Abasyn Journal of Social Sciences
Vol (16), Issue (1), 2023.
Open Access
DOI: 10.34091/AJSS.16.1.09

A Critical Assessment of the Impact of Loan Defaults on Profitability of Banks: A Case Study of HSBC Bank PLC

Naqeeb Ullah
Asia e University, Malaysia
Umair Asghar
Hajvery university, Lahore, Pakistan

Abstract

Increasing default and bankruptcy in banking sector, has significantly increased the concern of academicians, investors, and research to assess the impact of loan default on financial performance of banking sector. Therefore, main intent of the current research was to critically assess the impact of loan default on profitability of the banking sector, specifically on HSBC Bank Plc in UK. For research method, secondary quantitative approach has been employed, and information was derived on HSBC Plc, while covering period from 1993 to 2022. Regarding variables, NPL as an indicator of loan default was used as an independent variable, and ROA and ROI as an indicator of profitability were used as a dependent variable. For analysis, descriptive, correlation, and linear regression model were used via using SPSS software. Findings shows that NPL has a positive and significant influence on both ROA and ROI of HSBC bank. Thus, it suggested that increase in increase in NPL leads to increase in profitability of the banking sector as well. However, this effect could be result of a proportional relation between the NPL, number of approved loans and profitability. As number of approved loans increases then proportion of NPL would also increase and in the same as profitability. Findings in the current research suggested for future research while integrating both quantitative and qualitative research approach. It also suggested consideration of control variables (i.e., bank size, liquidity, and capital structure) for further detailed analysis..

Keywords: *ROA, ROE, Profitability, NPL, non-performing loan, loan default, UK banking sector, HSBC, financial crisis, financial performance*

In finance, the defaulter is referred one who fails to meet the legal obligation regarding the loan. This indicates that when the borrower cannot pay their loan back, the borrower is officially termed as defaulter by the bank. There are two kinds of defaulters one is the technical default, which arises when certain requirements of the bank or financial institutions are not met by the borrower other than payment (Goel et al., 2023). Meanwhile, the other type of default is debt services default, this default refers to the condition when the borrower is unable to make payments. (Ali and Dhiman, 2019).

The study undertaken by Malik, (2021) states that in 2008, Lehman Brothers was one of the largest financial institutions that defaulted in history with around $6000 billion of assets under management. India's Major 2,426 premeditated defaults were required to repay the banks 1047rs lakh crore. In September 2019, the Reserve bank of India (RBI) also presents the list of the leading 50 defaulters of loans with the amount of 65,607rs crores that have been devalued in the banking system. Loan defaults decline the performance of bank, as the loan defaults can severely decline the credit score, which effect the bank worthiness for credit. Loanable fund theory states that a default loan declines the loanable funds level, further reducingloan amount given to clients. Moreover, loan defaults also decrease the deposits that distress the bank's internal operation, leading to insufficient circulation funds (Storm, 2020).

Oteng, et al., (2017) mentions that the main cause behind the inconsistency in repaying the loan payment is the higher loan interest amount. The study of Abaidoo and Oppong, (2015) states that commercial banks are facing issues regarding performance, as several banks regardless of presenting profits, are facing a decline in the level of profitability. The theoretical perspectives demonstrate that issues related to the performance of the banks can be due to loan defaults. This generates the requirement to evaluate the association between the level of loan defaults and commercial banks' profitability.

Regardless of the fact that these examples of the impact of loan failure on commercial banks are conclusive, it is recognized that the overall contribution to the scholarly discussion of the topic is inadequate because there is often few research on the topic, specifically in UK banking sector. Consequently, this study evaluates loan default and the consequences on the financial health of United Kingdom commercial banks. As a result of this study, commercial banks in United Kingdom would be able to apply practical solutions to manage the issue of rising non-performing loans and subsequently enhance their financial performance and profitability.

Literature Review and Hypothesis Development

In accordance with study conducted by Nugroho, Arif and Halik (2021) a loan refers to the lending of specified amounts for a specified time period to earn an interest income. The author further evaluated that lenders cannot seek repayment from borrowers before time span, and sometimes there are also chances of losing money due to unsecured loans. However, over the past few decades, especially after an emergence of 2007-08 financial crises, banking sector had faced a sharp increase in loan defaults. The primary reason of increase in loan default was due to weak regulations, excessive loan, and non-payment of loan, which ultimately leads to bank run (Patwary and Tasneem, 2019; Oudat Ali, 2020).

