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STRATEGIC BEHAVIOUR OF FINANCIAL INSTITUTIONS SUBSEQUENT TO IFRS 9 ADOPTION

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ABSTRACT

IFRS 9, like its predecessor IAS 39, is an accounting standard dedicated to the reporting of financial instruments. IFRS 9 has substantially amended IAS 39, notably by introducing significant changes in the classification of financial assets. Loans were systematically recognised at cost under IAS 39. Under IFRS 9, loans are now reported either at cost or fair value. They can be recognised at cost if the financial institution has the intention and ability to hold them until maturity (Beatty, Chamberlain, and Magliolo 1996; Jarolim and Öppinger 2012). They must be recognized at fair value if the financial institution is likely to sell them prior to maturity. The carrying value of loans at cost is frozen and, therefore, has no effect on the reported income and shareholders' equity of the reporting financial institution. In contrast, the carrying value of loans at fair value changes with market conditions. This leads financial institutions to recognise unrealised gains or losses in comprehensive income, which affects shareholders' equity and, consequently, their apparent leverage and profitability (Hirst and Hopkins 1998).

The trade-off between fair value and cost for the report of loans is largely discretionary, considering that the loans that will be held to maturity may be recognised either at cost or fair value. Therefore, the choice between fair value and cost may be guided by opportunistic considerations, with the shareholders and managers wishing to produce accounting data that suits them best. To investigate the extent to which the reporting of loans is opportunistic, I adopt the Positive Accounting Theory perspective. This is followed by an analysis of the motivations suggested by this theory, which may drive the decision to report loans at fair value instead of cost. Using a sample of 399 observations from financial institutions and regression models, I examine whether the proportion of loans measured at fair value depends on the motivations suggested by the Positive Accounting Theory to explain the degree of opportunism of financial institutions when measuring loans.

My findings indicate that the trade-off between fair value and cost for reporting loans is mostly opportunistic and not guided by technical considerations only. the trade-off is determined through listing status, level of regulatory capital, size, and level of debt of the financial institutions that create the trade-off. In line with the Positive Accounting Theory and the reasons that will be discussed in the thesis, the proportion of loans reported at fair value is less for the listed financial institutions, less with high level of debt and less with a low level of capital adequacy ratio of the financial institutions in this thesis. In contrast, the proportion of loans at fair value increased with larger size of financial institutions.

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TABLE OF ABBREVIATIONS

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BvD	Bureau Van Dijk
ECL	Expected Credit Loss
FASB	Financial Accounting Standards Board
FVOCI	Fair Value Through Other Comprehensive Income
FVTPL	Fair Value Through Profit or Loss
GAAP	Generally Accepted Accounting Principles
G20	Group of Twenty (Intergovernmental Forum)
IASB	International Accounting Standards Board
IAS	International Accounting Standard
IFRS	International Financial Reporting Standard
SFAS	Statement of Financial Accounting Standards
UK	United Kingdom
US	United States

CHAPTER 1: INTRODUCTION

1.1. CONTEXT AND OBJECTIVES OF THE THESIS

Since 2018, all entities and financial institutions that comply with International Financial Reporting Standards are required to apply a new standard for financial instruments: IFRS 9 'Financial Instruments'[1] (European Systemic Risk Board., 2019). This new standard introduces several significant changes (Financial and Standards, 2015), particularly in terms of accounting for loans. The loans that were under IAS 39, which were the standard that prevailed prior to the adoption of IFRS 9, were systematically recognised at cost (André et al., 2009). Nevertheless, loans are currently recognised at fair value or cost, with the trade-off between fair value and cost being arbitrary to a large extent due to its dependency on the financial institution's judgment of its ability to hold the loans until maturity (PWC, 2017).

Considering the flexibility introduced by IFRS 9, the from IAS 39 to IFRS 9 provides the opportunity to create further insights into the degree to which accounting choices, the trade-off between fair value, and cost for reporting purposes of this thesis are opportunistic (Bischof and Daske, 2016). In this case, this thesis relied on the Positive Accounting Theory, which attempts to elaborate on and make a prediction of accounting practices. This Theory illustrates that accounting information producers, particularly financial institution shareholders or managers acting on behalf of shareholders, seek to maximise their individual interests in a similar manner to another economic agent (Watts and Zimmerman, 1978). Therefore, they are expected to select between fair value and cost to measure loans to maximise their utility while meeting the IFRS 9 requirements.

Following the prescriptions from the Positive Accounting Theory, several hypotheses are established with an aim to shed light on the motivations expected to determine the choice between fair value and cost. Using regression models, it is elaborated in this thesis that the proportion of loans at fair value depends on some of the aforementioned motivations. This will lead to conclude that, in accordance with the requirements of the Positive Accounting Theory, financial institutions behave opportunistically and select the accounting methods that suit them best. Financial institutions choice is motivated not only by the regulatory and contractual

[1] https://www.iasplus.com/en/standards/ifrs/ifrs9

constraints, but also by the pressure imposed by their environment, particularly their shareholders.

Chapter 1 is organized into four sections. The next section describes the background of the thesis, including the decisions taken to improve the reporting of financial instruments following the 2007-2009 financial crisis. Section 1.3 discusses the principles of accounting for loans under IFRS 9, elaborating on the basic principles of fair value and cost measurements. This is followed by a discussion on the major distinguishing features between IAS 39 and IFRS 9, with an emphasis on the flexibility introduced in IFRS 9 for the trade-off between fair value and cost. Section 1.4 reviews the Positive Accounting Theory and its relation to accounting policy choices, which may assist in providing an explanation and understanding the motivations for accounting choices. Section 1.5 presents the research questions and the organisation of the thesis.

1.2. BACKGROUND

The global crisis and slowdown of economic activities between 2007 and 2009 have demonstrated the important role and substantial influence of the financial system on economic growth, including the importance of enhancing its security and resilience (Goldschmid and Hoogervorst, 2009). This crisis has pointed out the problems of financial instruments attributed to inappropriate presentation and measurement (Sampaio et al., 2022). As a consequence, it was decided that all accounting standards dedicated to financial instruments were required to be updated, notably because the intensive use of fair value for reporting purposes was the primary cause of the crisis (Laux and Leuz, 2010).

In 2009, the G20 took a series of measures in London and subsequently in Pittsburgh with an aim to improve the stability of the international financial system (Meier, Gonzalez, and Kunze, 2021). One of the measures required the International Accounting Standards Board (IASB) to amend the standard of financial instruments by limiting the use of fair value. This is how a new standard, IFRS 9 '*Financial Instruments*', replaced the existing standard, IAS 39 '*Financial Instruments: Recognition and Measurement*'. The final version of IFRS 9 was finalised in 2014[2]. In 2018, financial institutions and all entities that applied IFRS had to switch from IAS 39 to IFRS 9 (European Systemic Risk Board., 2019). Surprisingly, the new standard creates

[2] https://www.iasplus.com/en/standards/ifrs/ifrs9

more space for fair value compared to the previous one as it allows loans[3] that were systematically reported at cost under IAS 39, to be recognised at fair value (International Accounting Standards Board, 2016).

Fair value accounting has been considered by standards setters for decades (Casta, 2003). The objective of fair value accounting is twofold. First, fair value accounting offers information related to the risk of financial instruments held by the entity. Furthermore, the greater the risk, the higher the changes in the fair value of the instruments, which results in the recognition of more significant unrealised gains or losses. The magnitude of the unrealised gains or losses recognised in the entity earnings or equity and the resulting volatility of earnings or equity reflects the risk inherent in these instruments. Second, fair value accounting leads to the recognition of the expected losses at an early stage. Therefore, supervisory bodies (e.g., regulatory authorities, and boards of directors among others) are able to implement early precautionary measures (André et al., 2009).

As previously mentioned, IFRS 9 introduces flexibility in the measurement of loans. They must be measured at fair value if they are likely to be sold prior to maturity. They also can be reported at cost if the entity has the intention and ability to hold them until they mature (Beatty et al. 1996; Jarolim and Öppinger, 2012). A notable contrasted feature is present between IFRS 9 and IAS 39. Under IAS 39, loans were systematically recognised at cost[4], leading to IFRS 9 that allows financial institutions to behave opportunistically upon reporting the loans that are likely to be held to maturity (Bischof and Daske, 2016). Consequently, the decision to adopt a fair value for these loans may be influenced by motivations other than purely technical considerations. Accordingly, this thesis aims to investigate these motivations, which include the factors leading to a financial institution preference for fair value over cost when measuring loans.

[3] I mention only loans throughout this chapter because my research focuses on loans held by financial institutions. However, what applies to loans also applies to receivables.
[4] https://www.iasplus.com/en/standards/ias/ias39

1.3. ACCOUNTING FOR LOANS UNDER IFRS 9

1.3.1. BASIC PRINCIPLES

Under IFRS or US GAAP[5], financial assets are measured either at fair value or cost. The cost is the price at which financial assets are initially recognised, the carrying value[6] of assets measured at cost is fixed throughout the holding period (Corona, Zhang, and Nan, 2019). In contrast, fair value is the price at which financial assets are traded and constantly change with the market conditions (Whittington, 2008). The unrealised capital gains or losses as a result of the changing carrying value of financial assets at fair value are recognized as a revenue or expense that affects the financial institution net income, and consequently the financial institution's equity or a comprehensive income reported solely in the financial institution equity without affecting net income (Barth et al., 2017). Financial assets are at cost if there is no uncertainty about the flows to be produced for the financial institution. This case applies to loans or interest-rate instruments that will be held until maturity, while a different case would apply if the financial assets are at fair value.

Financial assets are classified as 'Assets at Fair Value through Profit and Loss' when the unrealised gains or losses resulted from the changes in their fair value are recognised as a revenue or expense (KPMG IFRG Limited, 2016). On the other hand, the financial assets are classified as 'Assets at Fair Value through Equity' or 'Assets at Fair Value Through Other Comprehensive Income' when the unrealised gains or losses are directly reported in equity (Hirst and Hopkins, 1998).

The carrying value of loans reported at fair value changes at every reporting period (Ryan, 2008). Therefore, financial institution equity is affected by the changes in the fair value of its loans. While any increase in the fair value of reported loans positively affects equity. In contrast, any deacrese in the fair value of reported loans negatively affects equity. Furthermore, equity is directly affected if the changes in fair value are reported in the entity equity, such as the entity comprehensive income. However, it would be indirectly affected if these changes are reported in the entity's net income. Thus, opting for fair value increases the volatility of financial

[5] US GAAP refer to a common set of accounting principles, standards, and procedures issued by the FASB. Public companies in the U.S. must follow US GAAP.
[6] The carrying value is the value at which an asset is reported (i.e., carried) on a firm's balance sheet.

institutions' equity, which may assist in the identification of the level of risk generated by loans (Godwin, Petroni, and Wahlen, 1998).

It is clear that a higher proportion of loans reported at fair value leads to higher unrealised gains and losses that are likely to be reported in equity (Laux and Leuz, 2010). This is followed by a higher in the volatility of the equity of financial institutions that hold loans. In contrast, equity is not affected by loans if they are reported at cost. Given that the carrying value of loans at cost remains constant across time, opting for cost does not result in any fluctuation in the carrying value of loans and the recognition of unrealised gains or losses. Thus, loans at cost do not impact net incomes, the comprehensive incomes of the financial institutions that hold loans, or the volatility of their reported equity (Beatty et al., 1996).

Loans were systematically recognized at cost through the effective interest method under IAS 39[7]. Under IFRS 9, the loans are currently reported either at cost or fair value, depending on the type of business model that the financial institutions adopt to manage loans and the terms of cash flows as per the agreement among contracting parties (KPMG IFRG Limited, 2016). Loans may be recognised at cost only when the financial institution has the intention and capability of holding them until maturity. Additionally, the loans should be measured at fair value if the financial institution is likely to sell them prior to maturity (Beatty et al. 1996; Jarolim and Öppinger, 2012).

1.3.2. MAJOR DIFFERENCES BETWEEN IAS 39 AND IFRS 9

As previously mentioned, the G20 leaders requested accounting standards setters to improve all accounting standards concerning financial instruments. The improvements were required to reduce the complexity of the existing standards and limit the use of fair value for the valuation of financial instruments (G20 Information Centre - London, 2009). In response to this action, instead of adapting the text of the existing standards, the IASB and FASB mutually initiated the development of a new standard.

The goal of IASB was to shift from a rule-based standard, IAS 39, to a principle-based one, which is IFRS 9 (Schiller and Lundh, 2013). To illustrate, IFRS 9 was effective for implementation on 1st January 2018 (European Systemic Risk Board., 2019) and introduced

[7] https://www.iasplus.com/en/standards/ias/ias39

three main changes compared to IAS 39, which are related to 1) the measurement of financial assets, 2) the impairment of financial assets, and 3) hedge accounting rules (Financial and Standards, 2015). The changes related to the impairment of financial assets and hedge accounting rules would be discussed briefly, considering that this subject is not within the thesis scope. In contrast, the changes associated with the measurement of financial assets would be discussed in detail since this thesis investigates the motivations of financial institutions for the trade-off between fair value and cost when measuring loans.

The impairment of loans aims to recognise the consequences of credit risk on loans subject to such a risk. The IFRS 9 section on the impairment model introduces an approach based on expected losses rather than incurred losses. Under the incurred loss method of IAS 39, a loss allowance was recognised only when a minimum of one event has the possibility to impact the predicted future cash flows of a loan such as a borrower's financial difficulties had occurred. In contrast, the expected loss model of IFRS 9 requires the recognition of a loss allowance to be recognised prior to the credit loss regardless of whether the risk has been materialised or vice versa. With the absence of a significant increase in credit risk after the initial recognition of a loan, the loss allowance would follow the expected losses in the upcoming 12 months. However, when a credit risk significantly increases after the initial recognition, the loss allowance is based on the lifetime expected losses, such as the expected shortfalls in contractual cash flows at any point during the life of the financial instrument (Novotny-Farkas, 2015).

The section of IFRS 9 on hedge accounting was introduced mainly to address the mismatch between hedge accounting and risk management (Ernst&Young Global 2014; European Financial Reporting Advisory Group, 2015). The hedge accounting aims to relate the underlying hedge instruments to the hedged items with the type of hedged risk and the economic relation between each of them (PWC, 2017). The IFRS 9 hedge accounting models are to a large extent, similar to IAS 39. However, a major difference originates from the hedge effectiveness assessment, in which a hedge should show high effectiveness under IAS 39 with the range of 80-125 per cent in order to be qualified for hedge accounting. In addition, IFRS 9 introduces a principle-based qualifying criterion, avoiding the 80-125 per cent threshold that is mostly inconsistent with risk management approaches (Glaum and Klöcker, 2010).

The section of IFRS 9 on financial assets introduces a single approach for classifying and measuring the assets through three classification categories fair value through profit and loss (FVTPL), fair value through other comprehensive income (FVOCI), and cost (PwC, 2019).

Within IFRS 9, financial institutions have gained the flexibility to perform a trade-off between cost and fair value to classify loans. The classification follows the business model that is adopted for the management of loans and the features of legitimate agreements of the relevant parties (Nadia and Rosa, 2014). These features determine the purpose of financial instruments, which is the collection of funds toward the settlement of the financial instrument principal and interest elements (KPMG IFRG Limited, 2016). In contrast, IAS 39[8], required the classification of financial instruments under one of the four classes that depended on its eligibility conditions (Fiechter and Novotny-Farkas, 2017). As defined in IAS 39, this rule-based classification includes the assets held to maturity, loans and receivables, the assets held for trading, and the assets available-for-sale.

Business model considerations were not present in IAS 39 (Huian, 2013). Furthermore, a major difference between IFRS 9 (applicable since 2018) and the previously applied IAS 39 is that the loans were systematically recognised at the cost under IAS 39 (PwC, 2019), which created a fixed carrying value of loans throughout their holding period. However, they are reported either at cost or at fair value under IFRS 9. Under IFRS 9, loans must be recognised at fair value if they are disposed of before maturity. Loans may be recognized at cost only if they would be held to maturity (PWC, 2017). The carrying value of loans at cost does not change with market conditions. It is fixed across time regardless of the changes in their fair value. Therefore, loans at cost do not impact the financial institution's equity. Moreover, They do not affect the loans do not affect the volatility of the entity equity. In contrast, the carrying value of loans at fair value changes with market conditions. The resulting changes in fair value are recognised in the entity comprehensive income, which affects the holding financial institution equity without affecting net income (Beatty, Chamberlain, and Magliolo 1996 ; Hodder, Hopkins, and Wahlen 2006 ; Jarolim and Öppinger 2012 ; Corona, Zhang, and Nan, 2019).

The fair value of loans is attributed to the changes in interest rates (Linsmeier, 2011). Considering any increase in interest rates reduces the fair value, and therefore the carrying value of loans reported at fair value (Hodder, Hopkins, and Wahlen, 2006). This results in the recognition of unrealised losses that reduce the financial institution equity. Conversely, the financial institution equity increases when interest rates decrease. It is clear that the loans measured at fair value introduce volatility in the financial institution's equity, which is not the case for loans measured at cost (Staff of IFRS Foundation, 2014). Consequently, *ceteris*

[8] http://tfageeks.com/accounting-for-financial-instruments-ifrs-9-and-ias-39/

paribus, a higher proportion of loans reported at fair value would indicate higher volatility of the financial institution equity. Besides, higher equity volatility may indicate higher risk and subsequently result in a higher cost of equity capital.

1.3.3. MANAGERIAL DISCRETION IN ACCOUNTING FOR LOANS UNDER IFRS 9

The main distinguishing feature between the rule-based approach of IAS 39 and the principle-based approach of IFRS 9 is that IFRS 9 provides financial institutions with the flexibility to trade-off between cost and fair value for reporting loans (Bischof and Daske, 2016). The choice between cost and fair value relies on technical considerations, considering that a loan may be carried at cost solely when the financial institution has the ability and intent to collect all the loan cash flows through maturity. However, the trade-off between fair value and cost is discretionary to a certain extent since, if it is prohibited to recognise at a cost a loan that will not be held to maturity, it is quite possible to report at fair value a loan that will be held to maturity. This case applies to the entity that holds the loan and considers that it will not have the ability to collect all the loan cash flows, although all cash flows will turn out to be collected because the loan is held to maturity. Consequently, the decision to measure a loan at cost or fair value relies on the judgement of financial institution management to a greater or lesser extent, which may be at least partially opportunistic.

As per the above statements, financial institutions may decide to carry a loan at fair value even though the loan cash flows will be collected, considering that the loan will be held to maturity. This action leads to discretion in the reporting for loans, which financial institutions may take advantage of to make a report of loans at fair value with an amount that is higher than required under a strict application of IFRS 9 (Huian, 2013). Given that the choice to measure loans is determined solely by technical considerations, the trade-off between cost and fair value may be opportunistic. Therefore, the Positive Accounting Theory developed by Watts and Zimmerman (1979, 1986) suggested that financial institutions may use the flexibility offered by IFRS 9 to shape financial statements and achieve specific reporting goals. Accordingly, the next section 4.1 discusses the framework of the Positive Accounting Theory and describes the motivations for lead managers to prefer one accounting method over another, such as the selection of cost instead of fair value for loan reporting purposes in the context of this thesis.

1.4. THE POSITIVE ACCOUNTING THEORY AND ITS RELATION TO ACCOUNTING POLICY CHOICES

The choice between cost and fair value is not without consequences. Considering, the adopted choice whether would lead to the recognition of unrealised gains or losses. Loans classified as 'Assets at Cost' do not impact the financial institution equity regardless of the changes in their market value (Godwin et al., 1998). In contrast, Loans require the recognition of unrealised gains or losses if they are classified as 'Assets at Fair Value Through Other Comprehensive Income', which results in greater volatility in the financial institution's equity (Beatty et al., 1996). Therefore, financial institutions aim to minimise the volatility of their equity to avoid appearing excessively risky to investors who, for example, may prefer to measure the loans at cost if it is allowed to minimise such volatility. Conversely, investors, in this context, may prefer to measure loans at fair value if they expect a decline in interest rates and wish to maximise the carrying value of shareholders' equity. As per previous statement, a fair value of loans is essentially determined by the level of interest rates (Linsmeier, 2011). The rise in interest rates lowers their market value, which leads to the recognition of loss in equity by the financial institution, which decreases the entity equity. Conversely, a decrease in interest rates increases the market value of loans, which leads to the recognition of a gain that increases the entity equity (Beatty, Chamberlain, and Magliolo 1996 ; Linsmeier, 2011).

The Positive Accounting Theory was established by Watts and Zimmerman (1978). Given that corporate management has strong incentives to use the flexibility of accounting standards to produce financial statements that are consistent with their interests, the Positive Accounting Theory highlights that accounting choices are opportunistic to a large extent (Christie and Zimmerman, 1994). Accounting choices are not solely guided by the provisions of accounting standards; they are often motivated by considerations other than technical considerations, which aim to make the reporting entity appear more (or less) profitable or more (or less) leveraged.

Positive Accounting Theory has been implemented by any study that aims at investigating the motivations for accounting choices. It was suggested by Watts and Zimmerman (1978) that accounting policies are often opportunistic due to the corporate management that exploits the flexibility in accounting standards to shape reported numbers and engage in earnings management. Watts and Zimmerman (1978, 1986) highlighted three hypotheses for earnings management: the political cost hypothesis, the compensation hypothesis, and the debt covenant hypothesis.

The compensation hypothesis dictates that managers use flexibility in accounting standards to report figures that maximize their compensation. It is suggested by the debt covenant hypothesis that accounting choices may aim to avoid breaking debt agreements. According to the political cost hypothesis, companies prefer accounting choices that will not gain attention from the government, media, employees, consumers, and the public in general as it results in increasing regulations. Accounting choices may be determined solely by one of these three motivations initially suggested by Watts and Zimmerman (1978, 1986) rather than systemically all motivations, and they could also be guided by other motivations. In general, any motivation that can explain an accounting practice falls under the Positive Accounting Theory framework. The hypotheses studied in this thesis were developed based on the theoretical framework of Positive Accounting Theory.

1.5. RESEARCH QUESTIONS AND STRUCTURE OF THE THESIS

The thesis is structured within the framework of Positive Accounting Theory, which demonstrates that the flexibility in accounting standards allows reporting entities to behave opportunistically when adopting an accounting method (Vivien Beattie et al., 1994). The main assumption of Positive Accounting Theory is that managers behave opportunistically in favour of their interests. As a result, this behaviour is shown during the selection of accounting choices (Chambers 1993), specifically the choice that maximise their welfare or the welfare of the shareholders who hire them (Lambert and Sponem, 2005).

As a principle-based standard instead of a rule-based one, IFRS 9 introduced significant flexibility in the selection between cost and fair value for reporting loans (Farkas, 2016). In line with the Positive Accounting Theory, this thesis investigates the degree to which the trade-off between fair value and cost is arbitrary. This is followed by an analysis of the factors possibly leading to financial institutions preference for fair value over cost when reporting loans. Accordingly, the Positive Accounting Theory framework was implemented to examine the extent to which financial institutions behave opportunistically when reporting loans in compliance with IFRS 9. This thesis also attempts to provide insights into the motivations that may determine the trade-off between fair value and cost when measuring loans. Considering that loans can be measured at fair value or cost, the research question is twofold.

Is the trade-off between fair value and cost based on technical considerations only or is it, at least partly, opportunistic? What are the motivations that lead financial institutions to prefer fair value over cost when reporting loans?

The structure of this thesis is composed of several chapters. The next chapter presents the theoretical framing, describes the main features of Positive Accounting Theory, and reviews major empirical studies on the opportunistic behaviour of corporate management regarding accounting choices. Chapter 2 illustrates the motivations that may influence the financial institution choice between fair value and cost. These motivations fall under the Positive Accounting Theory, which serves as a reference to develop the hypotheses investigated in this thesis. Chapter 3 describes the research design employed for testing the hypotheses presented in Chapter 2, including the methodology and models used in this thesis. As the research design relied on regression models, the investigated variables are discussed in this chapter: dependent variables, variables of interest, control variables, and fixed effect variables. Chapter 3 also presents a sample of financial institutions collected from the BankFocus and FitchConnect databases. Following that, Chapter 4 demonstrates the findings from the regression models. This thesis ends with a conclusion and discussion of its managerial contributions.

CHAPTER 2: THEORETICAL FRAMEWORK

This thesis focuses on the fair value versus cost choice to measure loans that are possible by the adoption of IFRS 9. Financial institutions may behave opportunistically when measuring loans at fair value rather than cost due to specific motivations. Therefore, the Positive Accounting Theory, which analyses the opportunistic motivations that guide accounting choices, constitutes the theoretical framework of this research.

This chapter is structured within the framework of the Positive Accounting Theory that explains and predicts the behaviour of corporations behave while selecting accounting choices, such as the adoption of fair value or cost to measure loans. Positive Accounting Theory focuses on the motivations that lead opportunistic corporate management to shape accounting numbers for releasing the most suitable financial statements. These motivations are categorised into three broad components: political cost motivations, compensation scheme motivations, and debt covenants motivations.

