CHAPTER FOUR: FINDINGS AND ANALYSIS

4.1 Introduction

The chapter demonstrates empirical analysis regarding the effect of financial leverage on the on financial performance and liquidity position of the publicly listed Banks in United Kingdom. For this purpose, descriptive statistics has been used to describe the variables of the study correlation has also been conducted to examine interrelation among the financial leverage and financial performance of the banks. In addition to this, empirical investigation has also been conducted through panel least square regression to evaluate how much financial leverage has been affecting and influencing the financial performance and liquidity position of the Banks operating in United Kingdom. In addition to this, discussion on the findings of the study has also been conducted to discuss how much objectives of the study are achieved.

4.2 Descriptive Statistics

	D/E	D/A	EOP_L_EOP_D	EPS	ROE	NPM	Current Ratio
Mean	2.19	0.12	0.80	0.73	0.08	0.09	1.04
Median	2.17	0.11	0.69	0.24	0.09	0.06	1.14
Maximum	4.83	0.24	1.25	3.63	0.20	0.44	1.35
Minimum	0.41	0.01	0.57	-0.87	-0.03	-0.15	0.34
Std. Dev.	1.09	0.05	0.21	1.07	0.05	0.12	0.30

The mean debt to equity ratio of a bank is 2.19 (SD 1.09) and this implies that on average a bank has debt to equity ratio of 2.19 that could also deviate by 1.09. It is because the debt to equity differs by bank. It can also be interpreted as that on average a given bank owes £2.19 in debt against each £1 of equity; this makes double than equity that is normal for a bank and financial institution. Furthermore, the debt to assets (D/A) of the bank is 0.12 (SD 0.05) that

implies on average 15% assets of the banks are financed by debt and remaining by other liabilities and total equity. On the other hand, the average loan to deposit ratio of a given bank is 0.8 with standard deviation 0.21 suggesting that 80% of the loans have been made to customers from bank's own deposits without relying on the external deposits and that is an indication of bank's effective leverage.

In addition to, the mean earnings per share (EPS) of the bank is 0.73 with standard deviation 1.07 and this suggests that on average banks have generated a positive value for the shareholders. Since, the standard deviation of the EPS is higher than mean hence it can be evident that many banks' also have experienced net loss and have generated negative value for the shareholders. Furthermore, the mean return on equity (ROE) of the banks is 0.08 or 8% with standard deviation 0.05 or 5%; thus, this infers that a typical bank generates 8% return over the equity employed by shareholders but this mean value could deviate by standard deviation. Lastly, mean net profit margin of the banks is 0.09 or 9% with SD 0.12 (12%); but since the SD is greater than mean hence this implies that banks have also experienced a negative return previously; but on average could generate a net margin of 9% in a given period. Lastly, mean current ratio of the banks is 1.04 (SD 0.30) suggesting that on average a bank has stronger liquidity position to meet with the current liability's obligations but some of banks also have lower liquidity.

4.3 Pearson's Correlation

The correlation refers to the association within the quantitative variables or observations; the relation may exist within the variables but the core purpose is to evaluate the association from different dimensions to draw implications. For this purpose, scholars have referred Pearson's correlation technique as more effective in evaluating the interrelation. In this regard,

Gogtay and Thatte (2017) states that Pearson's correlation can highlight that either relation between the variables is positive or negative that refers to direction of association. Similarly, the authors further explain that Pearson's correlation also assists in determining strength of the relation that is represented by the value of coefficient which if remains less than 0.5 then relation can be stated as weak. However, if the value of coefficient is greater than 0.5 then relation can be stated as strong; and at the same time significance of the relation is also important to be considered (Schober, Boer and Schwarte, 2018). The significance of relation provides an empirical evidence that either relation between the said variables is statistically significant or not. It means if the relation is statistically significant then relation is also important on which implications can be drawn but if relation is not statistically then relation is not important from empirical point of view and may also be misleading to interpret.

