

## **CHAPTER 3: RESEARCH METHODOLOGY**

### ***3.1 Introduction***

This chapter is providing the most essential element of the study that is methodology. Methodology which is being used in this study is not only explained but also justified with the justification which is being taken from the secondary studies conducted by various researchers regarding the selection of the methodology. Various sections which have been included in this chapter are providing the details regarding the methods such as what was the research philosophy of the study, approach, design and others. However, the sections regarding the sampling and data collection are also being included in this chapter along with section of research limitations and ethical consideration.

### ***3.2 Research Philosophy***

When it comes to discuss about the research philosophy, it has been studied that there research philosophies that are usually being used are of four types which have been used to conduct any study such as realism, pragmatism, positivism and interpretivism (Edson, Henning, and Sankaran, 2016). Furthermore, it has also been studied that it is necessary that the research philosophy should be conducted in a way that all the requirements of the study should be catered (Cole, 2020). In this study, the applied philosophy is positivism as the topic which was selected by the researcher is investigating that how financial leverage impacts over the performance of banks in UK banking sector. In such a case, where the researcher is studying about the impact of one element over the other, it is necessary to analyse that the study will be focused on natural

phenomenon which will be examined through the factual information collected from any authentic source.

Therefore, positivism is being applied in the study to investigating that how financial leverage impacts over the performance of banks in UK banking sector. In addition to that, it has also been studied that this philosophy is being used for the studies where the results would not be changed until the circumstances remain same, therefore the findings can be generalised for all other contexts with similar topic (Sapkota, 2019).

### ***3.3 Research Approach***

It has been studied that two types of approaches are being used in research that can be selected for any study such as inductive or deductive research approach (Buesching, and Jordan, 2019). However, the selection of the research approach is being made upon some elements which are necessary to be analysed. The major aspect which is necessary to be analysed before the research approach selection is that whether the similar topic regarding the study has been studied ever before or not (Tuffour, 2017). In such a case, where the similar study has been conducted previously, the deductive research approach is being applied or vice versa.

In this research, deductive approach has been used to conduct the study, as the similar topic has already been studied by previous researchers. In addition to that, deductive research approach demands the researcher to select a hypothesis and test it with the findings of their study. Therefore, in this study, researcher has tested the previously developed hypothesis with the factual information being collected from the companies' financial statements. However,

inductive research approach collects the information and develops a hypothesis in the end of the study.

### ***3.4 Research Design***

Research design is being decided based upon the philosophy and the approach of the study as there is an impact of research philosophy and approach over the research design of the study. Mainly there are two research designs such as qualitative and quantitative, however, the third design is the combination of these two designs which is mixed method (Leavy, 2017). In case, where the quantitative research design is being selected, there will be various options to use for data collection while the information will only be collected in the form of numbers. On the other hand, qualitative research design demands the researcher to collect the information in detailed form, wither from secondary information or primary information.

In this study, applied research design is secondary quantitative, which means that the information is being collected from the secondary resources in the quantitative form. In addition to that, difference between the secondary and primary information is that primary information is that which has been collected primarily by the researchers, while the secondary information is being collected by any other person for their own objectives. Similarly in this study, secondary information resources are being used for data collection, however, the information taken from secondary resources is being referenced.

### ***3.5 Methods of Data Collection***

Methods of data collection are different for the quantitative and qualitative studies with respect to the factor that either the information is being collected through the primary resources or secondary resources (Adler, Fulton, and Hoegeman, 2020). In such a case, where the quantitative information is being collected from the primary resources, the information can be collected through the survey questionnaire or of the secondary information is being collected, researcher can look for the authentic resources for data collection. Conversely, if the data is being collected in qualitative form from the primary resources, researchers can use the interview questionnaire which can be structured or unstructured depending on the need of the research. However, secondary qualitative information is being taken from the research articles, journals, news or authentic websites.

In this study, information is being collected through the secondary qualitative form and for that particular reason, researcher has used the annual reports and online websites such as Reuters and others to collect information regarding the financials of the banks. In addition to that, it is also necessary to mention that the information regarding the financials of the banks is consisting of two factors such as their financial ratios and financial performance. When it comes to discuss about the financial ratios of the banks, researcher has collected the information regarding the debt to asset ratio, debt to equity ratio and interest coverage. However, financial performance is being measured through the return on equity, equity per share, net income margin and liquidity of the banks. Moreover, the information regarding these variables have been collected for the selected duration of 10 years which is from 2009 to 2018.