In respect of the organisation of this chapter, the first section presents the foundations of the Positive Accounting Theory, with emphasis on the opportunistic behaviour perspective that guides accounting choices. The next section 2.1 introduces the motivation factors acquired from the Positive Accounting Theory for the cost versus fair value trade-off that underpins the hypotheses of this thesis.

2.1. FOUNDATIONS OF THE POSITIVE ACCOUNTING THEORY

All accounting standards, specifically IFRS 9, offer various options that require judgement to be exercised in selecting the most appropriate standard. Following the Positive Accounting Theory, extant literature has identified and tested several motivation factors that may impact the selection of accounting choices. This theory aims at the prediction and explanation of accounting practices, particularly on how accounting methods are selected. Furthermore, it determines the response of the organisations and their stakeholders (e.g., auditors, management, etc.) to the adjustments recommended in accounting standards by focusing on the economic consequences of accounting choices (Hagerman and Zmijewski, 1981). In this case, Positive Accounting Theory offers a useful framework to understand how financial institutions make

accounting choices and consider the trade-off between fair value versus cost when measuring loans.

As stated by Watts and Zimmerman (1978, 1986), the Positive Accounting Theory explores the reasons for preferring one accounting method over another and provides a predictive framework for accounting choices. The accounting choices are expected to be selected based on their ability to maximise corporate management interests (Chambers 1993 ; Lambert and Sponem, 2005). Accordingly, the Positive Accounting Theory aims to present a scientific explanation of accounting choices (Williams, 1989). Many studies in the accounting literature relied on Positive Accounting Theory to predict and explain accounting practices, accounting choices, decisions, and changes in accounting policies (Christenson Charles, 1983).

According to Fields, Lys, and Vincent (2001), accounting choice is described as any decision that primarily aims to impact (in form or substance) the product of the accounting system in a certain manner, which includes the financial statements produced under GAAP, tax returns, and regulatory filings. Considering the predictions from different managerial motivations, the Positive Accounting Theory assumes that these motivations, such as contracting restrictions, bonus/compensation schemes, ownership concentration, asset pricing, and political cost (Clifford W. Smith, 1993), are the main determinants of accounting choices (Martens and Stevens, 1993).

Accounting choices must be made when accounting standards require the execution of judgment, which is almost systematically the case in a principle-based system. A rule-based system does not provide any possibility for making any judgment or interpretation, given that rule-based standards involve a list of comprehensive rules to be strictly complied with by companies in the preparation of financial statements. In contrast, a principle-based system offers flexibility as it allows the adaptation of stated principles based on specific characteristics and needs of the reporting entity. Therefore, principle-based systems, such as IFRS, provide managers with the opportunity to conduct a judgement or interpretation when applying an accounting method (Fields et al., 2001).

This thesis primarily aims to determine the motivations that influence the financial institutions preference for fair value or cost when measuring loans, considering that these motivations vary from one financial institution to another depending on various factors. Accounting choices are not only driven by the desire to provide the most relevant accounting figures; the preference for

one accounting choice (e.g., cost) against another choice (e.g., fair value) may also depend on the achievement of specific objectives including the maximisation of individual interests. Several factors may drive the financial institutions decision to prefer fair value over cost or vice versa. Through the insights provided into these factors, the Positive Accounting Theory of Watts and Zimmerman is the key theory for elaborating the decisions taken by those responsible for accounting choices.

According to Watts and Zimmerman (1978), their Positive Accounting Theory is "a positive theory of accounting based on economic concepts, as opposed to the normative approach based on the practice of accounting and corporate reporting. Being economics-based, this Theory aims to introduce empirical tests in accounting to explain and predict the consequences of individual parties' actions. It is meant to be a positive theory that is able to explain the existing practices based on specific determinants and predict the changes in practices based on the changes in these determinants (Watts and Zimmerman, 1979).

Positive Accounting Theory focuses on and empirically tests the reasons for parties' behaviour in making accounting choices, which is in contrast to the previous perspective, such as the normative accounting theories that explain how accountants should behave. Watts and Zimmerman highlighted that normative accounting theories solely focus on the market for excuses, so no other normative theory currently in the accounting literature can explain or will be used for justifying the accounting standards due to the following reasons (Martens and Stevens, 1993):

- "Accounting standards are justified using the theory (excuse) of the vested interest group, which is benefited by the standards,
- Vested interest groups use different theories (excuse) for different issues, and
- Different vested interest groups prevail on different issues."

The accounting theory proposed by Watts and Zimmerman, which is a scientific theory regarding how the world works, is positive. However, this theory is opposed to the normative approach that mostly focuses on the perscriptions of how firms must report financial information without relying on any empirical testing or observation and investigation on how accounting practices are selected and implemented by companies (Whitley, 1988). Furthermore, the term positive is used mainly to distinguish Positive Accounting Theory from the traditional normative theory by shifting the approach to highlight the significance of

predicting and explaining. Given the purpose of Positive Accounting Theory to elaborate on the accounting choices found in various empirical regularities through the methodology of economics, finance, and science, it is considered the ideal theory framework to explain and predict social science theory rather than making unrealistic predictions of it (Watts and Zimmerman, 1990).

Positive Accounting Theory is not related to any prescriptions for accounting practices in terms of which accounting choice should be applied; rather, it provides an explanation and prediction about a particular accounting choice without specifying the accounting choice to be adopted (Chambers, 1993). In this context, the difference between normative and positive research questions is the inclusion of the word "should" for the questions of normative research (e.g., how should a lease be treated on the balance sheet?) while the words "why", "what", and "how" are used in positive research into the explanations of the financial institutions behaviour (e.g., why do firms change accounting techniques?) (Christenson Charles, 1983). Furthermore, Positive Accounting Theory is employed by researchers to determine an answer to the reasons for financial institutions to select one accounting choice instead of other choices by analysing the factors that motivate financial institutions to make the selection of the accounting choice upon adoption. This approach of Positive Accounting Theory appears to be the most prominent theory used by several researchers in conducting their analysis to observe the nature of the relationship between the accounting numbers and determinants of accounting choices by collecting the factors as the evidence that influences the managerial behaviour regarding the financial institution motivations towards an accounting choice (Vivien Beattie et al., 1994).

Based on the model of Watts and Zimmerman (1990), Positive Accounting Theory seeks to explain and predict the behaviour of individuals under the contracting approach. This action had become a requirement for researchers who conducted their studies under Positive Accounting Theory to understand the motivations of each contractual party. This theory could properly present the economical and opportunistic behaviour of individuals based on their self-interest (Lambert and Sponem, 2005). Moreover, given the description of the majority of Positive Accounting studies as a part of the economics-based empirical literature, this approach has gained substantial attention from accounting researchers due to its descriptive power and the role of accounting information in market changes (Whitley, 1988). Positive Accounting Theory also suggests that economically or politically powerful parties declare the accounting standard to fulfil their self-interest, which justifies their usefulness (Chambers, 1993). The self-

interest informing the theory places economics as a priority, allowing managers to influence the adoption of specific accounting choices due to their authority unless the monitoring of performance is conducted by the contracting parties or on behalf of each of these parties (Chambers, 1993).

Financial institutions are regarded as the nexuses of contracts between self-interested parties and Positive Accounting Theory, which assumes to classify their motivations to prefer one accounting choice over another. The motivations of the self-interested parties could be categorised into the following three types (Fields et al., 2001):

- Contractual Arrangement:
  Accounting choices depend on the firm obligations, as stated in one or more agreements, such as the agreements of management compensation and debt covenants. The accounting choices are made individually or collectively to improve management compensation and avoid any covenant violation.

- Assets Pricing:
  Accounting choices depend on their impact on asset prices. The adopted accounting practice aims to overcome the restrictions raised in capital markets by introducing a mechanism for conveying information to the stakeholders who are considered to be the least informed and influencing the price of stocks, returns, or equity valuation.

- Influencing External Parties:
  This act refers to third parties, such as regulatory authorities, suppliers, and any parties other than shareholders or management. Institutions adopt accounting choices that influence the decision of any of the third parties to avoid any political cost that may arise or avoid a breach of any of the mandatory requirements.

Watts and Zimmerman (1990) considered 10 years of Positive Accounting Theory development and classified the opportunistic behaviour of entities into three main hypotheses: the debt hypothesis, the bonus plan (or management compensation) hypothesis, and the political cost hypothesis. Specifically, the debt hypothesis illustrates that high debt-to-equity ratios could likely lead entities to favour accounting choices that increase the net income (Vivien Beattie et al., 1994) and inflate equity by adopting accounting choices that lead to the transition of profit from the future to the current year. The compensation or bonus hypothesis demonstrates that

managers with a bonus plan based on a given income have a higher possibility to adopt accounting choices that lead to higher income to maximise their benefits (Lambert and Sponem, 2005). Based on the political cost hypothesis, entities under political scrutiny are likely to adopt an accounting choice that reduces the reported incomes (Vivien Beattie et al. 1994; Watts and Zimmerman, 1990).

This theory provides explanations of financial institutions' motivations to prefer an accounting choice over another choice that is expected to maximise management benefits. The explanation is supported by testing the influence of the most frequently used set of motivations, namely debt covenants, compensation plans, and political costs on the entities' selection of accounting choices (Neu and Simmons, 1996). These motivation factors commonly present a clear relation between various motivations (e.g., reported earnings, size, leverage), which are also the resources for management and the accounting choice expected to be influenced by the motivation factors.

The research on accounting choices under Positive Accounting Theory attempts to justify and predict the decisions made by financial institutions. In fact, all studies that aim at analysing the determinants of accounting policies, especially to show that accounting choices are driven by motivations besides simply providing figures that ideally reflect the actual financial position of a company, fall under the Positive Accounting Theory. Following is a summary of the results stated by other researchers who relied on the framework of Positive Accounting Theory according to each of its hypotheses.

- **Literature on bonus plan (compensation) motivations**

  Compensation plan represents the balance between a firm as a user of managerial expertise and the management as a provider of managerial expertise (Watts and Zimmerman, 1990). The main component of most compensation plans is a bonus, which is commonly associated with performance indicators including the reported profit. Notably, it is more possible to show opportunistic behaviour by adopting accounting choices that increase the reported profits, which maximises management compensation (Healy, 1985) and achieves job security (Sun and Rath, 2008). Therefore, in line with the bonus plan motivation, managers prefer accounting choices that affect reported earnings positively to boost their compensation or at least reject choices that may affect earnings negatively (Watts and Zimmerman, 1978). Furthermore, numerous empirical

analyses that supported the bonus plan hypothesis revealed the following results (Martens and Stevens, 1993):

- Managerial compensation is a substantial variable in explaining the selection of several accounting choices (Christie, 1990).
- The increases in corporate tax rates motivate management to select accounting choices that lead to improving incomes and management compensations (Ronen and Aharoni, 1989).
- Managers prefer accounting choices for lease that increase net incomes and managerial compensations (EI-Gazzar, Lilien, and Pastena, 1986).
- When management faces the potential of a big loss, it tends to adopt accounting choices that increase the current loss, thus deteriorating the current results to disclose higher future results and maximise future compensation (Healy, 1985).
- Managers select depreciation methods according to their impact on organisation revenue and management compensation (Dhaliwal et al., 1982).
- Organisations with management compensation plans based on accounting income have a higher possibility to select a capitalised interest accounting choice compared to other organisations (Bowen, Noreen, and Lacey, 1981).

- **Literature on debt covenants motivations**

  When a lender gives a loan to a counterparty, they may set specific requirements aimed at reducing or eliminating credit risk. These requirements often involve accounting-based covenants, which require the recipient of funds to ensure that specific constraints are fulfiled (e.g., maintaining specific assets and stipulating a maximum debt-to-equity ratio). Hence, borrowers may be motivated to select accounting choices that would reduce the possibility of impact occurrence on these constraints (Sweeney, 1994). Thus, if a debt covenant stipulates a certain debt-to-equity ratio, the borrower may be motivated to either inflate assets or deflate the liabilities to comply with the covenant. Under these debt covenants, borrowers with high debt-to-equity ratios have a higher possibility to select accounting choices that increase reported incomes, inflate equity, and subsequently reduce debt ratios (Christie, 1990). Accordingly, the empirical analyses that supported the debt covenant hypothesis demonstrated the following results (Martens and Stevens, 1993):

- The debt-to-equity ratio is a substantial variable in elaborating the selection of most accounting choices (Christie, 1990).
- Organisations that are expected to breach debt covenants have the highest possibility to seek accounting choices that increase net incomes (Deakin, 1989).
- Organisations that nearly breach a debt covenant have a higher likeliness to adopt an accounting method for pensions that increase net income in comparison to organisations that do otherwise (Bowen et al., 1981).
- Accounting for leases is significantly affected by debt-to-equity ratios (EI-Gazzar et al., 1986).
- Organisations that nearly breach a debt covenant have a higher likeliness to adopt SFAS No. 52 early to increase net income and management compensation compared to organisations that do otherwise (Ayres, 1986).
- Organisation managers that nearly breach debt covenants have a higher likeliness to select the full-costs accounting choice for oil and gas exploration to increase corporate income and equity (Lilien and Pastena, 1982).
- Organisations that nearly breach debt covenants have a higher likeliness to select a capitalised interest accounting choice to increase net income and equity (Bowen et al., 1981).

- **Literature on political cost motivations**

  Entities, specifically large ones, are under the scrutiny of different stakeholders such as auditors, employees, governments, and industry supervision authorities among others. They have a natural propensity to remain discreet to avoid appealing to these stakeholders and the political costs that could entail. The assumption of political cost is dependent mainly on the size of the entity, which may make it politically sensitive. This aspect also encourages entities to minimise possible adverse political attention and the cost related to this attention by avoiding the influence of any future tax law, increasing salary claims, or issuing any new regulation (Milne 2002; Watts and Zimmerman, 1978). Therefore, large entities are motivated to adopt accounting choices that decrease political pressure (Watts and Zimmerman, 1978). The empirical analyses that supported the political cost hypothesis presented the following conditions (Martens and Stevens, 1993):

- Larger companies have a higher more likely to push against accounting choices for computer software that increases net income (Trombley, 1989).
- Compared to smaller organisations, larger oil and gas organisations have a higher possibility to seek for accounting choices that decrease net income (Deakin, 1989).
- Accounting choices that reduce net income are preferred by larger firms for tax credits management (Wong, 1988).
- SFAS No. 52 is less likely to be adopted by larger firms compared to smaller firms to reduce net income (Ayres, 1986).
- Managers of larger oil and gas exploration companies have a higher possibility to choose the successful effort accounting option to decrease corporate income (Lilien and Pastena, 1982).
- The expense interest accounting method is more likely to be selected by larger organisations compared to smaller ones (Bowen et al., 1981).
- Accounting choices that lead to a reduction in net income are more likely to be selected by larger firms (Hagerman and Zmijewski, 1981).

2.2. HYPOTHESIS DEVELOPMENT

Through the theoretical framework of the Positive Accounting Theory, several hypotheses were developed with the aim to explain the trade-off between cost and fair value for loan reporting purposes. They relied on the following two motivation factors suggested by Positive Accounting Theory. However, as previously mentioned, the compensation scheme motivation factors were not tested in this thesis due to the unavailability of the management compensation contracts for the collected sample.

- Political Cost Motivation Factors, and
- Debt Covenant Motivation Factors.

2.2.1. POLITICAL COST MOTIVATION FACTORS

The political cost motivation factors include the listed motivation, the size motivation, the regulatory capital motivation, and the ownership dispersion motivation.

2.2.1.1. LISTED MOTIVATION

Financial institutions are either publicly listed or non-listed. The stakeholders' expectations vary depending on the listed or non-listed status of the financial institution. Subsequently, reporting motivations of financial institutions may be influenced by their listed or non-listed status.

As explained in chapter 1, the effect of accounting choice on the financial institution equity is a major dimension to consider in the trade-off between cost and fair value for measuring loans. The carrying value of loans at cost is frozen, indicating that it does not change with market conditions. Therefore, it does not require the recognition of unrealised gains or losses in the entity equity (Holthausen and Watts, 2001). In contrast, the carrying value of loans at fair value varies in line with the changes in the interest rates (Linsmeier, 2011), leading to the recognition of unrealised gains or losses and increasing the volatility of the entity equity (Beatty et al., 1996). Therefore, financial institutions are exposed to higher volatility in their equity if the loans are measured at fair value (Godwin et al., 1998).

Through the preference for fair value over cost, the financial institutions may be seen as riskier by investors and regulatory bodies (Zhang, Chong, and Jia, 2019). This condition may lead to two detrimental consequences: firstly, the implementation of more restrictive regulations aimed at limiting their risk, and; secondly, a higher cost of equity capital aimed at offsetting additional uncertainty. However, this case is less to non-listed financial institutions, given that they are less exposed to regulatory attention (Astami and Tower, 2006) and pressure from widely disseminated investors. Therefore, listed financial institutions concerned with the perception of being low risk may have strong incentives to measure their loans at cost rather than fair value whenever possible (Sun, Liu, and Cao, 2011).

It is clear that the changes in fair value are leading to volatility in equity, which reflects an element of share price risk that is embedded with a high cost of equity. This factor may have an adverse impact on the desire of share investors, thus reducing share prices (Hodder et al., 2006). Considering that the key users of the financial information in the listed financial institutions are share investors who make different decisions based on the reported financial figures (Holthausen and Watts, 2001). It is recognised that the fair value may affect the prices of the shares and subsequently influence the decision of the investors about the financial institution shares (Song, Thomas, and Yi, 2010). To illustrate, the adoption of fair value to

measure loans will increase the volatility of equity due to the unrealised gains and losses recognized in it (Godwin et al., 1998). In this context, the volatility of equity is considered a key figure for share investors (Holthausen and Watts, 2001) where the possible recognition of unrealised fair value losses may decrease the shareholders' equity until the net wealth of shareholders is affected (Fogelson, 1978). This aspect indicates the association between the loans measured at fair value and the share market value (Song et al., 2010).

Several studies of Positive Accounting Theory utilised the listed type of financial institution as the determinant of accounting choice. For instance, Alves (2019) examined the incentives to adopt fair value choice for listed Portuguese firms, while Pompili and Tutino's (2018) empirical analysis on a sample of listed US and European banks showed that the adoption of fair value choice was negatively related to the earnings quality for the listed US banks. The study by Beatty and Harris (1999) found that publicly listed banks were more significantly engaged in earnings management compared to the non-listed banks through unrealised gains and loss recognition through fair values. Moreover, Barth et al.'s (2017) analysis of a sample of listed and non-listed US commercial banks between 1996 to 2011 found that the listed banks were engaged in earnings smoothing to a greater extent using realised gains and losses through fair value choice. This condition may indicate a negative association between publicly listed financial institutions and the adoption of fair value to measure loans. To illustrate, equity volatility introduces a higher share price risk with an increase in equity cost in publicly listed financial institutions compared to non-listed institutions (Drago, Mazzuca, and Trinca Colonel, 2013).

Based on the previous literature, the public listing was regarded by other researchers as a motivation for financial institutions to trade-off between the available accounting choices. Therefore, this thesis distinguished between listed and non-listed financial institutions, applying this aspect as the independent variable to assess its influence on the choice of financial institutions to measure their loans at fair value.

The listed financial institutions were made as the dummy variable equal to 1 if the sample financial institution was publicly listed, and the dummy variable equal to 0 would indicate a non-listed institution. The listed data of the sampled financial institutions was captured from the profile of each financial institution. The previous literature indicated that the listed financial institutions that implement the fair value option to measure loans have higher exposure to

volatility due to the fluctuation of the fair value) in the value exposure, which would affect their total equity. Hence, the hypothesis on the listed institutions is as follows:

H1: *Listed financial institutions are less likely (have a lower propensity) to report loans at fair value.*

2.2.1.2. SIZE MOTIVATION

A variety of studies demonstrated a link between accounting choice and the size of firms, with larger firms having the tendency to make accounting choices that decrease reported profits to prevent political attention (Bowen et al., 1981). The size of financial institutions is possibly a motivation for the decision to measure loans at fair value rather than cost. This aspect was considered in this thesis to investigate its influence on the trade-off between fair value and cost to measure loans. However, two perspectives should also be considered. Based on the first perspective, larger financial institutions are predicted to have a stronger inclination to adopt a fair value for loans due to the higher possession of resources and expertise to track loans reported at fair value (Guthrie, Irving, and Sokolowsky, 2011). Furthermore, larger financial institutions are perceived to have relevant data systems, expertise, and advanced financial modelling to facilitate the measurement of loans at fair value (D. Yao et al., 2018). Meanwhile, the second perspective demonstrates that larger financial institutions tend to follow more conservative accounting practices due to the greater political attention gained (Sun and Liu, 2011). Therefore, they prefer cost rather than fair value when measuring loans due to their need to be considered low risk by their supervisory authorities. Larger institutions also face greater political attention, causing them to follow more conservative accounting (Sun and Liu, 2011) and prefer to be considered low-risk by their supervisory authorities. Their preference for the cost over fair value for measuring loans is to avoid impacting the volatility of total equity.

The establishment of a fair value measuring framework requires financial institutions that intend to the measurement of any of their financial instruments at fair value to gain the capability to follow a set of requirements. Compared to small financial institutions that might not have access to adequate data resources, it is possible for larger financial institutions to have the financial resources and internal knowledge with the ability to access several data sources that simplify the measurement of financial assets at fair value. This situation indicates that the incentives for reporting assets at fair value are higher in larger financial institutions compared to smaller institutions (Botosan, Carrizosa, and Huffman, 2011). Accordingly, a financial

institution size is measured by the record of total assets, as shown in the financial reports of the financial institution which has a significant positive association with the adoption of fair value (Botosan et al., 2011).

D. Yao et al. (2018) regarded bank size (total assets) as a variable to proxy for determining the selection of banks upon measuring assets at fair value, especially large banks with more financial assets and liabilities. D. Yao et al. (2018) found a positive association between bank size and the percentage of assets measured at fair value. Similarly, a positive association was also recorded in the literature between size (total assets) and the fair value option (Fiechter, 2011). In this context, Sun and Liu (2011) showed an association between the management adoption of accounting choice as the dependent variable and bank size as an independent variable that is determined by the logarithm of total assets. As a result, bank size (total assets) was found to be positively related to the adoption of an accounting choice in the analysis. Additionally, Hsu and Lin (2016) categorised the adopters and non-adopters of fair value and found that the size of the adopters of fair value choice, which was determined as the logarithm value of total assets, was substantially larger compared to the non-adopters of fair value.

Firms that report a higher income and are larger are often subject to regulatory attention. Therefore, institutions tend to adopt an accounting choice that decreases their equity volatility to avoid any possible regulatory attention (Kuo, 1993). Additionally, it was found that size (total assets) was a statistically substantial factor influencing the selection of accounting choices (Kuo, 1993). In this context, Quagli and Avallone (2010) used size (measured as total assets) as an independent factor to assess its effect on the choice between cost and fair value. Accordingly, bigger company size decreased the possibility for them to select the fair value approach instead of cost. Arguably, the size of financial institutions influencing the inclination towards an accounting choice is mainly attributed to the discretion of institutions to avoid regulatory attention or vice versa. A proxy for the size of financial institutions denotes the total assets, which are assumed to affect the percentage of assets measured at fair value.

Previous literature employed size as a variable to examine its relation to institutions' motivation toward accounting choices (Beatty and Weber, 2003), which was measured as the total assets (Beatty et al., 1996) of the financial institutions. These studies used Positive Accounting Theory to determine the effect of size as a variable on compliance with IFRS (Samaha, Khlif, and Dahawy, 2016). Accordingly, several researchers considered size as a variable to examine its impact on accounting choice. Hagerman and Zmijewski (1981) stated that the model analysed

by Watts and Zimmerman employed size as a variable to examine its effect on institutions' incentives behind the determinants of accounting policy choice. Notably, a significant association was found between firm income strategies and size, proving the influence of size as an independent variable on the accounting strategy of a firm (Hagerman and Zmiewski, 1981).

In other research, size was considered a motivation factor for financial institutions to choose among the available accounting choices. Therefore, total assets were used in this thesis as the proxy for size by measuring it at the logarithm of the total assets of financial institutions. Total assets were taken into account in this thesis to assess their impact on financial institutions' discretion for the trade-off between fair value and cost to measure loans. The motivation of financial institutions to measure loans at fair value was expected to be impacted by the size and be analysed as per measurement by the total assets to observe its impact on the adoption of the fair value option.

