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Comparison between Conventional and Islamic Banks regarding Non-Performing Loans and Bank Performance

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Abstract: *Credit creation is a vital concern for any financial institution such as commercial banks that are chasing lending rigorously. Therefore, with the massive prevalence of unsecured lending in the last decade specifically, following the financial liberalization of the 2000s banks are also equally suffering the phenomena of hazardous recovery. For instance, the study intends to investigate the impact of non-performing loans on bank performance conventional and Islamic as well. The results of the study indicate that non-performing loans harm the overall performance of banks. The study also concludes that concerning credit recovery conventional banks are working well as compared to their Islamic counterparts.*

Keywords: Bank performance, conventional banks, Islamic banks, non-performing loans, regression analysis, Pakistan.

Introduction

Over the last decades, various banking obstacles have emerged all over the world. After the financial crises of 2007 and 2008, bank asset quality has been highly reduced due to the global economic recession. A failure of a Bank is disastrous for society as a whole because a bank the public trust the most and the breakage of trust hampers the smooth functioning of the overall financial system of a country. Additionally, banks work with three essential objectives that are profitability, growth of assets and customer base. Banks depend on public trust as they are an industry that is involved in services. The performance of banks widely influences the level of public trust, so banks must keep good performance (Khan, Siddique, & Sarwar, 2020). Loans are the major source of external financing for business entities and individuals as well that's why the involvement of banks is very rigorous for public or private entities. To keep the rite established or retain the market share all the competing banks have to perform according to the desire of the clients. The fundamental function of banks is to provide loans to customers so, it is difficult for banks to operate without lending activity to their customers nevertheless, loans are considered the assets and earning sources for commercial banks (Ozurumba, 2016). However, sometimes loans

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are not performed as expected and are called non-performing loans it can be said as the debtor is not paying abruptly. The problem of non-performing loans is of considerable significance across the globe in the last decades. More interestingly, the volume of bed debts is terrifyingly growing not only in the developing and developed world equally (Saif-Alyousfi, Saha, & Md-Rus, 2018). Moreover, non-performing loans were considered one of the main causes of the 2007-2009 global financial crises which damaged the US economy and the economies of many countries across the globe precisely; most of the commercial financial giant's surrender such as Lehman Brother bank and so. It was the crisis that was purely based on substandard and over-leveraged lending famously known as Sub-Prime mortgages (Hosen, Broni, & Uddin, 2020).

It is worth mentioning the fact that in the 1990s or even in the early 2000s only public sector banks were functioning in Pakistan and were enjoying the probable monopoly. The banks were following cautious landing practices and discouraged the practices of non-performing loans. Meanwhile, the financial liberalization of the 2000s has entered more local and foreign commercial banks in the industry and bloomed up the quantum of private landing in the local economy. Resultantly, the local banking sector is also facing the problem of non-performing loans for the last three to four decades. The trial of non-performing loans in Pakistan starts from the year 2006 onwards and it reached the maximum in 2011 (15. 74%).In last the few years, the average level of non-performing loans in Pakistan is approx. 14.87% of gross landings by commercial banks (Khan et al., 2020). According to the state bank of Pakistan, we ranked 24th in terms of the highest level of non-performing loans.

Table 1
List Of Islamic Banks in Pakistan

Sr.#	Institution	Type
1	Full-fledged Islamic banks	5
2	Conventional banks have standalone Islamic banking branches	16

Source: State Bank of Pakistan Report 2021

The banking sector industry of Pakistan is reconstructing itself meantime, new players are entering and old ones are exhausted. Prominently, Islamic banking is originating harshly and taking a big chunk from the share of existing banking players. It is estimated that their 21 Islamic banks are operating in Pakistan with 5 full fledge and 21 converted convention bank subsidiaries operating with more than 2500 branches spreading across the country (State Bank, 2022). The share of Islamic banks has climbed from 2.3% to 21% because they are operating in Muslim countries following the Shariah-compliant law where the Riba (Interest) is prohibited. Henceforth they have not only raised assets to Rs.2000 billion but also captures a substantial customer base (Jameel, 2014). It is an astonishing fact that Islamic banks do deal in interest-based products they usually offer participatory forms of financing such as Mudarabah, Musharkah and Ijarah, etc, however, they are equally affected by the issue of sluggish recovery. Indeed, it is the need of the hour to study whether the existence of non-performing loans has hampered the financial performance of commercial banks like Islamic and conventional or not. It is the novelty of the study that no such issue has been envisaged in the past particularly, in the context of Pakistan. Furthermore, the study also investigates the impact of non-performing financing on the performance of Islamic and conventional both for comparison purposes.

