

PORTFOLIO LENDING STRATEGY AND BANKS PERFORMANCE IN JORDAN: WHAT TO DO?

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ABSTRACT

This empirical investigation examines the impact of loan diversification; individual lending, mortgage lending, small-medium sized enterprises lending, government lending and corporate lending, in addition to bank size on Jordanian commercial banks performance. Thirteen commercial banks in Jordan used for the time period 2000-2018 applying Seemingly Unrelated Regression (SUR). The data was collected from central bank of Jordan website and the different websites for the relevant banks. The results indicate that loan diversification does impact Jordanian commercial banks performance. In particular, individual lending, corporate lending & mortgage lending have positive impact on banks performance, while the SMEs lending and government lending have negative impact on performance. The study recommends that banks must focus on lending sectors that positively affect its profitability such as mortgage lending, individual lending and corporate lending. Thus, the strategy that Jordanian banks should follow is to concentrate more on mortgage lending, individual lending then corporate lending in order to increase their performance.

Keywords: Loan Diversification, Performance, Seemingly Unrelated Regression.

INTRODUCTION

The financial performance of the banking sector relies to a great extent on loans. Due to the importance of loans to banks, its policies and procedures must be clear and adhere to bank circumstances and based on the review and revision of the bank's board of directors. This must be done to minimize risks or failure to repay loans (Antoine, 2015). The ability of the borrower to repay the loan is considered vital information that needs to be apparent in loan files. This information also needs to be reviewed and analyzed frequently as an indication of the closure of the loan. Researchers have started to explore what is known as credit risk as a result of increasing default rates (Gintschel & Hacethal, 2004).

According to Akram & Rahman (2018), credit risk refers to the unfulfillment of the contractual agreement on behalf of the counter-party which may result in the demise of the bank. Banks face credit risk by acting as mediators between those who have money and those who need money, by converting short-term deposit (i.e. cash) into long-term loans (Akram & Rahman, 2018). A key practice that banks need to follow is the use of external independent experts with no ties related the banks or other financial institutions, to avoid any agency problems that could occur and provide objective insights. These experts are required to monitor and manage the quality of the loans in order to provide managers with credible and useful information that they need to avoid credit risk such as the patterns and levels associated with a loan (Zamorski, 2017). Managers need to know very detailed information regarding the borrower's trend to determine whether they will be able to repay the loan in addition to the interest, based on the cash flow

pattern. Also, to avoid credit failure, collateral needs to be identified to secure the loan in case the borrower is unable to pay. In such cases the collateral will be sold by the bank to cover the loan principle and interest (Zamorski, 2017).

One way to avoid credit risk is through loan portfolio diversification. Portfolio diversification comprises of various credit items belonging to various assets classifications. It has been mentioned that banks with portfolio diversification are more likely to survive during economic relapses compared to those with less diversification in their assets classifications. The primary issue with diversification is including new asset classifications, as growing in portfolio size without including new asset classes brings about portfolio focus associated with high risk. The importance of loan portfolio diversification can be seen in the many advantages it carries. For instance, it helps avoid risk concentration, which means that if one portfolio fails the rest are not affected. Diversification also adapts easily to change. This suggests that having different loan categories results in different risks and returns and any changes in the market may not affect all categories in the same way. Achieving high returns is another advantage of diversification as resources are divided among different categories. In addition, diversification aids banks in meeting financial goals by pairing portfolios with specific risk tolerance. Finally, partnerships are created through diversification as inexperienced investors keep investing in familiar categories.

BACKGROUND OF BANKS IN JORDAN

The banking sector is considered one of the most important pillars of the Jordanian economy. It is made up of the Central Bank of Jordan, commercial banks, Islamic banks, and non-Jordanian banks. Based on recent data, the sector consists of 27 banks, 16 of which are listed on the Amman Stock Exchange (ASE). This study will focus on 13 commercial banks during the period of 2000-2018. The following tables provide some specific characteristics in the Jordanian banking sector, for example, distribution of credit to different sectors, bank deposits and bank credit to GDP ratio compared with different selected countries. Table 1 shows the industrial, individuals, construction, trade and others distribution of credit, an interesting point to highlight is that construction sector got the highest percentage of credit allocation in 2019 with a percentage equal to 27.1%. In addition, Table 2 shows that the Jordanian banks hold significant dollar deposits as for example in 2019, 21.8% of deposits are in foreign currency. Furthermore, Table 3 highlights that the Jordanian credit to private companies compared to GDP is relatively low compared to other countries. In other words, other countries concentrate more in pending private companies in order to increase potential growth in the GPD.

