

IMPACTS OF EXCHANGE RATE FLUCTUATIONS ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN AFGHANISTAN**Abdulbari Walizada**

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ABSTRACT¹

The exchange rate fluctuation is one of the primary factors that has a considerable impact on economic activity, notably in the banking industry. This variable is especially significant in countries that have an economy that is heavily dependent on imports with a negative balance of payments. The purpose of the study is to establish, over the course of a nine-year period (2010-2018), how Afghanistan's commercial banks have been affected by exchange rate fluctuations. In order to conduct an analysis of the data obtained from the panel structures of three different banks, multiple linear regression models were utilized. The following categories of variables were considered independent factors: bank size, capital adequacy, credit risk, liquidity, inflation rate, interest rate spread, and changes in exchange rates. Profitability was the dependent variable, while return on equity was the variable that determined profitability.

We may infer from the statistics that bank size, credit risk, inflation, interest rate and ROE are positively correlated. ROE is negatively correlated with capital adequacy, exchange rate and liquidity. Despite the variables' 5% insignificance, they should still be taken into consideration because of their correlation with ROE. The management of the bank should exercise extreme caution with regard to bank-specific variables and make an effort to adapt their operations to the macroeconomic elements that they are unable to control.

Keywords:

Exchange Rate Spread, Commercial Banks, ROE, Inflation Rate

INTRODUCTION

Since the last 20 years, we can see comprehensive changes in different sectors of the Afghan economy. The banking sector is one of the most important and vital sectors for every country. After 2001 when the new government started to rebuild all the demolished part of the country, the country needed a strong banking system which could afford transaction and provide the fund to the huge projects.

Banks are the most important and significant institutions in the financial sector. The main role of the banks in the economy is to allocate fund to those sectors and projects which faces a lack of financial resources. Banks are the bridge between saver and potential investors, which provide the excess amount of money to the investors and give return (interest) to the savers. There is a positive relationship between the growth rate of economy and banking profitability. If the banking sector of a country is making enough profit and they have covered most of the population so the economy of that country/region will be growing and stable.

When we look to the history of the economic crisis, most of it has started from the financial sector especially from banks. For controlling the economy and sustainable development it is needed to have a healthy and strong banking sector.

In international trade involve different currencies; the variability of the foreign exchange rate is a potentially interesting factor that drives the level of profitability of commercial banks as it affects their financial intimidation process (Chiira, 2009). Because no country is self-reliant but instead they all transact business with one another, foreign exchange rates become handy. The exchange rate is a vital macroeconomic variable and backbone of trade (Adetayo, 2013). A variation of the exchange rate plays an important role in the determination of the balance of trade. Exchange rates, like any other commodity, are based on demand and supply for particular forms of currency. Domestic currency supply changes as a result of a country's fiscal and monetary

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policies (Berger&Bouman, 2010). Demand for a currency can be influenced by a large number of factors, including interest rates, inflation, and government regulations. Several macroeconomic and industry related factors potentially can affect the stock return of the companies. The continuing increases in the world trade and capital fluctuations have made the exchange rates as one of the main determinants of business profitability and equity prices (Bradly & Moles, 2002).

OBJECTIVES

The primary objective of the study is to ascertain whether there is a correlation between the country's current exchange rate and the profitability of Afghanistan's commercial banks. In order to conduct a thorough analysis of the situation, the research will put equal emphasis on both internal and external (macroeconomic) factors. This study will contribute additional useful information to the field, and it will be especially helpful for financial institutions.

To ascertain the impact that the current exchange rate has had on the overall financial performance of Afghanistan's commercial banks.

To have an understanding of the relationship between currency exchange rate and profit.

To have an accurate understanding of the amount of change and variation that was caused by the currency exchange rate as well as other variables that were independent.

Theoretical Literature Review

The Purchasing Power Parity Theory (PPP) and the International Fisher Effect Theory form the primary foundation for this study. Both of these theories are considered very significant. These theories are broken down into finer points further down.

Purchasing Power Parity Theory (PPP)

Gustav Wicksell, a Swedish economist, is the originator of the purchasing power parity theory (Menon & Viswanathan, 2005). According to this theory, the prices of the same goods purchased in various nations will come out to be the same when compared using the same unit of currency. When the currencies' purchasing power is similar in both of the nations' economies, this indicates that the exchange rate between the currencies has reached a state of equilibrium.

