NEAR EAST UNIVERSITY
DEPARTMENT OF BANKING AND ACCOUNTING
BANKING AND ACCOUNTING PROGRAM

THE MEDIATING EFFECTS OF FAIR VALUE ACCOUNTING ON THE EFFECTS OF A FINANCIAL CRISIS ON BANK PERFORMANCE

MOHAMMED KHALID MUSTAFA

MASTER’S THESIS

NICOSIA
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Assoc. Prof. Dr. Aliya IŞIKSAL

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ACCEPTANCE

We as the jury members certify "The mediating effects of fair value accounting on the effects of a financial crisis on bank performance**" prepared by Mohammed Khalid Mustafa defended on … June 2021 has been found satisfactory for the award of degree of Master.**

JURY MEMBERS

………………………………

Assoc. Prof. Dr. Aliya IŞIKSAL (Supervisor)

Near East University
Faculty of Economics and Administrative / Department of Banking and Accounting

………………………………

Assist. Prof. Dr. Ahmed Samour

Near East University
Faculty of Economics and Administrative / Department of Banking and Finance

………………………………
Dr. Ala Assi.
Near East University
Faculty of Economics and Administrative / Department of Banking and Accounting

………………………………

Prof. Dr. Hüsnü Can Başer.
Institute of Graduate Studies
Director

DECLARATION

I Mohammed Khalid Mustafa, hereby declare that this dissertation entitled "The mediating effects of fair value accounting on the effects of a financial crisis on bank performance" has been prepared myself under the guidance and supervision of **“Assoc. Prof. Dr. Aliya IŞIKSAL”** in partial fulfilment of The Near East University, Institute of Graduate Studies regulations and does not to the best of my knowledge breach any Law of Copyrights and has been tested for plagiarism and a copy of the result can be found in the Thesis.

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DEDICATION

To my Family and Friends

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My appreciation goes to my advisor **Assoc. Prof. Dr. Aliya IŞIKSAL** *who has been of tremendous help to me. I would also like to thank my friends for their support and encouragement.*

ABSTRACT

THE MEDIATING EFFECTS OF FAIR VALUE ACCOUNTING ON THE EFFECTS OF A FINANCIAL CRISIS ON BANK PERFORMANCE

The purpose of this research is to learn about the capabilities of extended business reporting language by highlighting the importance of using it as a standard tool for preparing and publishing electronic financial reports. 200 questionnaires were distributed to accountants, economists, financial analysts, financial managers, and general managers professionals working in Kurdistan banks. The collected responses were analysed used a structural equation modelling approach with the aid of Smart PLS 3. The study has managed to attain its stated goals and proved that implementing FVA enhances bank performance as the bank's assets and liabilities are measured at prevailing market prices. Additionally, it was demonstrated that a financial crisis necessitates the adoption of an effective FVA approach by banks to curb its effects. The results were in contradiction with previous studies as they highlighted that bank performance will improve as the financial crisis deepens. It was recommended that bank managers must use a guided and mixed approach when using FVA to address its inherent limitations and ensure that it does not negatively affect the value of the bank's assets and liabilities. Furthermore, the study recommends that it is vital to ensure that there are effective accounting and management strategies aimed at making sure that FVA implementation activities do not interfere with bank activities.

Keywords: Bank performance, fair value accounting, financial crisis, mediating effects, structural equation modelling.

ŐZ

GERÇEĞE UYGUN DEĞER MUHASEBESININ FINANSAL KRIZIN BANKA PERFORMANSı ÜZERINDEKI ETKILERINE ARACıLıK EDEN ETKILERI

Bu araştırmanın amacı, elektronik finansal raporların hazırlanması ve yayımlanması için standart bir araç olarak kullanılmasının önemini vurgulayarak genişletilmiş iş raporlama dilinin yetenekleri hakkında bilgi edinmektir. Kürdistan bankalarında çalışan muhasebecilere, ekonomistlere, finans analistlerine, finans yöneticilerine ve genel müdürlere 200 anket dağıtıldı. Toplanan yanıtlar, Smart PLS 3 yardımıyla kullanılan yapısal denklem modelleme yaklaşımı ile analiz edildi. Çalışma, belirtilen hedeflerine ulaşmak için başarılı oldu ve bankanın varlıkları ve yükümlülükleri hakim piyasa fiyatlarıyla ölçüldüğünden FVA uygulamasının banka performansını artırdığını kanıtladı. Buna ek olarak, finansal bir krizin, etkilerini azaltmak için bankalar tarafından etkili FVA yaklaşımının benimsenmesi gerektiğinin ortaya konmuştur. Sonuçlar, finansal kriz derinleştikçe banka performansının iyileşeceğini vurguladıkları için önceki çalışmalarla çelişti. Banka yöneticilerinin FVA'yı kullanırken, doğal sınırlamalarını gidermek ve bankanın varlık ve yükümlülüklerinin değerini olumsuz etkilememesini sağlamak için güdümlü ve karışık bir yaklaşım kullanmaları tavsiye edildi. Ayrıca, çalışma, FVA uygulama faaliyetlerinin banka faaliyetlerine engel olmadığından emin olmayı amaçlayan etkili muhasebe ve yönetim stratejilerinin olduğundan emin olmak için bir ihtiyaçtır.

Anahtar Kelimeler: Banka performansı, adil değer muhasebesi, finansal kriz, aracılık etkileri, yapısal denklem modellemesi.

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ABBREVIATIONS

BP:	Bank Performance
FASB:	Financial Accounting Standards Board
FC:	Financial Crisis
FVA:	Fair Value Accounting
IFRS:	International Financial Reporting Standards
MN:	Mean
SD:	Standard Deviation
SEM:	Structural Equation Modelling

INTRODUCTION

Background of the study

A financial crisis is one of the most disastrous economic activity and its occurrence affects companies around the world. A financial crisis is defined as a situation, which occurs when money supply exceeds money demand (Alqahtani & Mayes, 2018). Other studies consider it to be a financial situation composed of a broad variety of situations in which some financial assets suddenly lose a large part of their nominal value (Hussien, Alam, Murad & Wahid, 2019). Meanwhile, the period 2007 to 2008 was characterised by the most devastating financial crisis next to the great depression. As stands, some organisations, especially banks around the world are considered as still suffering from the effects of the 2008 financial crisis (Alexakis, Izzeldin, Johnes & Pappas, 2019).

