THESIS OF THE DOCTORAL (PhD) DISSERTATION

IFRS 9 AND ITS IMPACT ON THE FINANCIAL RESULTS OF THE LARGEST FINANCIAL INSTITUTIONS IN THE UNITED KINGDOM AND CANADA

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2023

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1. INTRODUCTION

Accounting science coincided with the emergence and development of civilization, and it has developed through the relationship with economic, social and political systems, as each country used to follow a specific input in the development of its accounting, such as the tax issues, the comprehensive central planning and the investment. Therefore, accounting was influenced in its development by the entrance used by each country, which contributed to the increase in the gap between countries in accounting practices, as many countries have issued accounting and tax laws and regulations that oblige companies to apply them (Besusparienė et al., 2018).

With the economic and technological development, the emergence of multinational companies, the spread of international trade and the global financial markets, which include stock markets, bonds, loans, currencies, options and other securities in the last three decades tremendously as a result of the easing of restrictions and controls on these markets, the free movement of capital and the trade liberalization in addition to the great progress in the communication and informatics industry and as a result, competition between global markets has increased to attract local and foreign companies, thus increasing the number and size of traded companies, hence the need for a high-quality global accounting language, to be understood by the relevant authorities in these markets, such as companies, lending investors, analysts, financial analysts, and local and global organizations (Miller et al., 1991).

As a result of previous developments, it became necessary to standardize accounting practices to meet the interests of external and internal users who need accurate financial information (Lourenço et al., 2015). Accounting standards are the means that make accounting reliable, and the application of these standards can ensure that all users of financial statements achieve the greatest possible benefit from the financial statements issued by financial institutions as the possibility of reliance on financial statements issued by financial institutions and trust in them depends mainly on the extent of these institutions' commitment to applying the relevant international accounting standards, to ensure the integrity of these financial statements, and they give a true picture of the financial performance (Landsman, 2007; Hung, 2000).

International Financial Reporting Standards (IFRS) have become an indispensable reference for professionals from all over the world, and in many countries of the world no local standards were governing professional practices in them, and perhaps this was a motivation for the supervisory bodies of the accounting profession in most of these countries to oblige

companies and financial institutions by adopting the application of IFRS standards as a basis for preparing the published financial statements issued by them, after taking into account the adaptation of their application by the requirements of the economic, financial and local environment (Haller, 2002).

IFRS standards are accounting standards derived from the pronouncements of the International Accounting Standards Board (IASB) in London, to provide a common global language for business affairs so that entity accounts are understandable and comparable across international boundaries. More than 150 nations and reporting jurisdictions permit or require IFRS for domestic public companies (IFRS Foundation, 2022). The importance of the IFRS is to maintain financial stability and transparency around the world, this allows companies and individual investors to make appropriate financial decisions that enable them to see the financial situation of the entity they wish to invest through their financial reports prepared according to the same standards (Beatty, 2011).

In 2008 the global financial crisis highlighted several weaknesses related to applying fair value accounting to financial assets and financial liabilities. The crisis showed the extent of the relationship between the macroeconomic and financial markets, it also alerted the need for effective accounting standards for financial instruments especially the accounting treatment of these instruments (Linsmeier, 2011; Barth & Landsman, 2010). Financial instruments are the driving force of the global financial system to raise the level of economic efficiency, by increasing risk-sharing opportunities and reducing operational costs. Financial institutions are in constant need of those tools and of the creation new tools that meet their needs and control financial risks (Bartram et al., 2015).

Due to the global financial crisis and bankruptcy of many banks around the world, IASB was allowed to reclassify some financial assets regulated by IAS 39, but it has been criticized because its difficulty in terms of implementation. As a result, in 2009 IASB issued the first part of IFRS 9-classification and measurement of financial assets and after 4 exposure drafts IASB issued IFRS 9 in July 2014 (IFRS Foundation, 2014). The new version of the standard includes fundamental amendments to the accounting of financial instruments, in addition to a new approach to calculating provisions for credit losses based on expected losses instead of calculating them based on incurred losses (IASB, 2014; Gebhardt, 2016).

Accounting for loan loss allowances is one of the most important contemporary issues in accounting science due to the importance of this allowance in hedging credit risk. Many users of financial statements indicated that the reason which increased the repercussions of the financial crisis is that the financial institutions did not have provisions for the loans that defaulted. The problem was that these loans were classified within low risk and good rating (Huian, 2012). Since then, the necessity of determining provisions for all loans has been highlighted, even if they have a good rating, because it is possible to default, and thus the risks will be better assessed. Loan allowances are required to be calculated based on the probability of default or inability of the client to repay and to increase hedging in advance, economic indicators are taken into consideration (Chen et al., 2019; Gurný, 2013).

According to Onali and Ginesti (2014) claim that the timing of the implementation of IFRS 9 was a major challenge for the financial services sector in many countries, in addition to the challenges of coordination between departments related to financial affairs, credit, information technology and other departments. The obstacles related to the availability of capabilities, capacities, and special systems for forecasting the economic situations and expected credit loss (Camilleri & Camilleri, 2017), especially in light of the lack of clarity of relations between the regulatory and accounting frameworks for the banking sector (Beatty & Liao, 2014).

The banking sector in any country represents a major nerve and a basic pillar of the economy, it works to stabilize monetary policy in the market and implementation of the state's monetary policies in addition to the largest investments in the financial markets through the banking sector, which is the main pillar of the capital market (Beaver, 2002). As banks are obliged to apply all standards and legislation that are imposed on them, like other public companies. Therefore, IFRS Srandards are considered as an environmental factors that affect the bank’s financial performance, and all financial institutions seek to implement everything that contributes to improve the process of measuring their financial performance (Holthausen & Watts, 2001).

Based on the above, it is important to know the effect of IFRS 9 on the key elements of financial statements of the largest financial institutions, which is beneficial to many parties related to the subject of the study, such as investors, management of these institutions, standards-setting bodies and other stakeholders.

1.1 Research Objectives

The financial results contribute to show the profitability, liquidity, solvency, financial position and the changes in economic recourses of the institutions. The financial performance is affected by several factors, first of which are the organizational factors, which are represented by the size of the financial institution, the accounting programs used, and the administrative staff. Secondly, environmental factors, which are the international instructions and standards that govern and regulate the work of institutions. And some studies (Harris, 2014; Edwards, 2016; Marton & Runesson 2017), predicted that applying the expected credit loss model and recognizing credit losses for all financial instruments according to the IFRS 9 will have a significant impact on some important items in the financial statements and thus on the financial performance indicators. The main objectives of this study as follow:

1- To examine the impact of applying IFRS 9 on the financial results of the largest financial institutions.

2- To examine the relationship between the financial institutions for two countries on different continents for the effect of IFRS 9 on the financial results.

3- To present the recent models for expected credit loss within Phase 2 of IFRS 9 impairment of financial instruments.

1.2 Research Questions

The new accounting approach under IFRS 9 might have many implications on financial institutions in general, and the banking sector in particular. These possible consequences may have an impact on the understandability, and relevance of financial information used by stakeholders to evaluate the performance of these institutions. The problem of the study is clear in the following two main questions:

1- Is there any difference in terms of the financial results of largest financial institutions after and before IFRS 9?

2- Is there any difference in the impact of IFRS 9 on financial results from one country to another?

1.3 Study Significance

The value of study is that IFRS 9 Financial Instruments has been applied recently and the previous studies focused on the expected impact and requirements of the implementation of this standard. However, the present study will be the first to examine the actual impact of this

standard on financial results, specifically the main items in the financial statements of the largest banks in the United Kingdom (UK) and Canada on two different continents, and compare the financial results before and three years after from the mandatory date of application of this standard to reach a more clear picture. Finally, this study focuses on the banking sector, which is a major reason for the growth of any economy in the world and the stability of the monetary system, as the exposure of this sector to crisis or risks will affect the rest of the sectors directly. Therefore, the selected study sample increases the value and importance of the study to the users of the financial statements.

1.4 Structure of the Dissertation

The dissertation is structured as follows:

Chapter one explains the research objectives, the research questions, and the significance of the study.

Chapter two discusses and provides the literature review related to IFRS 9, financial instruments and the expected results for this standard based on the previous studies in addition to theoretical perspectives of accounting for financial instruments and financial results. This chapter present the recent models for expected credit loss within Phase 2 of IFRS 9.