Year	Trade	Construction	Individuals	Industry	Other
2010	24.9%	21.9%	21.4%	13.3%	18.5%
2011	23.8%	21.9%	21.5%	14.5%	18.3%
2012	21.1%	20.7%	21.5%	14.1%	22.6%
2013	20.8%	21.6%	21.9%	14.0%	21.8%
2014	19.1%	23.6%	23.3%	13.1%	20.8%
2015	18.4%	23.2%	24.6%	10.2%	23.6%
2016	17.8%	25.4%	23.5%	9.6%	23.7%
2017	17.1%	26.7%	21.3%	11.0%	23.9%

2018	17.5%	26.9%	20.1%	10.8%	24.7%
2019	17.8%	27.1%	20.2%	11.2%	23.7%
Source: Central Bank of Jordan (2020)					

Table 2	
BANK DEPOSITS	
Year	Jordanian Dinars
2010	78.3%
2011	78.4%
2012	70.9%
2013	76.1%
2014	79.4%
2015	79.8%
2016	78.9%
2017	77.2%
2018	78.4%
2019	78.2%
Source: Central Bank of Jordan (2020)	

Table 3					
BANK CREDIT TO GDP RATIO CROSS COUNTRIES					
Country	Ratio	Country	Ratio	Country	Ratio
Lebanon	39.7%	Qatar	76.5%	Turkey	128.7%
Algeria	41.3%	UAE	89.8%	Tunisia	132.8%
Japan	47.0%	Bahrain	90.4%	Saudi Arabia	134.9%
Palestine	50.1%	Indonesia	93.2%	Georgia	140.3%
Ghana	70.7%	Poland	96.6%	Finland	143.8%
Jordan	72.4%	Malaysia	96.6%	Chile	150.0%
Source: World Bank Database					

RESEARCH PROBLEM

McVay Banks' competitiveness is highly dependent on loan terms and conditions. Loan policies influence loan demands and credit policies influence the bank's competitiveness in lending and in turn its performance in the industry (Gatakaa, 2014). Loans are turning into the most widely recognized strategy utilized by banks to draw in clients utilizing aggressive campaigns and simple loan policies and procedures, they presumably look to allure an enormous number of borrowers without considering the occurrence of any defaults or risks. The failure or absence of the abilities to adequately screen credit facilities or loan portfolios unavoidably brings about high non-performing loan ratios, and eventually lessens profitability and disintegrates capital, which is a significant issue the bank may confront that may contrarily affect its performance.

Researchers have agreed that diversifying loans and expanding portfolios reduces the possibility of loan defaults and non-performing loans, in addition to minimizing credit risk rates. This can be explained by the difference in performance experienced by different categories since

one category may perform poorly but another may perform better, thereby reducing the possibility of loss. Thus, it is vital better comprehend the clients' money related patterns and distinguish early cautioning markers and areas of potential shortcomings to decrease investment in it and increment investment in areas with high potential profits.

This paper adds to the progressing research on the advantages of bank loan diversification. Loan diversification might be gainful if banks' diversification attempts convert assets from being risky to becoming profitable. After review of literature, it has been found that few studies have been conducted on the topic of loan diversification and financial performance especially in Jordan. Hence, the main objective of this empirical paper is to investigate the relationship between loan diversification and banks performance, and to find out whether diversified portfolios affect the profitability of commercial banks in Jordan or not the findings of this study will also bring into insight some recommendations to future studies and to banks and their managers.

LITERATURE REVIEW

Hellen & Hesbon (2019) conducted a study to investigate the impact of loan portfolio, in terms of type of loan, provision to total loan ratio, gross non-performing loan ratio, and net loan ratio, in addition to other variables on the financial performance of banks in Kenya. The reported that loan portfolio management is tied in with controlling cash appropriately regarding investment in protections and resources. The researchers collected data from 132 senior management using a questionnaire, and found out that loan portfolio and loan portfolio management significantly affect financial performance. They also suggested that type of loan had the most impact on financial performance.