In addition, Mwangi (2020) in their study indicated that lack of willing to pay, improper appraisal by Credit Officers, and wilful negligence are one of the major reason that causes loan defaults in banking sector. Moreover, Nugroho, Arif and Halik (2021) in their study has also found out that firm size, scale of operation, and wrong economic decisions are exposure to loan default risk. Further, (Nugroho, Arif and Halik, 2021) in their study has also identified delay in time of loan delivery, loan shortages, small firm size, high interest rate, poor supervision, undue government intervention, and non-profitability enterprises as a major reason of loan default. On contrary, Wood and Skinner (2018); Çollaku and Aliu (2021) in their study indicated that decline in real GDP is one of the major reason that causes loan default. The author further evaluated that exchange rate depreciation has also a direct influence payment ability of the borrowers which increase the chances of loan default.

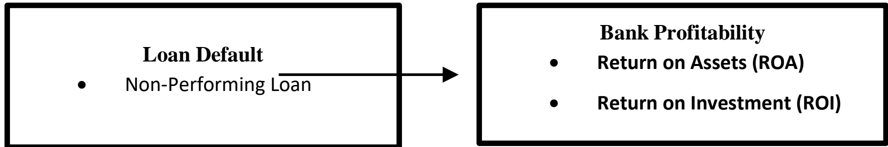
However, several studies have been carried out to analyse the loan defaults (i.e. loan loss provision ratio or non-performing loans NPL, net charge off, and nonperforming coverage ratio) (Wood and Skinner, 2018; Gabriel, Victor and Innocent, 2019; Patwary andTasneem, 2019; Oudat Ali, 2020; Çollaku and Aliu, 2021; Nugroho, Arif and Halik, 2021), and its influence on profitability (i.e. ROA, ROE, net profit margin) of banking sector, worldwide. For instance; Gabriel, Victor and Innocent (2019) in their study while analysing the non-performing loan in commercial bank from 1985 to 2016 found that non-performing loans has a negative influence on financial performance (Return on Asset) of commercial banks. The author suggested that banking sector need an effective regulations and environment where a loan default risk can be mitigated. Similarly, Çollaku and Aliu (2022) in their study has also analyse the association between loan (loan to deposit ratio and capital adequacy ratio) and profitability ratios (return on equity and return on assets) of Kosovo bank for time period of 2010 to 2019. The author has also considered bank size and liquidity, as a control variable to validate the findings. Findings shown that NPL has a negative influence on banking sector. Additionally, Wood and Skinner (2018) in their study have also examined the association between bank profitability and bank default ratios while considering macroeconomic determinants (i.e. GDP growth, interest rate, and unemployment). Although, findings shown that loan to deposit ratio and capital adequacy ratio significantly influenced on return on assets.

On contrary, Saeed and Zahid (2016) in their study have also analysed the impact of loan default on the profitability five commercial banks in UK, while covering time span from 2007 to 2015. Findings revealed that ROE and ROA is positively association with nonperforming loans and net charge off (or impairments). The author further evaluated that after financial crisis of 2008, the banking sector in the UK has taken a benefits from credit risks, and enhance their profitability through charging a higher interest rates, commissions, and fees. Similarly, it has also been supported with the findings of Nugroho, Arif and Halik (2021), which claim that profitability in Tanzania is positively associated with loan default. The author further evaluated that higher interest rates charged on loans significantly helps the banking sector to enhance their profitability. Further, Moseti (2021) in their study has also shows a positive association between financial performance of banking sector in Kenya and loan defaults, while findings have also revealed that liquidity has a negative association with financial performance of the banking sector. However, most of the studies have analysed the negative association between loan default and profitability of the banks; therefore, following hypothesis have been formulated:
H1a: Loan default has a significant influence on ROA of the bank in UK.

H0a: Loan default has a significant influence on ROA of the bank in UK.
H1a: Loan default has a significant influence on ROI of the bank in UK.
H0a: Loan default has a significant influence on ROI of the bank in UK.