Chapter three represent the materials and methods used for testing the data collected. This chapter focuses on the data sources, sample formation and selection. This chapter provides also the appropriate methodology and techniques chosen for the analysis of data.

Chapter four describes and discusses the results of the research. This chapter contains two parts, the first part explains the impact of IFRS 9 on the financial results by answering the sub-questions. The second part for this chapter answers the second major question of the research on the comparison of the impact of IFRS 9 on the largest financial institutions between two different countries on different continents.

Chapter five conclude the results presented in the previous chapter, the implications, limitations and future research directions.

Chapter six presents the novel findings of the research, summary, references and annexures in the end. Figure 1.1 shows the structure of the research.

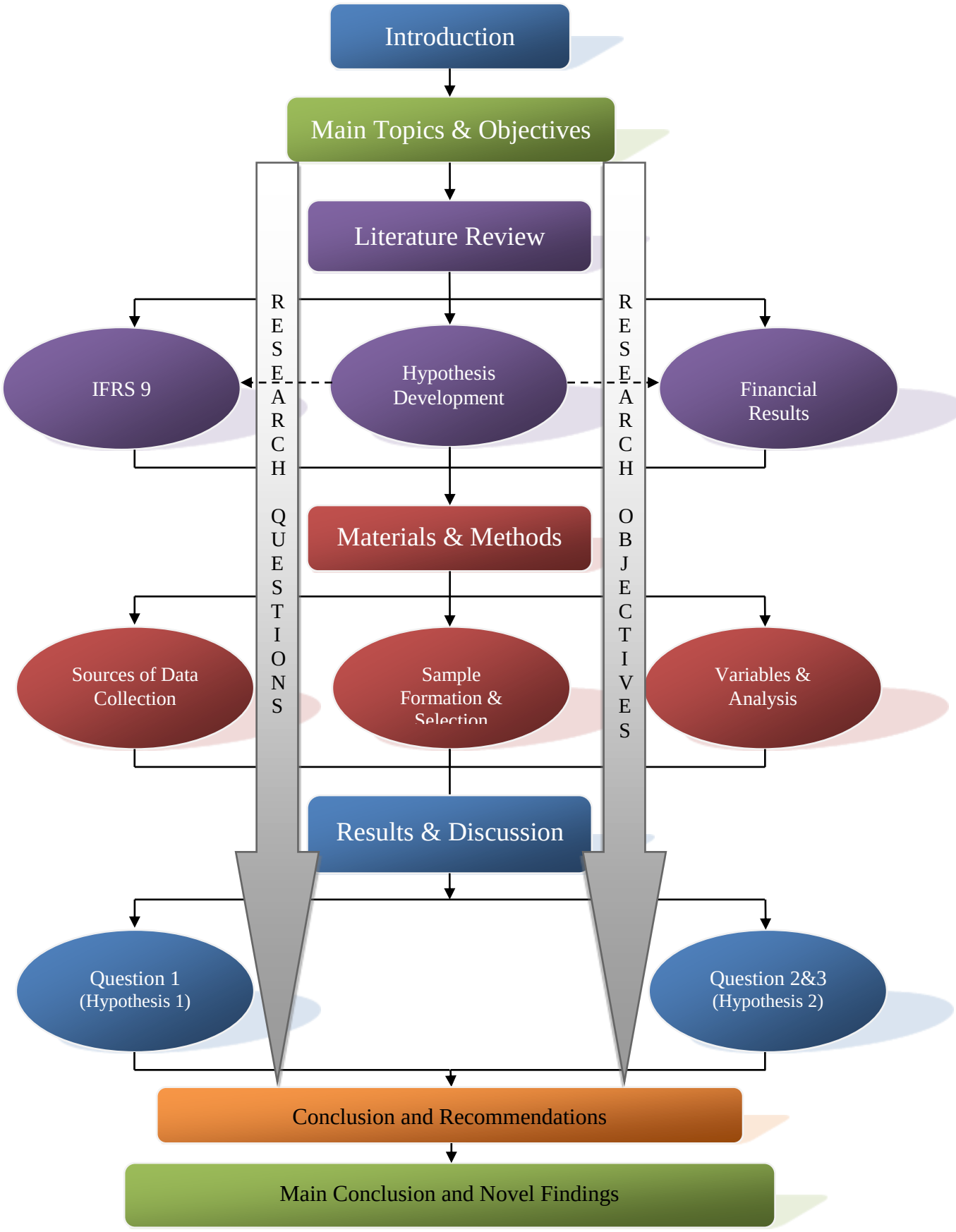

Fig 1.1: Structure of the dissertation

Source: (Author's own, 2020)

2. MATERIAL AND METHODS

2.1 Research Design

Research design is one of the main axes of the research methodology, and by the research design, we can match the questions and hypotheses of the study by planning the reasons for using the research approach, research strategy, selection techniques, and research methods. The methodology choices based on the research onion are quantitative, qualitative and mixed (Creswell, 2003). Research design is defined as the process of making decisions before the emergence of situations in which these decisions will be implemented, as it is a strategy for understanding and analyzing the events in the study (Mouton, 2011). In other words, it can be defined as a process of dependent expectations that tends to bring an expected situation under control. We can give an example by which we explain the meaning of research design by what the commander does in the field. The commander is the one who sets a design for the battle rather he think in advance about the objective circumstances facing him, then makes specific decisions for each of those future situations, deciding the number of units and types of weapons he will use in the battle, and the way to reach the enemy, then he tries to draw a model for the plan in light of the decisions he takes. This model enables him to know the extent to which decisions are related to each other, and he can also modify or change the plan if necessary. There is no doubt that the application of this example to the research is clear. If we look at the problem under study, and the problems branching from it, and decide what we will do to solve these problems, then we will increase the chances of controlling the research procedures. Figure 2.1 shows the research design of the dissertation.

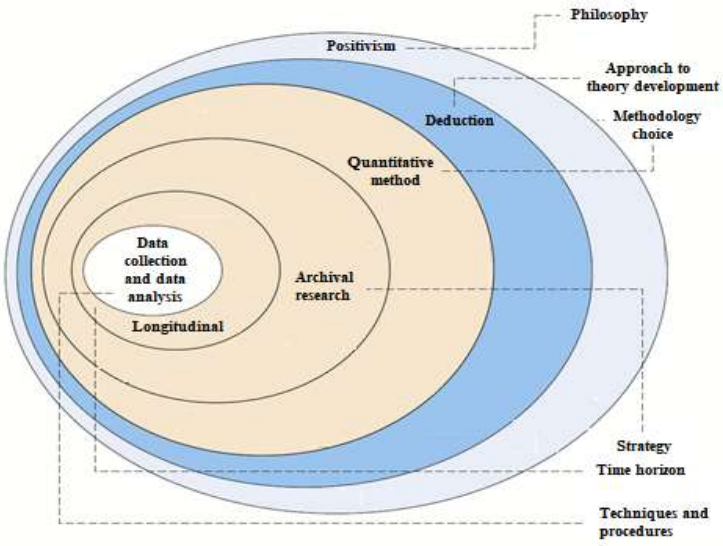

Fig 2.1: The research design of the dissertation
Source: (Author's own, 2021

The first type of research approaches according to the research onion is the deductive approach that appropriate for studies aimed at observing results using new empirical data for cases when the set hypothesis is proven right or would fit with aims to prove a theory wrong. The second approach is inductive for studies where the researcher tends to investigate the sample data concerning certain patterns to arrive at a general explanation (Johnson, 2004). Therefore, the deductive approach more suitable for this study and by this approach casual relationships can be described between the variables and testing the derived hypotheses for new cases. There are several strategies for scientific researches in this dissertation will based on archival research strategy. Therefore the research design matrix for this study is Quantitative, deductive and archival research as shown in the Figure 2.2. In the following figure the basic model for the dissertation.