Probability	D/E	D/A	EOP_L_EOP_D
EPS	0.213	0.215	-0.489
	0.160	0.156	0.001
ROE	-0.206	-0.092	-0.417
	0.174	0.546	0.004
NPM	-0.138	-0.228	-0.040
	0.367	0.131	0.792
Current Ratio	-0.061	-0.369	0.432
	0.692	0.013	0.003

The coefficient between debt to equity and EPS is 0.21 (p-value 0.160) implying that relation between the variables is positive weak but is not statistically significant since p-value is

greater than significance. Hence, this infers that relation of debt to equity with EPS is not important and that their relation may not influence each. Furthermore, the correlation of debt to equity with ROE, NPM and current ratio is negative and statistically insignificant as -0.206 (p-value 0.174), -0.138 (0.367) and -0.061 (0.692) respectively. It can be interpreted as that there is no evidence of significant relation between these variables hence it can be stated that it is not necessary that debt to equity could negatively influence since the relation is not significant.

The coefficient between debt to assets and EPS is 0.215 (p-value 0.156) implying that relation between the variables is positive weak but is not statistically significant since p-value is greater than alpha level 0.05. Therefore, this infers that relation of debt to equity with EPS is not important and that their relation may not influence each based on insignificant relation. Furthermore, the correlation of debt to assets with ROE and NPM is negative and statistically insignificant as -0.092 (p-value 0.546) and -0.228 (0.131) but has negative and significant relationship with current ratio as coefficient and p-value of the relation is -0.369 (0.013). Therefore, it is evident that ROE and NPM have no relation with debt to assets but current ratio has weak negative and significant relation. Hence, it can be said that if the debt to asset ratio increases then it would reduce the current ratio position of the company based on the fact that higher debt level tends reduce portion of current assets relatively thus ratio would also decline.

Furthermore, the relation of loan to deposit with EPS and ROE is negative -4.89 (p-value 0.001) and -0.417 (p-value 0.004) and this implies that current ratio has positive and significant relation. Hence, it is evident that loan to deposit has no relation with EPS and ROE but has positive and significant relation with current. This implies that if the loan to deposit ratio increases then it is more likely that current ratio of the banks would improve as a result.

4.4 Multiple Regression

Multiple regression has been widely used to determine how much regressors have been affecting the regressand variable in the model (Schneider, Hommel and Blettner, 2010). Meanwhile, in following study panel least square was used based on the fact that data of the study was panel data of 10 years for five banks. This technique has been used to examine the how financial leverage has been affecting the financial performance of banks and liquidity position; for this purpose, regression was conducted four times since study has four different independent variables and results of the study are present as follows.

4.5 Effect of Financial Leverage on Earning per share (EPS)

Dependent Variable: EPS

Method: Panel Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DEBT_TO_EQUITY	0.93	0.31	2.93	0.00
DEBT_TO_ASSET	-11.19	6.04	-1.85	0.07
EOP_L_EOP_D	-4.20	0.73	-5.75	0.00
CURRENT_RATIO	0.68	0.52	1.31	0.19
C	2.73	0.85	3.18	0.00
R-squared	0.48			
Prob(F-statistic)	0.00			

The first model of regression was used to determine how financial leverage affects earning per share (EPS); the coefficient of determination or r-square of the model is 0.48 that shows that model can explain 48% variability of the EPS. It means the debt to equity, debt to assets, loan to deposits ratio and current ratio as independent variables can estimate 48%

variability of the EPS but remaining is residual of the model that is also known as error term (Lunt, 2015). Furthermore, referring to the significance of the model, then it is evident that model is significant since p-value of the model is 0.000 implying that there is no chance or at least chances less than 5% that results are due to model error (Nimon and Oswald, 2013). Hence, the results can be used to draw implications for practical applications. Meanwhile, coefficients show that if there is one unit of change into the debt to equity, debt to assets, loan to deposits and current ratio then earning per share of the banks would change by 0.93 (p-value 0.00), -11.19 (p-value 0.07), -4.20 (p-value 0.00) and 0.68 (p-value 0.00) respectively. Therefore, it can be interpreted that debt to equity has positive and significant effect on EPS but effect of debt to assets and loan to deposit is negative and significant; hence would influence EPS negatively and EPS has no effect on the EPS. Hence, it is evident that if debt to assets increases then EPS would significantly improve but could also be negatively affected if debt to assets and loan to deposits increases.

