researchers tend to find a positive influence rather than the negative impact of foreign banks. As a result, a number of politicians in developing nations try to convince international banks to keep capital in their countries (Kariuki and Sang, 2018). This has resulted in the increased interest of researchers to examine bank involvement in these countries. Hence, there are a range of findings with theoretical and empirical studies conducted on this topic (Tanna, 2009; Hamdan and Alrgaibat, 2015; Lee and Wang, 2018; Zhu, 2012; Kalayci and Tekin, 2016; Azeroual, 2016; Buzdugan and Tuselmann, 2018; Giannetti and Ongena, 2007; Wadaki, 2010; Mamatzakis and Bermpei, 2013; Bruno and Cipollina, 2014).

As referring to empirical studies, there are many studies that have found a positive impact of foreign banks on the economy of developing nations (Cull and Soledad, 2010). Consequently, politicians, as well as governments, have developed strategies to increase the number of foreign banks in the developing nations. Therefore, there is an increasing number of research studies done on this sector.

Hakizimana (2015) states that most empirical studies link foreign direct investment to the countries' economic growth.

Foreign direct investments (FDI) in Uzbekistan have not been observed to be higher compared to other Central Asian countries. For a long time, Uzbekistan did not take measures actively to attract investors, but now the country is opening to the outside world and offering investment opportunities dynamically. After the change of government at the end of 2016, the investment climate in the country is improving rapidly and the government aims to attract new investors. The potential of Uzbekistan is based on strong macroeconomic fundamentals - a country with a strong domestic market, a relatively young and cheap labor force, rich in natural resources, a relatively diversified economy and a rapidly developing infrastructure (Burkhanov et al., 2015). In general, Uzbekistan has the advantage of macroeconomic stability, which, in combination with current reforms, opens up opportunities in various sectors of the economy, be it financial services, construction or tourism. Based on the positive macroeconomic situation, the country is implementing large-scale reforms aimed at ensuring further growth and improving the investment climate. In recent years, the business climate of Uzbekistan has improved significantly - in the World Bank's Doing Business ranking (2019), the country rose from 166th place in 2012 to 76th place in 2019. Reforms aimed at overcoming barriers in the field of legislation, tax and customs systems, implemented very rapidly. One of the most significant reforms was monetary liberalization in September 2017.

Consequently, the government has come up with strategies that could attract more investors into the country or could encourage investors to reinvest their profits into the economy of Uzbekistan. While the relationship between FDI and banks with foreign capital has gained high interest from researchers as well as policymakers, the consensus has not been reached because the findings show inconsistencies.

Moreover, although there is ample literature existed, there is a sparse number of studies done in Uzbekistan. With the strategies of Uzbekistan to attract more foreign direct investments into the economy, it is of utmost importance to evaluate the impact of foreign direct investments on financial performance in the country. Moreover, Uzbekistan has specifically identified foreign direct investments as one of the external financings that is needed to attain a robust, resilient, competitive and dynamic financial as well as economic stability in line with Vision 2020 (U. S. Department of State, 2018). More precisely, the government of Uzbekistan plans to raise the foreign capital earned from foreign direct investments to USD 25 billion by 2020. Therefore, this research will critically assess FDI fluctuations and its effect on the financial performance in Uzbekistan on annual data from 2006 to 2017.

Developing countries are facing the financial challenges every day and it is common to see that commercial banks fail to provide financial services for the investors who are the driver of economic growth (Grandolini, 2015). The financial industry of Uzbekistan has been stable as well as resilient throughout the years. However, the country is exposed to different risks such as liquidity, skewed distribution or corporate government risk. These risks have caused decreased profitability among commercial banks in Uzbekistan from 2012 to 2016 (UBA, 2017). Moreover, the developments in the global arena, for example, the rise of federal funds in the U.S. to 0.25 percent in 2015 caused the external financial conditions to be more rigid. As a result, the capital flows and volatility of currency were affected in developing countries including Uzbekistan (Gillespie, 2016). Additionally, it is expected the impact of slow rebalancing of the economy of China and the Brexit can change the foreign inflows into Uzbekistan.