The prevalence of a financial crisis demands effective financial and non-financial strategic measures to guard against its effect. Studies have recorded that another key element of addressing financial and corporate-related challenges (Mirzaei, 2019). However, applying such notions in the contexts of economic challenges like a financial crisis has been limited. Besides, a lack of consensus between studies is usually observed when corporate indicators like bank performance are related to economic variables such as a financial crisis. Bouzgarrou, Jouida and Louhichi (2018) contend that qualitative measurement problems make it practically impossible to apply reliable indicators capable of linking corporate indicators like bank performance are related to economic variables such as a financial crisis. Therefore, studies are called for to find qualitative ways of linking aspects like bank performances with a financial crisis. However, such a connection is still yet to be explored, especially about banks in Kurdistan, which are experiencing the effects of a financial crisis, which has been in existence since 2018.

Research problem

There are suggestions showing that the adoption of Fair Value Accounting (FVA) has been instrumental in addressing economic challenges faced by an organisation (Paoloni, Paolucci & Menicucci, 2017). Though such challenges are limited to financial reporting (McInnis, Yu & Yust, 2018), corporate image and reputation (Yao, Percy, Stewart & Hu, 2018), suggested academic insights show that FVA can be able to alleviate numerous problems experienced by banks (Corona, Nan & Zhang, 2019). This implies that the ever felt and long-lasting effects of a financial crisis on banks performance can be eased by implementing FVA. This can be supported by studies showing that FVA helps in dealing with price and financial statement preparation valuation methods (McInnis, Yu & Yust, 2018). Moreover, a financial crisis coupled with high inflation rates affects the valuation of bank assets and liabilities, which tremendously affects bank performance. However, such a connection is still yet to be explored, especially concerning banks in Kurdistan, which are experiencing the effects of a financial crisis, which has been in existence since 2018. The prevalence of a financial crisis came at a time when banks in Kurdistan were significantly resorting to FVA-related practices (Abdullah & Saeed, 2019). Again, such a connection between a financial crisis and FVA needs to be tested and how it can influence bank performance in the midst of a financial crisis.

Secondly, suggestions have been given that using FVA helps to enhance organisational performance (Gračanin & Kalač, 2011). These ideas strongly consider FVA to be so essential for dealing with problems affecting banks, especially during the period of a financial crisis (Laux & Leuz, 2010). However, these ideas have not yet been fully proven right using empirical methods especially when ideas are suggesting that FVA has inherent problems that may cause it to negatively affect organisational performance (Magnan, 2009). With regards to these observations, it is, therefore, important to examine the influence of FVA in economies like Kurdistan, which are still battling a financial crisis. Thus, the study's intended objectives are to answer the following questions;

- How does using fair value influence organisational performance during the period of a financial crisis?
- Does fair value accounting mediate the relationship between a financial crisis and bank performance?

Statement of purpose

The study aims to find ways FVA influences banking performance during the occurrence of a financial crisis. As a result, it will explore the roles played by FVA and how it helps to ease the effects of the financial crisis on banking performance.

Significance of the study

The present study emerges at a time when Kurdistan and its banks are still trying to contain and recover from the 2018 financial crisis. At the same time, there has been a significant implementation of FVA related financial statement valuation methods by banks in Kurdistan. Hence, exploring these developments is essential in understanding how these aspects are related. Moreover, their connections can be tested and examined using underlying empirical tools. The study is also the first of its kind in Kurdistan and hence, contributes significantly towards improving related empirical examinations.

Structure of the study

The study is structured into four chapters with the initial chapter drawing focus on the problem area. The second chapter deals with the examination of related theoretical and empirical studies while the third chapter centres on outlining the methodological steps that were undertaken to carry out this study. Detailed insight of the analysed data is provided in the third chapter while the last chapter concludes the study by drawing out relevant conclusions and recommendations.

CHAPTER ONE

THEORETICAL AND EMPIRICAL LITERATURE REVIEW

1.1 Introduction

One of the key issues surrounding the concept of fair value accounting (FVA) is its role and effects on organisations. Studies have adopted different approaches to examining how FVA assists and impact organisations (Corona, Nan & Zhang, 2019; McInnis, Yu & Yust, 2018). However, there are key areas regarding these studies about what they have explored and failed to address. For instance, a study by Yao, Percy, Stewart and Hu (2018) focuses on the regulatory aspect of FVA citing that it helps to ensure that organisations adopt acceptable financial preparation and reporting standards. Little has been devoted to analysing the implications of adopting FVA on performance. Such is of huge concern in banks, which significantly apply FVA (Paoloni, Paolucci & Menicucci, 2017).

The other instrumental research aspect relates to FVA having mediating effects, which studies must explore. Preliminary insights provided in the introductory chapter of this study denote that FVA has possible mediating effects on the relationship between a financial crisis and bank performance. The novel and contribution aspects of this study will be derived from these observations. Hence, this chapter seeks to layout related theoretical and empirical framework essential in understanding the roles of FVA and how its applications help to improve bank performance during a financial crisis.

1.2 Fair value accounting

According to the Financial Accounting Standards Board (FASB), FVA is a way of measuring the assets and liabilities that are listed on the company's financial statements (McInnis, Yu & Yust, 2018). This valuation approach was used to standardize the calculation of financial instruments by looking at their historical cost. As such, FVA includes concepts that are related to

I. The current market conditions in which the assets and liabilities are measured at on-going prices,
II. The intention of the holder might be to alter the determined fair values,
III. Orderly transactions are often used in periods where the firm has no intentions of liquidating and
IV. Third parties may change the price paid for the asset (Gup & Lutton, 2009; Valencia et al., 2013).