Table 2
List of Commercial Banks in Pakistan

Sr.#	Institution	Type
1	Nationalized banks	3
2	Privatized banks,	3
3	Private sector banks	15
4	Foreign banks	14
5	Provincial scheduled banks	2
6	Specialized banks	4

Source: State Bank of Pakistan Report 2021

Literature Review

Many studies have investigated the impact of non-performing loans on the financial performance of banks in recent years (Jameel, 2014; Ugoani, 2016; Kusmayadi, Firmansyah, & Badruzaman, 2017). Besmir and Aliu (2021) have done a study on the banks in Kosovo to examine their performance due to non-performing loans. They collected data from 2010 to 2019 and used multivariate linear regression. They are in view that non-performing loans severely damage the profitability of the banks. Gabriel, Victor, and Innocent (2019) carried out a study in Nigeria and checked the effect of non-performing loans on financial performance by using multiple regression techniques. The results depicted that non-performing loans have a statistically negative impact on the performance of Nigerian banks.

Similarly, Adebisi and Matthew (2015) inspected the relationship between non-performing loans and profitability by collecting data from 2006 to 2012. They are in view that there is no significant relation between non-performing loans and the performance of Nigerian banks. Amin, Ahsan, Al Muktadir, AZAD, and Rezanur (2021) made a study in Bangladesh to figure out the effect of NPLs on the performance of Islamic banks by gathering data from 2008 to 2019. The outcomes of the study revealed that ROA is negatively associated with NPLs. In Vietnam, Dao, Nguyen, Hussain, Nguyen, et al. (2020) highlighted the factors affecting non-performing loans of commercial banks by taking data from 2008 to 2017 and they found that macroeconomic factors including inflation rate, growth rate and interest rate effects the non-performing loan. The study found that the high performance of the bank and credit growth decrease the non-performing loans.

In Namibia, Maseke and Swartz (2021) conducted a study to check the impact of non-performing loans on profitability in the banking sector by collecting data from 2014 to 2018. The study showed that there is a negative relationship between non-performing loans and the performance of the bank. Another study by Swandewi and Purnawati (2021), examined the impact of non-performing loans on return on assets and they used the financial statements of banks in this regard. They have concluded that non-performing loans negatively and significantly influence the performance of the banks. Another study was made in Bangladesh by Hosen et al. (2020) on the factors that influence non-performing loans of conventional and Islamic banks. In this regard, data were collected from 26 commercials and four Islamic banks over a period from 2014 to 2018 and they applied a regression model. They concluded that there are lower non-performing loans in Islamic banks as compared with conventional banks. Moreover, Khan et al. (2020) have discussed the important determinants of non-performing loans and concluded that operating efficiency and profitability have a statistically significant negative impact on non-performing loans.

Methodology

The study intends to investigate the impact of non-performing loans on bank performance conventional and Islamic as well from the period 2010 to 2020. Non- performing loan is calculated by dividing non-performing loans by total loans (Gabriel et al., 2019; Khan et al., 2020; Setiawan, Hasan, Hassan, & Mohamad, 2017).

Non-performing loan= (non-performing loans/ total loans) 100%

It is an astonishing fact in that Islamic banks do deal in interest-based products they usually offer a participatory form of financing such as Mudarabah, Musharkah and Ijarah, etc, in participation with clients mostly based on the financing of counterparts. Therefore, financing activities are the function of Islamic banks and these activities are based on Shariah principles. Non-performing financing is measured by non-performing financing to participation financing (Setiawan et al., 2017).