The willingness to pay a specific amount for foreign currency must ultimately and fundamentally be based on the fact that this currency has purchasing power against goods and services in that country (Reid and Joshua, 2004). Any deviation from this statement that involves currency reflects an incorrect valuation. According to Yin-Wong and Kon (1994) PPP theory, the value of currencies should be determined by the amount of goods that they are able to purchase as well as the current exchange rate between the two nations. The ratio of the price levels of different currencies ought to be equal, which has the testable implication that the real exchange rate ought to exhibit mean reversion, at the very least over the course of an extended period of time.

As a result of these restrictions imposed by the absolute PPP, a different type of PPP has emerged: the relative PPP, which takes into account the flaws of the market, such as the cost of transportation, tariffs, and quotas. The definition of what determines the movement in the exchange rate over time is referred to as relative PPP. This is in contrast to the definition of what determines the absolute level of the exchange rate. According to what is written there, the variation in the value of the currency exchange rate is predicated on the disparity in the inflation rates of the two countries (Ross et al, 2008). According to the relative PPP theory, any exchange rate that is different from the one that was proposed by the theory represents either the real appreciation or the real depreciation of one currency over another (Reid& Joshua, 2004).

International Fisher Effect Theory

According to the international Fisher Effect idea, the disparity in financial returns that exist between the two nations is exactly equivalent to the rate of inflation that separates them (Shapiro, 2007). According to the International Fisher Effect, nominal risk-free interest rates incorporate a real rate of return in addition to a projected inflation rate. This indicates that if investors in all nations want the same real return, the difference in interest rates between countries may be the result of the difference in the predicted level of inflation in those countries. According to this line of thinking, the value of foreign currencies that have nominal interest rates that are relatively high should decline since high nominal interest rates are a reflection of the likelihood that inflation will occur. The risk of losing one's investment would be factored into the nominal interest rate as well (Stikouras and Wood, 2004).

METHODOLOGY

This is quantitative research. The secondary data will be used. The data will be taken from World Development Indicator, IMF, International Statistics, CSO and other sources. Multiple regression modal will be used to find the relationship. STATA software will be used for data analysis.

Research Design

The study adopted a descriptive research design. According to Mugenda and Mugenda (2003), a descriptive research design is a methodical and empirical inquiry into which the researcher does not have direct control of the independent variables because their manifestation has already taken place or because they inherently cannot be manipulated. This type of inquiry is conducted in the context of descriptive research. The what, where, and how of a phenomenon are the focus of descriptive investigations; as a result, these studies are better suited to construct a profile of the phenomenon in question (Mugenda&Mugenda, 2003). Because the study intended to construct a profile on the effects of exchange rate changes on the financial performance of commercial banks in Afghanistan, the descriptive research methodology was more suited than the experimental research design.

Data Sources

Quantitative and secondary sources of information are used in order to complete the investigation. The secondary data are split into two categories: bank-specific characteristics and macroeconomic variables. The data used for the internal variables came from audited financial records such as balance sheets, cash flow statements, and income statements. The study covers the years 2010 to 2018, and the data was collected from several government websites. The World Bank's Indicator serves as the source for the macroeconomic data. Ratios are used in the calculation of the internal factor data. STATA is used to perform the analysis on the data.

Sampling Criteria

In this study, the method of sampling at one's own convenience, which is non-probabilistic, is applied. The availability of audited financial statements during the time period covered by the study was one of the factors used to select samples. One more reason is that the services are available across the entirety of the country thanks to the numerous branches and sub-offices. The financial statements of the remaining banks were not available, and some of the banks were agencies for international banks, which meant that they could not be taken into consideration because their operations were not limited to Afghanistan alone.

Data Analysis

The study utilized an imbalanced panel data set with a cross-section (four banks), and the time series was from 2010 to 2018, resulting in a total of 28 observations, in order to investigate the impact that the exchange rate has on a company's financial performance. Panel data is sometimes termed pooled data. The information may be explained and transferred more effectively with the use of panel data. It is a mix of data from time series and cross-sections of the population. It is possible to explain both perspectives at the same time.

Panel data are typically, what academics turn to when they want to identify and evaluate impacts that cannot be discovered using pure cross-section or pure time series data. We are able to find solutions to difficult problems using panel data. However, in panel data, the degree of freedom is increasing, which naturally causes the power of the test to improve. Finding the proper trend in time series data requires more observations than in panel data.