### ***3.6 Sample size***

When the researchers are required to collect the sample for the study, it is necessary to undertake that sample size of the study should be selected in a way that the target population of the study should be represented appropriately (Schönbrodt, and Perugini, 2018). In addition to that, it has also been studied that the sample size of the study is also dependent over the fact that whether the study is being conducted with qualitative information or quantitative information (Malterud, Siersma, and Guassora, 2016). Therefore, in this study, the sample size is 5 banks of UK. As this study was conducted investigate that how the financial leverage affects the banking performance in UK, therefore, it was necessary that the sample should be selected from the banks of UK which should be listed in the stock market of UK. In this study the data has been collected over the defined parameters from the list of five banks which includes Barclays, Lloyds, HSBC, NatWest and Halifax.

### ***3.7 Sampling technique***

Sampling technique refers to the method used for the selecting the sample of the study, and it has been studied that there are various types of sampling techniques which can be used for any study (Taherdoost, 2016). However, the sampling technique is being selected based upon the type of the study and the target population of the study. The most important element while selecting the sampling technique is that how the researcher will approach the respondent. As per the study of Kim, Kwon, and Paik, (2016), there are mainly two types of sampling techniques such as probability and non-probability sampling technique. However, there are various techniques under these two heads.

In this study, where the secondary information was required to be collected regarding various aspects of the banks it was necessary to select a sampling technique that should be justified for this study. Therefore, analysing the criticalities of this study, researcher has selected the cluster sampling technique which allows the researcher to select a sample by making clusters where the target population of the study is being divided on the basis of their characteristics. In this study, the banks are being selected on the basis that they should be listed in the stock market of UK. Therefore, cluster sampling technique is being used in this study which is a part of probability sampling.

### ***3.8 Data analysis technique***

Techniques used for data analysis are being selected on the basis of the fact that what method of research is being used in the study. In this study, where the secondary quantitative information was selected for the various elements of the UK banks, it was necessary that the statistical mathematic tests should be applied in order to obtain the findings of the study. Therefore, in this regard, correlation and regression are the two tests which have been used in this study. However, the application of these tests is different to each other as the correlation tests is being used to find out the linkage between the factors of the study to assure that whether there is a relation between them or not. On the other hand, regression analysis has been used to find out the effect of financial leverage on the performance of the banks. As the major objective of the study was to identify the impact of financial leverage on the performance of banks in UK, therefore, four factors were identified in this study regarding the financial leverage such as equity per share, return on equity, net income margin and liquidity. By the application of regression analysis, researcher has checked the impact of these factors over the banks'

performance and presented the findings. In addition to that, impact of financial leverage on performance of the banks have been evaluated by using the below mentioned model.

The first model for the study evaluates the effects of financial leverage on earnings per share:

$$EPS = \alpha + \beta_1 DebtEq + \beta_2 DebtAst + \beta_3 IC + \mu_{it}$$

The second model of the study focuses in evaluating the effects of financial leverage on return on equity:

$$ROE = \alpha + \beta_1 DebtEq + \beta_2 DebtAst + \beta_3 IC + \mu_{it}$$

The third model of the study focuses on evaluating the effects of financial leverage on Net income margin

$$NI = \alpha + \beta_1 DebtEq + \beta_2 DebtAst + \beta_3 IC + \mu_{it}$$

The fourth model of the study focuses in evaluating the effects of financial leverage on Liquidity

$$Lqdy = \alpha + \beta_1 DebtEq + \beta_2 DebtAst + \beta_3 IC + \mu_{it}$$

### ***3.9 Ethical consideration***

It has been studied that there are some of the ethical considerations that are required to be undertaken by every researcher such as every information taken from any other research, article, journal or any other resource should be credited to the real author of the study (Njie-Carr, et al.,

2019). Furthermore, it is also important the collected information should be used for the said purpose of the study which should be specified before the data collection. In addition to that, research should never include the perception or any other aspect from the researcher which could not be justified by the findings of previous researches as it may increase the probability of biasness in the study.

### ***3.10 Research Limitations***

Similar to any other study, there are some of the limitations as well in this study such which should be clarified by the researcher itself (Cooke, 2018). In such a case, where the research imitations are not disclaimed by the researcher, there are chances that the future researcher may consider it as the weaknesses of the study. Therefore, in this study, major limitation was the time constraint as well as the budget constraint as the researcher was required to conduct the study in limited time and budget. In addition to that, sample size is also limited in this study, therefore, there are chances that the larger sample size of the study or including factors in this study may affect the findings presented by the researcher.