

4.1 Profitability ratio

Margin is defined as the audited accounting method used to calculate the annual business potential and profitability. To calculate the actual profit, the cost of the agency is compared with the profit of the agency. It is also short because evaluation is a tool for analysing an organization's past performance, assessing the financial viability of a particular company, and predicting future profits. The interest rate coefficient is two against one, as two dividends are sufficient to offset the sale of the institution (Dell'Ariccia et al., 2018).

The profit ratio includes the total profit ratio, the total profit ratio and the level of operating profit. It analyses the institution's total profit, total profit and day-to-day operating expenses over the institution's sales. The average profit ratio compares the pre-tax profit with the sale of the company and the rest of the business. NatWest Bank's total interest rate is 5.8%, which means that the company's turnover is limited. At this ratio, the income is high, as the income ratio is high in the banks' profits. Barclays has an average of 4.8% compared to banks, which means that although it is lower than other banks, it is in line with profitability and profitability (Shershneva and Kondyukova, 2020). Based on this analysis, we began to realize that, given the high salaries of both banks, the profitability of both banks was very high.

The second part of the profit analyses the total profit of both parties. The profit ratio is the same analysis, but here it includes the distribution of profit after tax and after interest. Gross profit analysis allows a company to understand the impact of taxation on corporate income (Ouenniche and Carrales, 2018). Barclay's total profit analysis has grown 18%, while Natwest has about 13% total revenue and profit. Barclays, on the other hand, rose as Natwest's revenue declined compared to 2019 at Natwest. This is the reason for Natwest Bank's low revenue ratio.

There are different methods for calculating and analysing banks' liquidity ratios. This measure will be examined for analysis in order to analyse the bank's current assets. The analysis is based on the amount of cash and deposits, total cash and bank deposits, as well as cash and securities and bank deposits. Large liquid assets are also considered in determining the size of an entity's assets. The liquidity ratio is short as it is the fastest way to test any business. As we all know, the rate of the acid test is supported because the rate of testing is fast and changes from time to time during the period of activity (Shershneva and Kondyukova, 2020). Natwest Bank owns about 6% of the shares, while Barclays owns only 3.5%. Barclays Bank has great potential for sustainability in the banking sector, as it is based on the fact that banks with less liquidity are better able to overcome banks' liquidity problems. Asset / turnover ratio 1.5 Current assets must be offset against up to 1% of liabilities.

4.2 Efficiency ratio

This measure shall take into account the efficiency of the organization and the efficient operation of the information. It is usually listed under the three most important aspects of a bank. These are estimates of efficiency, operating costs and revenue, and higher costs or bank charges. The efficiency of banks is calculated on the basis of operating expenses and total assets of the main share. It is cost effective because it is short in terms of asset value. Barclays is only 2% smaller than about 3.5% NatWest. The ratio is considered to be the weakest generally accepted basis as the weakest indicator of an institution's efficiency, which means that despite low efficiency, the size of assets is sufficient to cover the bank's operating costs (Shershneva and Kondyukova, 2020). However, according to him, the situation is important because low efficiency does not go hand in hand with high profit margins. There are two main factors behind inefficiency, namely that banks do not take other banking services into account. It has also been argued by many that the income

of the bank's shareholders is not directly linked to the bank, because despite its performance, the investment creates added value for the bank's shareholders. The author also argues that banks should focus on increasing profits at lower costs.

Variables, Data and statistics:

The data used for the test consisted of 50 banks of UK observations of UK listed banks between the years 2018 to 2020. Although, comparative analysis has been done to find out the impact of technological factors on the performance of banks.

The data has been extracted from financial reports of banks from 2018 to 2020. This information relates to the banks that are currently operating in UK. The ownership structure was extracted from balance sheet, ROA, ROE, CSR, total asset turnover ratio, and power of CEO. There were 245 observations that have been extracted from financial statements of banks.

Bank and the risk taking factor:

Risk level can be taken as the measure of the banking sector which is considered to be insolvent.

The lower value of z-score always indicates the higher probability of insolvency risk at bank.

The greater is the rate of volatility the greater will be the earnings present in greater risks.