Non-performing financing = (non-performing financing/financing) 100%

Return on asset (ROA) shows the profitability of banks which is calculated by dividing the net income by total assets (Kingu, Macha, & Gwahula, 2018; Ozurumba, 2016; Zaman & Chowdhury, 2019). A higher ROA shows that a firm is efficient and effective in generating a profit by using its assets.

ROA= (Net income after tax/ total assets) 100%

To generate rigourness in results there is a need for a second proxy of profitability, for instance, return on equity (ROE) is similar to ROA. It is calculated by dividing net income by shareholder equity. The more the ROE the better return is for the shareholder's investment. The below-mentioned table no. 03 shows the summary of proxies.

Table 3
Summary of Proxies

SR. #	Variable name	Symbol	Proxy/Formula	Source
1	Return on assets	ROA	= (net income/total assets) 100%	Annual reports of banks
2	Return on equity	ROE	= (net income/shareholder's equity) 100%	Annual reports of banks
3	Non-performing loans	NPL	= (non-performing loans/ total loans) 100%	Annual reports of banks
	or			
	Non-performing financing	NPF	= (non-performing financing / financing) 100%	Annual reports of banks

Results and Discussion

The study intends to investigate the impact of non-performing loans on bank performance conventional and Islamic as well from the period 2010 to 2020. There is a need for the check data first because all the inferences are based on the data used, checking the normality of the series is the clinical first step, therefore, the Unit root test (Phillip-perron (pp) and Hadri) is used to check the stationary of the data whether the series is stationary or not.

Table 4
Unit Root Test of Commercial Banks with Trends and Without Trends

	With trends				**Without trends**			
Variables	**PP**		**Hadri**		**PP**		**Hadri**	
	Statistic	**P value**	**statistic**	**P value**	**Statistic**	**P value**	**Statistic**	**P value**
ROA	42.6631	0.0023	16.3323	0.000	39.2834	0.006	3.94808	0.000
ROE	34.6221	0.0222	30.5900	0.000	40.1171	0.004	1.71351	0.043
NPL	48.1723	0.0004	7.32588	0.000	37.1136	0.011	5.39719	0.000

The results of Table no.04 clearly show that the series is stationary at level or there is no presence of unit root and reject the alternate hypothesis.

Table 5
Unit root test of Islamic banks with trends and without trends

	With trends				**Without trends**			
Variables	**PP**		**Hadri**		**PP**		**Hadri**	
	Statistic	**P value**	**statistic**	**P value**	**statistic**	**P value**	**statistic**	**P value**
ROA	29.8094	0.0002	6.03410	0.000	22.304	0.004	1.96935	0.024
ROE	28.1399	0.0004	6.72258	0.000	34.1337	0.000	3.55231	0.000
NPL	25.5669	0.0012	20.4846	0.000	43.1744	0.000	4.13516	0.000

The p value of all the variables of the Hadri test is also less than 0.05, which means that our series is stationary or there is no presence of unit root therefore we accept the null hypothesis and reject the alternate hypothesis.

Here comes the important part of the analysis which is descriptive statistics which elaborate the characteristics of the data as a whole and individual series. Table no. 05 presents the descriptive statistics of the said variables such as non-performing loans (NPL), return on assets (ROA) and return on equity (ROA) of both types of banks i-e conventional banks and Islamic. The average value of all the observations is the mean which can be found by dividing all number of observations. In both conventional and Islamic banks all the variables have low standard deviation which means the variability in data is low. It further also implies that the variations in profitability of said banks, because all the three said proxies are showing the earning capacity of banks. The results are showing that the earning propensity of commercial banks in Pakistan is bit stable. It is an established fact that the commercial banks are regulating our economy substantially and the aforesaid sector is also dominating in local capital market as well.

Conventional banks are more profitable as compared to Islamic ones the mean values of both the proxies aforesaid are higher. Moreover, returns do come alone it has a counterpart with risk and the higher standard deviation is conventional banks' data elaborate that they are more eager to capture higher market share. Alternatively, Islamic banks are following a conservative leading policy that's why they have lower nonperforming loans as compared to conventional partners. Moreover, most of the Islamic banking products are non-participatory in nature like: Ijarah & Salam whereas, the bank has not face any risk and all the burden remains in the shoulder of borrower. Additionally, by the introduction Islamic banking in the era non active realm of customer ship also became active which may called orthodoxical in nature.