The idea of FVA theory appeared in the 1930s of the 20th century which was presented by the French and German legislation with the influence of the FVA on accounting practice (McInnis, Yu & Yust, 2018). Therefore, some financial experts thought that FVA, which is known as market to market accounting, utilized in the Great Depression time. But President Franklin Roosevelt suspended this in 1938 (Najeb & Abdullah, 2014). However, different managers in the 1930s practised abusive valuation which led to legalizing accounting standards by the accounting profession. Consequently, historical cost accounting appeared as the most important practice to report liabilities and assets (Adegboyegun et al., 2020). Moreover, the deficiency of transparency may make the issue worse under HCA throughout the crisis. Najeb and Abdullah (2014) state that HCA could not represent the current primary value of assets. Thus, it is crucial to utilize the values of markets to supply them with more information and disclosures. This can be also used in the illiquid markets.

The establishment of the Trueblood Committee Report in October 1973 necessitated major regulatory developments in the use of FVA. This was mainly a result of increased efforts to deal with the rising problems of corporate scandals

(Valencia et al., 2013). These developments were also part of measures introduced to deal with accounting deficiencies observed with previous accounting frameworks. Amendments were thus, proposed with the initial ones focusing on establishing proper financial tools of setting and attaining good “Objectives of Financial Statements” (Adegboyegun et al., 2020).

Meanwhile, suggested improvements targeted at using predetermined conceptual frameworks such as the one established by the FASB. These frameworks encompassed the use of discounted cash flows, current replacement cost, exit values and historical cost for valuation purposes (Georgiou & Jack, 2011). Subsequent improvements later included aspects such as lease accounting and revenue recognition as well as the determination of market values of fixed assets. Nevertheless, problems of lack of reliability, relevance, and comparability led to the continued use of HCA and the withdrawal of SFAS No. 33 (Takacs & Szucs, 2017).

According to Hussien et al. (2019), continued shortfall associated with the use of the HCA method resulted in a shift towards looking and incorporating balance sheet methods and items. However, other researchers such as Najeb and Abdullah (2014), were against the use of such methods citing that they lack informativeness. As a result, there is still contrasting arguments between the desirability of FVA and HCA.

Meanwhile, major developments that took place in the USA such as the Savings and Loan Crisis which took place in the early 1980s resulted in increased use and preference of FVA (Valencia et al., 2013). This led to the establishment of quite a several problems associated with the use of HCA and the notable argument was that HCA resulted in managers making huge trading gains (Laux & Leuz, 2009). As a result, this led to a major development in the use of FVA on a much broader regulatory level (Takacs & Szucs, 2017)

One of the major factors integrating to the financial crisis in the world is Fair Value Accounting (FVA). The crisis happened between 2007 and 2008. It is important to investigate the role of FVA on businesses especially the banking sector. The recent market value of liabilities and assets of firms are more explorative in terms of cost and financial (Richard, 2005). Thus, conducting researches about FVA will make stockholders more interesting in the assessment of financial crises to make relevant decisions. The availability of information on the FVA will make the business environment more efficient. Additionally, the contribution of FAV may make the financial crisis worse (Najeb & Abdullah, 2014).

Various tools and methods are applied in current research to investigate the impact of FVA during an economic crisis. Some authors stated that banks' capital is affected by implementing FVA (Corona, Nan & Zhang, 2019; McInnis, Yu & Yust, 2018). The effect of FVA on capital ratio and capital in banks have been examined using simulation studies. Four scenarios have been described on how the implementation of FVA would negatively affecting the overall economic crisis especially banks. These scenarios include changing interest rates, reducing the quality of loan portfolio provided by banks, changing pricing strategies and financial crisis related to the real estate markets.

Changing the market prices could happen because of the impact of various potential factors. The changes are related to reducing the values of assets and assets that FVA is implemented. This can force businesses to market their assets at lower prices to obtain more capitals. FVA can cause problems including liquidity issues, expanding crisis, the new write-down and discounting on the value. Lower prices in the market, the occurrence of downward liquidities and economic froze up lead to business bankruptcies especially in banks (Yao, Percy, Stewart & Hu, 2018).

The influence of the major components of accounting losses and gains can be examined in three different ways. One of the components is repeating fair value losses and gains on the marketing assets, and making sure of available securities for losses and gains. The second component is the frequent recognized fair value losses and gains on securities available for sale. The influence of these recognized changes in fair values can be applied to investigate the impact of FVA on the financial crisis. finally, the availability of loan-loss stocks that can be used to recognize the investment loans (Paoloni, Paolucci & Menicucci, 2017).

1.3 Theoretical framework

Foremost, the notion of FVA accounting is embodied in the principle agent theory which recommends the need to come up with accounting methods as part of monitoring managers' activities. This problem is mainly a result of considerations made which showed that there are conflicting interests between stakeholders and managers about the way a business should be managed (Chung et al., 2017). The second idea is based on the problem of information asymmetry is always prevalent in an organisation (Šodan, 2015). That is, managers will have certain information, which the owners of the business might not be having.

The existence of conflicts between stakeholders and managers is believed to cause doubts as to whether managers will be able to manage the business in the best very possible (Magnan, Menini & Parbonetti. 2015). That is, managers are tasked with the responsibility of managing the organisation in a way that adds value to the shareholders. However, the problem of self-interests can cause managers to divert their attention towards engaging in activities that do not maximise shareholder value. As a result, the principal-agent theory implies that financial information needs to be disclosed in a way that allows owners of the business and other shareholders to make rational decisions. The disclosure of information has to be done in a manner that is understandable, comparable, reliable and relevant (Wu, Thibodeau & Couch, 2016). This brings us to the idea of FVA, which is composed of these four different attributes. Thus, by making use of FVA, problems posed by the principle-agent relationship can be eliminated if not, then eased.

The second issue is observable when there is the moral hazard problem, which may cause owners of the business to lose their investments. The notion of moral hazard is based on a relatively similar idea that managers will seek to maximise their self-interests and they can engage in risks that business owners will have to be liable for (Ashbaugh-Skaife et al., 2006). This can affect a firm's cash flows, which stand a risk of falling below the required levels. As a result, monitoring and checking of managers' activities, the business operational activities and condition becomes a necessity. This, therefore, calls for methods that can be used to provide an accurate description of what is happening with the business. Such information can easily be provided with FVA.