The risk taking ratio of banks is calculated with total assets, total equity, leverage, and CSR.

Monitoring of board:

In this study there is an analysis that have been carried out in order to assess the theoretical predictions related to managerial ownership and independence that effect the risk taking behavior of banks listed. This will minimize the level of residual losses, and this can be proxied through using the variables: on ownership structure.

VARIABLE MEASUREMENT

Dependent variables	Contractions	Measures
Return on equity shareholder equity	ROE	operating income/
Return on asset	ROA	Net profit/total assets
Independent and Control variables		
Corporate Social Responsibility coding method.	CSR	Through disclosure &
CEO power	CEO power	Dummy variable
Managerial ownership by managers	Tr	ercentage of shares held
Ownership concentration shares.	H5	Major top shareholders to total
The roperty, plant & quipment equipment	PPE	The ratio of roperty, plant & To total sales.
Firm size (control variable) assets.	LNTA	The natural log of total
Leverage (control variable) total ssets.	LEV	Total liability divided by

Asset turnover ratio (control variable) ASSET TO the ratio of total sales to total assets.

Statistics summary:

Table 1 mentioned above gives a detailed statistic for the sample set used for the empirical analysis. The lower score of z value have higher ratio of technological factors when comparing it with other sectors. the statistics also shows that on average there is a complete level of regulatory capital as compared to other sectors in UK. It is regarded as very interesting factor that shows banks have greater risks and also have greater buffer for absorbing the loss in results due to high regulatory reserves of capital.

To solve the issue, several econometrics tools have been used that were applied by F Li, such as instrumental variables, lagged dependent variables, fixed effects, control variables, and GMM OR dynamic model After the research it has been found that dynamic model was considered to be more authentic than other techniques, because it will have extreme effects to coefficient of correlation.

STATISTICAL MODEL

$$\text{Firm performance} = \beta_0 + \beta_1\text{CSR} + \beta_2\text{cp} + \beta_3\text{os} + \beta_4\text{ppe} + \beta_5\text{lev} + \beta_6\text{ATR} + \varepsilon$$

Where, β_0 = constant

β_1 = slope of the independent variables,

CSR = corporate social responsibility

CP = CEO power

OS= ownership structure

PPE= property, plant & equipment

Lev= leverage

ATR= Asset turnover ratio

DESCRIPTIVE STATISTICS

For the reference of descriptive analysis, we can refer to the table below, this table helps in defining the variables that are used in the study. This table would explain the mean, maximum and least worth of the data. The mean for leverage is .01736 for all the data set, while the least rate is -0.153, and the all-out value for the leverage of the data set is 1.515. on the other hand, the other control variables that include ppe, and total asset turnover ratio has mean of .018 and .0207, their minimum value is -.0064 and 0 while the maximum value of these control variables is .3288 and .77. following the same pattern, the performance measures of the firm i.e. ROA and ROE has the maximum value of 3.785 and 3.1594 respectively. While value for mean and standard deviation value for ROA be .10206 and .25855, and for ROE the mean value and standard deviation value be 1.58724. The result of high standard deviation values demonstrations that there can be difference in result. The change in the standard deviation value shows that there is difference in study performed. The result of ownership concentration shows that the value for mean was .7247, the standard deviation value is .1520 and maximum value is .9356. The impact of CSR is shown with the mean that is derived from the data is 4.2657, the standard deviation is .8962 and the maximum value is 5.

SUMMARY STATISTICS

Variable	Obs	Mean	Std. Dev.	Min	Max
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Roa	245	0.1020638	0.2585854	-0.3262	3.785
				-	
Roe	245	0.0746034	1.58724	23.9389	3.1594
leverage	245	0.0173647	0.1006658	-0.0153	1.515
Ppe	245	0.0181144	0.0457403	-0.0064	0.3288
Tastr	245	0.0207859	0.0667728	0	0.77

ownershipc~n	245	0.724766	0.1520311	0.33	0.935612
Csr	245	4.285714	0.8962582	2	5
Ceo	245	1	0	1	1



CORRELATION ANALYSIS

We have used the Correlation technique to conclude the association amongst the mention variables. They show that how much all the variables are linked with each other. These variables can either show a positive impact or they can also show a negative impact as well. The values that show negative sign denotes that they follow the same path while those that are in positive notation denotes that follow parallel path.