Table 6
Descriptive statistics of conventional banks

Variable	Obs	Mean	Std. Dev.	Min	Max	skewness	kurtosis
ROA	100	.008853	.0048726	-.0136	.0201	0.0012	0.0001
ROE	100	.167778	.2417212	-.3186	2.3471	0.0000	0.0000
NPL	100	.101255	.0757274	.0108	.4800	0.0000	0.0000
Descriptive Statistics of Islamic Banks							
ROA	40	.00537	.0054483	-.0087	.0169	0.7735	0.8387
ROE	40	.09325	.0999974	-.0970	.3486	0.0863	0.8442
NPL	40	.07034	.0500960	.0134	.1934	0.0393	0.8666

Table 7
Correlation matrix

Correlation test of conventional banks			
	ROA	**ROE**	**NPL**
ROA	1.000		
ROE	0.2421	1.000	
NPL	-0.2006	0.1472	1.000
Correlation test of Islamic banks			
	ROA	**ROE**	**NPL**
ROA	1.000		
ROE	0.9383	1.000	
NPL	-0.6616	-0.6350	1.000

After the descriptive statistics, Table no.07 presents a correlation matrix between the independent variable and dependent variables and their relation with one another of both conventional and Islamic banks. The values of all the variables are below the threshold level which indicate there is not any issue of multicollinearity between the variables. Because, the issue of multicollinearity between the variables may generate spurious regression. Regression analysis is a basic statistical tool that is used the relationship between the dependent variable and the independent variable. Overall the model suggests that there is a negative significant relationship between non-performing loans and profitability.

The analysis indicates that the performance of a conventional bank is badly affected by its lethal recovery of loans because loans are a vital source of asset formation and revenue generation of respective banks. It is worth mentioning the fact that Islamic banks fund cautiously while leading and they do not deal in interest-bearing loans. Perhaps. They also feel the heat of slow recovery and denting profitability. For instance, the regulator should give proper advice to all stakeholders to conduct proper inquiries before loan offerings to clients. The study concludes that the non-performing finance of Islamic banks is relatively higher than the non-performing loans of conventional banks in Pakistan.

Table 8
Regression analysis of conventional banks based on ROA

Source	ss	df	MS	Number of obs	=	100
				F(1, 98)	=	4.11
Model	.000094588	1	.000094588	Prob >F	=	0.0454
Residual	.002255921	98	.00002302	R-squared	=	0.0402
				Adj R-squared	=	0.0304
Total	.002350509	99	.000023743	Root MSE	=	.0048
ROE	Coef	Std. Err.	t	P>|t|	[95% Conf.	Interval]
NPL	-.0129077	.0063676	-2.03	0.045	-.025544	-.0002713
_cons	.01016	.0008037	12.64	0.000	.0085651	.0117548
	Dependent variable: ROA					

Table 9
Regression analysis of conventional banks based on ROE

Source	ss	df	MS	Number of obs	=	100
				F(1, 98)	=	2.17
Model	125392062	1	.125392062	Prob >F	=	0.1438
Residual	5.65909239	98	.057745841	R-squared	=	0.0217
				Adj R-squared	=	0.0117
Total	5.78448445	99	.058429136	Root MSE	=	.2403
ROE	Coef	Std. Err.	t	P>|t|	[95% Conf.	Interval]
NPL	-.4699639	.3189259	1.47	0.144	-.1629342	1.102862
_cons	.1201918	.0402528	2.99	0.004	.0403115	.2000721
	Dependent variable: ROE					

The analysis indicates that the performance of an Islamic is bank badly affected by its lethal recovery of loans because loans are a vital source of asset formation and revenue generation. The negative relationship between non-performing loans and profitability elaborates that the high-ups of a bank normally get anxious with the surge of non-performing loans.