The other thing to reckon with is the relationship that exists between debtholders and stockholders. Stockholders may hold a position in a company by investing in it and this normally involves them buying the company's shares. Some considerations consider that the value of investments made by investors will in some cases equal the value of the company's debt (Paoloni, Paolucci & Menicucci, 2017). Calls options are one of the significant ways through which stockholders can use to hold a position in a company. The time at which they may hold the options depends on the investors' 'risks appetite'.

Nevertheless, the challenge is that risk distribution between stockholders and debtholders is relatively different. For instance, stockholders are more likely to absorb a relatively high level of risks as compared to debtholders. This is because stockholders are more inclined to be associated with high-risk projects as opposed to debtholders whose funds are tied to some relatively low-risk projects. Debtholders have a claim on projects undertaken and the extent to which they can claim gains made is limited by the level of the firm's performance (Jiang, Wang & Xie, 2015). Meaning that if the business makes a loss, the debtholders may lose their claims. This is in contrast to shareholders who are bound to collect or receive all the gains made from a project. Stockholders are also in a position to lose a part if not all of their investments when the project goes wrong. These situations are characterised by a transfer of wealth from debtholders to stockholders and lack of information can cause high-risk bearing.

It is therefore important to note that the above-mentioned issues need to be deal with and one of the easiest ways of doing so is to provide more information. This can be supported by ideas given by Chung et al. (2017) which showed that the problem of information asymmetry encountered through agency conflicts can be addressed by providing accounting information (Paoloni, Paolucci & Menicucci, 2017). This will also help towards improving the efficiency of debt contracting as more information is availed about the present condition of the business, its ability to meet obligations as well as sustain operations. However, the major concern is how does FVA affect the quality of decisions made, and to what extent is it relevant and reliable in describing the fair value of a firm. This study, therefore, seeks to examine these issues on a broader level and

This study, therefore, aims to provide details related to questions surrounding the examination of the relative decision-usefulness of FVA in providing information on how it affects stock prices, which are considered to be a reliable indicator of a company’s value (Jiang, Wang & Xie, 2015). Considerations were made based on the need to ascertain the importance of FVA concerning its relevancy. For instance, Linsmeier (2010) considers that FVA is beneficial because it provides a good description of a business's true value. As such, FVA is to be relevant in decision-making as it also offers insights into the firms’ financial position. This is because it records the value of liabilities and assets at their market value. Hence, FVA is a vital aspect or tool in decision-making.

About the information that is provided through FVA, the basic concept is that better decisions can be made with regards to risk management. This is because FVA provides details about the financial position of a company and its ability to meet its obligations (Laux & Leuz, 2009). As a result, both shareholders and stockholders have a better capacity to obtain more information about the company’s risk profile and the possible strategies to undertake.

FVA offer many benefits to its users and one of the major benefits it offers is that it can easily accommodate changes in market value (Allan & Carletti, 2008). Such an ability to account for market changes is what is vital for stockholders and debtholders as they are allowed to make rational decisions. Laux and Leuz (2009) noted that the capacity of FVA to adjust and account for market changes is important because investors and other decision-makers are more capable of taking corrective actions and engaging in the timely market discipline.

In a study by Penman (2007), it was highlighted that debtholders usually prefer the use of FVA because it makes it possible for them to move their funds before they lose value. Therefore, FVA can be said to be useful as it aids debtholders as well as other market players to verify as to whether their funds will be safe and yield good returns in a particular firm or not. If not, then they can shift their funds away from risky firms towards profitable firms or projects.

With all these ideas in mind, it is therefore important to bear in mind that FVA is beneficial for both firms, stockholders and stakeholders. However, it stands to be affected by many challenges or issues.

- Firstly, one of the key issues that affect the use of FVA is that it is considered to exacerbate the problem of procyclicality, volatility in financial reporting and to be too counter-conservatism (Penman, 2007). Plantin et al. (2007) regard that FVA1, FVA2 and FVA3 are bound to be manipulated and subject to estimation errors.
- Secondly, considering debtholders' asymmetric payoff function, they care more about the lower bound of firm value. Under historical cost accounting, assets are written down when their market value goes below the book value, but are not written up when the market value reverses (i.e., accounting conservatism). Such asymmetric write-offs better protect debtholders by biasing firm value more towards its lower bound. On the contrary, fair value allows for both asset write-down and write-up. As a

result, the symmetric asset write-off renders fair value less protective to debtholders.

- On the other hand, the use of FVA affects several aspects and the first aspect has to do with the value of liabilities and assets. Allen and Carletti (2008) outlined that the values of liabilities and assets on a firm's balance sheet are subject to change in response to short-term market changes. Such changes do not often comprise part of the liabilities and assets long-term value.
- The other thing to consider is that the use of FVA may pose challenges during a period of economic instability. Such was the case with the financial crisis as contagion effects spread to other sectors and (Allan & Carletti, 2008). The issue is that markets are hindered or restricted by lacking liquidity and yet too much volatility imposes effects on capital and debt markets. This can cause an inaccurate description of the value of the business and thus give decision-makers an inaccurate picture of the business and the best possible strategy to adopt. Stock prices will on the other hand move in responses to such changes (Jain & Biswal, 2016). Hence, it is important at this stage to establish that FVA poses huge effects on the value of the firm and the extent to which it is reflected in stock prices.

Using details provided in this section, it is therefore important to note that FVA can sometimes fail to provide meaningful details to both debtholders and stockholders. This affects stock prices. Nevertheless, this needs further examination and this is what this study seeks to accomplish.

1.4 Theoretical analysis on decision usefulness of FVA

The FASB's Conceptual Framework contends that good investment and/or financial decisions can be made based on the premise of FASB 1978, para. 34. That is, the importance of accounting methods such as FVA can be ascertained by looking at their level of understandability, comparability, reliability and relevance (Valencia et al., 2013). This section, therefore, looks at a much broader view of these aspects as follows;

1.4.1 Relevance

Magnan, Menini, and Parbonetti (2015) consider relevance as the extent to which information can address the underlying issues or concerns thereby allowing decision-makers to make well-informed decisions about past, present, and future events. This is one of the notable characteristics of accounting information and (Emerson et al., 2010) contends that good accounting information is relevant at all times and in any circumstances.