The table mentioned below shows that the CSR has positive relationship with firm performance, and on the performance of the secure as well. The concentration of the ownership has negative correlation with performance of the firm.

	leverage	Ppe	Roa	roe	tastr	ownership		
						conc	csr	ceo
leverage	1							
Ppe	-0.0187	1						
Roa	0.0063	0.4398	1					
Roe	-0.2289	0.0385	0.1205	1				
Tastr	-0.0069	-0.03	0.0946	0.0338	1			
ownership								
conc	-0.0103	0.0579	-0.0295	-0.0461	0.0091	1		
Csr	0.0876	0.1936	0.0592	-0.0423	0.077	0.1619	1	
Ceo	-	-	-	-	-	-	-	1

REGRESSION RESULT

This study determines the impact of CSR on firm's performance with influence power of CEO and ownership structure on comparative analysis of UK banks. . Panel data regression model is used to test the hypothesis and to identify the nature of the hypothesis. Here, we have run two models, to identify the influence of CSR on firm performance and also the influence CEO power and

ownership concentration firm performance. In the first model we, have tested the link between the CSR. and firm performance with effect of CEO power and ownership concentration by ROA and ROE, by using Random effect model. Then in the second test we use fixed effect model to determine the link between the CSR and firm performance with effect of CEO power and ownership concentration

FIXED Effect MODEL (ROA)

In this fixed effect allowed to have the link with observed variables , the purpose of fixed random effect model is used control those variables that related to time with those variable that are not related to time.

						[95%
Roa	Coef.	Std. Err.	z	P>z	Conf.	Interval]
		0.148523			-	0.246770
leverage	0.044329	1	0.3	0.765	9	0.3354289
		0.336727				
Ppe	2.568741	7	7.63	0	1.908766	3.228715
		0.224455			-	0.010702
tastr	0.4292228	9	1.91	0.056	7	0.8691483

					-	
Ownership		0.101059			0.290418	
concentration	-0.0923465	2	-0.91	0.361	9	0.1057259
					-	
		0.017524			0.043099	
Csr	-0.0087524	5	-0.5	0.617	7	0.025595
Ceo	0	(omitted)				
_cons	0.1502808	0.096521	1.56	0.119	-0.038897	0.3394586

	0.0239008					
sigma_u	1					
	0.2293334					
sigma_e	4					
	0.0107448					

Rho 2 (fraction of variance due to u_i)

RANDOM EFFECT MODEL (ROA)

In this model we used the variables that are unobserved and non-correlated with (strong dependent variable that are statistically strong), this concept can be wrong but the reason that has been mentioned above, but the variables can let you determine the time variant factors. The random effect model can be assumed to be more considerable but we can consider it for some situations, it can also be calculated through generalized least square method.

					[95%	
Roa	Coef.	Std. Err.	Z	P>z	Conf.	Interval]
		0.148523			-	0.246770
leverage	0.044329	1	0.3	0.765	9	0.3354289
		0.336727				
Ppe	2.568741	7	7.63	0	1.908766	3.228715
		0.224455			-	0.010702
tastr	0.4292228	9	1.91	0.056	7	0.8691483
		0.101059			-	0.290418
ownershipconcentratio						
n	-0.0923465	2	-0.91	0.361	9	0.1057259
		0.017524			-	0.043099
Csr	-0.0087524	5	-0.5	0.617	7	0.025595
Ceo	0	(omitted)				
_cons	0.1502808	0.096521	1.56	0.119	-0.038897	0.3394586

		0.0239008	
sigma_u	1		
		0.2293334	
sigma_e	4		
		0.0107448	
Rho	2		(fraction of variance due to u_i)

Fixed Effect Model (ROE)

In this fixed effect model we are allowed to have the link with observed variables, the purpose of fixed random effect model is used control those variables that related to time with those variable that are not related to time.