The banking industry faced exchange as well as interest rates volatility in 2015 from Quarter 1 to Quarter 3 that had a negative impact on the credit

market. Therefore, the participation of foreign investors in the banking industry and other economic sectors was declined (PWC, 2016). This resulted in a decline in credit to the private sector to 14 percent of GDP in 2015 because banks spent the available funds to secure themselves and avoid borrowing from each other (World Bank Group, 2015).

Considering the unprecedented capital flight level due to global developments such as the increase in U.S. federal funds to 0.25 percent, the slow rebalancing of Chinese economy and Brexit which, in turn, resulted in decreased capital flows and currencies in developing nations, this study will analyze to which extent the foreign direct investments can affect the performance of Uzbek commercial banks.

There is a range of studies conducted on FDI and organization performance. For example, Kariuki and Sang (2018) conducted research on the impact of FDI on bank performance in Kenya and the same study was done by Massand and Gopalakrishna (2016) in India. However, there is a difference in legal frameworks governing FDI findings from these countries that should not be generalized to Uzbekistan. Moreover, there is ambiguity in the past literature which is related to inconsistencies in the findings of different research studies. More precisely, some studies found a positive correlation between FDI and bank performance (Sufian and Chong, 2008; Tsaurai, 2014; Massand and Gopalakrishna, 2014; Sasmaz and Gumus, 2018; Kariuki and Sang, 2018). On the other hand, other studies report a negative relationship (Vissak and Roolah, 2003; Salman and Hui, 2009; Moura and Forte, 2010). Furthermore, some studies conclude that there is no significant relationship between FDI and bank performance (Pallavi and Dhiman, 2018; Carbonell and Werner, 2018; Bayar and Gavrilletea, 2018; Tabash and Khan, 2018). Although there is abundant past literature available, researches attributed to Uzbekistan on this topic are still lacking. Instead, studies within this area focus heavily on explaining the effects of FDI on

economic growth or its determinants (Metaxas and Kechagia, 2016; Sattarov, 2012; Shukurov, 2016).

To address the mentioned issues, the current research intends to empirically assess the foreign direct investments and examine its impact on bank performance in Uzbekistan. The understanding of the relationship will help in determining the nature of bank performance and its determinants. In turn, it will help the country to understand if the policies made for attracting foreign direct investments are helpful for financial performance.

## II. METHODS & MATERIALS

This research is basic research and with a cure, the justification to carry out the research is to improve and expand the knowledge as well as understanding relating to the phenomena of interest (Sahay, 2016). In the current research, the phenomena of interest are related to the effect of foreign direct investments on the performance of commercial banks in Uzbekistan. This research will be causal research because of involvement in evaluating the nature of cause-and-effect relationships (Norris et al., 2019). In this way, the attempt of current research is to test and explain the link between the independent variable and dependent variable.

In addition, the current research is going to be based on the ex-post facto design or also known as a quasi-experimental study. Thus, this paper is to explore the effect of an independent variable on a dependent variable after the fact has occurred (Singh, 2018). Therefore, the variables are not randomly chosen but are subject of interest to the researcher.

This study involves the philosophy of positivism. Therefore, the research will seek to evaluate and explain the reality of relationships between the variables from an objective point of view. Hence, the phenomena will provide credible data. For example, the movement in bank profitability will be observed in the course of 12 years from 2006 to 2017 to explore how it correlates with FDI inflows.

The source of the data is related to the secondary information while the nature of the data is quantitative. The data covers the period of 2006 to 2017 and contains information published by Data Stream. The data will be used at equal time intervals and, correspondingly, this study will use time-series analysis. As for variable data, return on equity (ROE) will be calculated as an average of banks' ROE on an annual basis while FDI will be computed by using the real values. In this way, the accuracy of the measurements will be ensured.