The importance of FVA is attached to ideas that consider it to be relevant as it can provide important details about the market's assessment of current economic conditions (Amel-Zadeh & Meeks, 2013). This is important as it assists investors in making well-informed decisions as they are mainly focused on value and not costs. Thus, for this reason, Chung et al. (2017) consider HCA irrelevant in most cases as opposed to FVA, which offers more and current information about a firm's operational capacity, position and condition.

The notion of the relevance of FVA is based on the premise of market efficiency on which markets are considered to offer all the required information and to be in a competitive race for market share (Laux & Leuz, 2009). But the problem of transaction costs can limit the extent to which markets are considered to be efficient. Laux and Leuz (2009) contend that investor irrationality and behavioural biases are also more likely to affect market prices and thereby rendering markets inefficient. At this stage, prices will not be conforming to market fundamentals and the possibility of them doing so does not render HCA the best. Further ideas provided by Laux and Leuz also showed that lack of current information is also another issue that restricts the informativeness nature of HCA and can thus be said to be capable of obscuring problems. Thus, the use of market values provided by the use of FVA discloses more information

However, FVA is sometimes effective in certain market conditions and ineffective as well. For instance, Khan (2019) highlighted that FVA is ineffective when markets are illiquid and prices are falling significantly. This can be noted by arguments given by King (2009), which showed that the financial crisis was also a result of problems posed by the use of FVA and this is mainly because it distorts prices.

Paoloni, Paolucci and Menicucci (2017) rejected ideas that worked against the use of FVA citing that FVA does not cause 'forced sales' and distort the fair value of liabilities and assets. There is also a high level of order that follows transactions that are recorded using FVA as they reflect real economic conditions. In the USA, the use of FVA was blamed for causing problems related to poorly performing loans and deficits (Takacs & Szucs, 2017).

1.4.2 Reliability

When the provided information is free from bias and errors, one can consider it reliable (Amel-Zadeh & Meeks, 2013). FASB 20 states that reliable information has not been manipulated and is effective in estimating the fair value of a business (FASB, 1980). There have been some developments that were introduced to enhance the reliability of FVA and these include the development of new and broader financial guidelines such as FASB 20 (Magnan, Menini & Parbonetti, 2015).

Paoloni, Paolucci and Menicucci (2017) outline that one of the major features of accounting information is verifiability. Meaning that it should be easy to verify both the sources and accuracy of the provided financial information (Argimón, Dietsch & Estrada, 2018). Amel-Zadeh, Barth and Landsman (2017) posit that the chances of financial statements being manipulated are very low when FVA is used to prepare the financial statements and hence are considered to be reliable. Besides, the application of HCA is more convenient when managing corporate income and it conforms to GAAP standards.

Some problems may be encountered as the use of FVA can result in the occurrence of the same issues which it is trying to eliminate. In this occurs in the wake of a series of financial manipulation which may have been orchestrated by managers. Problems of financial manipulations and estimation errors are highly observable with regards to the use of Level 2 and Level 3 fair values (FASB, 2011). There are several incidences of fraud that took place as a result of the need to adopt the use of FVA and arguments are that these problems could have been avoided if HCA was used (Laux & Leuz, 2009; Najeb & Abdullah, 2014; Valencia et al., 2013). But earlier improvements were targeted at addressing this issue focused on changing assumptions that are used to determine the fair value of a business' liabilities and assets (Brad et al., 2012).

The other problem that is observable when using FVA is that the definitions of accounting reliability are subject to change over a given period (Brad et al., 2012). This tends to affect the way financial information is interpreted as well as the extent to which it is considered reliable. Barth also considers that a good calculation of market values does not imply that it is a good indication of actual economic outcomes. As a result, relevance and reliability are intertwined together. This can be reinforced by ideas given by Argimón, Dietsch and Estrada (2018) which showed that HCA does not offer a good indication of current complex measures.

1.4.3 Comparability

The use of FVA should allow comparisons of financial information to be made. Argimón, Dietsch and Estrada (2018), outlined that comparability is an aspect that allows users of financial information to draw differences and similarities about two or more financial details. Laux and Leuz (2009) also support the idea of using FVA and posits that it enables comparisons to be made between firms in different industries.

The concept of comparability is based on the premise that there is a common indicator that is being used to measure and compare the economic outcome or transactions. Thus, the need to use different indicators to measure and compare outcomes or transactions can present challenges (Amel-Zadeh & Meeks, 2013).

Some anomalies exist which are caused by the use of many different measures of financial information. On the other hand, FVA makes it feasible to deal with the problem of using numerous measurement (Amel-Zadeh & Meeks, 2013). Having multiple approaches to measure the same transactions can pose challenges for users of financial statements (Bouzgarrou, Jouida & Louhichi, 2018).

Paoloni, Paolucci and Menicucci (2017) contend that different valuation models can be used to measure the value of a liability or asset but there are different circumstances under which each FVA model can be applied. This compromises the extent to which HCA can be used to make comparisons of financial information and decisions made using HCA reports. As a result, FVA offers good details about better ways of ascertaining the value of liabilities and assets.

1.4.4 Understandability

Financial information should be easy to understand irrespective of the form it has been presented with. In other words, users of financial information should be in a position to perceive certain aspects from the financial statements. That is, the ability to understand the implications and effects of an organisation’s actions and their related measures.

A study by McInnis, Yu and Yust, 2018) reckons that the use of FVA helps to improve individual users of financial statements understanding of the position of the firm. This is because the prices at which such information is reflected will be based on actual or current market values. Wu, Thibodeau and Couch (2016) noted that such understanding requires that one possesses the necessary knowledge and having the inability to do may hinder a person from having a better understanding of the produced financial statements.

There are also similar studies that consider that investors have different approaches and understanding of the use of financial information (Paoloni, Paolucci & Menicucci, 2017). The benefits of FVA are greater than those of HCA in terms of relevance, reliability, comparability, and understandability. However, the impact of the importance of FVA information is empirically questionable.