Munene et al. (2019) researched the impact of unsecured loans on the financial performance of saving and credit cooperative societies. They defined unsecured loans as a type of individual or personal loan which is given to borrowers with no assurance, only a confirmation of month to month or regular salary. According to Munene et al. (2019), unsecured loans are represented by three variables including; loan amount, interest rate, and tenure. The findings of their study revealed that unsecured loans have a positive impact on the financial performance of credit cooperative societies in Kenya. In addition,

Market lenders performance using individual loan cash flow data was investigated by (Kraussl et al., 2018). Researchers contended that marketplace lending has riskier borrowers and suggested that it is a form of crowd funding. Kraussl et al. (2018) were interred in examining the qualities of risk and return of borrowers from the marketplace. They riled on evidence form the Lending Club (LC), the largest lending marketplace in the United States. LC goes the process of screening each loan to identify borrower qualities such as home ownership, status, and geographic area. LC is also capable of assessing default rates. LC receives capital support from banks and financial institutions.

The research focused on two areas of marketplace lending. The first was the notion of it being used as a finance intermediation, while the second was the issue of participants' morale. It was concluded that LC finances a large group of customers in the credit market and as a result of these loans, return for lenders is increased.

Mwizerwa et al., (2018) explored the relationship between loan portfolio management, including planning, risk controlling, and screening of customers, and performance of commercial banks in Rwanda. They noticed that banks who fail in managing their credit risk through loan portfolio demonstrate undesirable performance. Their discoveries showed that loan risk analysis,

diversification and monitoring were managed well and that there is a close relationship between loan portfolio management and performance. Furthermore, they referenced a few factors that ought to be considered in loan management, for example, quality of credit, viable guidelines and procedures and the compliance with it. Furthermore, Abdulrehman & Nyamute (2018) studied the effect of real estate lending on the financial performance of commercial banks in Kenya. They reported that mortgage lending affects the bank profitability as the mortgage market represents a vital source of revenue for banks. Banks award real estate loans so as to improve their market penetration and an upper hand in the market by giving competitive interest rates which consequently influence their performance positively. The researchers reached the conclusion that increased mortgage loans and interest rates improve the performance of commercial banks in Kenya.

Adzobu et al., (2017) explored the effect of loan portfolio diversification on banks' risks and returns in Ghana. They suggested that banks should not diversify their credit portfolio across many sectors in an effort to avoid credit risk and improve its controlling abilities. The reason behind this is that banks could diversify into sectors that lack experience thereby resulting in higher defaults and credit risks and in turn lowering the banks' success rates. Furthermore, they indicated that banks should diversify in the economic sector since they have moderate default risks. Based on their study, Adzobu et al., (2017) found that loan portfolio diversification has a negative effect on bank profitability.

According to Wamalwa & Jagongo (2017), credit portfolio management, including planning, controlling and client screening, is fundamental to diminish any defaults. Since banks are confronting high default rates, loan performance has become a significant concern for them. They also stated that the sustainability micro financial institutions (MFIs) rely on their loan portfolio. This is due to the fact that interest earned from these loans represents a source of revenue for them. However, only a single report recently revealed that loan default led to non-performing loans by MFIs. Wamalwa & Jagongo (2017), studied the impact of loan portfolio management on firm performance of MFIs and found that loan portfolio management and controlling have a significant effect on performance.

METHODOLOGY

Sample Used

This paper managed to collect the data for 13 Jordanian banks listed on ASE (Amman Stock Exchange) for 19 years (2000-2018). The data has been collected from multiple resources such as the central bank of Jordan website, annual reports and any other available resources for any missing information. The following subsections will discuss the different variables and its impact on financial performance. Moreover, at the end of each variable the suggested hypothesis will be stated.