					[95%	
Roe	Coef.	Std. Err.	t	P>t	Conf.	Interval]
leverage	-3.753425	1.077196	-3.48	0.001	-5.878153	-1.628698
Ppe	-0.1780092	4.130647	0.04	0.966	-8.325553	7.969535
Tastr	0.5216971	1.768202	0.3	0.768	-2.966014	4.009408
Ownership concentration	-0.053391	2.004507	0.03	0.979	-4.007204	3.900422

Csr	-0.0412168	0.2396695	-	0.864	-	0.4315221
			0.17		0.5139557	
Ceo	0	(omitted)				
_cons	0.3475004	1.642353	0.21	0.833	-2.891979	3.58698
sigma_u	0.79003611					
sigma_e	1.5036912					
Rho	0.21632727	(fraction of variance due to u_i)				
F test that all u_i=0: F(48, 191) = 1.36 Prob > F = 0.0780						

RANDOM EFFECT Model (ROE)

In this model we used the variables that are unobserved and non-correlated with (strong dependent variable that are statistically strong), this concept can be wrong but the reason that has been mentioned above, but the variables can let you determine the time variant factors. The random effect model can be assumed to be more considerable but we can consider it for some situations, it can also be calculated through generalized least square method.

					[95%	
Roe	Coef.	Std. Err.	z	P>z	Conf.	Interval]
leverage	-3.620174	0.9857936	3.67	0	-5.552294	-1.68805

Ppe	1.256859	2.438614	0.52	0.606	-3.522737	6.036454
Tastr	0.7684441	1.518678	0.51	0.613	-2.208111	3.744999
Ownership			-			
concentration	-0.4621095	0.7584813	0.61	0.542	-1.948706	1.024487
			-		-	
Csr	-0.0431204	0.1283507	0.34	0.737	0.2946832	0.208442
Ceo	0	(omitted)				
					-	
_cons	0.6184496	0.7170455	0.86	0.388	0.7869339	2.023833
<hr/>						
sigma_u	0.47533187					
sigma_e	1.5036912					
Rho	0.09084756	(fraction of variance due to u_i)				

HAUSMAN SPECIFICATION TEST (ROE)

Hausmann test is conducted to pick the most appropriate model between the model with fixed effect and the model with random effect.

H0: If Fixed Effect Model is appropriate than Random Effect Model

H1: If Random Effect Model is appropriate than Fixed Effect.

____ Coefficients ____

	(b)	(B)	(b-B)	sqrt(diag(V_b- V_B))
	Fixed	Random	Difference	S.E.
leverage	-3.753425	-3.620174	- 0.1332511	0.4342367
ppe	- 0.1780092	1.256859	-1.434868	3.333978
tastr	0.5216971	0.7684441	- 0.2467471	0.9056231
ownershipc~n	-0.053391	- 0.4621095	0.4087185	1.855466
csr	- 0.0412168	- 0.0431204	0.0019036	0.2024044

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\text{chi2}(5) = (b-B)'[(V_b-V_B)^{-1}](b-B)$$

=

0.50

Prob>chi2 = 0.9921

Interpretation shows Hausmann specification test depends upon the p-value of the table, if the p-value of the result is greater than 0.05 it means that it should be selected, otherwise if it is lesser than 0.05 it should be rejected.

HAUSMAN SPECIFICATION TEST (ROA)

Hausmann test is carried out to choose best model among the Fixed effect model and Random effect model.

H0: If Fixed Effect Model is suitable than Random Effect Model

H1: If Random Effect Model is suitable than Fixed Effect.

 PRIMOASSIGNMENT

	Coefficients			
	(b)	(B)	(b-B)	$\sqrt{\text{diag}(V_b - V_B)}$
	Fixed	Random	Difference	S.E.
leverage	0.0146142	0.044329	0.0297148	0.070222
ppe	3.023638	2.568741	0.454897	0.5324371
tastr	0.4238568	0.4292228	-0.005366	0.1494794
ownershipc~n	0.8182179	0.0923465	0.7258715	0.2885281

	-		
csr	-0.004767	0.0039853	0.0320781
	0.0087524		

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\text{chi2}(5) = (b-B)'[(V_b-V_B)^{-1}](b-B)$$

=

8.91

Prob>chi2 = 0.1125



Interpretation shows Hausmann specification test depends upon the p-value of the table, if the p-value of the result is greater than 0.05 it means that it should be selected, otherwise if it is lesser than 0.05 it should be rejected.