Dependent Variables

Return on equity is common metric that commercial banks use to evaluate their profitability and overall financial performance (ROE). This measure has been used as dependent variable throughout the majority of the research that has been published.

The return on equity (ROE) is calculated by dividing the net profit by the total equity. The return on equity (ROE) will indicate how much money is earned for each individual unit of investment made by shareholders. When the ROE ratio is high, it indicates that the performance of the company is strong, which is what an investor hopes for because it increases the likelihood that they will accumulate more wealth.

Independent Variables

The independent variables that we have used can be categorized into two distinct groups: those that are internal to the bank and those that are external to the economy as a whole. The management of the company is able to exert influence over the internal factors because they are dependent on them and can be managed by them. Management is powerless to influence the behavior of external elements, thus it must learn to accommodate this reality. These elements are analogous to variables of the macroeconomy, such as inflation, exchange rate, etc., as well as government policies, etc.

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
LNROE	27	7.33732	-4.15817	3.17914	2.04952	1.32486	1.755
LNB.S	27	0.13302	2.76222	2.89524	2.81968	0.04395	.002
LNINT	27	0.05264	2.69462	2.74727	2.71164	0.01414	.000
LNEXC	27	0.4386	3.83945	4.27805	4.05581	0.15756	.025
LNINF	27	2.97892	-0.51082	2.46809	1.20949	0.99427	.989
LNLI	27	0.25072	-0.08899	0.16172	0.04063	0.06675	.004
LNCR	27	1.73739	1.44175	3.17914	2.29015	0.46498	.216
LNCA	27	3.57212	-4.76651	-1.19438	-2.12138	0.70003	.490
Valid N (listwise)	27						

During the study period, the ROE had a minimum of -4.15 and a maximum of 3.17. The mean of the return was 2.04 with a standard deviation of 1.32. The bank size, which is measured as natural logarithms of total assets, had a minimum of 2.76 and the maximum value is 2.89. The mean was 2.81 with a standard deviation of 0.04. Interest rate had a minimum value of 2.69 and the maximum value is 2.74. The mean of the interest rate is 2.71 with a standard deviation of 0.01. The AFGHANI-USD exchange rate was noticed to have increased over time explaining the large fluctuation. The currency rate was therefore volatile throughout the whole study period and typically demonstrated a depreciating and volatility pattern, showing that in general, the country's international competitiveness had decreased over the time of study. The inflation rate had a minimum of -0.51 and a maximum of 2.46 percent during the study period. The mean of inflation was 1.2 with a standard deviation of 0.99. Liquidity had a minimum of -0.08 and a maximum of 0.16. The mean of the return was 0.04 with a standard deviation of 0.06. Credit Risk which is measured as total assets divided by total liabilities, the minimum value is 1.44 and the maximum value is 3.17. The mean of the credit risk is 2.29 with a standard deviation of 0.46. Capital adequacy had a minimum of -4.76 and a maximum of -1.19. The mean of the return was -2.12 with a standard deviation of 0.7.

Correlations

Descriptive Statistics

		LNROE	LNB.S	LNCA	LNCR	LNLI	LNINF	LNEXC	LNINT
LNROE	Pearson Correlation	1	.378	-.463*	.551**	-.332	.305	-.286	.176
	Sig. (2-tailed)		.052	.015	.003	.090	.122	.148	.380
	N	27	27	27	27	27	27	27	27
LNB.S	Pearson Correlation	.378	1	-.539**	.724**	-.312	-.140	.343	-.287
	Sig. (2-tailed)	.052		.004	.000	.113	.485	.080	.147
	N	27	27	27	27	27	27	27	27
LNCA	Pearson Correlation	-.463*	-.539**	1	-.769**	.473*	-.157	.290	-.098
	Sig. (2-tailed)	.015	.004		.000	.013	.435	.142	.625
	N	27	27	27	27	27	27	27	27