Past literature has demonstrated a range of models in analyzing the determinants of bank performance. This research will include the model of Solow growth which concentrate on the neoclassical growth to picture the effect of independent variables on the dependent variable. The production function of Solow (1956) is as follows:

$$Q = f(T, L, K)$$

Where,

- Q – output
- T – technical progress
- L -labor
- K – capital

As according to the equation shown above the growth of output refers to a linear function of technical progress, physical as well as human capital (Kunda, 2011). In this way, with the purpose of improving and catering the research to the Uzbek setting, the variables stated in the equation will be dropped in this research paper to include the variable of foreign direct investments as the determinant of bank performance as proxied by ROE (return on equity). Hence, the model should be as below:

$$ROE = f(FDI \text{ } \epsilon) \quad (1)$$

The term “ $\epsilon$ ” presents the error of the equation and will be used when capturing the impact of other variables that have an impact on the bank



performance (ROE) but not included in the model of current research. Therefore, this model suggests that return on equity (ROE) is a linear function of foreign direct investment (FDI).

To assess the effect of independent variables selected on bank performance in Uzbekistan for the period observed, the Autoregressive Distributed Lag Model is to be used. To perform the estimate, the researcher will express the equation (1) as:

$$ROE_t = \beta_0 + \beta_1 ROE_{t-1} + \beta_2 FDI_t + \epsilon_t \quad (2)$$

The autoregressive distributed lad method of estimation is able to test for any long-run relationships between the variables. In addition, the autoregressive distributed lad model is suitable and perfect for the stationary variables that are integrated in mixed order. The model is also reliable and is extensively used in various research studies (Shahbaz et al., 2008).

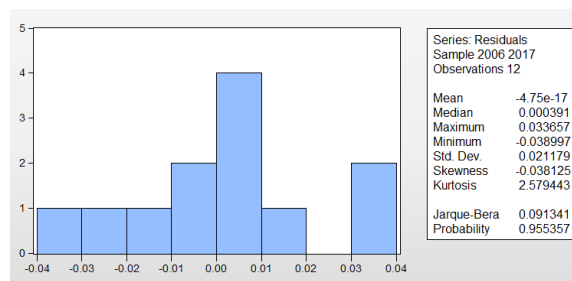
It is contended among researchers that macroeconomic data refers to a stochastic trend which is able to affect the estimates stochastic behavior in the research paper (Kaur et al., 2019). In order to ensure the integration level, differencing can be conducted through the Augmented Dickey-Fuller test (ADF). Moreover, the unit root test is to evaluate the stationarity of each variable and to ensure that the results are reliable.

### III. RESULTS

Normality test is used to ensure if research data has been collected from a population that is normally distributed. There is a range of tests exist to assess the normality distribution, however, one of the commonly used tests is the Jacque Bera test (Thadewald and Buning, 2007). If the distribution of residuals is normal, the probability level should be greater than 5 percent and the Jacque-Bera statistics should not be significant. As referring to *Table 3.1*, the probability is higher than the significance level of 5%. Simultaneously, the Jarque-Bera statistic is not

significant. Hence, the residuals are normally distributed.

Table 3.1: Normality Test



In time series analysis one of the common assumptions is to have stationarity in the data. Stationarity means that the data does not have a unit root with properties such as the variance, autocorrelation and mean. A unit root is a stochastic trend in a sequence of times, sometimes called a “random drift walk”. If a time series has a unit root, it will have an unpredictable systematic pattern. Hence, it is important to perform unit root test to check for stationarity in a time series. Augmented Dickey-Fuller (ADF) is the common test for checking the existence of the unit root. ADF is applied for more complex models and is issued to test serial correlation. The presence of unit root can be explained by assessing the probability and t-Statistic figures as is illustrated in *Table 3.2*. As referring to the rule of thumb, unit root exists when the probability is greater than 10 percent or when the t-Statistic is less than the test critical values. From the findings, ROE is stationary at 5 percent. When the first differencing has been made for the independent variable that is non-stationary, it is revealed that FDI is stationary at 10%. Therefore, the null hypothesis of the presence of unit root is rejected. For the consistency purpose, the order of integration is mixed since the series has I(0) and (1). In this way, the researcher is allowed now to advance to the Autoregressive Distributed Lad Model.