As previously mentioned, the two perspectives of the impact of size on the choice of fair value to measure the loans were expected to generate two sub-hypotheses. The first sub-hypothesis assumed that the larger financial institutions are equipped with the required tools and techniques along with the skills and expertise, allowing them to adopt fair value to measure their loans. It was expected that the larger size of the financial institution would increase the percentage of loans that were determined at fair value. Accordingly, the first sub-hypothesis of size was established as follows:

H2a: *Large financial institutions are more likely (have a higher propensity) to report loans at fair value.*

The second sub-hypothesis assumed that larger financial institutions are subject to high political costs due to their size. This political attention would discourage the financial institution from measuring loans at fair value rather than cost due to the volatility introduced in the fair value model. Thus, the second sub-hypothesis of size was developed as follows:

H2b: *Large financial institutions are less likely (have a lower propensity) to report loans at fair value.*

2.2.1.3. REGULATORY CAPITAL MOTIVATION

The financial institutions are essential for the regulators to retain a specific minimum degree of their capital. Described as regulatory capital, it mainly aims at absorbing losses, promoting public confidence, regulating asset growth, and protecting the depositors (Rime, 2001). Regulatory capital refers to compliance with the minimum capital guidelines that are measured by the ratio of capital adequacy in the financial sector (Swamy, 2018). Furthermore, the requirement of this capital is the minimum ratio of capital to be maintained by financial institutions to restrain the risk appetite of financial institutions. The capital conditions are calculated following the financial institution equity over its risk-weighted assets (Rime, 2001). Equity is the main component of regulatory capital, leading to the understanding of the impact of adopted accounting choices, such as fair value or cost, particularly the consequences of the adoption of fair value. This adoption of fair value commonly results in the recognition of unrealised gains and losses within other comprehensive income under equity (Francis, 2001; Paananen, Renders, and Shima, 2012).

As mentioned in Chapter 1, the carrying value of loans at cost is fixed, indicating that no changes occurred with market conditions. Therefore, the loans measured at cost do not require the recognition of unrealised gains or losses in the entity equity. In contrast, the carrying value of loans at fair value varies based on the changes in interest rates (Linsmeier, 2011), which results in the recognition of the unrealised gains or losses and increases the volatility of the entity equity. Consequently, preferring fair value over cost may cause financial institutions to recognise unrealised losses upon the increase in interest rates. Subsequently, the equity and regulatory capital decrease, which also reduces the motivation to report loans at fair value due to reduced regulatory capital, is low or vice versa (Barth et al., 2017).

Financial institution equity is affected by the changes in fair value loans after the unrealised gains and losses are recognised. The higher the proportion of loans reported at fair value, the higher the unrealised gains and losses likely to be reported in equity (Laux and Leuz, 2010). This condition also increases the volatility of the equity and the regulatory capital of financial institutions that hold loans. The instability introduced by adopting fair value does not appear to motivate financial institutions to measure their loans at fair value, especially when the regulatory capital is at a lower level. Meanwhile, financial institutions seek to reduce the regulatory cost that may be imposed by the regulators due to noncompliance with the regulatory capital requirements (Moyer, 1990).

Previous literature within Positive Accounting Theory employed regulatory capital as a variable to examine its relationship with the financial institution motivation toward accounting choices. In these studies, banks with lower levels of regulatory capital were less appealing for considering fair value options to prevent the violation of the capital adequacy requirements (Corona et al., 2019; Paananen et al., 2012). Similarly, the study by Ramesh and Revsine (2001) demonstrated that banks, as highly regulated firms, are less motivated to choose an accounting that increases their regulatory cost, particularly when their regulatory capital ratio is at a lower level. Moreover, poorly capitalised banks receive a stronger impact from the adoption of fair value to measure loans compared to the highly capitalised banks when the adoption of fair value is negatively affecting the equity. This condition would cause an immediate reduction in the regulatory capital (Paananen et al., 2012). Hence, financial institutions need to choose between the options of IFRS 9 (e.g, fair value versus cost) strategically to minimise the regulatory cost and its implications on financial institution flexibility and potential growth.

The level of regulatory capital would influence the preferences of financial institutions to adopt fair value rather than cost to measure loans. It considers the potential economic consequences on the existing agreements and portfolio of financial institutions following the substantial impact of the adopted choice (e.g., fair value versus cost) on the direction of the financial institution (Arnold et al., 2012). The capital requirements will affect the level of risk at which the loans are granted by a financial institution. The level of regulatory capital poses some restrictions on lending when financial institutions face difficulties in fulfilling the regulatory capital requirements due to the risk rating of the loans (Corona, Nan, and Zhang 2015).

It is clear that financial institutions are motivated to boost the regulatory capital ratio through discretionary accounting choices, especially the choices that bring positive consequences on the risk-taking level when loans are provided. For instance, the impact of using fair values on regulatory capital requirements would not be a solution to the risk problems of financial institutions nor encourage financial institutions to increase their risk appetite to further expand the loan portfolio (Arnold et al., 2012).

It is possible to assume that the selection between the cost and fair value is affected by the constraints of lending imposed by regulatory capital, which encourage the preference for fair value to measure loans when the capital requirements of a financial institution are at a higher level, which possibly allows the financial institution to achieve substantial growth in its loans portfolio (Corona et al., 2019). On the other hand, financial institutions are motivated to favour

cost to measure loans when the capital requirements are at a lower level. Given the costly regulatory capital, financial institutions tend to adopt an accounting choice for the loans in favour of managing the regulatory capital (Beatty, Chamberlain, and Magliolo, 1995). In this context, the trade-off between fair value and cost to measure loans is considered a motivation for financial institutions to hedge against the deterioration of the regulatory capital and enhance the total equity.

The decrease in fair value leads to the necessity of recognising the unrealised losses, although it would negatively affect the regulatory capital and total equity. This condition would increase the net income, considering that the recognition of losses in the income statement would occur during the actual sale (Beatty et al., 1995). It is noteworthy that the fair value option introduces volatility in the equity, which will negatively affect the regulatory capital and possibly be violated if the level of regulatory capital is low (Rime, 2001). Accordingly, lower regulatory capital would reduce the tendency of the financial institutions to adopt fair value to measure loans mainly to manage the level of the regulatory capital and avoid reporting it below the required threshold.

Even though the implementation of IFRS 9 may have a direct influence on the requirements of regulatory capital, the extent of influence varies depending on the adopted choice, which could be either fair value or cost. The financial institution would face a reduction or increase in the regulatory capital through the adoption of one option over the other. Therefore, the selection between these choices is attributed to the financial institution flexibility to mitigate every possible regulatory cost and avoid any adverse effects on the slack between the equity and regulatory capital. The setters of accounting standards have shown a management incentive to avoid breaching the regulations of the financial industry such as the regulatory capital requirements of the banking sector to maintain a certain level of capital adequacy ratio (Swamy, 2018), which will be subject to the supervision of the regulatory authority. Therefore, accounting discretion is used by financial institutions to manage the regulatory capital requirements as outlined by the banking industry (Healy and Wahlen, 1999).

Following the past literature works, the influence of regulatory capital requirements on accounting choice is present as a result of the regulatory restrictions of financial institutions. Therefore, other researchers considered regulatory capital in examining its influence on the institution discretion to select fair value rather than a cost for measuring loans. The proxy for the regulatory capital was the capital adequacy ratio that was used as an independent motivation

factor to analyse its impact on the financial institution discretion in measuring loans at fair value. It is expected that financial institutions with poor regulatory capital would not favour the fair value option to measure loans to avoid any regulatory cost. This condition may occur due to the volatility of equity, which could risk financial institutions with poor regulatory capital. In this thesis, financial institutions were assumed to be reporting loans at fair value to recognize unrealised capital gains and losses that affect the total equity and regulatory capital. Thus, the following hypothesis was developed:

H3: *Financial institutions with low regulatory capital are less likely (have a lower propensity) to report loans at fair value.*

2.2.1.4. OWNERSHIP DISPERSION MOTIVATION

Representing the nature of control over financial institution activities, ownership dispersion could explain the variations in the accounting choices adopted by institutions. Prior studies found that the increase in ownership concentration would reduce managerial discretion, therefore, the level of ownership concentration allows various levels of institution discretion (Astami and Tower, 2006). It also encourages the use of the ownership structure as a determinant motivation of institution accounting choices. It could be seen that ownership concentration may play a monitoring role that would minimise the opportunistic behaviour of institutions to make accounting choices contrary to ownership dispersion. Accordingly, this thesis considered ownership dispersion a motivation that may influence the financial institution preference to measure loans at fair value instead of cost or vice versa.

The assumption of this thesis is that in measuring loans at fair value, financial institution discretion is expected to increase with ownership dispersion. In this context, Watts and Zimmerman (1978) stated that accounting methods are related to certain features of the institution and sector due to the actions of managers seeking to maximise their interests (Watts and Zimmerman, 1990). The accounting choices are not made arbitrarily; they are attributed to various factors, such as the nature of the ownership control (e.g., individual, corporate, government, international), which could motivate one accounting choice from a set of available accounting choices (Ke, Petroni, and Safieddine, 1999). Some studies suggested that the largest owners, such as investors, analysts, or other types of governmental authority, are less likely to adopt fair value choice (Mäki, Somoza-Lopez, and Sundgren, 2016). Similarly, the research by Alves (2019) on the influence of ownership concentration on the selection of accounting choice

demonstrated that higher ownership concentration increased the probability of adopting a cost option compared to a fair value option.

Ownership control is the share of major ownership in a financial institution, which could lead to the manipulation of the direction for adopting an accounting choice. Previous literature considered ownership a motivation factor to examine its effect on IFRS, such as the study by Samaha et al. (2016) who employed ownership dispersion as a determinant to study the degree of compliance with IFRS. As a result, ownership dispersion positively and significantly impacted IFRS. In this context, the research by Mäki et al. (2016) illustrated that the adoption of fair value had a positive association with ownership dispersion as opposed to concentrated ownership, which was less likely to adopt fair value choice. Similarly, Astami and Tower (2006) suggested that the dispersed ownership structures of the institution would be inclined to adopt accounting choices that increase income. In the study by Dhaliwal et al. (1982) on the association between ownership control of an organisation with the adopted accounting choices, it was found that the preference of the accounting options would increase or cause early reported income, especially when the firm ownership was dispersed rather than concentrated.

An analysis was conducted by Vivien Beattie et al. (1994) on the managerial motivations to use flexibility in classifying the items of reported profit either as exceptional items or extraordinary items to manage the reported profit, where the ownership structure is considered an independent variable by segregating it into dispersed or concentrated ownership. The ownership structure was taken into account to observe its influence on the adoption of discretionary classification choice. As a result, the managerial opportunistic behaviour to manage the reported profit through the adaptation of discretionary classificatory choice was significantly and positively associated with ownership dispersion (e.g., manager-controlled firms) (Vivien Beattie et al., 1994).

The costs and merits for the adoption of fair value will vary across financial institutions, given that it is not optimal to have an accounting rule that imposes the same accounting choice across companies (Sunder, 2010). According to Mäki et al. (2016), financial reports are a key means of communication with investors upon the dispersion of ownership, and the adoption of fair value choice creates more useful financial reports compared to the adoption of cost choice. The implementation of fair value choice is costly, although it is more appropriate and will lower information asymmetry issues between the financial institutions and users of financial reports.

Therefore, it is assumed that financial institutions are more motivated to adopt fair value to measure loans when ownership is dispersed.

The previous literature within the framework of Positive Accounting Theory used ownership dispersion as a variable to examine its impact on the institution motivations to adopt fair value (Wang, 2006), whereas ownership concentration was shown to be the determinant of the accounting choices when the possibility of choosing cost is higher (Alves, 2019). The literature on ownership dispersion illustrated that a high ownership concentration may limit the discretionary accounting choices of managers, given that the possibility of managerial opportunism is expected to be reduced if large shareholders ought to monitor managerial behaviour (Hall, 1993). Hence, managers will possess less power to adopt an accounting choice at their discretion when ownership concentration is high (Alves, 2019). This condition is contrary to ownership dispersion, which offers more flexibility to adopt an accounting choice.

Ownership dispersion was employed in this thesis as the independent motivation factor for financial institutions to analyse its impact on their discretion to measure loans at fair value rather than cost. The proxy of the ownership dispersion was the low ownership concentration, which was identified using the independence indicator and degree of ownership concentration represented by A in the BvD independence indicator[9]. The low ownership concentration used as a dummy variable would be equal to 1 if the financial institution indicated low ownership concentration, while a dummy variable of 0 indicated otherwise. Furthermore, the basis of BvD independence indicators considered the number of shareholders and their individual and collective holding percentages, with each distinguished by the respective label (A, B, C, D or U). These labels represented various levels of ownership concentration (Callao, Cimini, and Jarne 2016). In respect of the characteristics of each label[10], label A denotes low ownership concentration, label B represents medium-low ownership concentration, label C indicates medium-high ownership concentration, and label D denotes high ownership concentration. A full table of BvD, the degree of ownership concentration, and the main significance and supplementary clarifications are included in the appendix (Table 13) (Horobet et al., 2019).

According to the Positive Accounting Theory, financial institutions with ownership dispersion may minimise the shareholders' intervention in the behaviour of the financial institution management upon selecting fair value and cost to measure loans. In this case, it is indicated that

[9] Bureau van Dijk independence indicator measures shareholders ownership concentration.
[10] Definitions are provided in the help for BvD Ownership Database, Orbis database.

ownership dispersion is more likely to increase discretionary accounting choices of the financial institutions due to the expectation that it would lead to strong opportunistic behaviour by the financial institutions with the power to adopt an accounting choice of their choice. Therefore, ownership dispersion is predicted to be positively associated with the choice of a financial institution to measure its loans at fair value. The following hypothesis was developed:

H4: *Financial institutions with dispersed ownership are more likely (have a higher propensity) to report loans at fair value.*

2.2.2. DEBT COVENANTS MOTIVATION FACTOR

Several research works observed different motivations for the preference for one accounting choice over the other choice. One motivation relies on the incentives provided in debt agreements, which are costly to amend (Healy and Wahlen, 1999), given that the conditions of such agreements commonly require the maintenance of specific accounting ratios or negative covenants (Clifford W. Smith, 1993). These agreements are used to govern the relationship between different internal and external stakeholders, in which any breach of this covenant condition could prohibit the firm from borrowing or paying off the loan (Fogelson, 1978). Watts and Zimmerman suggested that debt agreements create incentives for institutions to choose the accounting options that will prevent the firm from being exposed to any potential violation of the terms and conditions of debt agreements. This condition may be common in maintaining a specific debt-to-equity ratio (Healy and Wahlen, 1999). Thus, previous literature examined the effect of the adopted accounting choice on the debt covenants by testing the debt-to-equity assumption, which highlights that institutions have the tendency of adopting accounting choices to prevent the breach of debt (Duke and Hunt, 1990). The majority of previous research works on discretionary accounting choices employed leverage ratios as a proxy to test the debt-equity assumption within the framework of Positive Accounting Theory, and investigate whether institutions choose an accounting choice to avoid the violation of debt covenants or vice versa (Fields et al., 2001).

Shareholders' equity is the other proxy used to test the debt-equity assumption (Fields et al., 2001), representing the net wealth of a financial institution. This equity is the book value of the financial institutions that grant shareholders the right to claim their capital from it. It commonly contains the capital raised by the owners of the financial institutions, the retained earnings, the reserves, and the unrealised gains and losses that are not recognised through profit and loss

(Dechow, 1994). The financial institution is able to choose and classify assets at fair value using other comprehensive income as a section of shareholders' equity (Francis, 2001). Through this approach, shareholders' equity would be impacted by the recognition of the unrealised gains and losses resulting from the movement of the fair value. Subsequently, the adoption of fair value choice would possibly lead to higher volatility of the shareholders' equity (Godwin et al., 1998).

A change in the level of equity may lead to a breach of the conditions of debt agreements, which commonly present accounting restrictions. This is a key condition where measurement can be performed on it by including the ratio of long-term debt to total assets (Beatty et al., 1996). Furthermore, it is an incentive for the institutions to adopt an accounting choice that will not violate the accounting information related to debt covenants (Hilton and O'Brien, 2009). Debt agreements normally impose limitations on borrowers by defining specific conditions and terms (Holthausen, Robert W, and Leftwich, 1983). Furthermore, Beatty and Weber (2003) considered all debt contracts as variables and demonstrated a notable relationship between debt covenants and voluntary changes in the accounting methods, particularly when these changes affect the debt agreement and the debt covenants involve equity-based covenants. The study by Sweeney (1994) showed a direct association between accounting choices and the restrictions of debt agreements whereby the institutions would adopt accounting choices to increase income when they have the accounting flexibility and could bear the default cost. Similarly, the research by Dhaliwal (1980) recorded that firm management with a higher long-term debt would oppose accounting choices that lead to a reduction in net wealth (equity) due to the obligation for them to make changes to their existing debt agreement.

The modifications in the classification of fair value allow financial institutions to engage in an opportunistic conversion of assets to fair value or cost (Guthrie et al., 2011). The research by Barth et al. (2017) revealed that opportunistic behaviour mainly occurred in financial institutions that disclosed unrealised gains and losses in the shareholders' equity. The fair value choice would cause volatility to equity by increasing the possibility of recognising unrealised losses. This condition would result in a reduction in the shareholders' equity as opposed to the cost choice that mitigates the risk of volatility, although it may set a selling restriction on the assets that are measured under cost. Subsequently, an increase in liquidity risk takes place (Godwin et al., 1998). In this context, the sale instruments that are available for sale would be subject to recognising the fair value changes in the equity (Beatty et al., 1996). Thus, financial

institutions opt for the adoption of fair value options for transferring unrecognized losses to equity. This action avoids the recognition of losses in earnings when the instruments are being sold and is consistent with the opportunistic behaviour mostly made by the fair value adopters who have unrealised losses in the other comprehensive income (Guthrie et al., 2011).

Generally, the implementation of a new accounting choice encourages the exploration of its consequences on financial information by highlighting its impact on shareholders' equity (Ramesh and Revsine, 2001). The accounting choice regarding shareholders' equity would be influenced by the objective of a financial institution, such as the maximisation of the interests of shareholders (Francis, 2001). It was assumed by Hand and Skantz (1997) that the management of an institution would behave in a way that achieves the best interests of the shareholders to minimise the cost of financial distress that is expected to arise from the constraints of the debt covenants. Accordingly, they considered the covenants-based costs of the Positive Accounting Theory as the economic determinants of institutions' accounting choices. As a result, it was found that institutions preferred an accounting choice that reduces the cost of financial distress caused by high leverage.

The adoption of a fair value option to measure loans creates volatility to the equity due to the market changes in interest rates (Linsmeier, 2011), which will increase the possibility of an institution breaching the debt covenants threshold and shifting the wealth of shareholders to debtholders (Beatty et al., 1996). To illustrate, the fair value changes of the loans will be recognised as unrealised gains or losses in the shareholders' equity (Petroni and Wahlen, 1995). This aspect is in contrast to the adoption of the cost option to measure loans where the carrying value of loans remains constant across the tenor, therefore, the equity will not be affected. Therefore, financial institutions would have a tendency to consider reporting loans at cost rather than fair value to avoid affecting the shareholders' equity (Dong and Zhang, 2018). This condition suggests an adverse association between the shareholders' equity and the fair value option, given that the gains and losses of fair value are recognized in the other comprehensive income under the shareholders' equity (Barth et al., 2017).

The framework of Positive Accounting Theory would assist in assessing the factors for the differences in the decisions that will be made by financial institutions upon adopting the fair value option rather than the cost to measure loans. This theory empirically validates (Watts and Zimmerman, 1990) the preference of financial institutions for an accounting choice (e.g., fair value versus cost) by explaining a logical and objective basis for adopting an accounting choice.

Based on the previous literature, the influence of debt-to-equity motivation was examined in this thesis to measure loans at fair value by analysing the influence of shareholders' equity and capital structure. The proxy to capture the shareholders' equity would be the total equity as reported in the annual financial reports of the sample financial institutions. Moreover, this proxy was scaled by the beginning of the year balance of the total assets, where the ratio of the total equity to total assets represents the number of assets on which the shareholders have a residual claim. This condition indicates that higher total equity to total assets ratio would create a less leveraged financial institution, which indicates that a larger percentage of the assets is financed and owned by the financial institutions' shareholders. It could be concluded that a higher ratio is ideal, while a lower ratio would become an issue.

The proxy to capture the capital structure would be the capital funds ratio, which is measured as the capital funds divided by the liabilities, where the capital funds are equal to the aggregation of equity, hybrid capital, and subordinated debt[11]. This ratio presents the percentage of liabilities that are offered in a type of capital fund (Kosmidou et al., 2006). Furthermore, the increase in the ratio would increase the cost of capital (Abdel Reda, Rjoub, and Abu Alrub, 2016) due to the indication of an increase in debt risk (Ahmad, Ariff, and Skully, 2008). The capital funds ratio was used to examine its effect on the motivation of financial institutions to select between cost and fair value for measuring their loans.

The total equity and the capital funds ratio were recorded in the financial profile of the sample financial institutions. They were employed as the independent variables that were predicted to have a negative association with the financial institutions' choice of fair value for measuring loans. Specifically, financial institutions with a low debt-to-equity ratio would be motivated to measure loans at fair value to avoid falling under a specific threshold. Moreover, there was a high likelihood that financial institutions would behave opportunistically to ensure maintaining the debt covenants at the compliant level and avoid incurring any additional costs. Accordingly, the following hypothesis was established:

H5*: Financial institutions with high debt-to-equity ratios are less likely (have a lower propensity) to report loans at fair value.*

Table 1 outlines each motivation factor within the Positive Accounting Theory, which was examined to determine its influence (if any) on the preference of financial institutions to

[11] Osiris Data Guide, Bureau van Dijk Electronic Publishing (www.bvdep.com).

measure their loans at fair value. This is followed by an explanation and understanding of the opportunistic behaviour of financial institutions upon the selection between fair value and cost to measure loans.

Table 1: Hypotheses of Positive Accounting Theory

No	Hypothesis	Variables	Predictions
1	Listed financial institutions are less likely (have a lower propensity) to report loans at fair value.	Listed	(-)
2.1	Large financial institutions are more likely (have a higher propensity) to report loans at fair value.	LTA	(+)
2.2	Large financial institutions are less likely (have a lower propensity) to report loans at fair value.	LTA	(-)
3	Financial institutions with low regulatory capital are less likely (have a lower propensity) to report loans at fair value.	CAR	(-)
4	Financial institutions with dispersed ownership are more likely (have a higher propensity) to report loans at fair value.	OWNERA	(+)
5	Financial institutions with high debt-to-equity ratios are less likely (have a lower propensity) to report loans at fair value.	TETA/LTFUN	(-)

CHAPTER 3: RESEARCH DESIGN

This chapter discusses the thesis methodology and thesis method that was adopted to answer the thesis question and perform quantitative analyses for the collected sample of financial institutions. This chapter illustrates the variables used in the models, the sample of the thesis, and the descriptive statistics. Following that, descriptive statistics are presented to summarise the data set, which would describe and create an understanding of the data trends. These statistics are also used to describe various aspects of the thesis and the characteristics of the sample population.

A summary statistics table presents the list of independent motivation factors, the control variables, and fixed effect variables (Table 5), followed by measurement of the variability that includes the standard deviation, mean, and minimum and maximum value or percentage as applicable for all motivation factors. This step identified the motivation factors that were worth being considered regarding the treatment of options under IFRS 9 and explained the reasons for the factors being taken into consideration. The independent motivation factors that were extracted from the literature were tested to determine the nature of the association between the dependent variable *(LFVNLA)* and the variables of interest.

To answer the thesis question, there are models developed and tested by a reliable method, which determined the impact of the independent motivation factors on the dependent variable *(LFVNLA)*. Hence, the regression model allowed the identification of the independent motivation factors that were relevant or could be overlooked and the manner in which the motivation factors influenced each other.

Stata[12] was used to run regressions of the dependent variable *(LFVNLA)*, which represents the loans at fair value that was scaled by the beginning of the year balance of the net loans and advances to customers against the listed independent motivation factors (Table 3). Table 3 included the motivation factors used as a proxy for the determinants of financial institutions'

[12] Stata is a statistical software package for common purposes, which was developed in 1985 by StataCorp. The majority of its users engaged in studies, particularly in the areas of sociology, economics, political science, epidemiology, and biomedicine.

motivations to measure loans at fair value. Subsequently, the results generated from the regression models would be analysed and discussed in the next chapter.

Chapter 3 is organised into seven sections. The next section 3.1 describes the positivist approach related to the development of a descriptive model that aims to provide an explanation and make a prediction. Section 3.2 demonstrates the shift from the motivations of the Positive Accounting Theory to the factors that would explain opportunistic behaviour. Section 3.3 highlights the research method used as a technique to analyse the collected sample of financial institutions. This is followed by Section 3.4 that shows explanations of the models including dependent variable, variables of interest, control variables, and fixed effect variables. Section 3.6 presents the data collection method and the sample characteristics, followed by Section 3.7 that illustrates the descriptive statistics for the motivation factors of the collected sample.