4.6 Effect of Financial Leverage on Return on Equity (ROE)

Dependent Variable: ROE Method: Panel Least Squares Variable	Coefficient	Std. Error	t-Statistic	Prob.
DEBT_TO_EQUITY	0.03	0.02	1.36	0.18
DEBT_TO_ASSET	-0.76	0.36	-2.10	0.04
EOP_L_EOP_D	-0.13	0.05	-2.93	0.01
CURRENT_RATIO	-0.06	0.03	-1.58	0.12
C	0.29	0.05	5.50	0.00
R-squared	0.285276			
Prob(F-statistic)	0.003876			

The second model of regression was used to determine how financial leverage affects return on equity (ROE); the coefficient of determination or r-square of the model is 0.28 that shows that model can explain 48% variability of the ROE. It means the debt to equity, debt to

assets, loan to deposits ratio and current ratio as independent variables can estimate 28% variability of the ROE but remaining is residual of the model that is also known as error term (Lunt, 2015). Furthermore, referring to the significance of the model, then it is evident that model is significant since p-value of the model is 0.003 that indicates there is no chance or at least chances less than 5% that results are due to model error (Nimon and Oswald, 2013). Thus, results of the study could be trusted given that model meets with the significance criteria. Meanwhile, coefficients show that if there is one unit of change into the debt to equity, debt to assets, loan to deposits and current ratio then return on equity of the banks would change by 0.03 (p-value 0.18), -0.76 (p-value 0.04), -0.13 (p-value 0.01) and -0.06 (p-value 0.12) respectively. Therefore, it can be interpreted that debt to equity has positive but statistically insignificant effect on ROE but effect of debt to assets and loan to deposit is negative and statistically significant; hence would influence ROE negatively and there is no evidence of effect of current ratio effect on the ROE. Therefore, it is can be stated that if the debt to assets and loan to deposits ratio declines then it could improve the return on equity.

4.7 Effect of Financial Leverage on Net Profit Margin (NPM)

Dependent Variable: NPM Method: Panel Least Squares Variable	Coefficient	Std. Error	t-Statistic	Prob.
DEBT_TO_EQUITY	0.04	0.04	0.97	0.34
DEBT_TO_ASSET	-1.01	0.75	-1.34	0.19
EOP_L_EOP_D	-0.14	0.09	-1.49	0.14
CURRENT_RATIO	0.08	0.07	1.06	0.30
C	0.17	0.11	1.58	0.12
R-squared	0.14			
Prob(F-statistic)	0.14			

The third model of regression was used to determine how financial leverage affects net profit margin (NPM); the coefficient of determination or r-square of the model is 0.14 that shows that model can explain 14% variability of the NPM. It means the debt to equity, debt to assets, loan to deposits ratio and current ratio as independent variables can estimate only 14% variability of the NPM but remaining is residual of the model or error term (Lunt, 2015). Furthermore, referring to the significance of the model, then it is evident that model is not statistically significant since p-value of the model is 0.14 implying that there are higher chances that results contains errors greater than 5% and this is sufficient evidence that results cannot be trusted (Nimon and Oswald, 2013). Therefore, interpretation of the coefficients would also be meaningless since model contains errors and lacks explaining the net profit margin.