Conceptual Framework

Based on the aforementioned hypotheses, conceptual framework has been developed, as shown in a figure below:



Research Methodology

In the current research, the main emphasis of the researcher is to critically assess the impact of loan default on profitability of the bank; therefore, quantitative research design has been opted. The primary reason for using a quantitative research approach due to the nature of the research and research problem that requires an empirical evidence of the relationship between the loan defaults and profitability of the bank (Ryan, 2018). Regarding data collection, information was derived using secondary quantitative research on one of the largest banks (HSBC) in the UK while covering the period of last 30 years' data. The primary reason of using secondary quantitative approach, it enabled the researcher to gather empirical evidence and provide material evidence rather than assumption based conclusions (Nardi, 2015). Therefore, the secondary quantitative research approach has been one of the most suitable approaches for critical assessment of loan default on financial performance of the commercial bank in the UK. Regarding variables, return on Assets (ROA) and Return on Investment (ROI) has been used as a proxy for profitability of the bank, and Non-Performing Loan (NPL) was used as a proxy for loan default. Further, for data analysis, statistical tools (i.e. descriptive, correlation, and linear regression analysis) were used using SPSS, which allows the researcher to critically analyse the impact of loan default on profitability (Selvi, 2019). The justification of using this method, as it helps in hypothesis testing and overall ensured the validity of the research outcomes (Lindgren, Lundman and Graneheim, 2022). Lastly, ethical values have also been considered, and all information or data that were derived from secondary studies were appropriately cited in the current research.

Table 1.
Descriptive Statistics Analysis

Descriptive Statistics					
	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
NPL	30	0.286	0.793	0.538	0.157
ROA	30	0.099	0.819	0.587	0.179
ROI	30	0.874	5.502	4.388	1.132
Valid N	30				

The above table 1, summarise the key characteristics of the variables involved in this research. Notably, it can be seen that total number of observations are 30, as denoted by "N". It can be seen that mean value of 0.538 which implies that average non-performing loan was found to be 0.538 from 1993 to 2022, and it is expected to deviate towards 0.157. Additionally, ROA has been considered as a profitability of the bank. It can be seen that mean value of return on assets ROA is found to be 0.589, and it is expected to deviate towards 0.179. Lastly, return on investment ROI has also been used as a proxy of profitability of the bank. The average ROI during the time period is found to be 4.38, and expected to deviate towards 1.132.

Table 2.
Correlation Analysis

Correlations			
	NPL	ROA	ROI

NPL	Pearson Correlation	1	.723**	.434*
	Sig. (2-tailed)		.000	.016
	N	30	30	30
ROA	Pearson Correlation	.723**	1	.927**
	Sig. (2-tailed)	.000		.000
	N	30	30	30
ROI	Pearson Correlation	.434*	.927**	1
	Sig. (2-tailed)	.016	.000	
	N	30	30	30

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

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

Correlation analysis has also been used to analyse the association between variables involved in this specified research. Notably, it can be seen that Non-performing loan has a positive and strong association with ROA, as coefficient value is estimated to be 0.723. While, NPL has a moderate and positive association with ROI, as coefficient value is determined to be 0.434. Further, ROA and ROI has also strong and positive association with each other, as coefficient value is found to be 0.927.

Table 3.
Linear Regression Model 1

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	0.144*	0.083		1.735	0.094
NPL	0.823***	0.149	0.723	5.536	0.000
R Square 0.523					
Adjusted R Square 0.506					
Sig 0.000					
*Significant at 10% *, 5% **, 1% ****					

Referring to the value of R Square of first regression model, it has been found to be 0.523, which suggested that 52.3% changes in the ROA is predicted due to changes in NPL. Lastly, from the above table, sig value is computed to be 0.010 < 0.05, demonstrated that predicted model is significant and adequate for analysis. In linear regression model 1, “NPL” has been used as an explanatory variable to analyse its influence on “ROA” of the bank. Table shows that NPL has a positive and significant influence over ROA of the bank, as coefficient value if determined to be 0.823, and it is significant at 1%, as sig value is found to be 0.000 < 0.01. Thus, it implies that increase in NPL leads to increase in profitability of the bank as well. This suggests that effect of NPL on the profitability might due to chance as bank and its operations grow, the profitability and NPL also grows due to increased quantum of loans approved in given year. Thus, this effect could be a natural effect of increased number of loans during the period.