3.1. EPISTEMOLOGY – A POSITIVIST APPROACH

A principle-based accounting standard, IFRS 9, introduced flexibility that allows financial institutions to act with discretion when selecting between fair value and cost for financial asset classifications including loans. Accordingly, this thesis aims to study the motivation factors that might impact the preference of financial institutions for measuring loans at fair value instead of cost or vice versa. Therefore, this thesis primarily aims to examine and explain the motivations for adopting fair value rather than cost to measure loans.

Positive Accounting Theory aims to elaborate and make a prediction of the institutions' choice from the available accounting options. Positivist accounting researchers used the theory to produce a considerable amount of literature that elaborates on the factors leading to the institutions' preference for one accounting choice over another (Williams, 1989), followed by scientific explanations of accounting choices (Chambers, 1993).

The accounting literature was previously prescriptive, whereas the positive approach is indicative, which increases its development to cater for the scientific purpose of accounting research that describes reasoning (Chambers, 1993). Moreover, the positivist approach of this accounting theory is not concerned with providing prescriptions regarding how institutions should apply an accounting choice; rather, it focuses on offering a description and prediction of the selection of an accounting choice that constitutes a certain accounting phenomenon (Chambers, 1993).

Notably, the positivist approach is useful in developing a descriptive model that could be used to describe epistemology (Burrell and Morgan, 1978). This approach attempts to provide an explanation and prediction on the condition upon the analysis of a phenomenon by observing the regularity and casual association. It also considers the type of motivation factors that form the decision and are chosen based on previous literature and any other knowledge of stakeholders that may be useful for explaining this phenomenon (Burrell and Morgan, 1978). In this context, the explanation of the selection of an accounting choice is presented under the positive theory of accounting by obtaining the elements that constitute the accounting phenomenal. If these elements are not parts of the accounting phenomenon under examination, positive accounting will be irrelevant (Williams, 1989).

The motivation factors of this thesis are derived from the literature on Positive Accounting Theory and mapped to the relevant hypothesis. This action was conducted to ensure that the motivation factors relevant to the objective of this thesis were captured. According to Christenson Charles (1983), Watts and Zimmerman stated that the explanation of an accounting choice should be based on the causality, as per the following statement, which also indicates a positive approach that requires researchers to be aware of the institutions' motivations toward one choice against the other (e.g., fair value or cost) (Watts and Zimmerman, 1978):

> The public accountants or corporate manager may observe an association between variables such as changes in procedures and changes in stock prices but cannot tell whether the association is causal. To make the causality interpretation, the practitioner requires a theory that explains the relation between the variables. The theory enables the practitioner to attach causality emphasis explains the relation between the variables. The theory enables the practitioner to attach causality to a particular variable, such as a procedure.

Causality has a major impact on validating the explanations of an accounting phenomenon based on particular observations that offer interpretations for the nature of causality between independent variables (motivation factors) and the dependent variable related to this accounting phenomenon, which allows considering this particular observations sample to a generalised perspective (Luft and Shields, 2014). This factor is considered the common approach of implementing the positivist view while establishing an explicit and systematic framework of variables for validating casual explanations. Subsequently, the results of these casual expectations would present more convincing interpretations to the researchers' community

following the increase in the objectivity in the meaning of the epistemology of this research (Luft and Shields, 2014).

The positivism view of Positive Accounting Theory is a type of systematic approach that ascertains whether a particular phenomenon under a specific condition is related through a certain means with another phenomenon. Subsequently, results are presented in the form of explanations and predictions, which could either be generalised or vice versa (Chambers, 1993). Positivism emerged in accounting research that attempted to examine the expectations of an accounting phenomenon through quantitative testing. In this research, the positivist accounting researcher investigated the common elements of an accounting choice to provide a deduction on these elements, followed by the generalisation of the validity of the deductions obtained from a certain sample of analysis (Luft and Shields, 2014).

Based on another perspective, epistemology is related to the nature of the association between individuals and the knowledge that is possible to be created, obtained, and conveyed (Weber, 2004), leading to the underpinning of Positive Accounting Theory by positivist epistemology. This method is preferred for predicting and explaining the influence of institutions' motivation factors to measure loans at fair value based on the execution of a quantitative method for analysing a large sample (Modell, 2010). It is also preferred under the positivist approach for using a tool to quantitively analyse a large sample of observations related to the subject accounting phenomenon (Weber, 2004). This action is conducted to formalise a coherent system and establish epistemological criteria for evaluating the claimed knowledge (Whitley, 1988).

This thesis aims to explain and predict the motivations of financial institutions to measure loans at fair value rather than cost or vice versa. The positivist approach was implemented to consider empirical analysis (Bryman, 2008) on an authentic and valid sample comprising the annual financial reports of financial institutions. A quantitative method was applied to analyse the collected sample and capture the observations (Christenson Charles, 1983).

3.2. RESEARCH METHODOLOGY

The methodology relies on a regression model, which aims to regress the proportion of loans at fair value against variables of interest, control variables, and fixed effect variables. The variables of interest aim to examine the prescriptions of the Positive Accounting Theory

regarding the measurement of loans under IFRS 9, with each of these variables capturing a specific motivation. The other two categories of variables are not related to the Positive Accounting Theory. The control variables [return of equity (ROE) and return of assets (ROA)] aim to control the factors besides the motivation factors that may impact the trade-off between fair value and cost for loans. The fixed effects variables, which are presented in Table 2, aim to control the permanent differences across financial institutions. These variables capture the institution business model, country, and fiscal year under consideration.

Table 2: List of variables

Dependent Variable	Variables of Interest	Control Variables	Fixed Effect Variables
Proportion of Loans at Fair Value	Listed	ROE	Business Model
	Total Assets	ROA	Country
	Capital Adequacy Ratio		Year
	Low Ownership Concentration		
	Total Equity		
	Capital Funds		

Accordingly, the variables of interest and the motivation factors under study are listed as follows:

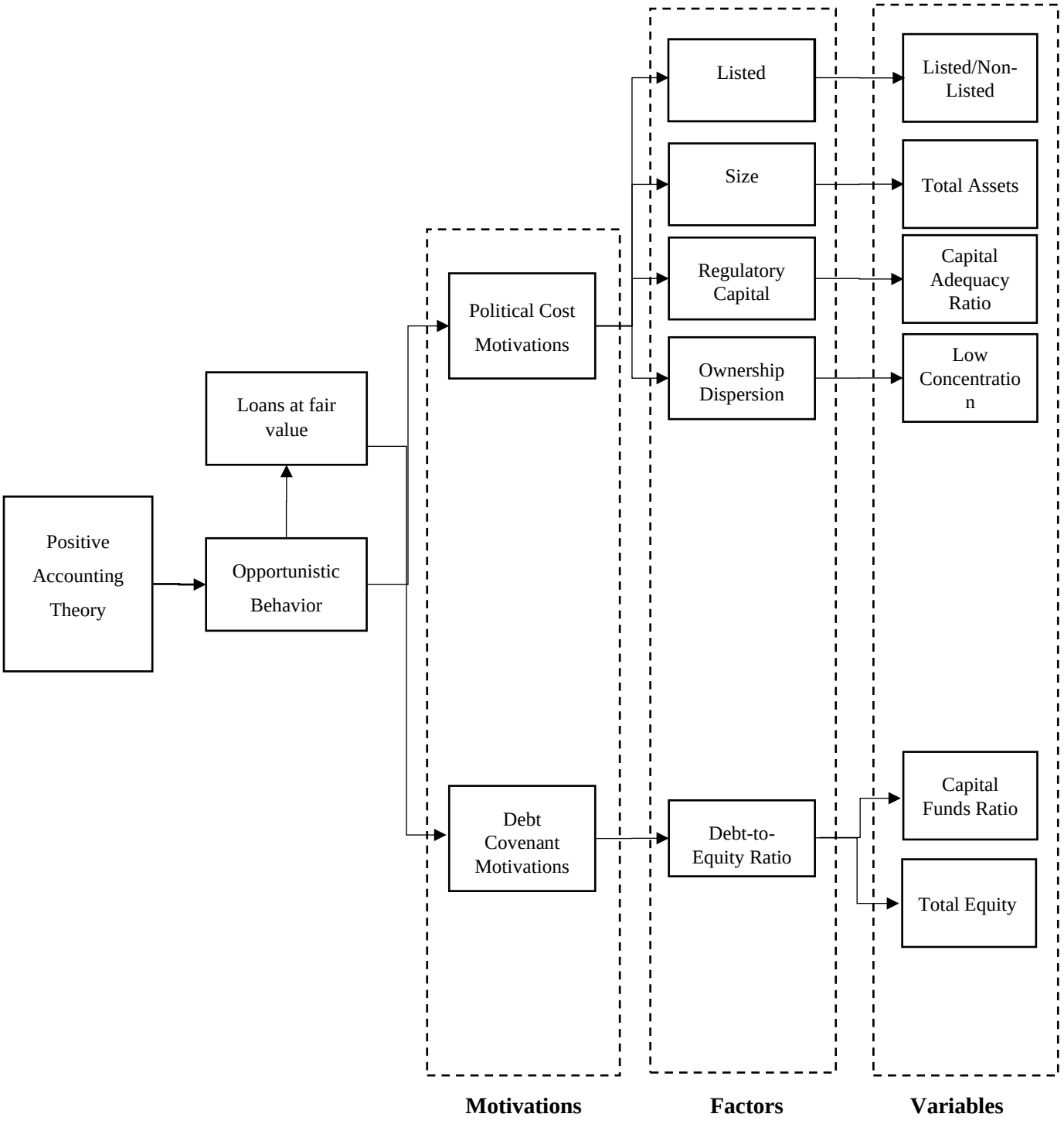
- **Variables for Political Cost Motivations:**
  - Listed financial institution is a proxy for the listing status motivation.
  - Total assets is the proxy of the size motivation.
  - Capital adequacy ratio is the proxy of the regulatory capital motivation.
  - Low ownership concentration is the proxy of ownership dispersion motivation.
- **Variables for Debt Covenant Motivations:**
  - Total equity is the proxy for debt covenant motivation.
  - The capital funds ratio is the proxy of debt-to-equity motivation.

This section outlines the method used to articulate the motivations for preferring fair value over cost (the variables of interest), the control variables, the fixed effect variables, and the regression model developed for this thesis. Each motivation was captured by variables (proxies) used in the model to regress the proportion of loans measured at fair value as a dependent variable, against the proxies of each motivation factor, the control variables, and the fixed effect variables.

The outcomes of the regression would present the nature of the relation between the dependent variable and independent variable, which facilitates the explanation of the opportunistic behaviour of the financial institutions to choose between fair value and cost when loans are measured. In line with previous research, the financial institutions' motivations to prefer one accounting choice over the other (fair value versus cost) may vary depending on their incentives. Accordingly, this thesis followed the approach of examining the influence of motivations that determine accounting choices, specifically the adoption of fair value for measuring loans.

Figure 1 presents the approach adopted in this thesis by demonstrating the shift from the motivations of the Positive Accounting Theory to the factors that would explain the opportunistic behaviour of the financial institutions upon selecting between fair value and cost to measure loans. These factors were linked to specific variables (proxies) for using it in the model to regress their influence on the dependent variable, which was the choice of fair value to measure loans. The motivations of the Positive Accounting Theory are specified in the regression model through the proxies and the control variables and fixed effect variables, which define the nature of the association between each motivation factor and fair value choice to report loans. Figure 1 also illustrates the model of the Positive Accounting Theory of this thesis, which is presented as a map of each factor and the variables linked to the relevant motivation under the Positive Accounting Theory.

Figure 1: Model of Positive Accounting Theory



3.3. RESEARCH METHOD

The thesis method is described as a technique that will be employed to analyse collected data. To illustrate, it is a statistical tool to be used by the researcher to facilitate the required analysis of the accounting phenomenon under the subject study (Bryman, 2008).

Statistics are becoming a crucial means for empirical research in finance and accounting, specifically the method used in this type of research, which is regression. This statistical technique is based on a mathematical model that aims to discover and examine the association between two or more variables for a certain phenomenon to suggest the nature of the association between variables. Thus, this technique is used to explain the reasons for previous behaviours, choices, and decisions among others, and offer a prediction of the possible implications of the variables on future activities and decisions (Lee, 2015). The regression model commonly considers one variable as the dependent variable, which becomes the main variable under the analysis. The remaining variables represent the independent variables or explanatory variables, which are considered motivation factors that either influence the dependent variable or vice versa (Trotta, 2003).

Several studies in the field of banking and finance relied on regression models to analyse the relationship between variables. Barth et al. (2017) employed regression models to test and explain the realised gains and losses on available-for-sale securities. Yao et al. (2018) examined the significance of discretion in fair value estimates by exploring the variables that explain the banks' accounting choices. In the earnings management field, Haapamäki (2018) conducted a regression analysis to study the incentives of a company to adopt IFRS voluntarily although this action would cause a reduction in earnings management.

This thesis focuses on financial institutions that have implemented IFRS 9 for their annual financial reports. It mainly aims to examine the influence of motivations factors that are derived from the previous literature to explain and predict the financial institutions' selection between the accounting choices (fair value versus cost) under IFRS 9 when the loans are measured. Furthermore, the thesis question is concerned with the financial institutions' motivations for adopting IFRS 9 options (fair value versus cost) regarding the classification and measurement of loans. The classification and measurement were examined as per the requirements for management to apply further judgement while classifying loans compared to the other IFRS 9 sections, namely the impairment model and hedge accounting. Additionally, the adopted

classification would allow for determining the practice that should be followed under the other sections of IFRS 9 (Deloitte, 2016). Given that measuring loans at fair value requires financial institutions to make a judgment due to the absence of an active market for estimating its fair value, this issue would cause financial institutions to develop and apply a method of fair value estimation for loans that mostly involve a significant judgment for predicting the loans' fair value estimation (McInnis et al., 2018).

The IFRS 9 classification and measurement of loans are notably different from previous standards (e.g., IAS 39) as they introduce a principle-based approach that is founded on a new accounting approach to the business model (Novak, 2014). Hence, financial institutions are required to continuously define their business model based on their comprehensive strategy and risk appetite, given that IFRS 9 is more concerned about the risk of business strategy rather than the risk of assets (Huian, 2013). Furthermore, there is a notable opportunity under IFRS 9 for financial institutions' management to reclassify loans when the qualifying criteria are met. Any changes to the business model allow the reclassification of the loans. Based on another perspective, the selection of the classification and measurement section for examination is for observing the continuing debates over the use of fair value for measuring financial institutions' assets (European Systemic Risk Board, 2017). In this selection, steps are taken by financial institutions to adopt IFRS 9 within their capabilities. An exploratory study based on descriptive statistics was proposed to answer the thesis question.

The thesis question is concerned with the motivation factors that were derived from the previous literature. These factors may or may not lead to the preference of financial institutions for fair value over cost for IFRS 9 adoption, given that the preference of financial institutions will vary depending on various motivations. The environment of operation could differ among financial institutions. Therefore, different motivation factors may drive financial institutions' decisions to prefer fair value over cost or vice versa. The quantitative method of developing a regression was proposed, allowing the question of this thesis to be answered.

3.4. ECONOMETRIC MODELS

To investigate the factors of the fair value versus cost decision for reporting loans, a two-stage process was adopted in this research (Humpage, 2000; Pinto, 2011). The first stage of the study aims to determine how the variables listed in Figure 1 explained the propensity to adopt fair value rather than cost, such as their association with the proportion of loans assessed at fair value. This stage relied on linear regression models. This was followed by the next stage that focused on IFRS 9 early adopters. With a sole emphasis on 2017, which is the pre-adoption year, the aim is to investigate the reasons that have caused some of the sampled financial institutions to prematurely adopt IFRS 9, particularly fair value, while the mandatory adoption year was 2018. This second stage relied on logit models, in which the dependent variable equalled 1 for financial institutions that adopted IFRS 9 in early 2017 and measured their loans at fair value. Meanwhile, the dependent variable of 0 denoted financial institutions that did not adopt IFRS 9 in early 2017 and measured their loans at fair value. It could be inferred that the factors leading a financial institution to adopt IFRS 9 in 2017 were the same as the factors leading to the preference of financial institutions for fair value over cost when measuring loans.

3.4.1. LINEAR REGRESSION MODELS

Two models were employed to regress the percentage of loans at fair value against the variables, which were the proxy for the motivation factors drawn from the Positive Accounting Theory.

Model I is as follows:

$$LFVNLA = \beta_0 + \beta_1 LISTED + \beta_2 LTA + \beta_3 CAR + \beta_4 OWNERA + \beta_5 TETA + \beta_6 ROE + \text{Fixed Effects} + \varepsilon$$

The dependent variable, LFVNLA, represents the proportion of loans at fair value, while LISTED is a dummy variable that is equal to 1 if the financial institution is listed, with 0 denoting the non-listed institution. Furthermore, LISTED attempts to capture the effect of the listing status on the decision to adopt fair value or cost when measuring loans. Then, LTA denotes the natural logarithm of the financial institution total assets, which aims to determine the impact of the institution size on its decision to adopt fair value or cost for reporting loans. The regulatory capital ratio, CAR, attempts to ascertain the effect of regulatory capital motivations on the trade-off between fair value and cost for reporting loans. A dummy variable,

OWNERA, aims to evaluate the effect of ownership diffusion on the fair value versus cost decision. It is equal to 1 if the financial institution has a low ownership concentration, with 0 denoting high ownership concentration. Following that, TETA is the institution total equity divided par total assets with an aim to capture the effect of debt covenants on the fair value versus cost decision. The ROE (the institution return on equity) is a control variable. The fixed effects aim to consider the business model of the institution, the country where it is domiciled, and its years under study (2017, 2018, or 2019). All these variables are presented in more detail in the next section 3.5.

Model II is nearly the same as model I. However, following the strong collinearity between the variables, it included LTFUN, which is the capital funds divided by liabilities (Capital Funds Ratio) instead of TETA as a proxy for the debt covenants motivation. Additionally, ROA was included instead of ROE to proxy for profitability.

$$LFVNLA = \gamma_0 + \gamma_1 LISTED + \gamma_2 LTA + \gamma_3 CAR + \gamma_4 OWNERA + \gamma_5 LTFUN + \gamma_6 ROA + Fixed\ Effects + \varepsilon$$

3.4.2. LOGIT MODELS

Two logit models were used to investigate the determinants of IFRS 9 early adoption. Following is model III:

$$EARLY = \alpha_0 + \alpha_1 LISTED + \alpha_2 LTA + \alpha_3 CAR + \alpha_4 OWNERA + \alpha_5 TETA + \alpha_6 ROE + Fixed\ Effects + \varepsilon$$

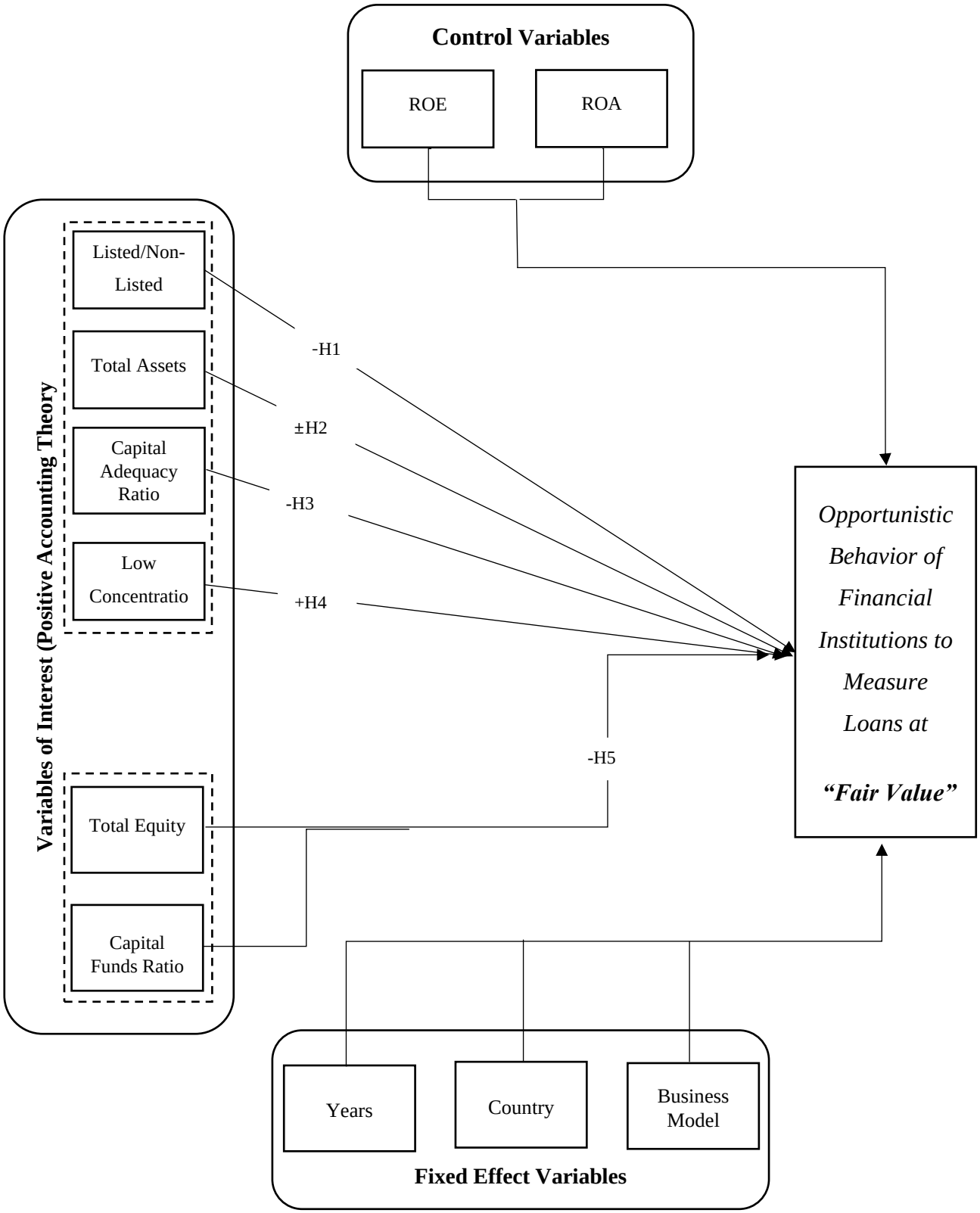
Model IV is nearly the same as model III. However, due to strong collinearity between some of the independent variables, this model includes LTFUN, which is the capital funds divided by liabilities (Capital Funds Ratio) instead of TETA as a proxy for the debt covenant motivation. Instead of ROE, ROA is included as a proxy for profitability.

$$EARLY = \lambda_0 + \lambda_1 LISTED + \lambda_2 LTA + \lambda_3 CAR + \lambda_4 OWNERA + \lambda_5 LTFUN + \lambda_6 ROA + Fixed\ Effects + \varepsilon$$

In model III and model IV, EARLY, the dependent variable, is a dummy variable that equals 1 when the financial institution adopts IFRS 9 early (e.g., 2017) and measures their loans at fair

value. However, the dummy variable that equal to 0 noted financial institutions that did not adopt IFRS 9 in early 2017 and measured their loans at fair value. In the case of both models, the independent variables are the same in models I and II. Figure 2 presents a map of all the variables under study.

Figure 2: Variables Map



3.5. EXPLANATIONS FOR VARIABLES

3.5.1. DEPENDENT VARIABLE

Loans at Fair Value (***LFV***) represents the total balance of loans measured at fair value, as reported in the annual financial report of the sampled financial institutions at the end of the fiscal year. The dependent variable was ***LFVNLA***, which represents the percentage of loans at fair value as reported at the end of the fiscal year, scaled by the beginning of the year balance of the net loans and advances to customers.

3.5.2. VARIABLES OF INTEREST

Obtained from the Positive Accounting Theory framework, the variables of interest were expected to influence the preference of financial institutions for the trade-off between cost and fair value when reporting loans.

Listed ***(LISTED)*** is a proxy that represents publicly listed financial institutions. This proxy is a dummy variable equal to 1 if the sample financial institution is publicly listed, and would be equal to 0 if the institution is not listed. According to the Positive Accounting Theory, it would be unlikely for financial institutions that are publicly listed to adopt fair value to measure loans, given that fair value introduces volatility in the institution equity. This situation may negatively impact the listed financial institutions from the external stakeholder's perspective.

The logarithm of Total Assets ***(LTA)*** is the proxy for the financial institutions' size, which represents the natural logarithm of its total assets at the end of the fiscal year. The *LTA* is an independent variable that is used to assess the impact of financial institutions' size on their preference between fair value and cost for measuring loans. Notably, larger financial institutions are potentially more exposed to political costs compared to small institutions. This condition would lead to their preference for cost upon measuring loans to minimise volatility in equity. On the other hand, larger financial institutions have more resources and abilities to manage loans measured at fair value. Therefore, size was expected to impact the trade-off between cost and fair value, although concluding whether it would be in favour of fair value or cost would be challenging.