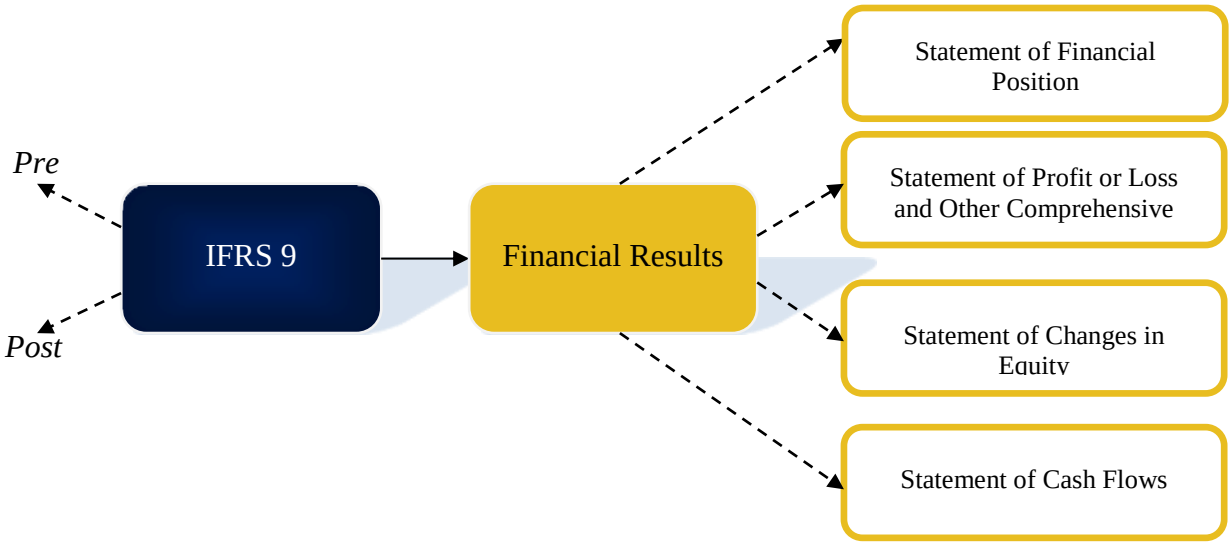

Fig 2.2: Basic Model for Dissertation
Source: (Author's own, 2021)

Figure 2.2 shows that independent variable (IFRS 9) is categorical (before and after the mandatory date of IFRS 9) and the dependent variables are quantitative/numerical variables that were defined in the previous chapter (The four main financial statements and the most important item in each statement). Figure 2.3 shows the levels or dimensions related to the research design based on the study of Mouton (2011).

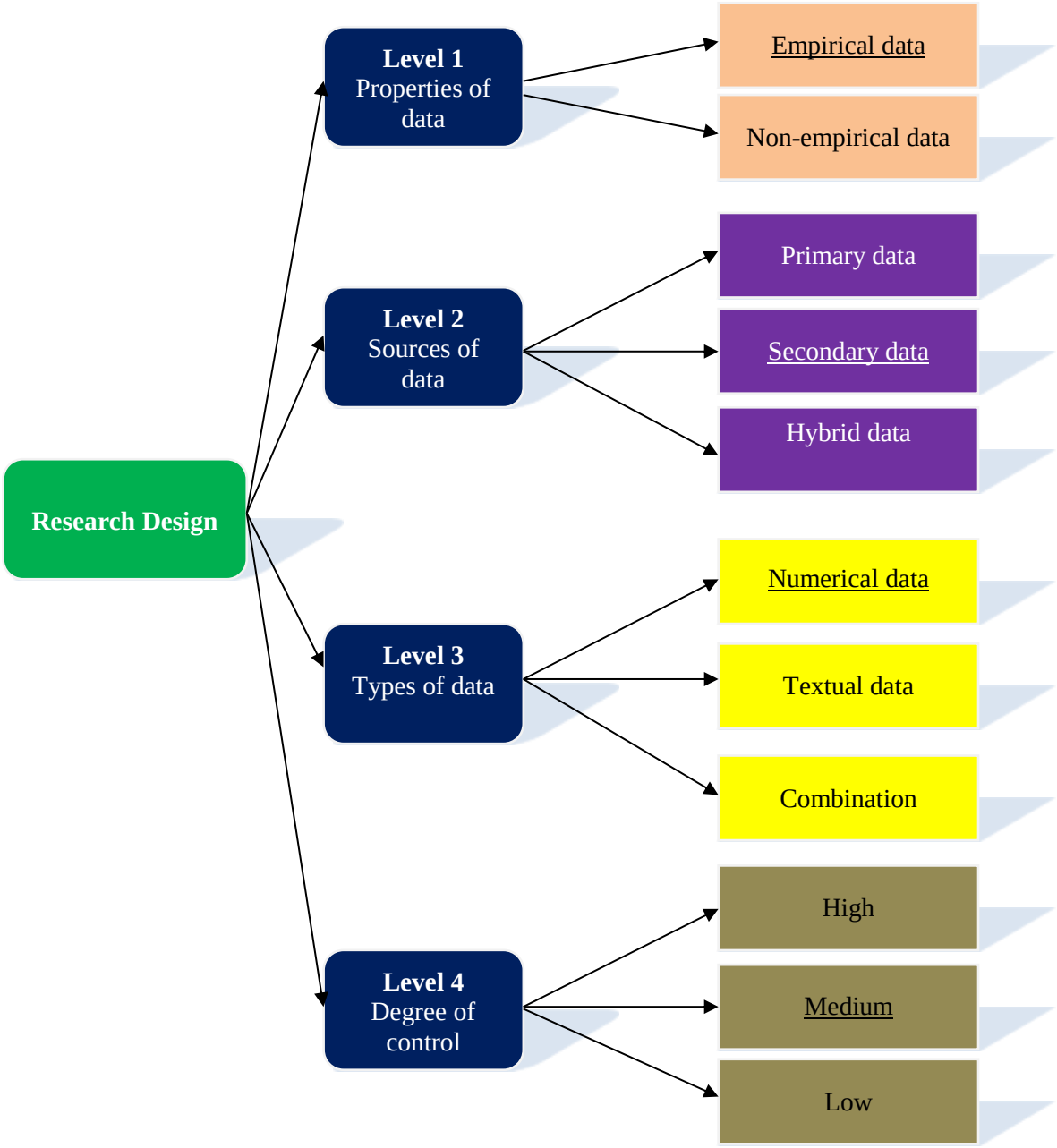

Fig 2.3: Four levels of research design
Source: (Mouton, 2011)

Based on the above figure, level 1 focuses on the properties of data. Empirical research is one of the types of scientific research based on data collection aimed at explaining a phenomenon, and it expresses the unbiased observation of a particular phenomenon in a field. Empirical research is based on several important foundations, which include both the problem and phenomenon that the researcher focuses on studying based on his observation and experience. Second, hypotheses, which express the relationship between two or more variables, through their study, can explain a particular phenomenon. Third, identifying the main independent and dependent variables closely related to the topic of research, and trying to reduce the impact of secondary variables (Davies & Nutley, 2008). Also there are non-empirical

researches that do not rely on observations, experiences. Regarding the other levels, they were explained previously and will be explained in the next sections of this chapter. If we apply the proposal of Mouton about the four levels for research design on this dissertation, it results in the following table.

Table 2.1: Research design for dissertation based on Mouton

Level	Dissertation
Properties of data	The dissertation is an empirical study, because the results derived by analyzing the data were collected by using the archival research (documents and records) to answer the questions and achieve objective of the dissertation.
Sources of data	This dissertation is based on the previous studies and empirical research and uses existing data (annual reports), therefore it is based on the secondary data.
Types of data	To answer its questions and achieve its objective, this dissertation based on the numerical and statistical data.
Degree of control	The dissertation relies on the annual reports - the financial statements for 40 banks in 6 years, 1120 observation (statement), but these financial records exist, which means we have no control on these data but we have the control on the sample of study, techniques of analysis. Therefore the level of control is medium for this dissertation.

Source: (Author's own, 2021)

Based on the above table the research design for this study included empirical data, secondary data, numerical data and finally the degree of control is medium. Population of the study will be the largest financial institutions in the UK and Canada, the target population the banking sector, and the sample of the study is 40 banks, the largest 20 banks in the UK and the largest 20 in Canada. Table 2.2 shows the ratio of sample from target population for this study.