Model Development

Dependent variable: financial performance (ROA)

Financial performance can be defined as the profits and returns gained by a bank during a year (Chepkoech, 2016). Financial performance can thus be indicated by ROA (return on assets), which is a profitability ratio measure and an indicator of managerial efficiency used by analysts

to evaluate managerial performance and effectiveness. In other words it shows how a firm manages its assets and converts them into net earnings. ROA is comprised of two other ratios—net profit margin (NPM) and asset utilization (AU). Net profit margin, which measures earnings per revenue, demonstrates managerial control and direction, and the process by which revenues can be maximized and expenses controlled to increase their earnings and the return to stockholders. Asset utilization relates to the allocation of assets to high yielding loans and avoiding risks. By doing so management can increase the yield on assets. NPM is calculated by dividing net income on operating revenues, while AU is calculated by dividing operating revenue on total assets.

Independent Variables

Percentage of corporate lending (CorpL)

Corporate lending is seen as an important determinant of bank profits, particularly for return on assets (Ekpu & Paloni, 2016). According to Ekpu & Paloni (2016), this is affected by bank size as in large banks, corporate lending has a little contribution on the return on assets in the UK. This may be attributed to economies of scale which is a characteristic of large banks. Furthermore, the researchers noted that expansion of large bank assets in the beginning of the 21st century led to a great focus on individual lending and other banks' lending rather than corporate lending. Therefore, we expect that there is a negative relationship between corporate lending and financial performance.

Percentage of small medium enterprises lending (SMEsL)

The absence of suitable financing channels has become a major barrier to the development of SMEs. Chinese economists have encouraged the development of small-and-medium-sized banks to manage the trouble of getting bank acknowledgment for SMEs. The reason behind this is that small- and medium-sized banks are better able to lend SMEs due to the personal aspect of their interaction with their borrowers. Therefore, we expect that there is a positive relationship between SMEs lending and financial performance.

Percentage of mortgage lending (MortL)

Mwendwa (2015) stated that real estate credits have a positive relationship with profitability since it is regarded as a source of long-term revenues for banks. Unfortunately when real estate prices fall, demand for real estate loans declines and in turn interest earned by the banks, which will ultimately result in reduced profits. In order to increase returns from these loans and as a result profits, a well and efficient mortgage credit management system needs to be in place (Karanja, 2013). Consequently, we expect that there is a positive relationship between mortgage credit and financial performance.

Percentage of individual lending (IndivL)

The nature of the contract of individual lending has been believed by Musyoka (2011) to have an influence on the level of credit risk and hence the delinquency level of loans. Accordingly, he conducted a study to examine the relationship between individual lending and group lending to determine which of the both leads to non-performing loans. However, there was no evidence in the findings of his study whether individual lending or group lending was a higher

indicator of non-performing loans, so he concluded that there is no difference between the two. Therefore, we expect that there is a relationship between percentage on individual lending and financial performance.

Percentage of Government lending (GovL)

Omet (2019) stated that a negative relationship exists between governmental lending and banks profitability due to the relatively low interest rate on these assets. Given this, it is essential to take note that in Jordan there is no secondary market for government securities. Banks are required by the Central Bank of Jordan to subscribe to these issues, and each bank is allotted a portion of these issues as per its relative size. Nonetheless, the idea of investing in government securities lessen banks' risks, is an advantage kept hidden from customers in the form of narrower net interest margins. Therefore, we expect that there is a negative relationship between percentage of government lending and financial performance.

Size (LnTA)

Many researchers have investigated the effect of firms' size on its profitability, but the results were mixed as some found a positive relationship between size and profits, while others found a negative relationship. Pervan & Visic (2012) indicated that absolute firm size plays a major role in clarifying profitability, as large firms are more profitable but less productive. Researchers who found a positive relationship between size and profits contended this conclusion to factors such as; larger market share (Sritharan, 2015), higher entry barriers (Singla, 2011). The proxy of size is the natural logarithm of total assets. Hence, we expect that there is a relationship between size and financial performance.

Based on the above discussion, the following empirical model of this paper is estimated by applying seemingly unrelated regression (SUR):

$$ROAi.t = \beta_0 + \beta_1 CorpLi.t + \beta_2 SMEsL i.t + \beta_3 MortLi.t + \beta_4 IndivLi.t + \beta_5 GovLi.t + \beta_6 Ln(TA)i.t + \varepsilon_i$$

Where:

ROAi.t = is the return on asset of firm i at time t.