The calculation of the Capital Adequacy Ratio (***CAR)*** was conducted based on the Basel III capital regulation. *CAR* represents the overall regulatory capital divided by risk-weighted assets, in which the total regulatory capital is equal to the aggregation of common equity tier 1 capital, additional tier 1 capital, and tier 2 capital. Furthermore, *CAR* mainly represents the risk level of financial institutions, leading to concerns by regulators and their attempt to initiate stability (Blum, 1999). Therefore, *CAR* was used as an independent variable to assess its influence on the choice of financial institutions to adopt fair value and measure their loans. Moreover, *CAR* is the end-of-year figure captured from the yearly financial reports of the sampled financial institutions and also a requirement for the financial institution to systematically comply with (Basel Committee on Banking Supervision, 2010). Breaching *CAR* may expose the financial institution to severe costs. Meanwhile, the movement of the fair value was recorded in the equity, leading to its fluctuation that could negatively impact the capital adequacy ratio. Therefore, it is noteworthy to examine the impact of *CAR* on the preference to measure loans at fair value.

Ownership Dispersion ***(OWNERA)***, which is low ownership concentration, could cause financial institutions to report loans at fair value rather than cost. The *OWNERA* is a dummy variable that is equal to 1 if the financial institution shows low ownership concentration, while the 0 dummy variable indicates high ownership concentration. The *OWNERA* is determined using the independence indicator and degree of ownership concentration coded as BvD (Horobet et al., 2019). Given that tracking loans at fair value is costly, financial institutions may be reluctant to measure loans at fair value in case of strong ownership dispersion.

Total Equity ***(TE)*** denotes the total balance of equity as reported at the end of the fiscal year of the sampled financial institutions. It is a proxy for debt-to-equity motivation. The *TE* is scaled by the beginning of the year balance of the total assets (*TA*). Meanwhile, *TETA* (*TE* scaled by *TA*) is an independent variable used to examine the debt covenant hypothesis.

Capital funding ratio (***LTFUN***) is another proxy for debt-to-equity motivation and the debt covenant hypothesis. It represents a leverage ratio for the capital funding of the balance sheet and is measured as the capital funds divided by total liabilities[13]. This aspect includes the addition of equity, hybrid capital, and subordinated debt as a percentage ratio of the liability, which demonstrates that the percentage of liabilities is provided in the form of capital funds

[13] Osiris Data Guide, Bureau van Dijk Electronic Publishing (www.bvdep.com).

(Abdel Reda et al., 2016). The *LTFUN* is a funding capital ratio in the balance sheet, which was used to examine its impact on the choices of financial institutions between fair value and cost for measuring the loans of financial institutions. It is also the end-of-year figure captured from the reported yearly financial reports of the sample financial institutions.

Total equity and capital funding ratio are proxies for the debt covenant motivation. The total equity represents the wealth of shareholders, while the capital funding ratio captures the leverage of financial institutions. Given that the equity is nearly the coverage of the funding obtained from borrowers, it should be maintained at an acceptable level to ensure appropriate debt coverage. On the other hand, changes in fair value impact the equity through unrealised gains or losses. This condition leads to unstable equity, which would negatively affect the preference toward measuring loans at fair value. Under the Positive Accounting Theory, the debt covenant hypothesis assumes that financial institutions should prefer accounting choices that prevent them from violating any of the debt covenants. Therefore, it is worth examining the impact of the total equity and capital funds ratio on the preference to measure loans at fair value.

3.5.3. CONTROL VARIABLES

The regression model introduces two control variables: return on assets *(ROA)* and return on equity *(ROE)*. The control variables were used to perform the regression with the assumption that they remained consistent during the tenure of the sample.

Return on Equity (***ROE)*** is a proxy for the performance metrics as it represents the measurement of financial institution performance. The *ROE* is a control variable, which is used to assess its influence on the decision of the financial institution for a trade-off between fair value and cost, considering that the *ROE* could be affected by recognising the unrealised gains or losses as a result of the adopted choice. It determines a financial institution capacity to generate value for its shareholders (Petersen and Schoeman, 2008). The *ROE* is equivalent to the end-of-the-year balance of the net income of the financial institution divided by the beginning of the year balance of the total equity. Subsequently, it would be demonstrated in the model as *(ROE)*.

Return on Assets ***(ROA)*** is the proxy of performance metrics and is considered one of the most used measurements of asset profitability for a financial institution, given that it is the key indicator of asset efficiency (Petersen and Schoeman, 2008). The calculation of *ROA* is

performed through the division of a financial institution net income by total assets. Following the assumption that *ROA* would have a direct association with the choice of financial institutions, it would be applied as a control variable to examine the choice of financial institutions in the trade-off between cost or fair value for measuring loans. It is noteworthy that *ROA* and *ROE* are the end-of-year figures presented in the annual financial reports of the sample financial institutions.

In the case of the selection of *ROE* and *ROA* as proxies of performance metrics, the flexibility of measuring loans at fair value or cost would impose two impacts, namely the fluctuation in the fair value and its effect on the equity. These impacts might align with the assumption of Positive Accounting Theory, in which the managers of financial institutions will adopt an accounting choice to maximise their benefits (Watts and Zimmerman 1978, 1986). In this context, the fair value choice introduces an unstable model, given that its estimation is affected by the market circumstances (D. T. Yao et al., 2018), which will have a direct impact on equity. Moreover, the changes in loan fair value would be recognised in the unrealised gains (loss), which are recorded under other comprehensive income in the equity (Guthrie et al., 2011). It is possible to consider the flexibility offered in IFRS 9 to report loans at fair value or cost as a tool for financial institutions to behave opportunistically and manage the performance matrix (e.g., *ROA* and *ROE*) for the purpose of meeting the targets (Hsu and Lin, 2016).

Performance could create an incentive for the management of financial institutions to maximise their interest by preferring one accounting choice over the other (Hagerman and Zmijewski, 1981). The preferred accounting choice may maximise the management compensation and meet the expectations of different stakeholders to avoid the report of a decline in performance (Healy and Wahlen, 1999). The preference of financial institutions to report loans at fair value could be influenced by the achievement of a specific threshold of performance ratio for accomplishing strategic objectives. For instance, there is a requirement to gain a minimal percentage of return on equity (*ROE*) to qualify for further issuing of shares (Chen and Wang, 2007) and a minimal percentage of return on assets (*ROA*) to grant the management an annual compensation. In this context, the *ROE* and *ROA* are the control variables that are predicted to offer an explanation and understanding of the financial institutions' choice to measure loans at fair value.

3.5.4. FIXED EFFECT VARIABLES

Three fixed effects variables were introduced in the regression model with an aim to control the business model (*TYPE*), the country (*COUNTRY*) of the financial institutions, and the fiscal years under study (*YEAR*).

3.5.4.1. TYPES OF BUSINESS MODEL

The business model is distinguished from one financial institution to another. It represents the types of products and services offered by each financial institution and the targeted segments. It is assumed from this condition that capabilities will vary among the types of financial institutions due to the differences in the resources, finance and human, the governance framework, the core-banking system, and most importantly the difference in the market segments and products offering. In other words, the business model of financial institutions might not involve a strategy to sell loans due to contractual restrictions or risk appetite (Page, 2014). This strategy might not allow the financial institution to obtain eligible loans for measurement at fair value. Furthermore, the expertise and internal systems set up to report loans at fair value may be inadequate. The strategy of the financial institutions is a driver of the propensity to measure loans at fair value or at cost, such as the strategy of a financial institution that aims to extend lending for achieving more lending income. Thus, the discretionary use of fair value may allow for releasing risk limits, which may increase lending and encourage competition (Corona et al., 2019).

Financial institutions' business models could affect the choice of financial institutions regarding fair value or cost based on the adaptation of IFRS 9. The business model of a financial institution is considered a comprehensive plan of organisation management of financial assets in terms of financial aspects, including cost, revenue behaviour, and market segments (Teece, 2007). For instance, some financial institutions operate under retail and commercial business models, where they earn most of their revenues by charging fees and commissions to their clients in return for the delivery of specific services and activities (Singleton-Green, 2014). Other financial institutions operate under an investment business model in which most of their revenues are generated through advisory services on sophisticated deals, such as mergers and acquisitions, deals, and trading securities among others (Singleton-Green, 2014).

The discretionary accounting choices introduce more subjectivities compared to the previous time, financial institutions are currently able to define their judgement framework when adopting one of the IFRS 9 choices (Page, 2014). This situation is in line with its plans regarding its strategy and business model (Nadia and Rosa, 2014). For instance, a financial institution with banking book activities as its primary motivation would be more motivated to consider cost rather than the fair value for measuring its loans, while a financial institution with significant trading activities will adopt fair value to measure many of its trading instruments (Fontes, Panaretou, and Peasnell, 2018). This condition leads to the question, "does the business model influence the decision of a financial institution to prefer one option over the other (fair value or cost) to measure loans following the adaptation of IFRS 9?".

Business Model ***(TYPE)*** describes the activities and speciality of the financial institutions that are performed following the business model, which was revealed by IFRS 9 to highlight the differences between financial assets/instruments to be measured at fair value or cost (Nadia and Rosa, 2014). It represents the type of financial institution in terms of the offered services and products (business line). In this thesis, the business model was regarded as a limitation to the financial institution ability to measure loans at fair value. It was also considered the fixed effect variable in the model to examine whether behaviours differ from one type of financial institution to the other. The proxy of the financial institutions' business model comprised the products and services provided by the financial institutions, which represented the business line driven by the type of financial institution.

TYPE is introduced as a fixed effect variable to represent the business model. The sample financial institutions consist of five types of business models: Commercial, Universal and Holding, Retail, Other Specialised Banks, and Governmental models. The primary distinguishing feature between the categories of financial institutions is the offered products and services. Commercial financial institutions offer services and receivables management, corporate and investment banking, asset management, SME[14] banking, and private equity and private asset management among others. Furthermore, universal and holding mainly refer to the license of holding companies that control interest and contain various financial institutions involved in the provision of financial products and services to other financial institutions. The segment of retail financial institutions mainly consists of individuals who offer a wide variety of banking services, such as personal banking, mortgage finance, saving accounts, provision of

[14] Small and Mid-Size Enterprises.

retail banking services, real estate lending, insurance transactions, and consumer finance services among others.

The other specialised banks represent financial institutions that are focused on offering particular products, such as real estate (mortgage bank), credit card factoring and leasing, wealth management, investment banking, asset management, security house, global investment, emergence, fixed income, frontier markets spanning the equity, multi-asset, investment advisory, alternative asset classes, financial planning, research and insights, and clients of financial advisers. Lastly, governmental banks are engaged in financing development projects that aim to support social and economic progress and manage the operation of the national commercial banks.

3.5.4.2. COUNTRY MOTIVATION

The IASB primarily aims to achieve a high level of quality for the accounting system (Ball, 2006) and promote comparability across different regions and countries (Hail, Leuz, and Wysocki, 2010). The approach adopted by IASB is to introduce flexibility for firms to conduct opportunistic earnings management (Capkun, Collins, and Jeanjean, 2016). However, IASB places less attention on the wide variation of institutions' motivations across countries compared to their attention to the variations in accounting standards (Florou and Pope, 2012).

Previous literature found that the implementation of international accounting standards is different across countries and regions due to the varying levels of regulatory environment quality and governance frameworks (Ball, Robin, and Wu, 2003). This finding may lead to different interpretations and applications of accounting guidelines and requirements. The countries or regions with a high level of regulatory quality most likely affect the decision of financial institutions to adopt fair value and reduce accounting mismatches. Therefore, the country is considered a fixed effect variable used to represent the operational characteristics (Fiechter, 2011).

The implementation of International Accounting Standards is related to the standard of the accounting system where an interaction takes place between the characteristics of accounting standards and their interpretation, ligitation, and execution (Barth, Landsman, and Lang, 2008). This implementation factor of International Accounting Standards depends on the features of the financial reporting system, which vary across countries. Accordingly, the adoption of fair

value would differ, considering that the development level of financial markets varies along with the estimates of fair value. Countries with developed financial markets have a higher likeliness to prefer the adoption of fair value options in comparison to the less developed financial markets (Quagli and Avallone, 2010).

The structure of the financial system and the effectiveness of monitoring tools in a region or a country plays a crucial part in the trade-off between fair value and cost (Bernard, Merton, and Palepu, 1995). The adoption of fair value requires the consideration of the potential exposure to the judgment of the costs and benefits that most likely vary across countries. For instance, the loan measurement at fair value does not have any standard systematic approach for estimation, which will increase the financial institutions' judgments while measuring loans at fair value (Bernard, Merton, and Palepu, 1995).

Several challenges and differences may pose restrictions to institutions' abilities to adopt fair value choice instead of cost. These challenges and differences may differ significantly across regions and could be related to the sophisticated structure of assets of financial institutions, political influence, regulatory requirements, and auditing environment (Beatty, Chamberlain, and Magliolo 1996). Additionally, the linguistic differences in the financial culture and IFRS across different countries and regions may delay the recognition of IFRS advantages (Kvaal and Nobes, 2012).

Notably, the reporting country significantly affects the accounting selections by the institutions (Astami and Tower, 2006), in which firm location might influence the adoption of fair value. The study by Chen et al. (2020) demonstrated an association between the location as a control variable and the adopting of fair value, which indicates that the fair value choice has the highest likeliness to be adopted by organisations with headquarters that are situated in less-developed countries, which take an advantage of the adaptability permitted in fair value to report unrealistic and unrelaible fair value estimates. To illustrate, the country of operation may affect the motivations of financial institutions to measure loans at fair value due to the legal, economic, and political system, including the influence of the government and taxation system. Given the differences between worldwide integration of the economic system, legal framework, and supervisory authorities (Hail et al., 2010), the focus on various countries appears to be important in addressing the diverse contexts, particularly when the analysis focuses on countries and regions where the market framework is different from each other (Drago et al., 2013).

Country of the sample financial institution ***(COUNTRY)*** refers to the countries of the sample financial institutions. It consists of 31 counties that cover four regions, the European Union, Africa, America, and Asia. In this thesis, *COUNTRY* was employed as the fixed effect variable to represent the country that would control the differences in financial framework, legal system, and others across the countries of the sample financial institutions. The use of the country as a fixed effect variable in this thesis was to evaluate its effect on the motivations of the financial institutions' discretion across the countries to adopt fair value to measure loans.

3.5.4.3. FISCAL YEAR

The fiscal year of the sample financial institutions ***(YEAR)*** represents the annual financial reports of the sample financial institutions that cover three fiscal years: the early adopters of IFRS 9 and reporter of loans at fair value for the fiscal year 2017, the mandatory adopters of IFRS 9 for the fiscal year 2018, and the post-mandatory adopters of IFRS 9 for the fiscal year 2019. The *YEAR* is a year-specific fixed effect variable that is introduced to the models to control the variables that are constant across the sample financial institutions, although it varies over time through the incorporation of the time-fixed effect.

The development of IFRS 9 commenced in July 2009 and the final version of IFRS 9 was released in July 2014[15]. The effectual adoption date of IFRS 9 took place in the years beginning from January 1, 2018, or after it, with advanced adoption allowed in 2017 (PWC, 2017). The adoption of IFRS 9 took place in various fiscal years that ranged from early adopters to mandatory adopters. Accordingly, this thesis was conducted over three fiscal years to cover different adoption stages of IFRS 9, which consisted of the early adopters of IFRS 9, particularly measuring loans at fair value for the fiscal year 2017 that faced the first adoption advantages and disadvantages. This followed by the adopters of IFRS 9 in the effective fiscal year 2018 to capture the decision made by the financial institutions on measuring loans (fair value versus cost) and the fiscal year 2019 following the mandatory fiscal year of adopting IFRS 9 to determine any behavioural changes in the choices made by financial institutions on measuring loans (fair value versus cost) in comparison to the effective year 2018 of IFRS 9. However, any fiscal year post-2019 was not considered, which was attributed to the absence of

[15] https://www.iasplus.com/en/standards/ifrs/ifrs9

financial institutions' annual financial reports. To illustrate this point, these annual financial reports were yet to be prepared and published at the time of conducting this thesis.

Table 3 presents a description of the listed motivation factors (variables of interest), namely the independent variables, control variables, and fixed effect variables. It also includes the loans at fair value, specifically the dependent variable, which was used for the models of this thesis.

Table 3: Summary of the motivation factors

Code	Motivation factors	Description
LFVNLA	Loans at Fair Value (Dependent Variable)	Loans at Fair Value, end of the fiscal year balance, scaled by the beginning of the year balance of the Net Loans and Advances to Customers.
LISTED	Listing Status (Variable of Interest)	Dummy Variable equal to 1 if the financial institution is publicly listed, while it is equal to 0 if it is not listed (as reported at the end of the fiscal year).
LTA	Size (Variable of Interest)	Natural logarithm of the total assets (end of the fiscal year balance).
CAR	Regulatory Requirements (Variable of Interest)	Capital Adequacy Ratio, end of the fiscal year percentage, (CAR equal to total regulatory capital divided by Risk-weighted assets) and the Total Regulatory Capital equal to Common equity tier 1 capital plus Additional Tier 1 capital plus Tier 2 capital.
OWNERA	Ownership Status (Variable of Interest)	Dummy Variable equal to 1 if the financial institution indicates Low Ownership Concentration, while 0 indicates High Ownership Concentration (as reported at the end of the fiscal year).
TETA	Shareholders' Equity (Variable of Interest)	Total Equity, end of the fiscal year balance, scaled (divided) by the beginning of the year balance of the Total Assets.
LTFUN	Capital Funding (Variable of Interest)	Capital Funds divided by Liabilities, end of the fiscal year percentage.
ROE	Return on Equity (Control Variable)	Net Income, end of the fiscal year balance, scaled (divided) by the beginning-of-year Total Equity.
ROA	Return on Asset (Control Variable)	Return on Average Assets, end of the fiscal year percentage.

Type	Business Model (Fixed Effect Variable)	Business Model of the sample financial institutions that contain the Products and Services.
Country	Country (Fixed Effect Variable)	Country of operation for each financial institution in the sample.
YEAR	Year (Fixed Effect Variable)	Year of the annual financial reports for each financial institution in the sample.

3.6. DATA COLLECTION METHOD

The research followed a sample of 133 annual reports of financial institutions for each of the three years, namely 2017 (year of possible early adoption), 2018 (year of mandatory adoption), and 2019 (post-mandatory adoption year), leading to a total of 399 observations. A total of 399 annual financial reports were collected from the BankFocus database for the financial institutions. The sole focus on the financial sector was due to the significant volumes of loans that were measured in the sector based on fair value. Following that, it was determined whether the sampled financial institutions were publicly listed from the FitchConnect database or vice versa. The financial information extracted from the 399 annual financial reports was filtered to exclude the following points:

1) Annual financial reports that are not prepared in conformity with IFRS;
2) Financial institutions with missing values on dependent and independent variables (due to the absence of historical data from all the annual financial reports for all motivation factors), and;
3) Financial institutions with an unknown value for the dependent variable, specifically the number of loans at fair value.

Table 4: Sample Characteristics

Variable/Motivation	**2017**	**2018**	**2019**
Dependent Variable			
LFVNLA			
Mean	0.052	0.047	0.05
Std. Dev.	0.19	0.15	0.16
Median	0	0.0073	0.0079

Variables of Interest	**2017**	**2018**	**2019**
Political Cost Motivations			
Size			
Mean	18.24	18.23	18.29
Std. Dev.	1.87	1.83	1.81
Median	18.28	18.19	18.33
CAR			
Mean	0.18	0.18	0.19
Std. Dev.	0.06	0.04	0.4
Median	0 .183	0.189	0.189
Listed			
Yes		186	
No		213	
OWNERA[2]			
Yes		108	
No		291	
Debt Covenants Motivations			
TETA			
Mean	0.09	0.08	0.09
Std. Dev.	0.07	0.05	0.05
Median	0.0887	0.0759	0.0788
LTFUN			
Mean	0.11	0.11	0.11
Std. Dev.	0.8	0.07	0.06
Median	0.099	0.0994	0.0972
Control Variables			
ROE			
Mean	0.38	0.33	0.49
Std. Dev.	3.51	4.58	4.83
Median	0.0766	0.0772	0.0695
ROA			
Mean	0.01	0.01	0.01
Std. Dev.	0.01	0.01	0.01
Median	0.0055	0.0053	0.0048
Fixed Effect Variables			
Business Model[3]			
BM1		168	

BM2	69
BM3	99
BM4	42
BM5	21
Countries	
France	90
UK	54
Germany	18
Denmark	24
Netherlands	24
Others	45
Ireland	18
Belgium	18
Norway	36
Korea	12
Austria	12
South Africa	9
Poland	15
Turkey	6
Hungary	6
Spain	6
Switzerland	6
[2]**Ownership** (Horobet et al. 2019)	A (Low ownership concentration)
[3]**Business Model**	BM1: Commercial Bm2: Holding Bm3: Retail Bm4: Other Specialized Financial institutions Bm5: Governmental

Based on the above Table 4 that presents a summary of the characteristics of the collected data that were used to run the regressions, several elements significantly influenced the data selection. The first element is the geographical coverage whereby, which necessitates ensuring the analays is of many counties as possible to improve the potential of generalising the thesis results. Accordingly, the choice for the sample was made to include Countries from a range of geographical regions (Europe, Africa, America, and Asia). The second element represents the fiscal year of the annual reports, with the focus placed on obtaining data for the financial institutions in the years of 2019, 2018, and 2017. This action was performed to investigate the difference between the voluntary adaptation of IFRS 9 for the fiscal year (2017), the mandatory adoption of IFRS 9 for the fiscal year (2018) to trigger the first-time adoption effects, and the post-mandatory adoption of IFRS 9 for fiscal year (2019). Overall, limitations were present on

the availability of data, followed by the challenges in reporting loans at fair value, prompting BankFocus to recently create a code for fair value.

3.7. DESCRIPTIVE STATISTICS

The descriptive analysis provides a summary of the data set, which describes and offers an understanding of the data trends. Table 5 presents the descriptive statistics for the motivation factors following the sample size of 133 financial institutions for each of the three years in the time series (2017, 2018, and 2019). It could be seen that the average percentage of loans at fair value to the balance of the net loans and advances to customers (*LFVNLA*) amounted to 5% with the lowest percentage of zero and the highest percentage of 1.15%. Meanwhile, the average percentage of *LFVNLA* decreased from 5% for 49 observations in 2017 (preadoption year) to 4.6% for 108 observations in 2018 (mandatory adoption year) and 5% for 123 observations in 2019 (post-adoption year). The number of observations for *LFVNLA* demonstrated that the adoption of fair value by financial institutions increased in 2017 (preadoption year), 2018 (mandatory adoption year), and 2019 (post-adoption year), with 49, 108, and 123 observations, respectively. Moreover, the standard deviation of 2017 amounted to 19%, which was higher than the standard deviation for 2018 and 2019 of 15% and 16%, respectively (Table 5). This result indicated that some of the financial institutions exhibited a large proportion of loans measured at fair value.

The mean of the capital adequacy ratio (*CAR*) amounted to 19%, with the lowest percentage of zero and the highest percentage of 49%. The *CAR* remained constant across the sample financial institutions for the years of 2017, 2018, and 2019 at 18%, 19%, and 19%, respectively (Table 5). It was also reported that the standard deviation for the three fiscal years amounted to 6%, 5%, and 4.3%, respectively.

The mean of the total equity (*TETA*) was 9% with a standard deviation of 6%, indicating that most of the assets of the sample financial institutions were generating income with a minimum percentage of zero and a maximum percentage of 67%. The *TETA* remained constant across the sample financial institutions at 9% for the three fiscal years of 2017, 2018, and 2019 (Table 5).