Table 2.2. Sample of the dissertation %

	United Kingdom	Canada	Total
Domestic Banks	62	35	97
Sample of Study	20	20	40
Ratio	32%	57%	41%

Source: (Author's construction, 2021)

The total number of financial statements selected for this study is 1,120 (observations) and this sample is appropriate to test the hypothesis. The dissertation concentrated on the UK and Canada based on GDP growth rate, economic strength in their continents, the number of financial institutions are similar, in addition to the interest to the applying of IFRS standards, due to the importance of financial institutions on the indicators of macroeconomic for these countries. Consequently, if there is a significant impact of this standard, it will be on those institutions and thus choosing these countries is the optimal choice for comparison to answer the questions and achieve the objectives of the study.

2.2 Data Analysis

One of the most important stages of preparing scientific research is the stage of data analysis because through that stage the researcher reaches the required results and thus achieves the research objectives. Data analysis can be defined as arranging, coordinating and organizing the data that the researcher has collected on the subject of his research, to present it in a new form to answer the objectives of the research that may be formulated in the form of questions (Yim et al., 2010). Data analysis in scientific research aims to achieve several things, the most important of which are explaining and clarifying the effect or the relationship between the variables of the study.

The researcher needs access to satisfactory and adequate answers to the questions that revolve in his mind about the studied phenomenon, to reach conclusions that are related to that phenomenon, and then to link this phenomenon to reality and study its dimensions and the effects that it entails as well as to search for appropriate methods to deal with it. Analysis of the data is carried out by using scientific research methods, where the stage of data processing is done through various means and methods. The method of data processing and the extraction of the studied scientific results is related to the nature and type of the study problem and is based on the scientific experiences of the researcher. When addressing the

research problem, the researcher can also treat the data in multiple ways, depending on the nature, type of data and the approach used to arrive at scientific results. This method is characterized by the researcher's ability to understand and interpret hypotheses of the study and the variables that affect the research sample or the phenomenon that the researcher studies. The analytical method is also characterized by providing the opportunity for the researcher to stand and know the extent of the truth of these variables or hypotheses on the phenomenon or research sample (Das, 2008).

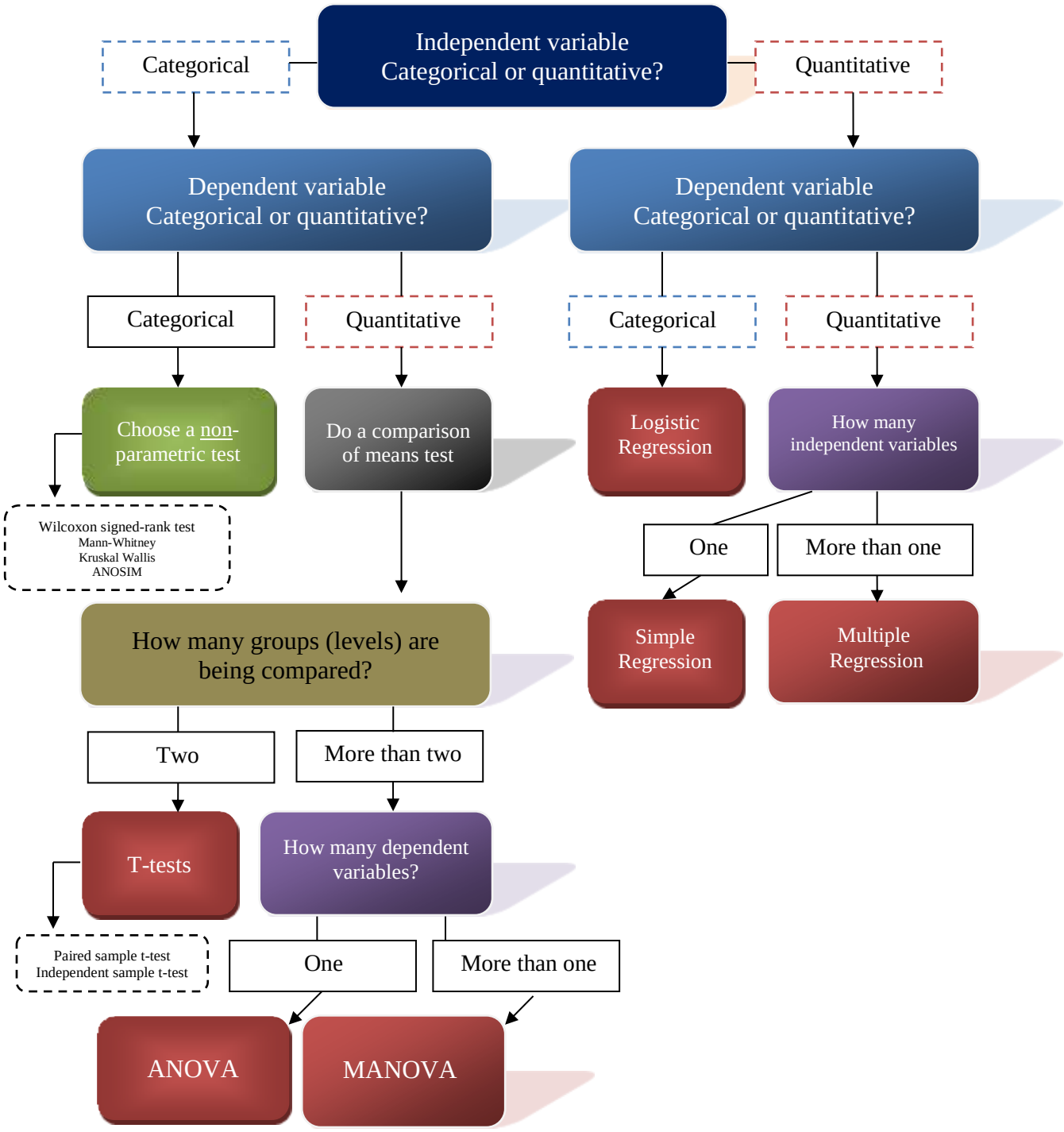

Fig 2.4: Inferential Statistical Techniques
Source: (Rebecca, 2020; Author's construction, 2021)

Based on the above flow chart, the main three tests in statistics comparison tests, regression tests, and correlation tests. This study will be based on inferential statistics by using the *comparison tests that assess whether there are differences in means, or ranking scores of two or more groups* (Pritha, 2021). Thus, this study will use the Paired sample t-test (Parametric test) to test the first hypothesis or Wilcoxon signed-rank test (Non-parametric test) it depends on the normality test of the collected data, and Independent sample t-test (Parametric test) to test the second hypothesis or Mann-Whitney test (Non-parametric test) and also it depend on the normality test. These tests are appropriate to test the hypothesis of dissertation regarding the first hypothesis will comparing between the average rate of change in main items for the financial statements before and after the effective date of IFRS 9, the second hypothesis focus on comparing the average rate of change for main items in financial statements after the effective date of IFRS 9 for two countries (the UK and Canada), which means that there are two independent groups, therefore the test chosen is appropriate to test the second hypothesis in this dissertation. In addition to the descriptive statistics to describe the data by using the averages and graphs to answer another questions in this study.

2.3 Summary

This chapter aimed to provide the research design, sampling, data collection and data analysis for this dissertation. Research design was detailed in the first section in this chapter, this section provided the three forms for research design (Research onion, research design matrix and four levels of research design) were applied for this study. The second section was the sources of data collection, in this study. The appropriate tool is documents-secondary resources to answer the questions of the study. The third section focuses on the sample formulation and selection, and provided the differences between the most forms for probability and non-probability sampling methods, in this dissertation the purposive and convenience form were applied to achieve the dissertation objectives. Data analysis was the last section in this chapter, there are different methods for analyzing the data, but it depends on the questions, hypothesis and objectives of the study in addition to the nature and type of the independent and dependent variable for the study. In the scope of the dissertation analysis was based on inferential statistics by using the T-tests (Paired sample t-test and independent sample t-test) in addition to the descriptive statistics. Finally, the dissertation is explanatory, it includes applied and quantitative research Explanatory research, because this study focuses on explaining the impact of IFRS 9 on the financial statements by comparing the financial statements before and after issuing this standard. The results for this study will affect the

decisions of external users for the financial statements and accounting standard-setting bodies, therefore applied research was conducted in this dissertation in addition to the quantitative methods that were relied upon to achieve the objectives of this study.