β_0 = constant.

β_1 to β_6 = the coefficients of concerned explanatory variable.

CorpL = is the percentage of corporate lending.

SMEsL = is the percentage of small medium enterprises lending.

MortL = is the percentage of mortgage lending.

IndivL = is the percentage of individual lending

GovL = is the percentage of investment in governmental bonds.

Ln(TA) = is the natural logarithm of total assets.

ε_i = is the error term.

RESULTS AND ANALYSIS

Descriptive Statistics

The following Table shows the descriptive analysis for the bank profitability (ROA), individual lending (IndivL), small-medium enterprises lending (SMEsL), corporate lending (CorpL), mortgage lending (MortL), Governmental Lending (GovL) and bank size (LnTA) of the Jordanian banks listed in ASE throughout the years from 2000 till 2018 in Table 4.

Measure	Mean	Maximum	Minimum	Std.Dev.
ROA	0.023	0.049	0.001	0.012
IndivL	0.219	0.544	0.009	0.145
SMEsL	0.118	0.251	0.017	0.099
CorpL	0.375	0.837	0.11	0.135
MortL	0.115	0.322	0.008	0.089
GovL	0.173	0.31	0.001	0.008
TA	20.62	24.142	17.65	1.13

According to the mean values of the loan portfolio, the mean value for SMEs is 0.118 and this confirms the need to enhance this ratio by lending more to small medium enterprises. In alignment with the variation between the banks in terms of conservatism levels and differences in the credit policies, the highest standard deviation value 0.145 is assigned to personal or individual loans which are characterized by high credit risk, while the lowest standard deviation 0.008 is for government lending. This is normal regarding government lending as it is seen as one of the lowest loans in terms of risk and is related to secure deals with the government. In addition, bank size reported the highest standard deviation which confirms that there are vast differences between the banks in terms of total assets in Jordan.

Correlation Matrix

The correlation matrix results which are provided by the following Table 5 indicate that there is a significant correlation between the profitability (ROA) of the Jordanian banks over the study period and the diversification in loans. Based on the results, IndivL recorded 0.058 which is significant at confidence level of 1%, SMEsL showed a negative correlation (-0.081) but significant at level of 1%, corporate Lending presented 0.115 (significant at confidence level of 5%), and lastly Mortgage Lending (MortL) is 0.088 (significant at a confidence level of 1%).

	ROA	IndivL	SMEsL	CorpL	GovL	MortL	LnTA
ROA	1	-	-	-	-	-	-
IndivL	0.058*	1	-	-	-	-	-
SMEsL	-0.081*	0.049	1	-	-	-	-
CorpL	0.115**	0.074*	0.058*	1	-	-	-
GovL	-0.002*	0.003**	0.002	0.003	1	-	-

MortL	0.088*	0.073*	0.041*	0.046*	0.032**	1	-
LnTA	0.194*	0.009*	0.086*	0.020*	0.002**	0.073*	1

In addition, the correlation between the independent variables is weak as a sign of the independence of such variables and weak partial effect. All correlation values are below 0.20, for example, the correlation between IndivL and SMEsL is 0.049, MortL is 0.073, and CorpL is 0.074. The SMEsL also has weak correlation even significant as the values are 0.058* with corporate Lending and 0.041* with Mortgage Lending. Moreover, Corporate Lending shows low and significant correlation with Mortgage Lending (0.046*). Furthermore, bank size as a control variable indicates a significant correlation with all variables. The highest correlation was with the ROA (0.194*) while the lowest correlation was with Government Lending (0.002**).

Results Based on Seemingly Unrelated Regression (SUR)

This section illustrates the results to decide whether there is an impact of loan diversifying on the Jordanian banks' profitability over the years from 2000 to 2018. The results are provided in the following Table 6.