Table 5: Descriptive Statistics

Panel A: Descriptive Statistics for Three Fiscal Years

	N	Mean	Std. Dev.	Min	Max
Dependent Variable					
LFVNLA	280**	0.050	0.17	0.00	1.15
Variables of Interest					
CAR	399	0.19	0.05	0	0.49
TETA	399	0.09	0.06	0	0.67
LTFUN	399	0.11	0.07	0	0.82
LTA	399	18.25	1.84	13.99	21.72
LISTED	399	0.47	0.50	0	1
OWNERA	399	0.27	0.45	0	1
Control Variables					
ROE	399	0.18	4.35	-52.80	55.72
ROA	399	0.01	0.01	-0.05	0.04

Panel B: Descriptive Statistics for each year (2017, 2018, and 2019)

Year	2017			2018			2019		
	N	Mean	Std. Dev.	N	Mean	Std. Dev.	N	Mean	Std. Dev.
Dependent Variable									
LFVNLA	4.69%*			5.24%*			4.90%*		
	49**	0.05	0.19	108**	0.046	0.15	123**	0.05	0.16
Variables of Interest									
CAR	133	0.18	0.06		0.19	0.05		0.19	0.043
TETA	133	0.09	0.07		0.09	0.05		0.09	0.05
LTFUN	133	0.11	0.08		0.11	0.07		0.11	0.06

	N	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
LTA	133	18.25	1.88	18.24	1.83	18.29	1.82
LISTED	133	0.47	0.50	0.47	0.50	0.47	0.50
OWNERA	133	0.27	0.45	0.27	0.45	0.27	0.45
Control Variables							
ROE	133	0.38	3.51	-0.32	4.58	0.49	4.83
ROA	133	0.01	0.01	0.01	0.01	0.01	0.01

**Represents the percentage of loans measured at fair value out of the net loans and advances to customers*

***Represents the observations number of the financial institutions' loans measured at fair value*

Capital funding *(LTFUN*) demonstrated an average of 11% for the three fiscal years of the sample financial institutions with a standard deviation of 7%. A minimum percentage of zero and a maximum percentage of 82% were recorded. The *LTFUN* also exhibited a stable percentage of 11% for 2017, 2018, and 2019 (Table 5).

The mean size of total assets (*LTA*) amounted to $18.25 million for the three fiscal years of the sample financial institutions with a standard deviation of 1.84, a minimum size of 13.99, and the maximum size of 21.72. The mean for *LTA* for the fiscal years 2017 and 2018 was approximately similar ($18.25 million and $18.24 million, respectively) and slightly increased to $18.29 million in the fiscal year 2019 (Table 5).

In the case of the listed financial institution, a mean of 47% was recorded with a standard deviation of 50%. The mean for the listed institution was approximately similar to the mean for fiscal years of 2017, 2018, and 2019, which amounted to 47%. Moreover, the lowest value of 0 represented non-listed institutions, while the highest value of 1 represented listed financial institutions.

The mean of ownership dispersion (*OWNERA*) amounted to 27%, with a standard deviation of 45% for the selected sample while the mean was fixed at 27% across 2017, 2018, and 2019 (Table 5). The ownership dispersion exhibited the highest value of 1, which indicated low ownership concentrations, while the lowest value of 0 indicated other types of ownership concentrations.

The mean of the return on equity (*ROE*) amounted to 18% with a standard deviation of 4.35, indicating that most of the sample financial institutions were profitable with a minimum of -52.80 and a maximum of 55.72. A profit average of 38% for the fiscal year 2017, a loss average of -32% for the fiscal year 2018, and a profit average of 49% for the fiscal year 2019 were also recorded (Table 5). In terms of performance indicators motivations, the return on assets (*ROA*) demonstrated a mean for three years at 1% with a standard deviation of 1%, the lowest percentage of -5%, and the highest percentage of 4%. The *ROA* remained stable for the fiscal years 2017, 2018, and 2019 at 1% (Table 5).

Table 6 shows the correlation matrix between the dependent variable (loans measured at fair value *(LFVNLA)*), the independent motivation factors of the Positive Accounting Theory, and the control variables. The significance level was reported as a *p*-value that amounted lesser than 0.05. Based on the table, the dependent variable of loans measured at fair value *(LFVNLA)* had a negative correlation with the independent motivation factors of Positive Accounting Theory, the total equity *(TETA)*, and the capital funding *(LTFUN)*. This result indicated that higher total equity and ratio of capital funding would reduce the percentage of loans measured at fair value. Additionally, the loans measured at fair value *(LFVNLA)* were positively associated with the control variable, return on equity (*ROE).*

The correlation matrix demonstrated that capital adequacy ratio *(CAR)* had a negative association with the independent motivation factors of Positive Accounting Theory, the listed types of financial institution *(LISTED)* and ownership dispersion *(OWNERA)*, and the control variables, return on assets (*ROA)*, and return on equity (*ROE*). This result suggested that the listed financial institutions with higher ownership dispersion had a lower capital adequacy ratio. Furthermore, the correlation matrix demonstrated that total assets *(LTA)* were negatively associated with the capital funding *(LTFUN)*, control variable, and return on assets (*ROA)*. This finding indicated that larger financial institutions exhibited lower ratios of capital funding and *ROA*.

The listed type of financial institution *(LISTED)* and the ownership dispersion *(OWNERA)* were positively associated with the total assets *(LTA)*, indicating that the listed financial institutions with higher ownership dispersion showed higher total assets. The correlation matrix illustrated that the listed type of financial institution *(LISTED)* was positively correlated with the independent motivation factors of Positive Accounting Theory, capital funding *(LTFUN)*, ownership dispersion *(OWNERA)*, the control variables, and return on assets (*ROA)*. It was

implied that the listed financial institutions had higher ownership dispersion, with higher ratios of capital funds and *ROA*.

Total equity *(TETA)* was negatively correlated with the independent motivation factors of Positive Accounting Theory, total assets *(LTA)*, and ownership dispersion *(OWNERA)*. This finding indicated that higher total equity led to lower total assets and ownership dispersion. On the other hand, total equity *(TETA)* was positively correlated with the independent motivation factors of Positive Accounting Theory, the listed type of financial institution *(LISTED)*, the capital funding *(LTFUN)*, control variables, and return on assets (*ROA)*. It was implied that financial institutions with higher total equity emerged as listed financial institutions with a higher ratio of capital funds and the ratio of *ROA*.

The negative association between ownership dispersion *(OWNERA)* and capital funding *(LTFUN)* suggested that financial institutions with greater ownership dispersion had a lower capital funding ratio. Meanwhile, a positive association was recorded between *ROA*, capital funding *(LTFUN)*, and return on equity (*ROE*). It could be seen that the increase in the percentage of the return on assets would increase the ratio of capital funding and the ratio of *ROA*.

Table 6: correlation matrix between the dependent variable LFVNLA and the independent motivation factors

Motivation	*LFVNLA*	*CAR*	*ROE*	*TETA*	*LTA*	*LISTED*	*OWNERA*	*ROA*	*LTFUN*
LFVNLA	1.00								
CAR	0.0259	1.00							
ROE	0.1846*	-0.0986*	1.00						
TETA	-0.1426*	0.0120	-0.0372	1.00					
LTA	0.0614	-0.0608	0.0075	-0.4690*	1.00				
LISTED	-0.0329	-0.1161*	-0.0204	0.0889*	0.1231*	1.00			
OWNERA	0.0054	-0.0894*	0.0415	-0.1469*	0.2797*	0.3466*	1.00		
ROA	0.0087	-0.1107*	0.3069*	0.5377*	-0.2980*	0.2003*	-0.0745	1.00	
LTFUN	-0.1523*	0.0706	-0.0371	0.8914*	-0.4048*	0.1306*	-0.1336*	0.5424*	1.00

* $p < 0.05$

CHAPTER 4: RESULTS AND DISCUSSION

The chapter is organised into four sections. The next section 4.1 presents preliminary tests for multicollinearity checks. Section 4.2 illustrates the linear regression results, followed by Section 4.3 that demonstrates the results of logit regressions for early adopters. Section 4.4 discusses the results for each motivation factor within the Positive Accounting Theory.

4.1. PRELIMINARY TESTS FOR MULTICOLLINEARITY

Various tests were performed to validate the robustness of the regression findings. The multicollinearity, which includes the intercorrelations among two or more independent variables, was examined through the calculation of the Variance Inflation Factor (VIF) (Dupuis and Victoria-Feser, 2013). The VIF is a commonly used measure for determining whether the level of multicollinearity could be tolerated or vice versa (Shieh, 2011). Notably, multicollinearity is considered problematic when VIF values exceed 10 (Lee, 2015), while the mean VIF for the model of 2.33 is considered low. Additionally, there was no VIF score of more than 10 for each independent variable in the model, indicating that multicollinearity did not have the likeliness to be an issue for the regression models in this thesis. Nevertheless, given that profitability for *ROE* and *ROA*, and indebtedness for *TETA* and *LTFUN* identified the same characteristics, these variables were included in two distinct models. Following that, *ROE* and *TETA* were tested in Model I, while *LTFUN* and *ROA* were tested in Model II. Table 7 outlines the VIF results for the independent variables.

Table 7: VIF

Motivation	VIF	1/VIF
CAR	1.07	0.94
ROE	1.21	0.83
TETA	5.40	0.19
LTA	1.39	0.72
LISTED	1.26	0.79
OWNERA	1.24	0.81
ROA	1.83	0.55
LTFUN	5.23	0.19
Mean VIF	2.33	

4.2. RESULTS OF LINEAR REGRESSIONS

The findings of the regression analysis demonstrated the association between the proportion of loans measured at fair value (the dependent variable) and the motivation factors (the independent variables) of the Positive Accounting Theory, which may explain the opportunistic behaviour of financial institutions upon selecting fair value or cost to report loans. The regression results are presented in Tables 8, 9, 10, and 11. For each regression model, the table demonstrates the regression coefficients, t-stats, and p-values.

As shown in the following Tables 8 and 9, the results of two regression models showed a difference between the adjusted R2 of the truncated model and full model for the model I, amounting to 8.97% and 64.33% respectively. Similarly, model II showed a difference between the adjusted R2 of 9.31 and 63.59% for the truncated model and full model respectively. This notable difference in the adjusted R2 of the truncated models and full models presented evidence of the usefulness of control variables and fixed effects. Table 8 presents the results of the regressions of the proportion of loans measured at fair value against the motivations of the Positive Accounting Theory for the two designed models of this thesis:

Table 8: Truncated Model - Regressions of the proportion of loans at fair value (LFVNLA) against the proxies for the Motivations of Positive Accounting Theory

		Model I			Model II		
Independent Variables	Prediction	Coefficient	T-stat	P-value	Coefficient	T-stat	P-value
Variables of Interest							
Listed	(-)	-0.005	-0.29	0.774	-0.002	-0.12	0.905
LTA	(+)/(-)	0.003	1.85	0.065*	0.003	1.79	0.075*
CAR	(-)	0.126	0.77	0.440	0.154	0.93	0.351
OWNERA	(+)	0.005	-0.23	0.817	-0.006	-0.28	0.777
TETA	(-)	-0.3610	-2.52	0.012**			
LTFUN	(-)				-0.328	-2.79	0.005***
Adjusted R2		8.97%			9.31		
F test		8.87	(p-value = 0.1)		9.19	(p-value = 0.1)	

T statistics in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Based on the above table, the findings of the above regression (Truncated Model), which were relevant to the political cost motivation factors of the Positive Accounting Theory, showed that the total assets ("*LTA*"), a proxy for the size, was positive and significant for both model I and model II (p-value < 0.1). Overall, the results were relevant for the total equity ("*TETA*") and capital structure ("*LTFUN*"), which were the proxies for the debt covenant hypothesis that were negative and significant with p-value < 0.05 and p-value < 0.01, respectively.

The following Table 9 illustrates the results of the regressions of the proportion of loans measured at fair value against the motivations of the Positive Accounting Theory, control variables, and fixed effect for the two designed models of this thesis:

Table 9: Full model - Regressions of the proportion of loans at fair value (LFVNLA) against the motivations of Positive Accounting Theory, Control Variables, and Fixed Effect

		Model I			Model II		
Independent Variables	Prediction	Coefficient	T-stat	P-value	Coefficient	T-stat	P-value
Variables of Interest							
Listed	(-)	-0.030	-2.04	0.042**	-0.031	-2.07	0.039**
LTA	(+)/(-)	0.005	3.87	0.000***	0.005	3.96	0.000***
CAR	(-)	-0.217	-1.85	0.066*	-0.216	-1.80	0.073*
OWNERA	(+)	-0.006	-0.40	0.692	-0.003	-0.18	0.861
TETA	(-)	-0.345	-3.41	0.001***			
LTFUN	(-)				-0.337	-3.49	0.001***
Control Variable							
ROE		0.003	2.84	0.005***			
ROA					1.64	1.74	0.082*
Fixed Effect Variables							
Type		Yes			Yes		
Country		Yes			Yes		
Year		Yes			Yes		
Adjusted R2		64.33%			63.59%		
F test		26.70	(p-value=0.1)		25.88	(p-value=0.1)	

T statistics in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The findings of the above regression, which were relevant to the political cost motivation factors of the Positive Accounting Theory, demonstrated that the capital adequacy ratio ("*CAR*") was negative and significant for model I and model II (p-value < 0.1). This result supported Hypothesis 3 of this thesis, which states, *"financial institutions with low regulatory capital are less likely (have a lower propensity) to report loans at fair value"*. It was also suggested that the failure of financial institutions to meet the regulatory capital as per regulatory requirements would lead to a regulatory breach. Subsequently, financial institutions with lower regulatory capital would have less motivation for measuring their loans at fair value to manage the regulatory capital.

The coefficients for total assets ("*LTA*"), a proxy for size, were positive and highly significant for model I and model II (p-value < 0.01). This result was in line with Hypothesis 2a, stating that *"large financial institutions are more likely (have a higher propensity) to report loans at fair value"*. It was suggested that larger financial institutions have an internal infrastructure that facilitates the adoption of fair value. Conversely, Hypothesis 2b states that "*large financial institutions are less likely (have a lower propensity) to report loans at fair value"* to reduce political costs, which was not in line with the results.

The proxies within the Positive Accounting Theory were the dummy variables for the listing status ("*LISTED*") and ownership dispersion ("*OWNERA*"). Specifically, *LISTED* had a significant association with the choice of financial institutions to measure their loans at fair value. The coefficient for *LISTED* was negative and significant (p-value < 0.05) for models I and model II. This result supported Hypothesis 1, which states "*listed financial institutions are less likely (have a lower propensity) to report loans at fair value"*. It was also indicated that publicly listed financial institutions avoided reporting loans at fair value to limit the volatility of their equity. Conversely, *OWNERA* was not significantly associated with the choice of financial institutions to measure their loans at fair value. Following that, Hypothesis 4, which is *"financial institutions with dispersed ownership are more likely (have a higher propensity) to report loans at fair value"* to reduce political costs, was not supported by the results of this thesis.

Overall, the findings were in line with the debt covenant hypothesis, which states that the increase in indebtedness would reduce the propensity to adopt fair value upon measuring loans. The proxies for the debt covenant hypothesis, ("TETA") and ("LTFUN"), were negative and highly significant (p-value < 0.01). This result was in agreement with Hypothesis 5, which

states that *"financial institutions with high debt-to-equity ratios are less likely (have a lower propensity) to report loans at fair value"*. In summarising the control variables, the two proxies for profitability, ("*ROE*") and ("*ROA*"), were positive and significant (p-value < 0.01 and p-value < 0.1), indicating that higher financial institution profitability would lead to a higher incentive to measure loans at fair value.

4.3. RESULTS OF LOGIT MODELS FOR EARLY ADOPTERS

Table 10 presents the results of the logit regression, which was executed with a focus on early adopters of IFRS 9, particularly measuring loans at fair value in the fiscal year 2017. This action was for understanding the motivations that caused financial institutions to adopt IFRS 9 earlier than mandatorily required by the IASB. The dependent variable *EARLY* was equal to 1 for financial institutions that adopted IFRS 9 as early as 2017 and measured their loans at fair value, with 0 for financial institutions that did not adopt IFRS 9 as early as 2017 and measured their loans at fair value. Furthermore, the significance levels of the motivation factors of the Positive Accounting Theory, which were associated with the portion of loans at fair value (dependent variables), were reported as a *p*-value that was either less than 0.05 or 0.1.

As shown in the following Tables 10 and 11, the findings of two regression models demonstrated that the difference between the log-likelihood of the truncated model and full model for model III amounted to -80.91 and -46.22, respectively. Meanwhile, this difference between the aforementioned models for model IV amounted to -78.14 and -45.08, respectively. In comparison to the log-likelihood value of the truncated model, the higher log-likelihood value of the full model offered evidence of the usefulness of control variables and fixed effects to offer a better fit to the data. Table 10 demonstrates the findings of the logit regression for the financial institutions' motivations of Positive Accounting Theory to measure loans at fair value at the pre-adoption stage (early adopter).

Table 10: Truncated Model – Logit models for IFRS 9 early adopters against the proxies for the Motivations of Positive Accounting Theory

	Model III			Model IV		
Independent Variables	Coefficient	Z	P>|z|	Coefficient	Z	P>|z|
Variables of Interest						
Listed	0.242	0.58	0.562	0.426	0.98	0.327
LTA	-0.060	-1.58	0.114	-0.069	-1.78	0.074*
CAR	8.387	2.32	0.020**	11.799	2.88	0.004***
OWNERA	0.239	0.52	0.606	0.199	0.42	0.671
TETA	-13.149	-2.94	0.003***			
LTFUN				-16.63	-3.44	0.001***
Log-likelihood	-80.91			-78.14		
Wald chi2(18)	17.09	(p-value = 0.1)		18.82	(p-value=0.1)	

T statistics in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Based on this table, the results relevant to the political cost motivation factors of the Positive Accounting Theory indicated that the capital adequacy ratio ("*CAR*") was positive and significant for model III (p-value < 0.1). Similarly, *CAR* was positive and highly significant for model IV (p-value < 0.01). Following that, the total assets ("*LTA*"), a proxy for the size, was negative and significant solely for model IV (p-value < 0.1). The results relevant for the total equity ("*TETA*") and capital structure ("*LTFUN*"), which were proxies for the debt covenant hypothesis, were negative and highly significant (p-value < 0.01) for models III and IV.

Table 11: Full Model - Logit models for IFRS 9 early adopters against the motivations of Positive Accounting Theory, Control Variables, and Fixed Effect

		Model III			Model IV		
Independent Variables	Prediction	Coefficient	Z	P>|z|	Coefficient	Z	P>|z|
Variables of Interest							
Listed	(-)	0.010	0.01	0.990	-0.056	-0.07	0.947
LTA	(+)/(-)	-0.093	-1.63	0.103	-0.109	-1.87	0.062*
CAR	(+)	8.957	1.60	0.111	11.410	1.73	0.085*
OWNERA	(+)	0.791	1.04	0.300	0.848	1.12	0.262
TETA	(-)	-13.780	-1.55	0.120			
LTFUN	(-)				-11.202	-1.49	0.137

Control Variables	Coefficient	Z	P>|z|	Coefficient	Z	P>|z|
ROE	-0.579	-0.09	0.926			
ROA				-58.600	-0.69	0.487
Fixed Effect Variables						
Type	Yes			Yes		
Country	Yes			Yes		
Log-likelihood	-46.22			-45.08		
Wald chi2(18)	22.07	(p-value = 0.1)		22.23	(p-value=0.1)	

T statistics in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 11 demonstrates the result of the logit regression for the financial institutions' motivations of Positive Accounting Theory and Non-Positive Accounting Theory to measure loans at fair value at the pre-adoption stage (early adopter). It was indicated from the above logit regression that was relevant to the political cost motivation factors of the Positive Accounting Theory that the capital adequacy ratio ("*CAR*") was positive and significant solely for model IV (p-value < 0.1). This result demonstrated that the financial institutions with a more significant degree of regulatory capital were more motivated to adopt IFRS 9 early and measure their loans at fair value. The coefficients for total assets ("*LTA*"), a proxy for size, were negative and significant solely for model IV (p-value < 0. 1). This result indicated that larger financial institutions were not attributed to early adoption of IFRS 9 and measurement of their loans at fair value.

Following the results of models I and model II of the full model, Table 12 presents the results for each hypothesis that showed statistical significance along with the nature of the association (e.g., positive or negative). A summary of the results is also presented, which offers an explanation and understanding of the opportunistic behaviour of financial institutions when the fair value to measure loans is considered.

Table 12: Results Summary of Hypotheses

No	Hypothesis	Variables	Predictions	Results
1	Listed financial institutions are less likely (have a lower propensity) to report loans at fair value.	Listed	(-)	Supported (-)
2.1	Large financial institutions are more likely (have a higher propensity) to report loans at fair value.	LTA	(+)	Supported (+)
2.2	Large financial institutions are less likely (have a lower propensity) to report loans at fair value.	LTA	(-)	Not Supported
3	Financial institutions with low regulatory capital are less (have a lower propensity) to report loans at fair value.	CAR	(-)	Supported (-)
4	Financial institutions with dispersed ownership are more likely (have a higher propensity) to report loans at fair value.	OWNERA	(+)	Not Supported
5	Financial institutions with high debt-to-equity ratios are less likely (have a lower propensity) to report loans at fair value.	TETA/LTFUN	(-)	Supported (-)

4.4. DISCUSSION

This section presents a discussion of the findings of the analysis conducted to test the thesis questions and hypotheses established in Chapter 2 regarding the financial institutions' motivations to adopt fair value to measure loans. Accordingly, the results determined the nature of the association of the proportion of loans measured at fair value (dependent variable) and variables of interest (independent variables) of the Positive Accounting Theory. Following that, the results were discussed in detail for each motivation factor within the Positive Accounting Theory and categorised into two motivations as political cost motivations and debt covenants motivation. Discussion was also made on the results regarding the control variables and the early adopter (e.g., logit regression results).

4.4.1. POSITIVE ACCOUNTING THEORY MOTIVATIONS

The following sections discuss the results of the Positive Accounting Theory motivations to adopt fair value to measure loans.

4.4.1.1. POLITICAL COST MOTIVATIONS FACTORS

The discussion of the financial institutions' motivations, which include adopting fair value versus cost while measuring loans and opportunistically managing the political cost motivations (listed type, size, regulatory requirements, and ownership dispersion), are summarised in the following sections.

4.4.1.1.1. LISTED MOTIVATION

The results of this thesis indicate that the motivation to measure loans at fair value is influenced by the listed and non-listed status of financial institutions. As previously mentioned, the full model results of this thesis based on models I and II demonstrated that the listed financial institutions had a lower propensity to report loans at fair value. The listed financial institutions were more motivated for measuring their loans at cost. Furthermore, the carrying amount under cost rather than the fair value option would be fixed, which did not change due to market conditions. In contrast, the carrying value of loans at fair value varies based on the changing interest rates (Linsmeier, 2011), leading to the recognition of unrealised gains or losses. This was followed by increased volatility of the financial institution's equity (Holthausen and Watts, 2001). Accordingly, the listed financial institutions were expected to reduce the proportion of loans reported at fair value to avoid volatility in equity and possible political attention.

In contrast to the non-listed financial institutions, the equity volatility could expose the listed financial institutions to a political cost, given that the listed institutions could be perceived by investors and regulatory bodies as risker financial institutions (Godwin et al., 1998). Two outcomes took place after this situation: 1) implementation of more regulatory restrictions to limit their risk, and; 2) higher cost of equity capital aimed at offsetting additional uncertainty. The listed financial institutions aim to avoid violating any commitment, such as the expectations and valuations of the capital market, the agreements in place in the aspect of accounting numbers, and other regulatory requirements (Healy and Wahlen, 1999), considering that violation to any rules would have a negative impact on its equity price. Therefore, the listed

financial institutions would be more motivated to measure loans at cost instead of fair value to reduce the volatility of equity. This aspect reflects an increase in shares' price risk with a high cost of equity, which may adversely affect the desire of shares investors and lead to the reduction of the prices of shares (Hodder et al., 2006).

The fair value choice could be more relevant to the stakeholders (Benston, 2006) as it allows financial institutions to provide market value with more dynamics (Tutino and Pompili, 2017). However, this statement varies depending on different stakeholders. In some cases, listed financial institutions are required to fulfil a specific requirement, which is not the case for non-listed financial institutions, such as the requirement to gain a certain return on equity prior to the application to be permitted for further issuing shares through rights concerns (Chen and Wang, 2007). Therefore, listed financial institutions would be less motivated to suffer the violation that is possibly encountered due to the implementation of fair value to measure loans.

The results of the literature supported the results of this thesis about the motivations of listed and non-listed financial institutions towards the trade-off between cost and fair value for measuring loans. The result in this thesis indicated weaker motivations of the listed financial institutions to measure their loans at fair value to minimise exposure to share price fluctuations, which subsequently affected the decisions of the investors. To illustrate, investors' decisions are made based on the reported figures in the financials (Holthausen and Watts, 2001). This aspect is in line with the research by Song et al. (2010), which highlighted an association between the loans measured at fair values and the market values of shares that adversely affected the decisions of investors in the shares of financial institutions. It also agreed with the study by Hodder, Hopkins, and Wahlen (2006) who confirmed that fair value volatility negatively affects share prices and has a positive association with the cost of the financial institution's equity.

It is clear that the volatility of equity is considered a key figure for shares investors (Holthausen and Watts, 2001), where the possible recognition of unrealised fair value losses could lead to a decrease in shareholders' equity, which subsequently causes a negative impact on the net wealth of shareholders (Fogelson, 1978). Additionally, the results of this thesis on the nature of the association between motivation to measure loans at fair value and publicly-listed financial institutions were in line with the result by Beatty and Harris (1999), which illustrated a notable and adverse correlation between the level of listed (public) financial institutions and the adoption of fair value choice in comparison to the non-listed financial institutions. Meanwhile,

the findings by Pompili and Tutino (2018) illustrated strong evidence of the significant and adverse relationship between the adoption of fair value and listed banks. The significant and negative association between the listed financial institutions and the choice of financial institutions to measure their loans at fair value was in line with the findings of several previously highlighted studies.