Table 4.
Linear Regression Model 2

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	2.704***	0.687		3.937	0.000

NPL	3.128***	1.226	0.434	2.552	0.016
R Square 0.189					
Adjusted R Square 0.160					
Sig 0.016					
*Significant at 10% *, 5% **, 1% ****					

Furthermore, the second model has R Square of 0.189, which suggested that 18.9% changes in the ROA is predicted due to changes in NPL. Lastly, sig value is computed to be 0.016 < 0.05, demonstrated that predicted model is significant and adequate for analysis. In linear regression model 2, "NPL" has been used as an explanatory variable to analyse its influence on "ROI" of the bank. Table shows that NPL has a positive and significant influence over ROI of the bank, as coefficient value if determined to be 3.128, and it is significant at 1%, as sig value is found to be 0.016 < 0.01. Thus, it implies that increase in NPL leads to increase in profitability of the bank as well. It is evident that this effect could be due to chance as proportion of the NPL increases as number of loans approved increases during the period and thus the revenue increases.

Discussion and Implications

Increasing concern towards loan default has been significantly increased, especially after financial crisis of 2007-08 due to increasing excess lending, delay in time of loan delivery, small firm size, high interest rate, poor supervision, undue government intervention, and non-profitability enterprises (Patwary & Tasneem, 2019; Oudat Ali, 2020; Goel et al., 2023). Further, macroeconomic indicators (GDP, interest rate, and uncertainties in exchange rate) have also been reported as a major indicator that increased the chances of loan default. However, various researchers have been focused worldwide, but findings in the context of UK it is found to be highly controversial (Wood and Skinner, 2018; Gabriel, Victor and Innocent, 2019; Patwary and Tasneem, 2019; Oudat Ali, 2020; Çollaku and Aliu, 2021; Nugroho, Arif and Halik, 2021). Therefore, in the current research, researcher has been focused towards empirical investigations regarding impact of loan on profitability of bank in UK.

Although, most of the researchers in previous studies have shown that non-performing loans has a negative influence over profitability of the banking sector (Wood and Skinner, 2018; Gabriel, Victor and Innocent, 2019; Çollaku and Aliu, 2021). Likely, Gabriel, Victor and Innocent (2019) in their study indicated that commercial banks' profit is negatively influenced due to loan default. The author recommended that effective regulations and environment where a loan default risk can be helpful in mitigating loan default. Additionally, it has also been confirmed with the findings of Çollaku and Aliu (2021); Wood and Skinner (2018) which claim that loan to deposit ratio and capital adequacy ratio has a negative influence over profitability ratios (return on equity and return on assets) of banking sector. However, findings in the current research has also shows a positive influence of NPL on profitability (i.e. ROA and ROI) of HSBC bank PLC. Similarly, some researchers have also argued that NPL positively influence over profitability of the banks (Saeed and Zahid, 2016; Nugroho, Arif and Halik, 2021). As Saeed and Zahid (2016) in their study found a positive association between ROA and NPL. Further in this regard, Nugroho, Arif and Halik (2021) in their study also supported a positive association between NPL and profitability of the banking institutions. However, based on the findings in the current research and aforementioned studies, formulated hypotheses have been accepted and rejected, as showing in a table below:

	Statement	Coefficient	P-value	Accepted	Rejected
H1a	Loan default has a significant influence on ROA of the bank in UK.	0.823	0.000	✓	
H0a	Loan default has a significant influence on ROA of the bank in UK.				✓
H1b	Loan default has a significant influence on ROI of the bank in UK.	3.128	0.016	✓	
H0b	Loan default has a significant influence on ROI of the bank in UK.				✓

Conclusion and Future Research Directions

The current research has critically analysed the impact of loan default on profitability of banking sector in the UK particularly in case study of HSBC bank. For critical analysis, secondary quantitative information was employed, and data was derived on HSBC bank for the last 30 years (1993 to 2022). Regarding variables, non-performing loan was used as an independent variable, while ROA and ROI were used as a dependent variable. For data analysis, descriptive, correlation, and regression analysis were used through SPSS software. However, findings shown that NPL has a positive influence on both ROA and ROI of HSBC Plc bank. Thus, it revealed that increase in NPL leads to decrease in profitability of the banking sector. Although, findings in the current research has significantly contributed in the previous studies, which can help the policy makers in banking sector of UK and other countries to manage the issue of rising non-performing loans and subsequently enhance their financial performance and profitability. Hence, findings in the current research is also limited to the quantitative research, and it suggested for future research while integrating both quantitative and qualitative research approach for further detailed analysis. In addition, control variables (i.e. bank size, liquidity, and capital structure) can also be considered to analyse the profitability of the bank.