4.8 Effect of Financial Leverage on Liquidity (Current ratio)

Dependent Variable: CURRENT_RATIO
Method: Panel Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DEBT_TO_ASSET	-5.48	1.31	-4.19	0.00
DEBT_TO_EQUITY	0.25	0.07	3.57	0.00
EOP_L_EOP_D	0.20	0.19	1.09	0.28
C	1.00	0.16	6.09	0.00
R-squared	0.4038			
Prob(F-statistic)	0.0000			

The fourth model of regression was used to determine how financial leverage affects current ratio; the coefficient of determination or r-square of the model is 0.40 that shows that model can explain 40% variability of the liquidity. It means that debt to equity, debt to assets, loan to deposits ratio and current ratio as independent variables can estimate 40% variability of the current ratio but remaining is residual of the model or error term (Lunt, 2015). Furthermore, referring to the significance of the model, then it is evident that model is significant since p-value

of the model is 0.000 implying that there is no chance or at least chances less than 5% that results are due to model error (Nimon and Oswald, 2013). Therefore, the results of the model could be trusted and used for interpretation as model explains the variability significantly. Meanwhile, coefficients show that if there is one unit of change into the debt to equity, debt to assets and loan to deposits then current ratio of the banks would change by -5.48 (p-value 0.00), 0.25 (p-value 0.00) and 0.20 (p-value 0.00) respectively. Therefore, it can be interpreted that debt to equity has positive and significant effect on current ratio but effect of debt to assets is negative and significant and loan to deposit has insignificant effect. This means lowering the debt to assets ratio could improve liquidity position of the banks whereas debt to equity ratio could improve the ratio. In contrast, loan to deposits ratio has been found to have no effect on the current ratio of the company.

4.9 Discussion

Objective 1: To study the concept and significance of financial leverage

The first objective of the study was to study the concept and significance of financial leverage. In this manner, it has been identified that financial leverage is the process in which debt is being used for the purpose of buying more assets. It is analysed that leverage is engaged to improve the return on equity, though, there is an extreme amount of financial leverage which mainly enhances the failure of risk while making it tougher to repay the debt. This has also been argued in the study of Anagnostopoulou and Tsekrekos (2017) that financial leverage is known to be favourable when it can be used for which debt can bring together for the purpose of generating the returns greater in contrast to the interest expense which is associated with the debt. Moreover, according to Afolabi (2019), it has also been identified that financial leverage is due to the use of borrowed capital which is considered as the source of funding while investing for the expansion of the asset base of firm and generating the returns over the risk of capital.

Pertaining to the significance of the financial leverage, it has been identified that financial leverage helps the company in terms of earnings and tax reduction. This has also been argued in the study of Choi, Donangelo and Kim, (2019) that financial leverage is considered to be significant as the major advantage of financial leverage is its enhanced earnings and favourable tax treatment. In addition to this, there is also a possibility that financial leverage may allow the entity for earning a disproportionate amount over the assets which the business owns. However, the study of Sajid, Mahmood and Sabir (2016) stated that due to the financial leverage, there is a likelihood of inconsistent losses in which the related extent of interest expense overwhelms the borrowers if the borrower is not able to earn adequate returns for the purpose of offsetting the interest expense. Despite of this, the financial leverage is regarded as an suitable substitute when the company is operating in a sector along with the steady revenue level, high barriers to entry and large cash reserves, therefore the operating conditions are sufficiently steady for supporting in a large amount of leverage with little downside.

Objective 2: To identify factors affecting the performance of an organisation

The second objective of the study was to identify the factors affecting the performance of an organisation. In this manner, it has been identified through the discussion that factors that affect the performance of the organisation include earnings per share, return on equity, net income margin and liquidity or current ratio. The earnings per share represents the proportion of the overall profit of the company that is distributed to each individual share of the stock (Batchimeg, 2017). In addition to this, the earning per share ratio is of huge importance for investors, and for individuals who practice trading in stock markets. This has also been argued in the study of Mohapatra (2019) that the profitability of the company is determined by the high ratio of earning per share. Therefore, it is one of the significant determinant while measuring the financial performance of company. On the other hand, the return on equity is also regarded as the

significant ratio which is use to predict the financial performance of a company. This has also been contended in the study of Rai et al. (2018) that ROE is a profitability ratio which depicts the amount of company's profitability that is caused as a proportion of shareholder's equity. According to Daly and Frikha (2017), the ROE ratio is an important determinant of the financial performance of the company, as it explains the company capability in terms of generating the cash internally.