Variable	ROA Coefficient
TA	0.092*
IndivL	0.163*
SMEsL	-0.069*
CorpL	0.048*
MortL	0.183*
GovL	-0.053*
Adj. R-Squared	0.49
F-Statistic	52.372
D-W Statistic	1.89

According to the findings of SUR estimation, it is noticed that mortgage lending has a significant positive impact at 1% level of confidence on bank profitability. That is, the higher the banks lend real estate loans the higher return it will generate. The main evidence that support this result is that housing loans had formed the largest lending ratio by the end of 2017 according to CBJ statements. This result is also supported by Abdulrehman & Nyamute (2018) who concluded that mortgage lending increases performance and stated that the real estate market is a major source of banks' profits. In addition, individual lending has a significant positive impact on return on assets but in proportion less than mortgage lending at 1% level of confidence and this result supports Dinc's (2017) findings in Turkish banks & Munene et al. (2019) findings in Kenyan banks which suggested that individual lending has a positive effect on banks' performance. Nonetheless, the CBJ and other researchers have reported high risks associated with individual lending and as a result are described as unsecure or unguaranteed.

Furthermore, corporate lending as found to have a significant positive impact on return on return on assets at 1% confidence level. Ekpu & Paloni (2016) findings support this conclusion as they stated that corporate lending is one of the most important factors influencing UK banks' profitability. These corporate loans are also known as 'credit facilities', which corporations use to avoid reapplying for a loan every time they need money. Based on the results

of CBJ 2018 research, it was found that credit facilities given to large corporations recorded an increase of 11% indicating an influence on these banks' performance.

Small-medium sized enterprises were found to have a negative significant impact on return on assets at 1% level of confidence. The reason behind this result may be attributed to the fact that most SME are deemed riskier than large corporations as they are exposed to failure and hence defaults. This result falls in line with Kolari et al., (1996) who found out that lending to SMEs increases the return on assets ratio of small sized banks only in the U.S. To be put differently, when lending to SMEs the profitability of large banks is affected negatively while the profitability of small banks is affected positively. Accordingly, Chinese economists have voted for the development of small-and-medium-sized banks to grant credits to SMEs (Guo & Liu, 2002; Li, 2002).

Lastly, bank size was found to have a significant positive effect on return on assets at 1% confidence level. This result is aligned with the findings of Sritharan (2015), Singla (2011) and Pervan & Visic (2012) who indicated that large banks are more likely to have higher profits as firm size enables them to set high entry barriers to potential entrants. As a result, large banks are able to provide more loans to markets and earn as many borrowers as they can compared to smaller banks, which ultimately affects their profits and performance.

SIGNIFICANCE OF RESULTS

Based on the previous sections, the theoretical impact of loan diversification on banks profitability is not conclusive. According to Klein & Saidenberg (1997) banks with more loan diversification tend to have better performance; combining diversified sources of income would increase profits and even have stable income throughout the years. This argument has been in line with Chiorazzo et al. (2008) who argued that high risky loans concentrated to certain sectors might reduce the profitability.

In addition, the empirical evidence of the impact of loan diversification on banks' profitability is also not conclusive. For example mixed results achieved in different markets as Berger et al., (2010) argued that the Chinese banks suffered lower profits with high diversification during the period of 1996-2006. On the contrary, Elsas et al., (2010) found that diversification affects the profitability positively in different countries included in their sample (Italy, Canada, Switzerland, Spain, Australia, Germany, UK and US. Therefore, this paper fills in the gap of investigating the impact of loan diversification on banks performance in Jordan and the significant difference of the Jordanian Banking sector to other banking sector in different countries since they invest high amounts in governmental bonds and charge high noninterest income.

CONCLUSION

This study sought to examine the impact of loan diversification on the performance of commercial banks in Jordan during the time period between the years 2000 and 2018. The results were based on SUR estimates which showed that loan diversification does have an impact on Jordanian commercial banks' performance. More specifically, it was found that loan diversification in terms of individual lending, mortgage lending, and corporate lending have a significant positive impact on Jordanian commercial banks' performance, while SMEs lending and government lending have a significant negative impact on performance. The findings of this study conform to those of studies conducted in different countries. For instance in Kenya, Hellen

& Hesbon (2019) found that loan portfolio has a significant positive impact on bank performance. In Kenya & Austria, Thiongo et al., (2016) and Rossi et al., (2009) suggested that there is a positive relationship between diversification and performance. Consequently, Jordanian commercial banks need to focus their attention on mortgage lending, individual lending then corporate lending as a strategy to improve their performance.

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