1.5 The determination of fair values

Under FVA, the value of an asset or liability can be determined using three levels of input data as stipulated by the International Financial Reporting Standards (IFRS), (Brad et al., 2012; De Haan et al., 2009; Najeb & Abdullah, 2014). According to the IFRS, the following valuation levels can be applied when determining the fair value of an asset or liability;

- **Level 1:** This is applied in active markets and used to determine the value of quoted identical assets and liabilities. Such markets are characterised by frequent changes in assets and liabilities related transactions (Brad et al., 2012; De Haan et al., 2009; Najeb & Abdullah, 2014). The importance of this level is to offer current pricing information.
- **Level 2:** This level is applied in both active or inactive markets and involve the use of observable information for similar items in active or inactive markets, such as two buildings in a similar location (Brad et al., 2012; De Haan et al., 2009; Najeb & Abdullah, 2014).
- **Level 3:** This is applied with the first two levels are inapplicable to determine the value of assets and liabilities (De Haan et al., 2009). This is highly applicable during a credit crisis or when markets are illiquid or are non-existent (Brad et al., 2012). The major issue is that using FVA in such cases to value assets and liabilities can be significantly subjective and as firms include their data adjusted for other reasonably available information (Brad et al., 2012; De Haan et al., 2009; Najeb & Abdullah, 2014).

Level 1, 2 and 3 methods have significant effects on bank performances as they relate to the valuation of assets and liabilities (Paoloni, Paolucci & Menicucci, 2017). Such stems from considerations denoted that assets and liabilities are essential components of a bank's working capital and liabilities management (Yao, Percy, Stewart & Hu, 2018). Hence, improper determination of the actual assets and liabilities undermines the effectiveness of the bank's working capital and liabilities management strategies. Additionally, the considerable impact is confined to how these consequences affect bank performance (McInnis, Yu & Yust, 2018).

Underreporting assets values hinders bank performance and banks can lose substantial amounts of revenue, especially when those assets are earned for selling. Furthermore, the overall value of the bank hinges on the accurate determination of bank assets and liabilities. Thus in turn is reflected as either a profit or loss on disposal. The same considerations are also applicable in the context of liabilities both paid by banks and to the bank by its customers (Corona, Nan & Zhang, 2019). Banks must ensure that these liabilities are properly evaluated to reflect their actual market values and FVA serves such important purposes.

It is vital to acknowledge that bank derives revenue from their assets and incur expense from liabilities. Such scenarios require an effective approach to valuing assets and liabilities. Some other notable benefits and effects are tied to these two scenarios. For instance, competitiveness can be undermined when banks are not capable of estimating actual bank assets and liabilities values. Bank products and services must be well priced for banks to earn required or competitive profit levels (McInnis, Yu & Yust, 2018). Also, investors might be given a wrong impression about the bank when wrong on unreliable accounting valuation methods are used (Paoloni, Paolucci & Menicucci, 2017). This is pivotal at times when investors want to make important bank decisions. Hence, the rationality of their decisions is severely undermined by the inappropriate use of valuation methods. Therefore, FVA addresses such concerns and ensures that investors are provided with accurate and reliable information for making rational decisions.

This is the early initial phase through which the concept of FVA was developed. The development of the concept of fair value was based on the need to make improvements to the use of the historical cost accounting approach in measuring the value of semi-finished and raw materials (Jiang, Wang & Xie, 2015). Chung et al. (2017) contend that the emphasis was to reinforce the importance of market value over cost.

The inception of the idea of fair value follows major developments that were necessitated by the establishment of the 1844 Joint Stock Companies Act (Wu, Thibodeau & Couch, 2016). The Act recommended that a bank's assets be measured at their current prices as noted by the balance sheet date. That is the extent to which a business can sustain its operations and meet daily obligations (Magnan, Menini & Parbonetti. 2015). This was followed by legal improvements that were meant to reinforce the effectiveness of fair value by instituting ways of recording the value of inventory at its prevailing balance sheet value. But the major challenge was that long-lived assets were not used as a benchmark and the preferable benchmark was operating assets. Georgiou and Jack (2011) contend that this led to the widespread development and use of fair value in financial reporting with terms such as "fair value" and "fair return" being the norm. On the other hand, the use of historical-cost–based was necessitated by observations made which showed that using fair value can result in a significant decline in the value of assets (Emerson, Karim & Rutledge, 2010). As a result, propositions were made to use historical accounting methods (Scott, 2011).

Improvements were also made which led to the development of other accounting measures such as deprival value which were based on ideas developed from FVA (Chung et al., 2017). These changes considered that possible changes in liabilities and assets be included as part of changes in corporate income (Paoloni, Paolucci & Menicucci, 2017). However, more ideas were proposed to suggest that fair value be used as the best measure of the value of a firm's liabilities and assets. For instance, Scott (2011) contends that fair value gives a good indicator of the market value of a firm's liabilities and assets. Hitz (2007) also proposed that fair value is desirable becomes it includes changes in the market value of a firm's liabilities and assets as part of its corporate income. The major challenge that still exists is that fair value may not be in a position to offer an indication as to whether the price is the exit or entry price.

Most importantly, the information that is provided by using FVA is relevant for decision making and predicting the value of the firm. Such relevancy and fairness are mainly indicated by changes in stock prices which show potential changes in the value of the firm. As a result, the use of FVA can thus be said to offer huge benefits to business institutions. However, all these positive characteristics do not always provide reliable and relevant information about the business. This is because measurement errors are bound to occur at any point in time and this reduces the level of informativeness of the FVA method. Moreover, the source of the computed information can sometimes reduce the relevancy and informativeness of the FVA method. Thus, both the benefits and shortfalls of using the FVA method can either cause an improvement or deterioration in the relevancy and informativeness of the FVA method. Besides, there exist other situational events and circumstances which can compromise the relevancy and informativeness of the FVA method. But the problem is that this issue had not been explored especially in connection with capital market research. This study filled study gaps with regards to the relevancy and informativeness of the FVA method by drawing evidence from capital markets.

The established results provide strong evidence that fair value level 1 asset offers a reliable and relevant explanation of changes in stock prices of banks in Kurdistan. Such ability causes an increase in assets to further cause an increase in stock prices. This is mainly because investors respond positively to changes in level 1 assets which indicate the capability of organisational managers to effectively manage the firm’s assets. In other words, an increase in level 1 assets shows that the firms’ have improved in managing the bank’s assets.