The literature has demonstrated the preference of listed financial institutions to adopt cost rather than fair value to measure loans to minimise the exposure to share price risk. The type of financial institution (e.g., listed versus non-listed institutions) influences the decision to measure loans at fair value or cost (Abarbanell and Lehavy, 2003). It is possible that the choice of financial institutions between fair value and cost varies based on the stakeholders' interests, which causes different classes of stakeholders to have different focuses. This is followed by making the choice to align with the differences among the stakeholders (Kuo, 1993).

In summary, listed financial institutions' decision to adopt the fair value option to measure loans is influenced by the political cost motivation. Listed financial institutions would attempt to adopt cost to measure loans and avoid the equity volatility introduced by fair value as a result of the recognition of unrealised gains (loss). This action is also performed to avoid any possible consequences, such as the increase in equity cost, share price risk, and regulatory requirements to meet particular objectives of the external stakeholders, such as meeting the regulatory requirements to make a new stock issuance among others. It is possible to confirm that the trade-off between fair value and cost to report loans for the listed financial institutions is opportunistic rather than being solely based on technical considerations.

4.4.1.1.2. SIZE MOTIVATION

The results of this thesis demonstrated that the motivation to measure loans at fair value was influenced by the size of financial institutions. These results were based on two perspectives: 1) larger financial institutions have a higher propensity to report loans at fair value as they have more resources and expertise to track loans reported at fair value, and; 2) larger financial institutions have a lower propensity to report loans at fair value to avoid political attention to consider it at low risk by their supervisory authorities. In this case, the equity volatility introduced by fair value due to the recognition of unrealised gains is taken into account (losses).

The full model results of this thesis based on models I and II have demonstrated that larger financial institutions are more likely to report loans at fair value. This statement supports the first perspective that large financial institutions have adequate and appropriate resources to facilitate reporting loans at fair value. However, the results of this thesis did not support the second perspective, which considered the tendency of financial institutions to adopt a conservative accounting practice to reduce political attention. This condition leads to the preference for cost over fair value to measure loans to avoid affecting the volatility of total equity (Sun and Liu, 2011).

Several results of previous literature supported the results of this thesis in relation to the first perspective. Specifically, the results by D. Yao et al. (2018) were in line with the findings of this thesis, which stated that the behaviour of the banks towards adopting fair value options to measure loans was affected by the size of the assets of financial institutions. It was also reported that the size of financial institutions was positively related to the percentage of assets measured at fair value (D. Yao et al., 2018). Meanwhile, the study by Alves (2019) also showed that size, measured as total assets and the adoption of the fair value choice instead of the cost was positively and significantly associated with larger institutions with a tendency to adopt fair value more than smaller institutions. The research by Botosan et al. (2011) showed additional results in line with the result of this thesis. Specifically, it demonstrated that the size of financial institutions was positively associated with the transfer of assets to fair value measurement, which was attributed to the access of large financial institutions to the adequate data source as opposed to small institutions. Similarly, the results by Fiechter (2011) illustrated that large financial institutions had a higher likeliness for adopting fair value options.

Large financial institutions exhibit advantages that allow them to measure their loans at fair value, while small financial institutions are less motivated to adopt fair value due to their lower ability for this action. The adoption of fair value is attributed to different factors, which could be related to tax benefits, leverage, stock prices, system, and expertise among others. It is possible to assume that larger financial institutions are equipped with more advanced internal infrastructure expertise and data to measure the reported loans at fair value (D. Yao et al., 2018). This aspect increases the motivation of large financial institutions to report loans at a fair value compared to small institutions.

The adoption of fair value to measure loans may be challenged by multiple factors relevant to the unavailability of an active market and inadequate technical skills. These aforementioned

factors would vary from one financial institution to another, which might limit the reliability of the fair value estimations (Kumarasiri and Fisher, 2011). The availability of financial and human resources for large financial institutions compared to small institutions indicates a higher likeliness for large financial institutions to possess the required capabilities for adequately estimating the fair value of loans. This feature would clearly increase the reliability in the estimation of fair value to measure loans for large financial institutions compared to smaller institutions.

The skills and resources are naturally facilitating large financial institutions to have a portfolio with various and sophisticated instruments that could be measured by fair value (Guthrie et al., 2011). This aspect increases the opportunity for large financial institutions to engage in transactions that provide several fair value choices. It also significantly increases the size of the adopters of fair value choice compared to the non-adopters. In this case, the adopters of fair value choice have more instruments that are eligible for measuring it at fair value. This action encourages large financial institutions to show opportunistic behaviour based on their strategies by relying on the existing infrastructure to measure their loans at fair value following their discretions.

In other cases, it is a requirement for financial institutions to maintain a minimum threshold of total assets to avoid any political pressure. Size has an influence on the strategy of financial institutions through the adoption of fair value to measure loans, which could contribute to the reduction of the negative impact on the number of reported total assets (Hagerman and Zmijewski, 1981). Given that the size of financial institutions is positively associated with the choice of fair value, financial institutions are able to behave opportunistically through the flexibility of adopting fair value choice to measure loans to inflate their total assets (Pompili and Tutino, 2018).

Under the second perspective of the results relevant to the size of financial institutions stating that larger financial institutions have a lower propensity to report loans at fair value to avoid political attention by their supervisory authorities, it was not supported by the results of this thesis. This political attention appears to discourage the financial institution from measuring loans at fair value as a result of the volatility model of fair value. The larger financial institutions do not consider the equity volatility introduced by fair value, which is attributed to the recognition of unrealised gains (losses). Hence, the political cost argumentations within Positive Accounting Theory under the second perspective do not motivate the financial

institutions to consider a conservative accounting option (e.g., cost rather than fair value) to minimise any possible public criticisms. Following that, the criticism might arise from the political pressure to achieve a specific performance threshold to create job security and improve economic growth among others.

In summary, the size of the total assets of the financial institutions is significantly and positively associated with the report of their loans at fair value, which induces higher motivation to large financial institutions to report loans at a fair value compared to smaller institutions. This aspect is in line with the findings of several previously mentioned literature. The literature demonstrated the motivation of large financial institutions to report loans at fair value due to the availability of the required resources (e.g., staff, systems, skills) in large financial institutions. In contrast of the second perspective that assumes following the conservative accounting approach, this thesis illustrated that large financial institutions do not consider the political attention of various stakeholders, which is expected to be more for stakeholders of large financial institutions compared to small institutions. This condition causes large financial institutions to commit different accounting choices (Kuo, 1993).

The flexibility that is offered within IFRS 9 by trading off between fair value and cost would be an incentive for large financial institutions rather than smaller institutions to show opportunistic behaviour. According to the strategy of financial institutions considering their capabilities, this behaviour is not based on technical considerations. Therefore, the size of financial institutions plays its part in identifying the motivation of the financial institutions upon selecting between fair value and cost. Specifically, large financial institutions have a higher likeliness (have a higher propensity) to report loans at fair value when they are equipped with the required tools, techniques, skills, and expertise that enable them to adopt fair value to measure their loans.

4.4.1.1.3. REGULATORY REQUIREMENTS MOTIVATION

The results of this thesis demonstrated that the motivation to measure loans at fair value was influenced by the level of the financial institutions' regulatory capital. Based on models I and II, the previously highlighted full model results revealed that the financial institutions with low regulatory capital are less likely (have a lower propensity) to report loans at fair value. The results considered the important monitoring role of the supervisory authorities in posing certain

regulatory capital requirements, with which the regulated financial institution should comply in all cases (Healy and Wahlen, 1999).

The supervisory authorities cause a violation when any of the regulatory capital is reduced below the minimum predefined threshold in the financial sector (Swamy, 2018). Therefore, this negative influence of the regulatory capital on financial institutions will most likely motivate a financial institution to report loans at cost. To illustrate, the cost option creates stability for the financial institutions, allowing them to adopt an accounting choice that would facilitate the management compliance with the regulatory requirements and avoidance of the occurrence of any possible breach or failure to comply with the regulatory requirements. The fair value option introduces volatility to the financial institutions' equity, which leads to a fluctuation in the regulatory capital, given that equity is the main component of regulatory capital calculation.

The financial institution with a lower regulatory capital exhibits a less tendency to adopt fair value to measure loans, specifically to manage the level of the regulatory capital and avoid reporting it below the required level. In this case, the cost is a favourable option to be adopted by financial institutions to measure loans. Provided that the carrying amount of loans under the cost option will remain constant during the life of the loans and will not be subject to any fluctuation due to market conditions. Therefore, there is no requirement for the recognition of unrealised gains (losses) in the financial institutions' equity.

In contrast, the carrying value of loans at fair value varies based on the changes in interest rates (Linsmeier, 2011), which will increase the volatility of the financial institution's equity (Holthausen and Watts, 2001) due to the recognition of unrealised gains (losses) in the other comprehensive income under the equity (Francis, 2001; Paananen et al., 2012). As a result, there is an expectation for financial institutions to be motivated to increase the proportion of loans measured at cost and reduce the proportion of loans reported at fair value to avoid volatility in equity and possible violation of the capital adequacy ratio.

Several results of previous literature were in line with the results in this thesis regarding the negative association of regulatory capital with the motivation to measure loans at cost. Specifically, the results by Paananen et al. (2012) were in agreement with the result of this thesis, in which the capital adequacy ratio was found to be significantly and negatively associated with the decision of financial institutions to adopt fair value options. Paananen et al. (2012) also confirmed that financial institutions with poor regulatory capital and near the

minimum requirements are more motivated to adopt the cost option compared to financial institutions with higher levels of regulatory capital. This initiative is for avoiding the violation of the capital adequacy ratio. Similarly, Ramesh and Revsine (2001) illustrated that regulatory capital was negatively associated with the adoption of fair value to report loans, whereby financial institutions with lower regulatory capital are motivated to adopt an accounting choice that increases the level of the regulatory capital to avoid its deterioration. If the adoption of fair value leads to the recognition of unrealised losses, an immediate reduction to the regulatory capital would occur, which will pose a stronger impact on the poorly capitalised banks compared to the highly capitalised banks (Paananen et al., 2012).

The flexibility, which is granted to the financial institutions by IFRS 9 to adopt fair value or cost, introduces a tool for financial institutions to utilise this choice to manage the level of regulatory capital, especially at its lower level. It is clear that the adoption of cost options to measure loans is a management technique that could possibly be used to achieve the maintenance of the regulatory capital at the required level and prevent the possibility of exposure of the institution to any political cost. This aspect may be introduced by the regulatory authority as a result of a non-compliance event. This view is aligned with the results by Moyer (1990), who found that financial institutions were motivated to adopt an accounting choice that reduced the cost possibly imposed by the regulatory authorities if the regulatory capital declined to a level below the threshold determined by the regulators or the supervisory authority.

Ramesh and Revsine (2001) indicated that highly regulated firms, such as financial institutions, are more motivated to adopt an accounting choice that reduces political costs, particularly when their regulatory capital ratio is at a lower level. Meanwhile, the risk appetite of financial institutions is affected by the level of their regulatory capital (Corona et al., 2015), in which higher regulatory capital leads to fewer limitations being placed on the financial institutions to grow their loans portfolio. Subsequently, the financial institutions are motivated to report loans at a cost to avoid unsatisfactory decline and negative potential economic consequences for the existing agreements and portfolio of financial institutions. The regulatory capital affects the risk limit of financial institutions, determining the amount of loans to be granted by them (Arnold et al., 2012). In this case, the regulatory authorities will pose few restrictions on lending activities when a financial institution is encountering challenges in complying with the regulatory capital requirements. Therefore, the financial institutions that suffer a lower regulatory capital are motivated to consider cost rather than fair value, given that the loans

measured at fair value have the strongest impact on the regulatory capital (Blankespoor et al., 2013).

The adoption of fair value will not encourage financial institutions to increase the risk appetite to further expand the loan portfolio (Arnold et al., 2012). It is possible to assume that the selection between cost and fair value is affected by the constraints of lending imposed by regulatory capital. This condition leads to the preference of cost to measure loans when the capital requirements of a financial institution are at the lower level (Corona et al., 2019). However, given that regulatory capital is costly, financial institutions tend to adopt an accounting choice for reporting loans in favour of managing the regulatory capital (Beatty et al., 1995). It is relevant to the thesis results, where the significant and negative association between the regulatory capital and the choice of fair value to measure loans will most likely motivate financial institutions to consider the measurement of loans at cost. This action acts as an opportunity for the financial institutions to avoid the volatility of their equity and improve their regulatory capital.

The adoption of fair value to measure loans may lead to the recognition of losses that are resulted from fair value movements, which will be a negative component of common equity tier 1. This is followed by a decrease in regulatory capital (Barth et al., 2017). Clearly, the risk appetite and ability of financial institutions to grow their loans portfolio would decrease. Therefore, financial institutions with a strategy of expanding their loan portfolio would not be motivated to measure loans at fair value to prevent a negative impact on the level of the regulatory capital. Subsequently, a decrease in the risk appetite of financial institutions leads to the reduction of the expansion in the loan portfolio.

The results of this thesis demonstrate the importance of regulatory capital to financial institutions that seek to avoid any possible regulatory breaches in all cases. Thus, financial institutions with lower regulatory capital are more likely to measure their loans at cost. The movements in the fair value of loans at each re-measurement date result in recognising unrealised capital gains (losses). It is clear that unrealised capital gains would be reported in the financial reports of the financial institutions, which would introduce volatility to the total equity and negatively affect the degree of regulatory capital.

The regulatory capital was significantly and negatively associated with the motivation of financial institutions to measure loans at cost rather than fair value. Therefore, it was indicated from this relation that financial institutions with low regulatory capital are less likely (have a

lower propensity) to report loans at fair value. This condition avoids the adverse effect of the decrease in the regulatory capital threshold of financial institutions with poor capital which could mitigate the political cost that might be imposed due to any breach of the minimum requirements of the regulatory capital.

Poorly capitalised financial institutions tend to measure loans at cost rather than fair value to minimise the impact on the total equity through the recognition of the unrealised gains (losses) of fair value. This action contributes to the increase in its volatility, which impacts the regulatory capital. As a political cost, this capital motivates financial institutions to show opportunistic behaviour in the trade-off between fair value and cost to measure loans. In this case, it was proven in this thesis that the financial institutions, which faced a poor level of regulatory capital, showed more opportunistic behaviour compared to technical considerations, and preferred to report loans at a cost to enhance their equity and avoid any possible political cost.

4.4.1.1.4. OWNERSHIP DISPERSION MOTIVATION

The results of this thesis demonstrated that the motivation for measuring loans at fair value was not influenced by the ownership dispersion. Based on models I and II, the results of the full model did not show any association between the financial institutions with ownership dispersion and the choice to measure loans at fair value. It was suggested from the result that a dispersed ownership structure of financial institutions did not increase the likelihood of measuring loans at fair value. The assumption of this thesis, in which the financial institutions' discretion in measuring loans at fair value was expected to increase with ownership dispersion, was not supported. It was clear that the financial institutions with a low ownership concentration did not have any motivation towards measuring loans at fair value.

This thesis regarding the impact of ownership concentration on the choice between cost and fair value to measure loans was in line with the study by Hall (1993) on the influence of ownership concentration on accounting choice within the political cost motivation under the Positive Accounting Theory. The results by Hall (1993) demonstrated that the ownership concentration was insignificant. Therefore, the concentration of ownership was not found to have an influence on the adopted accounting choice. In contrast, the result of this thesis concerning the impact of ownership concentration on the adoption of fair value to measure loans was inconsistent with the previous literature demonstrating that ownership dispersion was

positively associated with the adoption of fair value. In this case, the study by Alves (2019) and Mäki, Somoza-Lopez, and Sundgren (2016) on the impact of ownership structure on the adopted accounting choice recorded that the adoption of fair value had the possibility to be considered with the dispersed ownership. This result indicated that financial institutions with low ownership concentration do not have any motivation to show opportunistic behaviour and use discretionary power over the available accounting choice, particularly the preference for the adoption of fair value over cost.

It was also demonstrated that the level of shareholders' control did not impose any limitations on the flexibility of financial institutions to favour the adoption of fair value for the measurement of loans instead of cost. In this context, it is possible to suggest that financial institutions with ownership dispersion (low ownership concentration) will not gain further flexibility and freedom to adopt fair value to measure loans compared to other ownership structures of financial institutions with high ownership concentration. Therefore, different levels of ownership concentration do not permit different levels of accounting discretions.

Low ownership concentration is not the driver of financial institutions to show opportunistic behaviour upon selecting between fair value and cost to measure loans. Although the ownership dispersion represents less control and reduction of the restrictions (Mäki et al., 2016), the ownership dispersion is not an incentive for financial institutions to measure loans at fair value. It also does not support the assumption that low ownership concentration allows fewer restrictions and interventions by shareholders in accounting-related matters.

Based on the results of the political cost motivations, it could be concluded that the trade-off between fair value and cost for reporting loans is highly discretionary, given that the loans that will be held to maturity may be recognised either at fair value or at cost. Reporting loans at fair value is opportunistic and not guided by technical considerations, in which the shareholders and managers of financial institutions wish to produce accounting figures that suit them best. The financial institutions have motivations under political cost to show opportunistic behaviour upon selecting between the fair value and cost to measure loans. To illustrate this point, the motivations of political cost, which include publicly listed financial institutions, the size of financial institutions, the level of the regulatory capital, and the ownership dispersion of financial institutions, are taken into account.

The assumption of political cost mainly depends on minimising possible adverse political attention of stakeholders (e.g., such as auditors, employees, governments, and industry

supervision authorities among others) and the political costs related to this attention (Milne 2002; Watts and Zimmerman, 1978). This statement is in line with the results of this thesis that demonstrate the motivation under the political cost of financial institutions. Each motivation within political cost regarding the report of the loans at fair value poses certain influences: 1) lower likeliness for publicly listed financial institutions and poor (low) regulatory capital, and; 2) higher likeliness for large financial institutions to report loans at fair value. In contrast, there is no motivation for financial institutions with ownership dispersion to have the possibility to report loans at fair value. Therefore, financial institutions are motivated to adopt accounting choices that reduce political pressure (Watts and Zimmerman, 1978). In most cases, reporting loans at fair value or cost under the political cost is an opportunistic behaviour to report the most relevant accounting figures that satisfy financial institutions' objectives and strategy.

The preference for fair value against cost depends on the reduction of the political cost, which is mainly to avoid equity volatility introduced by fair value after the recognition of unrealised gains (loss). Therefore, the type of financial institutions (e.g., publicly listed or non-listed) and level of the regulatory capital are motivated to report loans at cost rather than fair value to prevent any possible negative consequences, such as the increase in equity cost, share price risk, and violation of the regulatory capital requirements. On the other hand, large financial institutions have a higher likeliness to report loans at fair value, considering that they are equipped with the required tools and techniques along with the skills and expertise to allow the adoption of fair value to measure their loans. The larger financial institutions are motivated to rely on their capabilities to measure loans at fair value regardless of the equity volatility introduced by fair value following the recognition of unrealised gains (losses).

Opportunistic behaviour is attributed to the production of accounting figures that suit financial institutions best. The results of the thesis supported the notion that political cost motivations have an opportunistic influence on the choice of financial institutions to perform a trade-off between cost and fair value for the reporting of loans. This condition presents the answer to the question of this thesis by highlighting the political cost motivations that motivate financial institutions to show opportunistic behaviour rather than technical behaviour upon the choice to measure loans at fair value or cost.

4.4.1.2. DEBT COVENANTS MOTIVATION

Following is the summary of the discussion of the financial institutions' motivations to adopt fair value versus cost upon measuring loans and opportunistically managing the debt covenants motivation, specifically the debt-to-equity motivations:

4.4.1.2.1. DEBT-TO-EQUITY MOTIVATIONS

The results of this thesis demonstrated that the motivation to measure loans at fair value was influenced by the level of debt-to-equity ratios of financial institutions. The level of debt-to-equity ratios was measured in this thesis through two variables of interest: 1) the total of shareholders' equity, and; 2) the capital funds ratio.

Based on models I and II, the aforementioned results of the full model revealed that the financial institutions with high debt-to-equity ratios had lower likeliness (lower propensity) to report loans at fair value. However, the cost was a favourable choice to measure loans when the debt-to-equity ratios of financial institutions were high. In contrast to the fair value option where the carrying amount was a variable from the changes in interest rates, the carrying amount of loans was fixed under the cost option (Linsmeier, 2011). The changes style of fair value results in the recognition of unrealised gains (losses) under the shareholders' equity (Francis, 2001), followed by an increase in the volatility of the financial institution's equity (Holthausen and Watts, 2001). In relation to this, equity is considered a key condition that is commonly stated in the terms and conditions of debt agreements that present a common condition of maintaining a debt-to-equity ratio at a specific (Healy and Wahlen, 1999).

Debt agreements create a motivation for financial institutions to consider an accounting choice that does not adversely affect the level of equity, which occurrence could violate the conditions of debt agreements. Notably, it is costly to amend or change the existing debt agreement (Healy and Wahlen, 1999), given that the conditions of such agreements normally require the maintenance of specific accounting ratios or negative covenants (Clifford W. Smith, 1993). In this context, the results by Beatty and Weber (2003) demonstrated the tendency to consider accounting choice that does not negatively affect the debt agreements when they contain equity-based covenants. The study by Sweeney (1994) presented evidence of the direct link between accounting choices and the limitations of the debt covenant. It was also illustrated that the essential determinants of the accountings choice are the default cost caused by the lenders and the accounting flexibility that is present to the institutions (Sweeney, 1994).

Based on models I and II, the full model results of this thesis demonstrated that financial institutions with high debt-to-equity ratios had the tendency to measure loans at cost rather than fair value. This condition indicates a negative association between the total equity, shareholders' equity as the first variable of interest under debt covenant, and the choice of financial institutions to measure their loans at fair value. This result also indicates that financial institutions behave opportunistically to report loans at cost instead of fair value to minimise the cost of financial distress, which may occur from the possibility of breaching the debt covenant conditions (Hand and Skantz, 1997).

Several results of previous literature supported the results of this thesis regarding the nature of the negative association of high debt-to-equity ratio (e.g., shareholders' equity as the first variable of interest under debt covenant) with the motivation to measure loans at fair value. The results of this thesis were in line with the findings of (Barth et al., 2017), which presented a negative relation between the shareholders' equity and the choice of fair value. Although the recognition of unrealised gains (losses) under the shareholders' equity discourages financial institutions from measuring loans at fair value, financial institutions prefer cost to measure loans (Barth et al., 2017). The flexibility to measure loans at cost or fair value would be a tool to avoid the adverse effect of it on equity when a financial institution is involved in several debt agreements, which normally come with limitations on borrowers by defining specific conditions and terms (Holthausen, Robert W and Leftwich, 1983). This condition confirms the important use of the cost option to measure loans as a means to manage the shareholder's equity, particularly when a financial institution faces a decrease in the level of its shareholders' equity.

The association between the other variable of interest, capital funds ratio and the motivation of the financial institutions to measure loans at fair value suggests that financial institutions refuse the accounting choice that introduces movements in equity (Dhaliwal, 1980). Given that the fair value choice introduces a movement in the value, financial institutions might not be in favour of the adoption of the fair value option to manage the debt covenants. Moreover, the study by Dhaliwal (1980) highlighted that firm management with higher long-term debt would be opposed to the accounting choices that lead to a reduction in net wealth (equity). Otherwise, they ought to make changes to their existing debt agreement. In this context, the movements of the loans at fair value will affect the total equity, while loans at cost would not affect it (Beatty et al., 1996). The fair value option introduces a chance of negative volatility to the total equity, particularly when the fair value decreases (Godwin et al., 1998). Given that the adjustments in fair value require the recognition of unrealised losses under equity, a reduction would take place

in the shareholders' equity in contrast to the cost choice. The cost option to measure loans will be the desired option especially when the equity level reduces as it mitigates the risk of equity volatility (Godwin et al., 1998).

Rather than performance items, shareholders' equity displays the owners' statement. Therefore, the items that could be accumulated under the shareholders' equity, such as fair value changes, could be an unconventional highlight (Hirst and Hopkins, 1998). In this case, the fair value option to measure loans may not be favourable. On the contrary to cost, it will be a motivation for financial institutions to adopt it and use it as a means to reduce the violations of the shareholders' equity statement, given that the fair value is introducing movements in the value of loans measured at fair value due to the gains (losses) reported under the equity statement. This condition is a result of the value modifications of the loans measured at fair value (Dong and Zhang, 2018).