Table 3.2: Summary of Unit Root Test

Variables	ADF Statistics	Level of difference	Probability value	1% critical value	5% critical value	10% critical value	Order of integration
ROE	-3.220247	0	0.0494**	-4.297073	-3.212696	-2.747676	I(0)
FDI	-3.935769	1	0.0617*	-5.521860	-4.107833	-3.515047	I(1)

### Test of Hypothesis

$H_0$ : There is no significant relationship between FDI and bank performance in Uzbekistan

$H_1$ : There is a significant relationship between FDI and bank performance in Uzbekistan

### Decision Role:

Reject  $H_0$  and accept  $H_1$ , if t-Statistic calculated is greater than t-Statistic tabulated

Reject  $H_1$  and accept  $H_0$ , if t-Statistic calculated is smaller than t-Statistic tabulated

Table 3.3: Regression Result of hypothesis: Impact of FDI on bank performance

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
ROE(-1)	0.484036	0.160513	3.015552	0.0167
FDI	-0.004021	0.016098	-0.249812	0.8090
C	0.099106	0.028929	3.425798	0.0090

The equation for hypothesis one as found from the results shown in *Table 3.3* is written as:

$$ROE_t = 0.099106 + 0.484036ROE_{t-1} + (-0.004021)FDI_t + \epsilon_t$$

The crucial parameters of the regression are the economic a priori criteria, the significance of t-test and the R-squared as well as Adjusted R-squared coefficients. The proportion of variation is quantified by both R-squared and Adjusted R-squared coefficients in the dependent variable attributed to the explanatory variable. Moreover, the coefficient of Adjusted R-squared is considered to be more reliable and accurate when it comes to predicting the goodness-of-fit because Adjusted R-squared adjusts the statistic that is conducted on the number of explanatory variables in the research.

The results of ARDL as is illustrated in *Table 3.3* show that the return on equity from the previous

period can affect the current return on equity positively. Moreover, the P-value of return on equity is less than the significance level of 5 percent meaning that the relationship is significant. Thus, the current return on equity is positively and strongly affected by return on equity from the previous period. As for foreign direct investment, the results show that there is a negative correlation of -0.004021. This implies that an increase of one unit in foreign direct investment, the return on equity is going to decrease by 0.4021 percent. Simultaneously, the value of adjusted R-squared indicates that 42.45 % of the changes in return on equity is explained by movements in foreign direct investments. Furthermore, the probability value of 0.8090 which is greater than the significant level of 5 percent demonstrates that the negative effect of foreign direct investments on return on equity in Uzbekistan is not significant. This is further proven by the fact that the t-statistic calculated (-0.2498) is less than the tabulated value of 2.228. Consequently, the hypothesis one is rejected, and the null-hypothesis is accepted. It is concluded that the influence of foreign direct investments on bank performance in Uzbekistan is negative and insignificant.

## IV. DISCUSSION

The effect of foreign direct investments on bank performance is found to be insignificant over the period from 2006 to 2017. In general, developing countries are highly dependent on the inflows of foreign direct investments due to lack of capital for the development processes. The foreign direct investments contribute to Uzbekistan by increasing capital and improving technology and skills. Therefore, the economic growth, as well as the financial stability of a country, can be improved by expanding production capacity and creating employment. Prior studies have demonstrated that foreign direct investment and bank performance are closely correlated. Moura and Forte (2010) state that lower FDI inflows increase banking performance in Uzbekistan. While the current research has found a

negative effect of foreign direct investments on bank performance, it is also revealed to be insignificant.

The justification behind such a result is probably that bank performance in Uzbekistan is strongly affected by other factors instead. These may include capital adequacy, non-performing loans, market size and policies in the country (Moura and Forte, 2010). Within the services sector, Bayar and Gavriltea (2018) highlight that loans are highly relevant to commercial banks. Granting loans is that main source of income for commercial banks as they receive interest from customers for the service provided. In 2017, commercial banks offered investment loans which are worth 16.1 trillion soums which is higher than from the previous year by 1.3 times (Guliyeva, 2018). Therefore, the total assets of commercial banks increased by 1.9 times to 161.2 trillion soums in 2017 in Uzbekistan. In this way, Uzbekistan has built special investment environment for customers looking for investment loans to attract more capital cashflows.