Table 10
Regression analysis of Islamic banks based on ROA correlation matrix

Source	ss	df	MS	Number of obs	=	40
				F(1, 38)	=	29.58
Model	.000506691	1	.157257724	Prob >F	=	0.0000
Residual	.000650973	38	.006124255	R-squared	=	0.4377
				Adj R-squared	=	0.4229
Total	.001157664	39	.000029684	Root MSE	=	0.00414
ROA	Coef	Std. Err.	t	P>|t|	[95% Conf.	Interval]
NPL	-.071951	.0132298	-5.44	0.000	-.0987334	-.0451686
_cons	.010431	.0011377	9.17	0.000	.008128	.0127341
	Dependent variable: ROA					

It is worth mentioning the fact that Islamic banks fund cautiously while leading and they do not deal in interest-bearing loans. Perhaps. They also feel the heat of slow recovery and denting profitability. For instance, the regulator should give proper advice to all stakeholders to conduct proper inquiries before loan offerings to clients.

Overall, it has been observed that with the each passing the proportion of non-performing loans is increasing in commercial banks portfolio. Moreover, either conventional or Islamic banks are concerned they are equally affected with the problem of sluggish recovery. Meanwhile, Islamic banks have hedge itself up to some extent by applying sharia compliance roles and offering non participatory financing options. Indeed, it is the need of the hour to study whether the existence of nonperforming loans has hampered the financial performance of commercial banks like Islamic and conventional or not. It is the novelty of the study that no such issue has been envisaged in the past particularly, in the context of Pakistan.

Table 11
Regression analysis of Islamic banks based on ROE correlation matrix

Source	ss	df	MS	Number of obs	=	40
				F(1, 38)	=	25.68
Model	.157257724	1	.157257724	Prob >F	=	0.0000
Residual	.232721696	38	.006124255	R-squared	=	0.4032
				Adj R-squared	=	0.3875
Total	.38997942	39	.009999472	Root MSE	=	.07826
ROE	Coef	Std. Err.	t	P>|t|	[95% Conf.	Interval]
NPL	-1.267567	.2501449	-5.07	0.000	-1.773959	-.7611754
_cons	.1824107	.0215104	8.48	0.000	.1388652	.2259562

Dependent variable: ROE

Conclusion

Credit creation is a vital concern for any financial institution such as commercial banks that are chasing lending rigorously. Therefore, with the massive prevalence of unsecured lending in the last decade specifically, following the financial liberalization of the 2000s banks are also equally suffering the phenomena of hazardous recovery. Therefore, the study intends to investigate the impact of non-performing loans on bank performance conventional and Islamic as well. A failure of a Bank is disastrous for a society as a whole because in a bank the public trust the most and breakage of trust hampers the smooth functioning of the overall financial system of a country Additionally, banks work with three essential objectives profitability, growth of assets and customer base. Banks depend on public trust as they are an industry that is involved in services. The banking sector industry of Pakistan is reconstructing itself meantime, new players are entering and old ones are exhausted. Prominently, Islamic banking is originating harshly and taking a big chunk from the share of existing banking players. It is an astonishing fact that Islamic banks do deal in interest-based products they usually offer participatory forms of financing such as Mudarabah, Musharkah and Ijarah, etc, however, they are equally affected by the issue of sluggish recovery. The analysis indicates that the performance of a conventional bank is badly affected by its lethal recovery of loans because loans are a vital source of asset formation and revenue generation. It is worth mentioning the fact that Islamic banks fund cautiously while leading and they do not deal in interest-bearing loans.

Perhaps. They also feel the heat of slow recovery and denting profitability. For instance, the regulator should give proper advice to all stakeholders to conduct proper inquiries before loan offerings to clients. The study concludes that the non-performing finance of Islamic banks is relatively higher than the non-performing loans of conventional banks in Pakistan. Meanwhile, due to the prevalence certain constraints the scope of the study remains limited to Pakistan and shorter period of time. The scope of the study can further be enhanced by looping more banks into consideration and by extending more financial years into inclusion. Furthermore, the financial sector of Pakistan has also seen substantial financial liberalization and openness by following an event study can also be concluded pre and post time diaspora.

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