Overall, the results in this thesis indicated that lower shareholders' equity increases the loans measured at cost, given that any reduction in the equity would affect the debt covenants. This condition may lead to a wealth transfer from the shareholders to the claimants, developing the supervision by the debt holders into a key to avoid any breach of the debt covenants (Beatty et al., 1996). Furthermore, the constraints of debt covenants have a significant association with the selected accounting choice, which is an incentive to prefer one accounting choice over the other (Hall, 1993). It is evident that financial institutions would be motivated to measure loans at a cost to minimise the changes in the equity, which leads to the mitigation of any possibility of covenant violation (Kuo, 1993) and improvement in the total equity. The previous literature demonstrated the opportunistic behaviour of financial institutions in using accounting choices to manage the debt covenants, particularly the financial institutions with high leverage (Christie, 1990) that show opportunistic actions to minimise the cost imposed by the restrictions in the debt covenants (Clifford W. Smith, 1993).

It is possible that the opportunistic behaviour of financial institutions is driven towards measuring loans at the cost to avoid a negative impact on the total equity, which creates an impact on the debt covenants (Beatty et al., 1996). Financial institutions have the motivation to manage the shareholders' equity for different purposes, which may be relevant to equity smoothing at the time of a drop-down. This process ensures that the level of the shareholders' equity is maintained at an acceptable threshold to prevent any possible breach of the debt covenants and protect the wealth of the shareholders' equity from any possible intervention of external stakeholders including the regulators and lenders.

Financial institutions have the prosperity to use the cost option as a tool to avoid reporting unrealised gains (losses) of the loans measured at fair value, particularly the reporting of losses that would be recognised through the equity statement beside the earnings statements. Subsequently, it would reduce the shareholders' equity of financial institutions that would have an adverse effect on the cost of capital. Particularly, this aspect is linked to particular debt covenants that were agreed with the lenders at the time of the borrowing (Fields et al., 2001). Therefore, the financial institutions would rely on the flexibility of IFRS 9 by motivating the measurement of loans at cost rather than fair value. In this case, the choice of cost could minimise the probability of violating the debt covenants and boost the total equity when it is being reduced below a specific threshold. This situation may result in a breach of the conditions of the debt covenants.

The debt covenant motivations assume that borrowers are motivated to consider accounting choices that do not negatively affect the specific covenants, as determined by the lender in the debt agreement. As previously mentioned, equity is considered a key condition that is commonly stated in the terms and conditions of debt agreements where a common condition could maintain a specific debt-to-equity ratio (Healy and Wahlen, 1999). Thus, financial institutions would be motivated to adopt accounting choices that do not negatively affect equity. This aspect was consistent with the results of this thesis that demonstrated the motivation of the debt covenants of financial institutions. In the case of the influence of motivation within the debt covenants in terms of reporting loans at fair value, it is less likely for financial institutions with high debt-to-equity ratios (Christie, 1990).

As a motivation within the debt covenants motivation, the debt-to-equity ratio is a tool that can be used by financial institutions to prevent any potential violations of the debt covenants and minimise any possible cost. It supports the influence of shareholders' equity and capital funds ratio, and variables of interest on the debt covenants motivation when financial institutions perform a trade-off between fair values and cost to measure their loans. This statement on the debt covenant motivation has offered the answer to the question of this thesis by highlighting the debt covenant motivation. This aspect is represented by the shareholders' equity and capital funds ratio, which encourages financial institutions to prefer reporting loans at cost rather than fair value. It implies that the trade-off between fair value and cost to report loans under the debt covenant motivations is opportunistic and not guided by technical considerations. Additionally, the trade-off between fair values and cost is used by financial institutions to report the most relevant accounting figures that satisfy financial institutions' objectives and strategies.

In summary, the Positive Accounting Theory focuses on the motivations that influence financial institutions to behave opportunistically rather than technically to a certain extent to meet their expectations by sharing accounting figures that suit them the best. This thesis primarily aims to identify the motivations that lead to the preference of financial institutions for fair value over cost or vice versa upon measuring loans. However, the motivation to adopt fair value or cost will vary from one financial institution to another depending on various factors. As previously mentioned, this thesis considers two of the motivation factors suggested by the Positive Accounting Theory, namely the political cost motivations and debt covenant motivations. The results of this thesis have offered an explanation and understanding of the motivations of financial institutions for the trade-off between fair value and cost to measure their loans. It is also proven that the trade-off between fair value and cost for measuring loans is opportunistic and not solely guided by technical considerations in most cases.

Motivations are the main drivers of financial institutions' decision to report loans at fair value instead of cost and vice versa. The degree of opportunism of financial institutions when measuring loans has been discussed in this thesis. It is indicated that financial institutions are motivated to prefer measuring loans at the cost over fair value or vice versa under the political cost motivations to avoid any possible political cost based on the status of financial institutions (e.g., publicly-listed or non-listed), the size of financial institutions, and the level of regulatory capital. Under the debt covenant motivations, the motivation for the previously mentioned preference is to avoid any cost that might arise due to the violation of the conditions of the debt covenants.

In summary, financial institutions are motivated under political cost motivations to report loans at cost if they are publicly listed and face a low level of regulatory capital. In contrast, larger financial institutions particularly consider reporting loans at fair value under the political cost motivations. As for the highly leveraged financial institutions, they are motivated under the debt covenant motivations to report loans at cost. In most cases, reporting loans at fair value is opportunistic and not guided solely by technical considerations. Subsequently, the decision of financial institutions to report loans at fair value or cost is driven by the desire to provide the accounting figures that suit them the best and maximise their interests while meeting IFRS 9 requirements.

4.4.2. CONTROL VARIABLES

The following summary is made on the discussion of the influence of the control variables, namely, return on assets and return on equity, on the motivations of financial institutions to adopt fair value.

4.4.2.1. RETURN ON ASSETS AND EQUITY

Based on models I and II, the full model results of the thesis demonstrated that performance metrics (e.g., *ROE* and *ROA*) were positively and significantly associated with the choice of financial institutions to measure their loans at fair value. The adoption of the fair value choice introduces the opportunity to manage performance metrics, which might increase the possibility of recording realised gains. Hence, the fair value measurement makes a better reflection of their current financial position and facilitation of the assessment of past performance and future predictions by applying a timely recognition of gains (Denk and Kaip, 2006).

The main assumption of fair value is that a financial institution must reflect the changes in the valuation of the loans measured at fair value in the unrealised gains (loss), which was reported under other comprehensive income in the equity (Guthrie et al., 2011). Accordingly, the measurement of fair value reflects the current valuation, which might have a positive impact on the total equity of the financial institution or vice versa. The value modifications under the fair value option during the tenor will be reflected promptly in the same reporting period (Corona et al., 2019), which may have a negative or positive impact on the total equity. As a result, the adoption of fair value to measure loans becomes sensitive to the profitability level of the financial institution. In this case, a financial institution with a low-performance level would be less motivated to report loans at fair value to avoid negative impacts on the total equity (Balsam, Haw, and Lilien, 1995).

Performance compensation, particularly the bonuses and benefits of the senior management and staff of financial institutions, commonly have a direct or indirect dependence on the achieved earnings (Degeorge, Patel, and Zeckhauser, 2005) possibly on the equity-based level. Performance compensation includes bonuses, which indicate an important component of the compensation packages of financial institutions' management. Therefore, the management of financial institutions would tend to avoid any adverse impact on performance compensation (Wang and Werbin, 2018). It is expected that the management of financial institutions would show behaviours that maximise their interests. In this context, the results of this thesis indicated

a positive association between the proportion of loans measured at fair value and the performance metrics measured by *ROE* and *ROA*. It was also implied that higher performance metrics (e.g., *ROE* and *ROA*) increase the likeliness for financial institutions to report loans at fair value and vice versa.

Financial institutions with a strategy to achieve specific performance metrics (e.g., *ROE* and *ROA*) to maximise management benefits (DeFond and Park, 1997) are motivated to adopt an accounting choice that achieves this strategy. The ability of financial institutions to determine their strategy in managing performance metrics would vary from one financial institution to another based on several elements, such as the risk profile of the financial institution. Furthermore, it is assumed that financial institutions with a high-risk profile will have a performance metrics threshold in place that might be impacted by the modifications of the fair value of loans. Similarly, a higher proportion of loans measured at fair value leads to a higher possibility of volatility in the performance metrics due to the nature of the significant and positive association between performance metrics and the choice of financial institutions to measure their loans at fair value.

Financial institutions will be less motivated to measure loans at fair value when the fluctuation in the fair value negatively affects performance metrics (*ROE* and *ROA*) ratios. Therefore, financial institutions are less likely to measure loans at fair value when performance is low and job security is threatened (DeFond and Park, 1997). This aspect is in line with the study by Bratten, Causholli, and Myers (2020), which recorded that the portion of assets measured at fair value was positively and significantly associated with the recognition of realised gains and losses. It was also found that financial institutions would manage their performance through the fair value option as a tool to create smooth performance metrics (e.g., *ROE* and *ROA*) and maximise their benefits. Similarly, the results by Hsu and Lin (2016) showed a significant and positive relationship between the quantity of assets measured at fair value and performance metrics. In this case, performance metrics are considered an incentive for the management of financial institutions to facilitate the achievement of the targeted performance threshold to maximise management compensation, which is possibly affected by reporting loans at fair value.

Financial institutions are highly pressured by several internal and external stakeholders to achieve or maintain at least a constant performance and avoid any decreases in performance below the minimum threshold. Performance is considered to be an important element in the financial reports issued by financial institutions (Degeorge et al., 2005) and the benchmark that

financial institutions constantly seek to achieve (Graham, Harvey, and Rajgopal, 2005). Therefore, financial institutions are aware of the consequences of reporting loans at fair value, especially when the performance is low, to prevent any possible negative impact on performance. In this context, the failure of financial institutions to meet the targeted performance or to maintain a stable performance would lead to uncertainty and reduce the credibility of the financial institution. Similarly, Brown and Caylor (2005) showed the recent hierarchy of the institutions in terms of earnings management, which prioritises avoiding any negative performance surprises such as an institution failure to achieve the announced performance or avoidance of quarterly losses and possible decrease in performance metrics (*ROE* and *ROA*). Additionally, the results by Degeorge et al. (2005) revealed three main motivations that drive the decisions of institutions regarding earnings management: reporting positive profit, maintaining recent performance, and meeting predictors' expectations.

Given that fair value is an unstable model, the management of financial institutions will avoid any decreases in performance in terms of total equity, which may occur due to reporting loans at fair value. This aspect reveals that financial institutions with low-performance metrics (profitability) are less likely to be motivated to measure loans at fair value to avoid fluctuation in performance due to the movements of the fair value. This condition is expected, given that the financial institutions would be strongly motivated to avoid reporting any negative earning surprises, such as missing the performance target. Hence, financial institutions would adopt the fair value choice in most cases to measure loans and recognise gains. This action would prevent the reporting of any possible loss or decrease below the targeted performance (Guthrie et al., 2011). However, the results of this thesis were not in line with the findings by Zhang et al. (2019), which indicated that financial institutions with a lower financial performance seek to hide their performance weakness by adopting the fair value option. These results were also inconsistent with the result by D. Yao et al. (2018), which showed that return on assets was significantly and negatively related to the percentage of assets measured at fair value.

Numerous studies presented evidence that reporting loans at fair value was significantly and positively associated with performance metrics (*ROE* and *ROA*), which indicated that the motivations of financial institutions to prefer fair value while the movements are in fair value would not decrease the performance metrics (*ROE* and *ROA*). The studies also highlighted the influence of performance compensation on the reporting of loans at fair value, in which any increase or decrease in the portion of loans at fair value would be influenced by the performance metrics (*ROA* and *ROE*).

4.4.3. EARLY ADOPTERS

The early adopters of fair value under IFRS 9 for the fiscal year 2017 consisted of financial institutions who experienced the first adoption advantages and disadvantages. The early adoption of IFRS 9 was analysed to understand the motivations that caused financial institutions to adopt IFRS 9 at an early rate and report loans at a fair value earlier than mandatorily required by the IASB. Based on model IV, the previously mentioned thesis results of the full model demonstrated that the financial institutions with high regulatory capital had a higher likeliness to adopt fair value at early late to measure loans. These results also indicated that larger financial institutions had a lower likeliness to adopt fair value early to measure loans.

The supervisory authorities triggered a violation with any decreases in the regulatory capital below the minimum predefined threshold in the financial sector (Swamy, 2018). It was indicated from this condition that the early adopters of IFRS 9, specifically the reporter loans at fair value, are concerned about being exposed to a risk of violating the regulatory capital requirements (Healy and Wahlen, 1999). Therefore, they were demotivated for this early adoption prior to the mandatory adoption year (e.g., 2018) especially when they were poorly capitalised financial institutions and their level of regulatory capital was close to the minimum requirements (Paananen et al., 2012).

Poorly capitalised financial institutions are more motivated to postpone the adoption of a discretionary accounting choice, measuring loans at fair value under IFRS 9 at the early stage (e.g., 2017), until the mandatory adoption year (e.g., 2018), which possibly creates a political cost when their regulatory capital ratio is at a lower level. In contrast, the early adopters of IFRS 9 who comprise highly capitalised financial institutions are motivated for the adoption of this accounting choice and reporting of loans at fair value prior to the mandatory adoption year (e.g., 2018). The early adopters of IFRS 9 are selected to adopt discretionary accounting choices and measure their loans at fair value. However, this adoption will introduce volatility to the financial institutions' equity, which leads to a fluctuation in the level of regulatory capital. The occurrence of this fluctuation (if any) is attributed to the recognition of unrealised gains (losses) resulting from the fair value movements when loans are measured at fair value, which poses less impact on the highly capitalised banks (Paananen et al., 2012).

Based on another perspective, financial institutions, specifically large institutions, are under scrutiny from different stakeholders. The natural propensity of these institutions to remain discreet to avoid attention from these stakeholders and the political costs could be encountered.

This statement indicates that the early adopters of IFRS 9, reporters of loans at fair value, are considering a conservative accounting choice to be seen as low risk by their supervisory authorities and reduce any political attention, which causes public criticism (Sun and Liu, 2011). The early adopters of IFRS 9 are not motivated to early adopt IFRS 9 and measure loans at fair value to avoid equity volatility, as introduced by fair value due to the recognition of unrealised gains (losses).

In summary, the motivation of early adopters of IFRS 9 to report loans at fair value are mostly opportunistic and not guided by technical considerations. The early adopters of IFRS 9, specifically the reporters of loans at fair value, are mainly influenced by minimising any possible adverse political attention and political costs related to it (Milne, 2002; Watts and Zimmerman, 1978). The political cost motivations opportunistically influence the financial institutions to early adopt IFRS 9 and report loans at fair value solely when the level of regulatory capital is high. However, they are not motivated to report loans at fair value earlier despite their status as larger financial institutions.

CONCLUSION AND MANAGERIAL CONTRIBUTION

This chapter is organised into two sections as follows. Section 5.1 illustrates the conclusion of the thesis based on the results of the analyses and the suggestions for future research. Section 5.2 discusses the managerial contributions of the thesis.

5.1. CONCLUSION

The switch from IAS 39 to IFRS 9 offers flexibility in classifying and measuring financial assets, including loans. While loans were systematically recognised at a cost under IAS 39, they are currently reported at cost or fair value under IFRS 9. The trade-off between fair value and cost is arbitrary to a large extent as it depends on the financial institution judgment of its ability to hold the loan until maturity (PWC, 2017).

This thesis aims to examine the discretionary behaviour of financial institutions toward the preference for fair value rather than cost upon measuring loans. It also aims to study the motivations for the behaviour of financial institutions in this area. In this case, the Positive Accounting Theory was applied in this technique, which offered a framework useful for understanding opportunistic accounting behaviour. The primary research question of the thesis was established: what is the extent of the trade-off between fair value and cost opportunistic such as motivation by management and shareholders' propensity to maximise their own interests by reporting accounting figures that suit them best? The analysis of this thesis followed a sample of 399 observations for three fiscal years (the preadoption year 2017, the mandatory adoption year 2018, and the post-adoption year 2019). Several motivation factors suggested by the Positive Accounting Theory were examined, which consisted of two types: political cost motivations and debt covenant motivations.

The findings of this thesis demonstrated that financial institutions behaved opportunistically and selected the accounting method that suited them best. The trade-off between fair value and cost for measuring loans was not guided solely by technical considerations. Furthermore, the financial institutions considered the discretion offered in IFRS 9 while measuring loans to manage various motivations in different directions. Overall, the findings offer a comprehension of the influence of political cost motivations and debt covenant motivations regarding the choice of fair value to measure loans.

Financial institutions with low regulatory capital are more likely to measure loans at a cost to avoid breaching any regulatory requirement. Specifically, larger financial institutions are more likely to measure loans at fair value due to the availability of the required skills, infrastructure, and eligible instruments compared to smaller institutions with lower motivation to adopt fair value as a result of the lack of these attributes.

The findings highlighted the influence of the status of financial institutions (listed versus non-listed), in which the publicly listed financial institutions were less likely to report loans at fair value to avoid volatility in their equity and possible political attention. Financial institutions are also influenced by debt covenant motivations. The results of the thesis indicate that financial institutions are less likely to report loans at fair value when they are highly leveraged and have a high debt-to-equity ratio. This condition could avoid a negative impact on the shareholders' equity and a possible violation of the debt covenants.

5.1.1. RECOMMENDATIONS FOR FUTURE RESEARCH

This thesis focuses on global-scale countries from different geographical regions (Africa, America, Asia, and the European Union). Furthermore, IFRS has been implemented by more than 100 countries around the world. A total of 17 countries were investigated, with more of them being European countries. Therefore, it would be noteworthy to expand the sample to more countries, especially developing countries. Following that, the results of this thesis do not apply to entities other than financial institutions, which may be perceived as a crucial limitation. Thus, future research is recommended to focus on whether the motivation factors influencing the behaviour of financial institutions also impact the behaviour of industrial companies.

It is recommended for a study to be conducted based on a qualitative approach (e.g., a questionnaire) as an alternative research methodology to this thesis that is exclusively based on a quantitative method. This approach may improve the understanding of the factors causing financial institutions to perform a trade-off between cost and fair value upon measuring loans.

5.2. MANAGERIAL CONTRIBUTION

This thesis aids the understanding of the motivation factors that determine accounting policies. As suggested by the positive accounting literature, evidence of strong opportunism in this area is presented. The producers of financial information instil the strongest motivation possible to adopt accounting choices that maximise their interests. The preference of adopting accounting choice over other choices is mostly opportunistic and not guided by technical considerations only.

The product of any reporting system is financial information that reflects the financial position of how a financial institution routinely performs its activities. This action establishes the foundation of the financial institutions' specific set of reports that are available to internal (e.g., managers, shareholders) and external (e.g., investors and regulators) stakeholders. Notably, financial information plays a crucial role in decision-making, supplying information on real economic events to managers and investors that allow them to identify investment opportunities and shape strategies (Bushman and Smith, 2003). It is also important to offer the financial institutions' users a comprehension of the interests of the management and shareholders that they prepared the financial information. Accordingly, this thesis provided the users of financial statements with a detailed empirical study that presented the motivations of financial institutions to measure loans at cost or fair value.

The importance of financial information to various decision-makers led to the recommendation for this thesis to offer an explanation of the consequences based on the preference for an accounting choice over another. It is essential to explain the managerial tendencies regarding the trade-off between fair value and cost upon measuring loans. This action is performed by examining the financial institutions' motivations toward the adoption of fair value, which provides information on the relation between these motivations and reporting loans at fair value. The adoption of fair value may also offer considerable advantages or disadvantages to a particular type of financial institution (listed or non-listed), the size of financial institutions, the provision of tools to manage earnings, or fulfiling regulatory requirements among others.

Most financial institutions focus on lending, indicating the significant position of loans in their financial report compared to other types of assets. Furthermore, loans are the most important assets for financial institutions. For instance, the percentage of loans for a sample of banks, which comprised US investment banks and bank holding companies, accounted for 47.28% of

the total reported assets for the holding companies of big banks and 61.67% of the total reported assets for the holding companies of smaller banks (Laux and Leuz, 2010). Considering that the trade-off between fair value and cost to report loans is opportunistic, it was worthy for this thesis to consider the loans to understand the possible impact of the motivations on the opportunistic behaviour of financial institutions to report loans. The sizeable amount of loans allows financial institutions to obtain a tool to manage the financial figures at a specific level and shape it into the most compatible form (Gebhardt, 2016).

As previously mentioned, the flexibility of IFRS 9 offers an option to the financial institutions for the trade-off between fair value and cost for reporting loans. Given the effect occurring from each option, the financial institutions would require the understanding of the effect of their decision upon the trade-off between fair value and cost after considering the nature of the link between the motivations under the Positive Accounting Theory and the adopted choice (e.g., fair value or cost) to measure loans. In contrast to IAS 39, loans were systematically recognised at cost (Bischof and Daske, 2016). In this context, the carrying value of a loan measured at fair value is exposed to daily interest rate changes (Linsmeier, 2011).

The fair value changes would have either a positive or negative impact on financial institutions' equity, indicating that a higher proportion of loans measured at fair value would lead to higher volatility of the financial institution's equity. To illustrate, the financial institutions' motivations would vary from one financial institution to another. Subsequently, the pre-awareness of the link between the motivation factors and the loans measured at fair value would facilitate financial institutions in adopting a dynamic approach to make an accounting choice (e.g., fair value or cost). Accordingly, this thesis could assist in creating this awareness by presenting the association between the set of motivations and the proportion of loans reported at fair value. For instance, the financial institutions might not be motivated to adopt fair value to avoid breaching any lending agreement, minimise fluctuation of shares prices, or violate regulatory capital among others.

A managerial question has been addressed through the results of this thesis, which is "what are the motivations of a financial institution to report loans at fair value or cost?". It could be seen from the discussion in Chapter 4 that the motivations of financial institutions to report loans at fair value are related to the type of financial institutions (publicly listed or non-listed), the size of financial institutions, the level of regulatory capital, and the level of debt-to-equity ratio. Additionally, the control variable and performance metrics (*ROA* and *ROE*) exhibited their

influence on the motivations of financial institutions to report loans at fair value for maintaining the performance metrics (*ROA* and *ROE*) at an acceptable level. This approach may develop the fair value into a more prominent accounting choice that financial institutions are encouraged to adopt rather than cost to report loans for the management of specific ratios, fulfilment of specific benchmarks, or vice versa.

The previously highlighted motivation factors would be driven by the comparison exercise that may be conducted by financial institutions based on the expected benefits and costs. For instance, financial institutions may tend to select fair value as an accounting choice to manage the value of assets and supply more loans (Bischof and Daske, 2016). Although the fair value choice is a discretionary accounting choice for financial institutions, some financial institutions may avoid it due to the consequences that may occur following its adoption in terms of relevant motivation factors, such as capital adequacy ratio or maintenance of the debt covenants conditions (Clifford W. Smith, 1993).

In summary, this thesis may help financial institutions have a conceptual framework to understand the aspects of differences in reporting loans at fair value or cost based on their motivations and the level of opportunistic behaviour. It may also encourage the institutions to discover more opportunities to influence the preference for reporting loans at fair value or cost. The analysis of this thesis considered three years of financial reports data, which represented the year before adoption, year of adoption, and year post-adoption. This action may offer more insights to allow financial institutions to devise strategies, set benchmarks, take specific decisions in selling a loan portfolio, modify the business model, or offer products and services, among others. Considering the fact that IFRS 9 is a new international accounting reporting standard (PWC, 2017) that was effectively implemented in 2018, the research works observing this phenomenon and demonstrating the association between the various motivation factors behind reporting loans at fair value or cost to financial institutions are scarce.

APPENDIX

Table 13: BvD independence indicators

Indicator and Degree of Ownership Concentration	Primary Significance	Supplementary Clarification
A Low ownership concentration	Independent companies—those with known recorded Shareholders, each of them having less than 25% of direct or total ownership of the company	A+—Companies with six or more shareholders and/or companies in whose case the sum of direct ownership is above 75% A—Companies with 4 or 5 shareholders and/or companies that are the ultimate owners of another company (given that the information is included in a source), even when its shareholders are not mentioned. A−Companies with 1 to 3 shareholders
B Medium-low ownership concentration	Companies with known recorded shareholders with ownerships below 50%, but with one or more shareholders with ownership percentages above 25%	B+, B and B−—allocated similarly to A clarifications above
C Medium-high ownership concentration	Companies with known recorded shareholders that have a total or calculated ownership above 50%	C+—Companies with a sum of the direct percentage of ownership is 50.01% or higher C—Also assigned to companies in whose case an ultimate owner is mentioned in a source, although its ownership percentage is unknown
D High ownership concentration	Companies with a recorded shareholder that has direct ownership above 50% Companies	
U	Companies with an unknown degree of ownership concentration	

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