Additionally, it should be noted that the policies of Uzbekistan towards attracting form foreign direct investments may not have a significant effect on bank performance.

## V. CONCLUSION & RECOMMENDATIONS

To sum up, foreign direct investments have a negative and insignificant effect on bank performance (ROE) in Uzbekistan.

Despite the fact the researcher has done this research in her best ability, there are still some drawbacks and limitations of the study that need to be noted. The purpose of explaining the limitation is to help the further researcher to investigate a similar topic.

One of the limitations is related to the availability of data. The current research applies the archival research to get the information that is needed for this study and, therefore, there is a risk of unavailability of data. For example, the current research is being

conducted in 2019 while the data that are used in the study are till 2017. This is because some of the variables are not published in 2018 and 2019 yet. Hence, this research is not capable of capturing all the periods in which variables were developed.

Another limitation is related to the longitudinal impacts. Some researchers are capable of analyzing a specific topic for years. However, in this study, there is limited time available to explore the relationship between the variables due to the deadline of the research paper. A higher number of variables in a study may lead to a better understanding of the topic. However, this study analyses only one independent variable to explore its impact on bank performance. There are other variables that could be analyzed to understand the nature of bank performance. This limitation also leads to the inability of a researcher to analyze both determinants and impacts of foreign direct investments on bank performance. It could lead to better policy recommendations since there would a clear picture of foreign direct investments and bank performance.

Lastly, the third limitation is that only return on equity is analyzed in this study as an indicator of bank performance. The reason is the unavailability of data on other indicators of profitability. There could other indicators of bank performance that could be used in this study to better analyze the overall performance of banks.

Since the results of the study show that there is no significant effect of the explanatory variable on bank performance, the researcher recommends analyzing the bank performance of all Central Asian countries. Uzbekistan is one of the transitional countries that were part of the Soviet Union. Hence, all the countries from the Soviet Union have a transition economy in which a centrally planned economy changes to a market economy (Romano and Barrera, 2019). Hence, it is better for future studies to evaluate the bank performance of those transitional countries. This would give more worthwhile results and the

relationship between the foreign direct investment and bank performance would be better understood. Moreover, the analyses in transitional countries would give a big picture of the banking industry in Central Asian countries.

The second recommendation will be to increase the sample size of the study. If the data is available, then it is better to increase the sample size by analyzing longer periods and by collecting data from more banks.

The future studies may also use more advanced techniques in analyzing the relationship between the foreign direct investment and bank performance. The past literature suggests a variety of techniques used by a researcher who achieved valuable results. For example, as study of Peng et al. (2003) reports significant relationship among determinants of bank performance. The study applied Error-correction model and Vector Autoregression model which found the main factor that explains the financial performance. Simultaneously, in the study of Combey and Togbenou (2017), the research technique of Pool Mean Group estimator revealed that bank performance is strongly correlated with its determinants. Thus, future studies a be conducted by using such techniques as Error-correction model, Vector Autoregression model, and Pool Mean Group estimator to achieve credible results.

It is also noteworthy to mention that Uzbekistan needs to reevaluate the investment policies. More precisely, since the results show that there is an insignificant relationship between foreign direct investments and bank performance, the attempts to improve the performance of commercial banks in Uzbekistan by attracting more foreign direct investments may not be effective.

#### Further Research:

Exploring the impact of foreign direct investments on bank performance would encourage researchers to analyze the determinants of foreign direct investments. It would be an interesting topic which

may lead to better policy recommendations since there would be a better picture of foreign direct investments.

Involving additional macroeconomic factors such as government debt, unemployment or money supply could help to achieve higher accuracy of the findings of future studies. Moreover, with an increased number of observations, conclusions would be more robust.

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