LNCR	Pearson Correlation	.551**	.724**	-.769**	1	-.535**	.066	-.217	.175
	Sig. (2-tailed)	.003	.000	.000		.004	.742	.277	.383
	N	27	27	27	27	27	27	27	27
LNLI	Pearson Correlation	-.332	-.312	.473*	-.535**	1	-.004	.007	-.024
	Sig. (2-tailed)	.090	.113	.013	.004		.985	.973	.905
	N	27	27	27	27	27	27	27	27
LNINF	Pearson Correlation	.305	-.140	-.157	.066	-.004	1	-.482*	.027
	Sig. (2-tailed)	.122	.485	.435	.742	.985		.011	.895
	N	27	27	27	27	27	27	27	27
LNEXC	Pearson Correlation	-.286	.343	.290	-.217	.007	-.482*	1	-.717**
	Sig. (2-tailed)	.148	.080	.142	.277	.973	.011		.000
	N	27	27	27	27	27	27	27	27
LNINT	Pearson Correlation	.176	-.287	-.098	.175	-.024	.027	-.717**	1
	Sig. (2-tailed)	.380	.147	.625	.383	.905	.895	.000	
	N	27	27	27	27	27	27	27	27

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

The bank size (bs) and return on equity (ROE) had a positive correlation with the coefficient of 0.378. This means that when the bank size is increased by one unit, ROE will be increased by 0.378 units. The correlation between ROE and capital adequacy is negative with a coefficient of -0.46. This means that there is a relation between them when the capital adequacy is going to increase by one unit, the ROE will be decreased by 0.46. Credit risk is the ratio between the total asset and total liabilities of the bank. There is a positive correlation between ROE and credit risk (cr) with the coefficient of 0.551. When the credit risk is increased by one unit, the ROE will be increased by 0.551. The correlation between liquidity and ROE is negative with a coefficient of -0.33. When the liquidity ratio is increased by one unit, the ROE will be decreased by 0.33.

The inflation rates and the ROE had a positive correlation with the coefficient of 0.305. The exchange rate had a negative correlation with ROE and the coefficient is -0.286. This rate had a negative correlation with the inflation rate shown by a coefficient of -0.482. The correlation was positive between the return on equity (ROE) and interest rates spread as indicated by a coefficient of 0.176. The interest rate spread had a positive correlation with the inflation rates with a coefficient of .027. However, the correlation between the exchange rate and interest rate spread was negative as shown by the value of -0.72. The relationship between bank size and inflation was weak since the coefficient of correlation was -0.14. The correlation between bank size and interest rate spread was indicated by the coefficient of -0.287. The exchange rate and bank size, however, had a positive correlation as indicated by a coefficient of 0.34.

The correlation findings revealed a weak association between the exchange rate fluctuation and the returns of banks in the study period. The exchange rate fluctuations were also found to be negatively related to changes in inflation and credit risk.

The study concentrated on the effects of foreign exchange fluctuations on the financial performance of commercial banks in Afghanistan. Results from correlation analysis revealed that fluctuations in the value of

domestic's currency affected the financial performance of the studied banks. These findings correspond with studies done on other sectors the same variables.

Regression Analysis

LNROE	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
LNBS	11.04647	12.76646	0.87	0.387	-13.97533	36.06826
LNCA	.0251072	.5758597	0.04	0.965	-1.103557	1.153771
LNCR	.4098134	1.331671	0.31	0.758	-2.200214	3.019841
LNLI	-2.818369	4.578552	-0.62	0.538	-11.79217	6.155429
LNINF	.3576385	.3178066	1.13	0.260	-.2652509	.980528
LNEXC	-1.332178	3.651632	-0.36	0.715	-8.489245	5.824888
LNINT	12.46668	29.11817	0.43	0.669	-44.60388	69.53725
_cons	-58.70352	94.22973	-0.62	0.533	-243.3904	125.9834
sigma_u	0					
sigma_e	1.1790419					
rho	0	(fraction of variance due to u_i)				

The above table represents the result of pooled regression for three sample banks. Running the regression with the dependent variable (ROE) shows that independent variables are insignificant on ROE. The researcher have found that bank size (ba) with 11.04, Credit Risk (cr) with 0.409, Liquidity (li) with -2.81, Inflation Rate (inf) with 0.357 , Exchange Rate (exch) with -1.332 are insignificant in 5% or the value of those independent variables are more than 0.05. Capital Adequacy (ca) with 0.025 is significant in 5%.

R-squared was 0.41 that means 41% of the dependent variable (ROE) is explained by independent variables.