References

Abaidoo, A. and Oppong, S., 2015. Determinant of loan default and its effect on financial performance of commercial banks in Ghana. A case study of Fidelity Bank Limited.

Ali, L. and Dhiman, S., 2019. The impact of credit risk management on profitability of public sector commercial banks in India. *Journal of Commerce & Accounting Research*, *8*(2), pp.86-92.

Çollaku, B. and Aliu, M., 2021. Impact of Non-Performing Loans on Bank's Profitability: Empirical Evidence from Commercial Banks in Kosovo. Journal of Accounting, Finance and Auditing Studies, 7(3), 226-242.

Goel, A., & Rastogi, S. 2023. Credit scoring of small and medium enterprises: a behavioural approach. Journal of Entrepreneurship in Emerging Economies, *15*(1), 46-69.

Gabriel, O., Victor, I. E. and Innocent, I. O., 2019. Effect of non-performing loans on the financial performance of commercial banks in Nigeria. American International Journal of Business and Management Studies, 1(2), 1–9.

Lindgren, B.M., Lundman, B. and Graneheim, U.H., 2020. Abstraction and interpretation during the qualitative content analysis process. *International journal of nursing studies*, *108*, p.103632.

Macro trends. Available at: https://www.macrotrends.net/stocks/charts/HSBC/hsbc/financial-ratios

Malik, R. 2021. An Impact of Loan Defaults and Impact on Profitability of Bank. International Journal for Research in Engineering Application & Management (IJREAM). Vol-06, Issue-11, FEB 2021. ISSN : 2454-9150.

Moseti, N., 2021. *The Effect of Loan Defaults on Financial Performance of Commercial Banks* (Doctoral dissertation, University of Nairobi).

Mwangi, J. (2020). Effects of Macro-economic Factors on Non-performing Loans of Commercial Banks in Kenya (Doctoral dissertation, University of Nairobi).

Nardi, P. M., 2015. Why We Do Research In this chapter, the differences between everyday thinking and scientific thinking are discussed. An argument is made about the advantages of doing survey research and understanding various kinds of research: exploratory, descriptive, explanatory, and evaluation. The chapter concludes with a comparison of quantitative and qualitative research methods. In *Doing Survey Research* (pp. 11-34). Routledge.

Nugroho, M., Arif, D. and Halik, A., 2021. The effect of loan-loss provision, non-performing loans and third-party fund on capital adequacy ratio. Accounting, 7(4), 943-950.

Nugroho, M., Arif, D., & Halik, A. (2021). The effect of loan-loss provision, non-performing loans and third-party fund on capital adequacy ratio. Accounting, 7(4), 943-950.

Oteng, E., Ampomah, B.A. and Kyeremeh, E.A., 2017. An Assessment of Bad Loans and Its Impact on the Profitability of Banks in Ghana: A Case Study of Agricultural Development Bank Limited (ADB LTD.). *European Journal of Business and Managemen*.

Ryan, G., 2018. Introduction to positivism, interpretivism and critical theory. *Nurse researcher*, *25*(4), 41-49.

Saeed MS, Z. N., 2016. The Impact of Credit Risk on Profitability of the Commercial Banks. J Bus Aff.

Selvi, A.F., 2019. Qualitative content analysis. In *The Routledge handbook of research methods in applied linguistics* (pp. 440-452). Routledge.

Storm, S., 2020. Secular stagnation, loanable funds and demography: why the zero lower bound is not the problem. In *Economic Growth and Macroeconomic Stabilization Policies in Post-Keynesian Economics* (pp. 90-106). Edward Elgar Publishing.

Wood, A. and Skinner, N., 2018. Determinants of non-performing loans: evidence from commercial banks in Barbados. The Business & Management Review, 9(3), 44-64.