3. MAIN FINDINGS OF THE DISSERTATION

The research variables will be outlined and the hypotheses will be tested in the scope of this chapter. Inferential and descriptive statistical approaches will be utilized to arrive at the study's results and answer the research questions. In terms of inferential statistics, the study used the parametric test (t-tests) since it satisfied the criteria for this sort of test, which include a sample size of higher than 30 banks (normal distribution) and its proportion of the population (the largest financial institutions) is less than 10%. In addition to descriptive statistics such as standard deviations, arithmetic means, figures, and tables, which aid in providing a holistic picture to achieve the highest degree of analysis and findings. The SPSS software suite was used to generate the statistical results. The largest 40 banks in the United Kingdom and Canada, as indicated in the preceding chapter, were subjected to statistical analysis. For the period 2014 to 2020, a high number of observations (n = 1120) were included in the sample. In order to test Hypothesis (H1.a), and to determine the degree of acceptance or rejection of the hypothesis, and to verify the statistical evidence of the above mentioned results, the paired sample t-test was used, where the hypothesis will be accepted or rejected at level of significance 5%, and if the $p < .05$, the null hypothesis will be rejected and the alternative hypothesis accepted. Table 4.1 and 4.2 contains the test results for this hypothesis.

The paired sample t-test is used for two related samples in the case of paired readings, if we have a sample drawn randomly from a natural population, and this sample has two quantitative measurements in a measuring instrument. For example, if a researcher wants to test a training program on a group of employees in an institution, and takes a test before applying the program, and re-applies the same test on the same individuals after applying the program, it then has double readings for the sample members (before and after) and thus uses the t-test for two related samples. The mechanism for finding (t) in the case of two related samples is as follows (Bowerman et al., 2013):

$$t = \frac{\overline{d}}{\frac{s_d}{\sqrt{n}}} \qquad (3.1)$$

Where:

$\overline{d}$*: The average of difference between (before and after applying)*

S_d*: The standard deviation between (before and after applying)*

n: The number of sample

$$\bar{d} = (\sum d)/n \tag{3.2}$$

$$S_d = \sqrt{\frac{1}{n-1}\left(\sum d^2 - \frac{(\sum d)^2}{n}\right)} \tag{3.3}$$

However, before using this test, the researcher must make sure that the samples are not independent, and that they have a normal distribution. If the sample size is larger than 30 participant, the condition for a normal distribution can be excluded (Black, 2016; Wilcox, 2010). The alternative nonparametric test if the sample is less than 30 participants or there is no normal distribution is Wilcoxon Signed ranks test.

Independent sample t-test is used for two independent samples in the event that we have only one independent variable with only two levels, and only one dependent variable (Wilcox, 2010). For example, if a researcher wants to study the difference between (for males and females) in the degrees of thinking, he uses the t-test for two independent samples. The mechanism for finding (t) in the case of two independent samples is as follows (Bowerman et al., 2013):

$$\frac{(\overline{X}1 - \overline{X}2)}{\sqrt{S_d\left(\frac{1}{n1} + \frac{1}{n2}\right)}} \tag{3.4}$$

$$S_d = \frac{(n_1-1){s_1}^2 + (n_2-1){s_2}^2}{(n_1-1)+(n_2-1)} \tag{3.5}$$

A two-sample t-test is used to compare the averages of two independent groups, such as comparing males and females in a continuous quantitative variable such as achievement, intelligence, or comparison between two experimental and control groups in academic achievement after using an experimental treatment. However, before using this statistical method, the researcher must make sure of the conditions for using the t-test for two independent samples (Willard, 2020). The alternative nonparametric test if the sample is less than 30 participants or there is no normal distribution is Mann-Whitney. The following section represent the result of the dissertation.

Based on the research questions for this study this chapter includes two parts, the first part is comparing the key financial indicators of the largest financial institutions before and after IFRS 9. The second part is comparing between two countries on different continents for the effect of IFRS 9 on the key elements of IFRS financial statements.

This part contains the result of the first main question of this thesis, to compare the key elements of IFRS financial statements before and after IFRS 9. To answering this question this study used the statistical program SPSS in addition to Microsoft Excel in analyzing the data. It also relied on the Paired sample t-test and Wilcoxon signed rank test as statistical methods as mentioned previously. These types of statistical tests are more suitable the therefore these types of statistical tests for this type of comparison provide more useful information than other statistical tests such as regression analysis, in light of the fact that the independent factor for this study is not numerical, but rather categorical (pre and post). Based on the previous chapter, it was found that there is a decrease in the mean of all items after the date of effective date of the standard compared to before, except for the cash flows item. Table 3.1 summarizes the results of the sub-hypotheses of the first main hypothesis.

Table 3.1: Summary of Findings – Hypothesis 1

No.	Hypothesis	Statistical Supported
H1.a	There is a statistically significant difference in the average rate of change in total assets before and after IFRS 9.	Not supported
H1.b	There is a statistically significant difference in the average rate of change in total liabilities before and after IFRS 9.	Not supported
H1.c	There is a statistically significant difference in the average rate of change in net income before and after IFRS 9.	Supported
H1.d	There is a statistically significant difference in the average rate of change in total equity before and after IFRS 9.	Supported
H1.e	There is a statistically significant difference in the average rate of change in net cash flows before and after IFRS 9.	Not supported

Source: (Author's Construction, 2021)

Table 3.1 summarize and shows the significant difference, whether increase or decrease, there is a significant change in net income and equity only, while in the case of the rest of the items (total assets, liabilities, and net cash flows) there are no significant changes according to the results of inferential statistics. These results are consistent with the results of previous

researchers who expected and found that there is no significant effect of IFRS 9 (Cohen & Edwards, 2017; Halilbegovic et al., 2018) while it contradicts the researchers who expected that there is a significant effect of IFRS 9 (Beatty & Liao, 2011; Fiechter, 2011; Huian, 2012; Harris et al., 2014; Bushman & Williams, 2015; Novotny-Farkas, 2016; Brkovic, 2017; Filipova-Slancheva, 2017; Gornjak, 2017; Marton & Runesson, 2017; Goulash & Somogyi, 2019).

The second part contains the result of the second main question of this thesis, to compare the main items in the financial statements between two countries. To answering this question this study used the Independent sample t-test and Man-Whitney test as statistical methods, these types of statistical tests as mentioned previously information for this type of comparison are more appropriate and provide more useful than other statistical tests such as regression analysis. Relying on the previous chapter, it was found that the mean of all the key financial indicators decreased in British banks after the date of effective date the standard, while Canadian banks only equity and net income, while the rest of the items increased (Total assets, liabilities, and net cash flows). Table 3.2 shows the results of the sub-hypotheses of the second main hypothesis.

Table 3.2: Summary of Findings – Hypothesis 2

No.	Hypothesis	*Statistical Supported*
H2.a	There is a statistically significant difference in the average rate of change in total assets between the UK and Canada after IFRS 9.	*Not supported*
H2.b	There is a statistically significant difference in the average rate of change in total liabilities between the UK and Canada after IFRS 9.	Not supported
H2.c	There is a statistically significant difference in the average rate of change in net income between the UK and Canada after IFRS 9.	Supported
H2.d	There is a statistically significant difference in the average rate of change in total equity between the UK and Canada after IFRS 9.	Not supported
H2.e	There is a statistically significant difference in the average rate of change in net cash flows between the UK and Canada after IFRS 9.	Supported

Source: (Author's Construction, 2021)

Table 5.2 summarize the significant difference between Canadian and British banks, there is a significant difference in net income and net cash flows, while the rest of the items there is a difference, but not a significant difference, according to the results of the inferential statistics. This result contradicts the previous study such as study of Onali and Ginesti in 2014 that expected the significant difference between countries after IFRS 9.

4. NEW AND NOVEL FINDINGS OF THE DISSERTATION

This study mainly aims to know the real impact of IFRS 9 on the most important items in the financial statements. Before starting to select the study sample and collect and analyze data, the theoretical and experimental literature on IFRS 9 in particular and studies related to accounting for financial instruments were reviewed and analyzed in order to identify the research gaps.