1.6 The effects of a financial crisis on firms

A financial crisis is defined as a decline in assets prices that is followed by failure by consumers in meeting their obligations and banks experiencing liquidity issues (De Haan et al., 2009). It is essential to note that financial crisis exists in various forms and each form has its distinct effects on the firm (Laux & Leuz, 2009).

One of the notable effects of a financial crisis has been linked to the problem of inflation (Najeb & Abdullah, 2014). This follows insights revealing that periods characterised by a financial crisis are linked to high inflation rates (Najeb & Abdullah, 2014). Najeb and Abdullah (2014) contend that a financial crisis that is associated with high inflations of inflation undermines the importance and effectiveness of certain accounting valuation methods. Such extends to include FVA but this remains to be fully explored in detail.

Just like inflation, it is presumed that there are various accounting and financial approaches to dealing with the effects of a financial crisis. That is, there are different approaches to dealing with a financial crisis and one of the approaches involves using fair value accounting. Studies in support of FVA contends that it values assets and liabilities at their current market prices (Asmild, Kronborg, Mahbub & Matthews, 2019; Gup & Lutton, 2009; Valencia et al., 2013). In this way, changes in prices will also be reflected in similar changes in the market values of a company’s assets and liabilities. Thus, shifting from historical costing to FVA in response to a financial crisis can be said to affect financial performance. This means the way financial information is reported before, during and after the financial crisis is different. Hence, it can be inferred that a financial crisis has significant effects on bank performance.

A financial crisis can also influence reported methods used to present financial or bank performance details as a bank take necessary measures to hedge against the effects of the financial crisis (Sironi, 2018). Sironi also contends this hinders the effective ability of banks with different branches or subsidiaries in different countries. That is, the adopted financial performance reporting methods can cause a financial crisis to hinder the effective comparability of reported financial information. This is because banks approach and deal with a financial crisis differently. Such can be evidenced by the use of FVA and historical costing methods (Brad et al., 2012; De Haan & Lakers, 2020; Najeb & Abdullah, 2014). Hence, a bank performance comparison is challenging when different asset valuation methods are applied.

Other studies highlighted that the nature of valued assets and liabilities' figures reported during periods of a financial crisis can be so high to an extent that reporting them poses problems for accountants. The reliability of reported valued assets and liabilities information can prove to be unreliable and ineffective especially when exorbitant figures are observed. Related studies have shown that a financial crisis causes companies to use different financial and asset valuation strategies that seek to enhance financial performance (Bies, 2005; Nelson, 2020). Thus, a financial crisis influences the use of different assets and liabilities financial valuation methods.

Najeb and Abdullah (2014) contend that the roles of specific reported financial performance information changes during and after a financial crisis as investors and other stakeholders' concern change during and after the financial crisis. this is connected to the importance and use of specific assets and liabilities valuation methods used by the banks. However, other studies contend that financial performance information serves the same purposes and roles in banks either during or after the financial crisis (Bath, 2006; Najeb & Abdullah, 2014). This is because financial statements serve the primary purpose of providing details about a firm's financial performance over a certain period (Gup & Lutton, 2009; Valencia et al., 2013).

Other studies highlighted that financial statements show the condition of the firm during or after the financial crisis using the information provided in the balance sheet (Brad et al., 2012; De Haan et al., 2009; Najeb & Abdullah, 2014). Other studies consider that information provided by financial statements during or after the financial crisis is important for decision making and investors and other stakeholders use financial statements details to make important financial and non-financial decisions (Allat, 2001; Bies, 2005). All these uses of financial statements details have not been related to the effects of a financial crisis and this study contributes to existing studies by incorporating such ideas regarding the Kurdistan Region of Iraq's banks in using FVA to deal with the effects of inflation.

A financial crisis imposes severe effects on an organisation and such effects can severely reduce organisational performance. Existing studies demonstrate that there is a significant adverse relationship between a financial crisis and organisational performance (Asmid et al., 2019; de Haan & Kakes, 2020). However, denoted that the relationship can be positive depending on an organisation's ability to explore existing opportunities posed by the financial crisis (Nawaz, 2017).

Sironi (2018) asserts that organisations' growth and development potential is restricted if they are faced with situations involving a financial crisis. Such restrictions are due to a decline in both business and economic activities. Expanding business operations is much more effective when there are corresponding increases in both business and economic activities. In some cases, organisations are known to downsize operations during a financial crisis (de Haan & Kakes, 2020). Besides, small organisations can remain small and large organisations large due to the unavailability of funds to fund operations (Asmid et al., 2019), Even when such funds are available, utilising them requires proper risk management which organisations might exercise thereby diverting resources from such activities.

Overall, a financial crisis is not a desirable economic event and banks will stand to be affected by its occurrence. The effects are diverse and range from operational, market and industry-related, growth and development-related. However, this does not dispute the fact that some banks can prevail and registered substantial improvements in performance during a financial crisis (Nelson, 2020). But risk-averse strategies have also been known to be a prominent feature among banks during such time and restricting performance-related activities and investments (Asmid et al., 2019).

1.7 Bank profitability

Bank performance has been noted to be related to the changes in the financial performance of the bank throughout an operating period of usually a year (Bikker & Vervliet, 2018). Hence, in this study bank performance will be taken to mean financial performance. Despite emphasis being placed on financial indicators as measures of bank performance, they are notably three indicators that can be used to measure bank performance (Ozili & Uadiale, 2017). These measures are net interest margin, return on equity and return on 28 assets. Bank performance is an important element or subject in banking and finance and especially when formulating economic policies. This is because banks are mediators who act as the gap between economic agents who need funds to undertake economic projects or production activities (Kohlscheen, Murcia Pabón & Contreras, 2018). Funds that cannot be easily accessed by consumers and other economic players are in most cases provided by banks (Xu, Hu & Das, 2019). Hence the extent to which economic activities will increase is determined by the availability of funds provided by the financial sector (Kadioglu, Telceken & Ocal, 2017). Thus, the more funds banks can offer, the more productive activities will increase and the more banks will make profits from fees charged on assets and services, and returns on issued assets. Hence, banks that can make more profits are more capable of issuing more loans and investing in more profitable assets.