4.4 Banking Competition

The banking sector is important for the economic development of the United Kingdom. This component connects investors and lenders. In addition, it can also realize the transfer and storage

of value. Banks help manage financial risks and provide basic services. In fact, these components play an important role in the development of Britain. Some market participants may not play these roles as well as banks. However, it is important to keep in mind the importance of this sector to the UK economy (Moghavvemi et al., 2018). Moreover, when the industry faces unexpected challenges, consumers are often abused. This article looks at competition in the banking sector.

Over the years, competition in the UK banking system has become less important. However, if the market performance in 2018 is reliable, it will change. According to the Cruickshank report, competition in the UK banking system is not as fierce as it was in the late 1920s. This has led to competition between competitors, governments and other stakeholders. However, no progress has been made in the area of achievement. Participants are particularly concerned about the functioning of the market and its form of competition. Problems such as financial difficulties did not improve the situation. In addition, long-term problems such as weak competition have made it difficult for banks to increase their market share.

For example, better service banks are still struggling to increase their market share. In addition, it makes it more difficult for new entrants to gain industry recognition. However, there is intense competition from some consumer groups.

However, this did not require banks to increase their efficiency, innovation or customer service. In fact, consumers cannot control the bank's communication. This makes it difficult for the banking sector to create a successful competitive structure (Moghavvemi et al., 2018). A report by British banks shows that customers are charging excessive fees. In addition, there is a shortage of new projects. In addition, the UK market places great emphasis on effective competition. This is a big problem, especially if customers do not have enough personal information to switch current accounts, especially for small and medium-sized banks.

Customers also face issues such as barriers to entry and unusual service standards. However, when participants try to create competition between banks, annual volatility is best (Dell'Ariccia et al., 2018).

The payment system also reduces competition for banks because it applies to them. However, the commercial bakery business has become an incentive to compete. For example, Virgin Currency and Metro Bank may enter the market to increase competition.

Given the persistent customer situation, new entrants still face major challenges. Nevertheless, it is a good step towards winning competition in the UK banking system. The next 5 years will be a turning point for the banking system. Especially given the power that new entrants bring to the retail market. In addition, competition should enter the current account to improve efficiency.

4.5 Effect of ratio Analysis

The strongest and most consistent criteria are used to measure the performance and profitability of service companies. Clearly, the difference in profits suggests that the sales revenue of small service companies is higher than that of large companies (Korzeb and Samaniego-Medina, 2019). In particular, service companies have lower costs, higher productivity and higher profits. It is interesting to note that the debt of small and medium-sized enterprises is very high. The results of short-term loans show that service companies use very little short-term assets. This makes the service sector more specific in financing long-term loans. Apart from the service sector, this is the most appropriate measure for measuring the efficiency of companies in calculating their return on equity. Otherwise, the employment rate at primary and secondary level is measured. It refers to sales of goods and sales of goods, respectively. The results obtained by Dell'Ariccia et al, (2018) on the performance criteria of service companies reflect a positive and significant correlation and

concluded that the size of factories is not significantly related to the output of public companies in the service sector.

The growth of the aviation industry shows that performance appraisal is important for managers to identify and disclose performance issues in a competitive market. According to Gelderblom and Trivellato, (2019), this is a recent airline performance testing study that focuses solely on performance. However, the analysis of financial results seems to have been neglected. For us, the measurement of the lifespan of airlines can be based on the company's own financial results. Lack of budgets can lead to biased estimates.

The aviation industry mainly uses three types of performance indicators. The first is production efficiency, advertising efficiency and production efficiency, marketing and management.

As Gelderblom and Trivellato, (2019) classifies assets and fixed assets as inputs to financial assets in the analysis of an airline's financial statements. In addition, liabilities and expenses are classified as financial assets and other income or losses are classified as financial items. The integrated cash flow is therefore characterized by high costs, in particular airfreight and interest charges, on intangible goods. Otherwise, it is considered an unregistered service.