Given that IFRS 9 is newly issued compared to the rest of the IFRS standards, there are few previous studies that focused on IFRS 9. In addition, accounting for financial instruments is one of the most controversial topics due to its mathematical and statistical complexities. Therefore, many researchers avoid research in this field compared to other accounting topics. When reviewing the relevant literature in this field, it was found that these studies focused on the effects of applying IFRS 9, the new instructions and the mechanism for applying this standard. The main novel contribution of this study is to collect a sample of the largest financial institutions, specifically the banks operating in the largest countries that adhere to the application of IFRS standards, the United Kingdom and Canada, which is considered the first study that provides a real comparison of the impact of IFRS 9 on the most important items in the financial statements. Previous studies did not seriously examine the comparison of the impact of this standard on different continents, especially since the world today has become more open after globalization, and this data will be necessary for the investors, so the results of this study provide a new contribution to knowing the extent of the impact of IFRS 9 on the difference between those countries.

Based on the review of previous studies, it was found that there is a gap in the absence of a study focused on discussing all aspects and phases of IFRS 9 in detail. This study made a new contribution in discussing the three main phases of this standard, in addition to presenting and proposing statistical models in calculating the PD, the most important components of the ECL equation. This comprehensive review and the proposed models help to provide more appropriate financial data for each of the users and also more appropriate to the requirements of IFRS 9. Finally, this study used statistical tools that were not used by previous studies that

focused on the expected results of IFRS 9. As these statistical techniques are the most appropriate for this type of studies in order to provide high-quality and more accurate results for users of financial statements.

Accordingly, IFRS 9 did not lead to significant difference between these two countries on the main financial indicators as a comprehensive view. Whereas, if each indicator was highlighted separately, we would find that there is a significant difference between these two countries with regard to the percentage change in net income and cash flows after IFRS 9. Despite the similarities between these two countries in major issues as mentioned previously, there are minor differences, have direct impact such as applying expected credit losses equation with different models and rates based on the instructions of each central bank for each of these countries, in addition to the minor differences in the hedging policy for financial risks between the two countries. All these facts led to direct impact and difference in net income and cash flows compared to the rest of the basic financial indicators (total assets, total liabilities and total equity), which represent the largest figures in the financial statements, that are not easy to change, but may be affected in the future if the significant difference in net income continues. To summarize the above, the novel contributions for this thesis are:

1. The novelty of the study is that no previous research tested the IFRS 9 effect on the largest financial institutions in the largest countries that adhere to the application of IFRS standards.
2. The first study that provides a real comparison of the impact of IFRS 9 on the key items in the financial statements.
3. Explain with details the three main phases of this standard, in addition to presenting different statistical models in calculating the probability of default (PD).
4. This study used statistical tools that were not used by previous studies that focused on the expected results of IFRS 9.
5. The statistical results of this study differ from the expectations of applying IFRS 9, as the two main hypotheses of this thesis were rejected as shown below.

Although most of the expectations indicated that there was a significant impact on all the key elements of the financial statements, due to the significant changes of IFRS 9 in calculating expected credit losses (ECL) compared to IAS 39 on the basis of incurred losses, the results of this thesis indicate that there is no statistically significant difference in the most of key elements of the financial statements. Therefore, the first hypothesis was rejected, but there was a significant difference in net income and equity after IFRS 9. The important question is why there is no significant impact for this standard on the total assets, total liabilities, and net

cash flows? The first reason is that the impact of IFRS 9 will not be significant if the financial institution contains high-quality financial instruments in addition to the existence of a stable economic and political environment based on the expectations of the standards setters. And since the study sample was banks operating in two countries with financial and political stability, in addition to high-quality financial instruments, all of this mitigated the impact of IFRS 9 on the rate of change in the main financial items from a comprehensive perspective. On the other hand, IFRS 9 and its amendments, especially Phase 2, impairment of financial instruments, had a significant impact if we only highlighted the net income and equity of those banks, although they have high-quality financial instruments and operate in a stable environment, the second phase of this standard had a direct impact on net income and equity. As for the rest of the amendments in this standard, they did not have a direct impact, such as phase 2, which relies heavily on statistical models that can directly affect the percentage change in income and property rights compared to the rest of the main financial indicators in the short term. However, as I mentioned earlier, this negative change in net income will be reflected in a positive one and create a more stable and shock-resistant environment. This is regarding the interpretation of the results of the first main hypothesis.

The second hypothesis focused on the comparison between British and Canadian banks, as previous expectations indicate that after applying IFRS 9, there will be a significant difference between countries. However, depending on the results of the thesis, it indicates that the difference not significant between British and Canadian banks in the percentage change of the key elements of the financial statements as a whole, after applying IFRS 9. There are many explanations that led to these results. Among these explanations is that the study sample contains the largest banks operating in UK and Canada. Thus, each of these banks has customers and high-quality financial instruments, in addition to stable and similar economic and political indicators. The next chapter will present the conclusion, recommendations, references and annexures in the end.

5. IMPLICATIONS, LIMITATIONS, AND FUTURE DIRECTION

5.1 Implications

Accounting during its development has gone through many stages, where each stage had its own advantages and characteristics, and the matter settled on considering accounting as a system that aims to provide the necessary information to economic decision-makers, but the one who looks at the reality of accounting will find that the elements and applications of this system have been greatly affected by the environment surrounding it, which created a kind of

difference that led to the emergence of various accounting systems in the world, some of which are local and others of a regional or international nature.

In the past, these accounting systems were limited to handling and processing historical accounting data for the preparation of financial statements, then this narrow view developed according to the development of the needs of the management of economic units and the actors in them, which are usually in harmony with their surroundings, to then turn into information systems that do not stop at the limits of financial data and information, but rather go beyond them to include quantitative and descriptive data and information that are useful in decision-making for users distinguished by their diversity and diversity, which prevents the possibility of preparing consolidated lists for them.

In addition to this the large deduction of institutions, the internationalization of their activities, the expansion of their markets and their geographical dispersion, as well as the separation of ownership from management, added new roles to accounting systems in addition to determining the results of operations, financial position and the institution's relationship with others.

All of these recent developments in global finance are moving towards creating a unified standard for accounting models. Everyone recognizes the advantages and benefits of following a unified accounting system and global rules that are applied by everyone everywhere. Perhaps the best example of this is the emergence of international accounting standards and the beginning of many countries' adoption of them, but to varying degrees in line with their economic structures. However, this matter stands in the way of great obstacles that prevent its application, even partially, since some differences can be easily resolved such as the terminology used or the presentation of the accounts, but it is not so with regard to the deeper issues connected with the principles. As it is easy to translate words, but it is very difficult to translate ideas and principles, and this is what made the acceptance of multiplicity and diversity in accounting systems a reality (Iatridis, 2010).

Most countries, in the context of applying international accounting standards, have adopted the financial accounting system based on those standards. This system was built on principles that the economy in some countries still lacks, such as the difficulty of obtaining information in various fields, the correct statistics on which the estimation process is built, the absence of active commercial, and financial markets that reflect the normal conditions of competition. Thus, specialists and experts in accounting and finance believe that very complex and advanced standards may significantly affect the financial positions of companies located in developing and unstable economies (Tamimi, 2022). IFRS 9 *Financial Instrument*s is one of

the most complex and controversial accounting standards, as the topics it deals with are among the most daunting subjects in accounting and financial sciences. Financial instruments have the largest proportion in their financial statements. In addition, these tools are exposed to high risks that directly affect the financial positions and strategic decisions of these institutions.

As a result, this study focused on comparing the rates of change in the key elements of IFRS financial statements such as total assets, liabilities, owners' equity, net income, and net cash flows before and after the issuance of this standard. Although some standards were amended or issued during the study period, this study focused on financial institutions, specifically the banking sector. Whereas, in the event that there is a significant change, the direct reason for this is IFRS 9, as a result of the proportion of these financial instruments. Also, as mentioned previously, the study focused on two of the most stable and committed countries in implementing the standards. The results of this study provide many vital implications for many parties that care and use the financial information. This study has vital implications for standard setters. The issuance of an important standard that is closely related to the activities of the financial sector, such as IFRS 9, prepares international standard-setters to consider and review all the results of studies related to this standard. This is due to the importance and impact of the financial sector, especially banks, which is the basis of this criterion. This study provides very important results and indicators, the IASB and setters of accounting standards can use those results and models that were presented in this study in order to know the extent of the impact of this standard on the largest international banks that apply international standards, in particular IFRS 9, In addition to increasing opportunities for improvement and development of this standard in line with the users of financial statements, achieving financial stability and reducing fluctuations as a result of uncertainty.