Moreover, the net income margin has also been identified as the significant determinant of the company's performance. This is due to the reason that net income margin is recognised as profit margin, which depicts the overall profitability of the company. The study of Ferrouhi (2018) also argues that net income margin ratio measures the net profit or income which is generated as a proportion of company's revenues. Similarly, it can also be stated that net profit margin refers to the proportion of revenues remained after the exclusion of interest, operating expenses, preferred stock dividends and taxes. Therefore, net profit margin is among the most useful financial measure to analyse the performance of company. On the other hand, the current ratio or liquidity ratio has also been identified as one of the determinants of financial performance of the company. The study of Matar and Eneizan (2018) argued that this is due to the purpose that the current ratio is regarded as one of the most prominent metrics which is utilised across different industries to measure the firm's short-term liquidity in relation to its impending liabilities and available asset. In a similar manner, this ratio reveals the ability of the company in terms of generating sufficient amount of cash to pay-off all of its debt. Therefore, this ability of the company is considered as an important measure to assess financial health of that company.

Objective 3: To evaluate the impact of financial leverage on the banking performance of the UK

The third objective of the study was to evaluate the impact of financial leverage on the banking performance of UK. The analysis identified that there is no significant impact of the financial leverage on the net profit margin of companies. However, the study of Kiet, and Thuan, (2019) argues that financial leverage for the banking sector is the most significant element as the banks are usually operating on the fixed amount of profit which is being earned through the interest earned upon the loans provided by the bank. It has also been identified that there is significant impact of the financial leverage on earnings per share, return on equity and current ration. This has also been supported in the study of Oketch, Namusonge, and Sakwa (2018) that the banking structure mainly rely over the debt as there are number of sources which provides the cash to the bank and makes it easier for them to continue their business process. The main source of money includes the amount being deposited by the account holders, investors, fixed depositors and central banks. In this manner, it makes clear that the banks are also liable to pay interest which have share in the investment for the company. Moreover, it was studied that the rate of interest that the banks collect from the borrowers and the rate of interest being paid by the banks is unlike (Sodeyfi, 2016). However, the banks are the bodies which decreases the risk of investors therefore they also pay the lower amount of interest to their investors.

In this manner, the probability to earn profit is directly proportional to rate of risk that the investor is going to bear either in the long term or short term. Moreover, it has also been identified that the banks usually have staff and procedures for the purpose of evaluating the risk prior providing loans while assuring that their investment will be recovered in each possible outcome (Bui, 2020). However, in the context of UK banking sector, it was identified that the leverage of banking sector is higher than the other countries as most of the people in UK are relying over debt even for their basic necessities of life (Elahi, 2017).

4.10 Chapter Summary

The chapter presents how financial leverage of the banks have been affecting the financial performance and liquidity position of the banks in United Kingdom. The empirical investigations in chapter reveals that debt to equity and debt to assets ratio have statistically insignificant relation with EPS, ROE, NPM and current ratio; but loan to deposit ratio has negative relation with EPS and positive relation with current ratio significantly. Furthermore, EPS of the banks is negatively affected by debt to assets and loan to deposits ratio and positively by debt to equity; whereas second model reveals that only debt to assets and loan to deposits have negative and significant effect on ROE. In addition to, NPM is not affected by the financial leverage of the banks; whereas last model reveals that debt to assets ratio negatively affect liquidity position of banks and that debt to equity positively affects liquidity.