4.5 Financial institutions

It is very important to assess the activities and financial position of financial companies. The role of financial intermediaries is to act indirectly in this sector, which affects other sectors of the economy (Gelderblom and Trivellato, 2019). If good returns have a positive impact on the economy, but the financial sector is under pressure and problems arise, it will have a negative impact on other sectors of the economy.

According to the bank, the goal of developing the organization is to increase the share of assets rather than increase profitability. All this requires the identification and management of many

factors that play an important role in the profitability of banks in the new environment (Longhurst et al., 2020).

To increase investor confidence, Bank of America uses the Dominion Bond Rating Service (DBRS), which provides bank interest rates as a forward-looking measure of a bank's ability to meet its financial obligations. The analysis of DBRS interest rates focuses on four important aspects of the bank's financial life. First is profitability, it is the ability to generate a steady income and increase internal revenue. Second, the quality of assets indicates a potential loss that could affect income and capital. Third, the emphasis is on the liquidity of available funds to meet short-term liabilities. The latter is the equity ratio; it refers to the borrower's ultimate protection against future losses.

According to Longhurst et al., (2020), the financial indicators used by experts to make decisions are less useful to them. For the 40 indicators identified in the study, there is no significant difference between credit and financial experts. According to Bahrain's 244 debt and financial experts, they were assessed on the basis of 71 financial indicators and 5 levels of corporate governance. The results show that debt experts believe that a fast interest rate is the most effective interest rate, followed by a recurring interest rate. Financial experts see price buying as a very useful measure, followed by market assessments and books.

It should also be noted that the real gap between large and small banks peaked in 2019. During the analysis period, finances have a positive correlation between flexibility and productivity. In addition, mergers and acquisitions have led to a steady increase in the efficiency of large banks, while the efficiency of small banks is declining. Evidence has shown that the higher the value of the assets, the higher the efficiency. The size of the market value has increased significantly, as shown by the increase in the average financial assets of banks.

4.5 Social banking

Many UK banks are focusing on commercial banking, which has put many to work for low-income businesses, groups and individuals. Banking groups seem to be different in many ways. For example, the bank has expanded globally and established operations in Asia and the Middle East, where most people are poor and dependent on adequate income. To meet the needs of these large but potential customers, banks need to design and develop appropriate banking plans to attract as many customers as possible in Asia and the Middle East (Korzeb and Samaniego-Medina, 2019). At the same time, banking groups are entering new markets that are more visible in traditional pricing systems and that the public sector is stronger. As this type of public banking may become a new market concept, banks will be able to use their profits.

Given the specificities of commercial banks, which are closely linked to profit policies, their business practices often exclude most people with precarious incomes. It can be seen that if access to and growth of commercial banks in Asia and the Middle East could only be an issue as a key policy. Thus, the banking group could potentially increase its losses by taking over commercial banks in the region, as transaction costs increase and borrowing and ongoing crime increase (Ouenniche and Carrales, 2018).

In order to continue to take advantage of this opportunity to develop the business, the banking group must assess the needs of each market and shape the financial needs of each market. For example, the Bank's international policy requires it to spend about 30% of its budget on product research and development. This will provide sufficient capital to ensure that the Bank can continue to participate in the development of products suitable for all markets in which it operates in the international market (Korzeb and Samaniego-Medina, 2019).

Long-term banking has shown that a company is very interested in sustainable growth and development while returning profitable returns to shareholders (Ouenniche and Carrales, 2018). Therefore, the Bank seeks to gain a foothold in the financial market by creating unique and unique competitive advantages. However, as banks pursue this broader goal, banking groups recognize that their current and potential customers are key to the bank's success and must therefore create and develop products that meet the bank's needs, the needs of individual customers. The Bank has achieved this goal with its unique marketing strategy, which includes: product diversity, international growth, efficient business management and the use of cost-effective technology. The focus is directly on customer relationship management policies. To strengthen their marketing goals, companies need to create a stable and sustainable customer base by offering products and services that meet their needs and expectations (Ouenniche and Carrales, 2018). Therefore, the company aims to maintain its reputation by developing effective risk management strategies to ensure and improve customer security.