This study also offers implications to the regulators in UK and Canada in particular, because the study sample focused on banks operating in these two countries. We also know that British banks are among the largest banks in the world and contribute significantly to the British economy, and IFRS 9 is one of the most dangerous standards faced by these banks in recent times, whether British or Canadian or others. Therefore, this study will also provide a comprehensive and clear picture to the regulatory bodies about the extent of the impact of this standard on the key financial indicators of financial institutions. In addition to knowing what models and laws will be more supportive to ensure sustainability and economic development, given that this standard is the main objective with regard to hedge accounting and expected credit losses.

This study also has valuable implications for investors and financial analysts in addition to the decision makers of those large institutions.

IFRS 9 has many advantages, the most important of which appear in the transparency shown by the expanded disclosure requirements related to the IFRS 9 model. Thus, enhancing financial stability, and it is expected that such transparency and disclosure will help to strengthen the individual reports of banks and the periodic consolidated regulatory disclosures and the validity and adequacy of the amounts of expected losses reported. The application of the standard affects deposits by enhancing depositors' confidence in banks because they provide more guarantees and greater protection, it also contributes to promoting a sound study of the customer's credit potential, and thus represents a protection for banks from any risks related to borrowers' non-fulfillment of their financial obligations.

On the other hand, this criterion increases the severity of risks in times of crises, as early recognition of losses negatively affects the bank's flexibility by reducing capital levels, where banks make provision for credit losses for future expectations and not real losses, which will affect the profitability and capital of the bank, and thus show the business result in a low way, which affects the share. Therefore, this study provides an important picture for investors, analysts and decision-makers in those large financial institutions about the extent of the impact of this standard, both at the level of historical comparisons of the institution itself or the institution with its competitors in the same country, and also for financial analysts when comparing with another country on a different continent, which is related to investment portfolios that have investments in large financial institutions outside the borders of the state.

Finally, this study also provides implications for academics interested in accounting, in particular accounting for financial instruments, the future of accounting for financial instruments, derivatives, and hedge accounting, which is considered one of the most important, controversial, and complex topics, as academics and researchers interested in this field have to be at a high level in both accounting, statistics and mathematics. This study also provides them with the models used in calculating expected credit losses, in addition to knowing the real impact of this standard and not the expected impact on the financial results of the largest financial institutions, which will lead them to more innovative future research in the field of developing quantitative techniques and methods, reducing the risk of uncertainty while maintaining a high level of transparency and minimal level of earnings management and manipulation practices.

5.2 Limitations and Future Directions

This study has many limitations and shortcomings like other studies. First, this study focused on banks, which are considered one of the most important financial institutions, but as it is known that there are other types that fall under financial institutions. In the future, it is necessary to focus on other financial institutions, such as the insurance sector, which is also one of the important sectors and is largely related to expected credit losses. Second, this study focused on two developed and economically stable countries in order to obtain results that reflect the real impact of this standard on the largest banks in those two countries because these banks have a great impact on the economy of those countries and the world as well due to the large assets of these bank. In the future, it is necessary to study the impact of this important criterion on developing economies and compare it with advanced economies. Third, this study focused on the largest banks, and according to the results, there was no significant impact on all financial results, the reason may be that the impact of the standard on large banks that have financial instruments with high efficiency is much less than that of medium and small banks that have financial instruments that are not highly efficient. In the future, it is important to study the impact of this standard on medium and small banks in the United Kingdom and Canada so that we can generalize the results to the banking sector as a whole. Fourth, the financial statements that were relied on covered three years before and three years after the mandatory date of the standard, and this is what distinguishes this study from the rest of the studies as it gives a clear indication of the impact of the standard. In the future, after ten years, for example, it is possible to conduct a study to see the comprehensive impact of this standard and its subsequent amendments, which, as we mentioned, differs from the rest of the standards in terms of complexity, so it needs to be focused on. Fifthly, this study relied on audited financial statements as a data collection tool, but in some cases there are many cases of fraud and accounting scandals in recent times. Therefore, in the future, it is necessary to conduct a study that uses a different tool to collect data, such as interviews with financial and risk managers of these banks, in addition to academics specialized in this field, to obtain a clearer picture.

Finally, this standard was expected to have a direct impact on the banking sector and the global economy, but as a result of many factors such as the COVID-19 pandemic and Russia-Ukraine war, the central banks provided a lot of economic stimulus to maintain financial stability. Thus, as a result of the many factors in the last year of the study sample, a study must be conducted in the future under more stable conditions to obtain more generalizable results. Accounting in recent times is moving toward the finance side, risk management and

statistics, and this may reduce the value of accounting, although the information that is provided is of great benefit, but the expectations issues in accounting standards are increasing compared to the past, and this may increase the chances of manipulation as long as the possibilities and expectations increase.

Therefore, this study recommends the IASB and standard-setters that there be more auditing or submitting two reports. The first depends on traditional accounting and financial movements that have actually occurred, and the other report depends on financial accounting, which includes everything related to expectations. Additionally, this study suggests that standard-setters create a specific standard for the banking industry, where managing financial instruments serves as the primary function in the banking industry and a supporting function in non-financial institutions. Therefore, having a separate transaction or standard is preferable. This study recommends that financial institutions interact the senior management with the requirements of IFRS 9, specifying policies and procedures related to the application of the standard, training specialized personnel in this field, updating current systems and means of control, or applying new systems and artificial intelligence in calculating expected credit losses with taking into account the undue cost and effort. Finally, this study recommends academics to conduct more research and attend conferences to get acquainted with the details of IFRS 9 and the guidelines for its application, and to monitor the effects of its application on the banking environment and the global economy. This study also recommends universities and educational institutes to update and develop accounting courses in order to graduate accountants who are able to deal with international standards in general and standards for financial instruments in particular.

REFERENCES

Barth, M. E., & Landsman, W. R. (2010). How did Financial Reporting Contribute to the Financial Crisis? European Accounting Review, 19 (3), 399-423.

Bartram, S., Brown, G., & Waller, W. (2015). How Important Is Financial Risk? Journal of Financial and Quantitative Analysis, 50(4), 801-824. DOI: 10.1017/S0022109015000216

Beatty, A. (2011): "Do delays in expected loss recognition affect banks' willingness to lend?" Journal of Accounting and Economics, (52), https://doi.org/1-20. 10.1016/j.jacceco.2011.02.002

Beatty, A., & Liao, S. (2014). Financial accounting in the banking industry: A review of the empirical literature. Journal of Accounting and Economics, 58(2-3), 339-383. https://doi.org/10.2139/ssrn.2346752

Beaver, W. (2002). Perspectives on Recent Capital Market Research. The Accounting Review, 77(2), pp.453-474. Available at https://www.jstor.org/stable/3068906

Besusparienė, E., Vitunskaitė, E., & Butėnas, R. (2018). The Importance of Financial Accounting Information for Business Management. Accounting, Audit and Forensic Science, 75-81. http://doi.org/10.15308/finiz-2018-75-81

Black, K. (2016). Business Statistics: For Contemporary Decision Making. 9th edition. Wiley & Sons Ltd.

Bowerman, B. L, O'Connell, R. T, & Murphree, E. S. (2013). Business Statistics in Practice. McGraw-Hill.

Brkovic, M. (2017). IFRS 9 implementation in banks and macroeconomic scenarios: Some methodological aspects. Bankarstvo, 46(3), 36–51.

Bushman, R., & Williams, C. (2015). Delayed Expected Loss Recognition and the Risk Profile of Banks. Journal of Accounting Research, 53(3), 511-553. DOI: 10.2139/ssrn.2226964

Camilleri, E., & Camilleri, R. (2017). Accounting for Financial Instruments: A Guide to Valuation and Risk Management (1st ed.). Routledge.