The results of the regression show that there is a positive insignificant relationship between the Bank Size and ROE. It means that one unit increase in bank size will affect 11.04 units increase in return on capital. Capital adequacy has a positive significant relationship with ROE. This means that one unit increase in capital adequacy will affect 0.025 units decrease in ROE. Credit risk has a positive insignificant relationship with ROA. This means that one unit increase in the credit risk contributes 0.409 units increase in ROE. Liquidity has a negative relationship with ROE. One unit increase in liquidity will cause -2.81 units decrease in ROE.

The macroeconomic variable inflation has a positive relationship with the ROE. One unit increase in the inflation rate contributes 0.35 units increase in the ROE. The exchange rate has a negative relationship with ROE, one unit increase in the exchange rate effect -1.33 units decrease in the ROE.

RESULTS AND DISCUSSION

The purpose of this study was to investigate the impact that shifts in the currency exchange rate have on the overall financial performance of commercial banks in Afghanistan.

1. The research indicated that there was a favorable connection between the currency exchange rate and the financial performance of commercial banks. This performance was evaluated based on the return on equity (ROE).

2. The findings of the research also showed that the degree of relationship between the variations in the exchange rate and the return was not very strong. These findings slightly agreed with the findings of Kipchirchir

(2011), who observed the existence of a strong relationship between the financial performance of multinational corporations in Kenya and the exchange rates. To a small extent, these findings slightly agreed with the findings of Kipchirchir (2011). The disparity between the currency used for trading and the currency used for reporting financial information may have been the cause of the observed association.

3. It was found that the exchange rate between Afghani and USD had increased over time, which resulted in considerable volatility over time. The currency rate was fluctuating during the entirety of the study period and generally had a depreciating and variable tendency. This suggests that the country's international competitiveness had generally declined over the course of the study period. Throughout the entirety of the research period, the Afghan Currency just had a decreasing value in comparison to the US Dollar. Because of this, the cost of living has increased, which has had a detrimental impact on the economy of the country. This is because the country is highly dependent on imports.

CONCLUSION

The purpose of this study was to ascertain the extent to which shifts in the currency exchange rate had an impact on the overall financial performance of commercial banks in Afghanistan. The research investigated how factors such as bank size, capital adequacy, credit risk, income diversification, inflation rate, exchange rate fluctuation, and interest rate spread impacted the profitability of commercial banks in Afghanistan from 2010 to 2018. The time period covered by the study was from 2010 to 2018.

The variables bank size, capital adequacy, credit risk, income diversification, inflation rate, exchange rate changes, and interest rate spread were employed as independent variables in this study. The profitability of commercial banks is employed as the dependent variable in this study. This profitability is quantified by return on equity (ROE). In order to determine how well commercial banks are doing financially, a regression analysis using the pooled OLS approach was performed using the panel data that was provided.

Based on the findings of the research, the study comes to the conclusion that there is a weak positive association between fluctuations in the foreign exchange rate and the performance of commercial banks in Afghanistan over the time period under consideration. During the course of the research, it was found that the value of one "Afghani" could be purchased for a significant amount of dollars in United States currency. In practical terms, the value of the Afghan currency has been falling against the US Dollar during the past few years. The researcher comes to the additional realization that, throughout the course of time, there has been an upward trend in bank size, capital adequacy, inflation rate, exchange rate, and interest rate.

In relation to the rate of inflation, we can draw the conclusion that inflation rates have been steadily climbing on an annual basis. Because of the inverse link that existed between inflation and returns on assets, performance was significantly impacted as a direct result. The interest spread was the difference between the two rates, and it had a negative relationship with the return on assets. The findings of the study indicate that interest rates, particularly lending rates, have been rising throughout the course of time. On the other hand, the same observation was not evident in the deposit rates offered by banks. According to the findings of the study, the interest rate spread has been widening over the past several years. This is because the cost of borrowing money has increased, making it more profitable, although the interest rates on deposits have remained relatively low. Because of this, customers who make deposits in banks incur a greater fee and receive a lower return on their money, which translates to a larger return for the banks.

The findings of this study indicate that the appropriate steps should be taken by the government in order to protect the local currency. It should encourage direct investment from overseas markets to stimulate economic expansion, which would then lead to an appreciation of the domestic currency. This would mean that the currency would be more stable when compared to other foreign currencies. As a direct result, this would bring down the cost of borrowing money, making loans even more accessible to people.

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