Chen, I., Lee, Y., & Liu, Y. (2019). Bank liquidity, macroeconomic risk, and bank risk: Evidence from the Financial Services Modernization Act. European Financial Management, 26(1), 143-175. https://doi.org/10.1111/eufm.12208

Cohen, B., & Edwards, G. (2017). The New Era of Expected Credit Loss Provisioning. BIS Quarterly Review, 39-56. https://www.bis.org/publ/qtrpdf/r_qt1703f.pdf

Creswell, J. (2003). Research design: Qualitative, quantitative and mixed methods approaches (2nd ed.). Thousand Oaks, CA: SAGE Publications.

Davies, H., & Nutley, S. (2008). Learning More about How Research-Based Knowledge Gets Used: Guidance in the Development of New Empirical Research. William T. Grant Foundation, New York, NY.

Edwards, G. (2016). Supervisors' Key Roles as Banks Implement Expected Credit Loss Provisioning. Financial Stability Journal, 7, 1-26.

Filipova-Slancheva, A. (2017). Classification and Measurement of Financial Assets as per IFRS 9 – Evidence from a Bulgarian Bank. The 5th Human and Social Sciences at the Common Conference, 52-56. http://doi.org/ 10.18638/hassacc.2017.5.1.233

Georgiou, G. (2010). "The IASB standard-setting process: participation and perceptions of financial statement users", The British Accounting Review, 42 (2), 103-118.

Gornjak, M. (2017). "Comparison of IAS 39 and IFRS 9: The Analysis of Replacement", International Journal of Management, Knowledge and Learning, 6(1), 115-130.

Goulash, E., & Somogyi, C. (2019). Experiences Relating to Introduction to IFRS 9 In The Banking Sector. Economy and Finance, 6(3), 266-295. http://doi.org/10.33908/EF.2019.3.3

Gurný, P., & Gurný, M. (2013). Comparison of Credit Scoring Models on Probability of Default Estimation for Us Banks. Prague Economic Papers, 22(2), 163-181. http://doi.org/ 10.18267/j.pep.446

Halilbegovic, S., Šaković, E., Omerbegovic, A., & Celebic, N. (2018). Implementation of IFRS 9 standards, Classification of financial instruments. European Journal of Economic Studies, 8(2), 120-130. https://doi.org/10.13187/es.2019.2.120

Haller, A. (2002). 'Financial accounting developments in the European Union: past events and future prospects'. European Accounting Review, 11(1), 153–190. https://doi.org/10.1080/09638180220124770

Harris, S., Khan, U., & Nissim, D. (2014). The Expected Rate of Credit Losses on Banks' Loan Portfolios. The Accounting Review. 93(5), 245-271.

https://doi.org/10.2308/accr-52012

Holthausen, R., & Watts, R. (2001). The relevance of the value-relevance literature for financial accounting standard setting. Journal of Accounting and Economics, 31, 3−75 https://doi.org/10.1016/S0165-4101(01)00029-5

Huian, M. (2012), Accounting for financial assets and financial liabilities according to IFRS 9. Annals of the Alexandru Ioan Cuza University – Economics, 59(1), 27-47. http://doi.org/10.2478/v10316-012-0002-0

Hung, M. (2000). 'Accounting standards and value relevance of financial statements: an international analysis', Journal of Accounting and Economics, 30(3), 401–420. https://doi.org/10.1016/S0165-4101(01)00011-8

IASB. (2014). International Financial Reporting IFRS 9 Financial Instruments.

Iatridis, G. (2010) International Financial Reporting Standards and the Quality of Financial Statement Information. International Review of Financial Analysis, 19(3), 193-204. https://doi.org/10.1016/j.irfa.2010.02.004.

IFRS Foundation. (2022). Who Uses IFRS Accounting Standards? Retrieved from https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/.

IFRS Foundation. (2014). IFRS 9 Financial Instruments. Retrieved from https://www.ifrs.org/issued-standards/list-of-standards/ifrs-9-financial-instruments/#about

Johnson, R. (2004). Mixed Methods Research: A Research Paradigm Whose Time Has Come. Educational Researcher, 33(7), 14-26. https://doi.org/10.3102/0013189X033007014

Landsman, W. R. (2007). Is fair value accounting information relevant and reliable? Evidence from capital market research. Accounting and Business Research, 37, 19-30. https://doi.org/10.1080/00014788.2007.9730081

Linsmeier, T. J. (2011). Financial reporting and financial crises: The case for measuring financial instruments at fair value in the financial statements. Accounting Horizons, 25(2), 409–417. https://doi.org/10.2308/acch-10024

Lourenço, I. C., Sarquis, R., Branco, M. C., & Pais, C. (2015). Extending the Classification of European Countries by their IFRS Practices: A Research Note. Accounting in Europe, 12(2), 223-232.

Marton, J., & Runesson, E. (2017). The predictive ability of loan loss provisions in banks – Effects of accounting standards, enforcement and incentives. The British Accounting Review, 49(2), 162-180. https://doi.org/10.1016/j.bar.2016.09.003

Miller, P., Hopper, T., & Laughlin, R., (1991), "The New Accounting History: an Introduction", Accounting, Organizations and Society, 16(5-6), 395-403

Mouton, J. (2011). How to succeed in your master's and doctoral studies: a South African guide and resource book. 15th ed. Pretoria: Van Schaik.

Novotny-Farkas, Z. (2016). "The Interaction of the IFRS 9 Expected Loss Approach with Supervisory Rules and Implications for Financial Stability", Accounting in Europe, 13(2), 197-227. https://doi.org/10.1080/17449480.2016.1210180

Onali, E., & Ginesti, G. (2014). 'Pre-adoption market reaction to IFRS 9: A cross-country event-study'. Journal Of Accounting And Public Policy, 33 (6), 628-637. https://doi.org/10.1016/j.jaccpubpol.2014.08.004

Pritha, B. (2021). An introduction to inferential statistics. Scribbr. https://www.scribbr.com/statistics/inferential-statistics/

Tamimi, O., & Orbán, I. (2022). Financial engineering and its impact on audit efficiency in the opinion of experts. Journal of International Studies, 15(2), 50-62. doi:10.14254/2071-8330.2022/15-2/4

Yim, K., Nahm, F., Han K., & Park, S. (2010). Analysis of statistical methods and errors in the articles. The Korean Journal of Pain. 23, 35-41. https://doi.org/10.3344/kjp.2010.23.1.35

Wilcox, R. R. (2010). Fundamentals of Modern Statistical Methods: Substantially Improving Power and Accuracy. 2nd edition. Springer.

Willard, C. A. (2020). Statistical Methods: An Introduction to Basic Statistical Concepts and Analysis. Routledge.

LIST OF PUBLICATIONS

Articles (Published)

Orbán, I., & Tamimi, O. (2023). The Impact of IFRS 9 on Financial Reporting during Covid-19 Pandemic from the Point of View of Experts in Europe. *Australasian Accounting,Business and Finance Journal,* 17(4), 21-36.

Tamimi, O., & Orbán, I. (2022). The Correlation between Statement of Cash Flows IAS 7 & Earnings per Share IAS 33 Daimler AG (Mercedes Benz) Case Study. *Intellectual Economics*.

Tamimi, O., & Orbán, I. (2022). Financial engineering and its impact on audit efficiency in the opinion of experts. *Journal of International Studies*, 15(2), 50-62.

Tamimi, O. Y. (2021). The role of internal audit in risk management from the perspective of risk managers in the banking sector. *Australasian Accounting, Business and Finance Journal,* 15(2), 114-129.

Tamimi, O., Orbán, I. (2020). Hyperinflation and Its Impact on the Financial Results. *Intellectual Economics*, 14(2), 5-16. https://doi.org/10.13165/IE-20-14-2-01

Orbán, I., & Tamimi, O. (2020). Accounting Model for Impairment under IFRS 9 and its Impact on Loss Allowance. *European Research Studies Journal*, XXIII (4), 1259-1277.

List of Conferences

Oct 2022: International Conference on Advance Accounting and Finance (ICAAF) // Munich- Germany (In-Person).

April 2022: British Accounting and Finance (BAFA) Conference // University of Nottingham-UK (In-Person).

Feb 2022: Károly Ihrig Doctoral School of Management and Business // Debrecen-Hungary (In-Person).

April 2021: British Accounting and Finance (BAFA) Conference // Virtual

April 2021: Károly Ihrig Doctoral School of Management and Business // Debrecen-Hungary (In-Person).