It is therefore important to ensure that banks continue to survive and make more profits so that their impact on economic activities and growth remains uncompromised (Bouzgarrou, Jouida & Louhichi, 2018). The importance of bank performance is tied to economic growth, inflation, unemployment and this is why monetary authorities are so much concerned about banking activities and performance.

1.8 Determinants of bank profitability

Factors that determine bank performance can be categorised into two broad categories, that is internal determinants and external determinants. Internal determinants are firm-specific factors while external determinants are economic specific (Nisar, Peng, Wang & Ashraf, 2018). These are discussed as follows;

One of the key factors that affect bank performance is capital adequacy which represents a measure of the lowest amount of capital banks are required to have by the Central Bank (Kadioglu, Telceken & Ocal, 2017). Capital adequacy is used by Central Banks to maintain bank stability if banks are experiencing bank panics which might lead to bank runs (Bikker & Vervliet, 2018). Bank runs occur when consumers are risk-averse and are attempting to 29 withdraw their funds from banks as a result of problems that are being experienced in the banking sector (Ozili & Uadiale, 2017). When banks are unable to meet the rising demand for bank deposits, it forces other bank customers to begin to panic and withdraw their funds from banks and if this is not contained, a situation called a bank run will occur. Hence, capital adequacy serves as a provision against such things including losses that banks may suffer in the process. It, therefore, acts as a measure that guards against risk and meant to boost bank efficiency.

One of the challenging risk that threatens banks is liquidity risk which occurs when banks are facing a shortage of liabilities (swift cash or funds) to meet their short term operational needs (Kohlscheen et al., 2018). This is because too much capital will be tied up in fixed assets which cannot be easily converted into means of payment. It is therefore important for banks to have access to cash which they can use to fund activities or meet their obligations. Loans given to households have a high chance of being defaulted and this may result in credit risk. To avoid that, banks will charge high interest rates on highly risky credit. Hence, the relationship between profitability and liquidity can be said to be positive (Kadioglu, Telceken & Ocal, 2017). But the lesser the number of funds that are tied up in fixed (illiquid) assets, the more banks will have a better capacity to invest in other assets which might give banks better returns in the future (Hirindu Kawshala, 2017; Nisar et al., 2018).

The more a bank is exposed to credit risk, the greater the chances that its profitability is being threatened and this brings about the idea that it is not the volume of loans that matters but the quality of loans issued (Bouzgarrou, Jouida & Louhichi, 2018; Ozili, 2017). A high volume of issued loans increases the chances of having unpaid loans which causes a decline in profitability. Bikker and Vervliet (2018) conducted a study to examine how credit risk influences the profitability of banks in the Philippines. The ratio of loan loss provisions to total loans was used as a measure of credit and the results should that credit risk has a significant negative effect on bank profitability. The results, therefore, show that credit risk has the potential to lower bank profitability and that it is 30 most important for banks to establish a measure that will help deal with credit risk.

What causes credit risk to be a problem for banks is that there is a mismatch in credit risk management and any anomalies that exist must be addressed to avoid hazardous exposure. Though leverage plays an essential role to explain changes in profitability, there are differences in ideas that can be noted to exist. This is because obtained results about the relationship that exists between capitalisation and profitability are sometimes different. For instance, Xu, Hu and Das (2019) outlined that banks can sometimes have low capital ratios which might indicate that that the potential risk levels are so high and hence the relationship between leverage and profitability, in this case, can be expected to be negative.

Low leverage ratios often require that banks raise additional sources of funds to boost their capital levels (Bikker & Vervliet, 2018; Topak, & Tırmandıoğlu Talu, 2017). But this can prove to be costly as interest and other costs may be required to be paid. On the other hand, ideas obtained by Berger (1995) showed that having a high capital ratio implies that banks have a better leverage position. This reduces the need by banks to borrow or issue shares to get more funds and hence contributing to profitability. It can thus be noted that well capitalised or highly leveraged banks are more efficient. Hence, it can be concluded that there is a positive association between bank leverage and profitability.

One of the key ways that can be used to determine whether banks will enjoy economies of scale or diseconomies of scale is by looking at their sizes. This is because the size of a financial institution determines how banks will diversify their products, or even diversifies to guard against risks (Bikker & Vervliet, 2018).

Kohlscheen, Ali and Puah (2019) outlined that differences in costs experienced by banks are a result of size differences. Implying that big banks incur high costs as opposed to small banks but what matters most is how they approach the problem of costs. This is where the idea of economies of scale come in. big banks can be said to be in a strong position to enjoy and benefit from economies of scale which can result in falling costs and rising output (Topak, & Tırmandıoğlu Talu, 2017).

Challenges that can be noted when 31 banks increase in size by diversifying operations and products is that the diversification process may end up reducing credit and operational risks. Yet, on the other hand, the relationship between risk and returns is positive and implying that banks will charge and demand high returns to cover for the high (Hirindu Kawshala, 2017). Hence, a reduction in credit risk will tend to lower returns than banks will get. In this case, it can thus be noted that bank size has an adverse effect on returns and ultimately profitability. From this idea, it can thus be said that the relationship between bank size and profitability is not always positive. This can be evidenced by the idea that big banks have more total assets (Hasanov, Bayramli & Al-Musehel, 2018). When a large portion of total assets is made up of fixed assets, banks in this case will be having a limited amount of liquid assets and hence can potentially face liquidity challenges.

A high portion of fixed assets hence implies that banks are having a lot of money which is tied up in assets and this can reduce their ability to invest in future projects which can offer them high returns (Borio, Gambacorta and Hofmann (2017). This tends to compromise future profit levels and thus in this situation arguments can be made that bank size does not also necessarily lead to improvements in performance. What is requires is that big banks have proper asset management strategies that can balance liquidity needs and required fixed assets to support their operations. Bank size can however be considered to be positively related to performance when income generated from total assets is greater than operational and asset acquisition costs (Ebenezer, Omar & Kamil, 2017). A high return from total assets (ROA) is thus an important determinant that influences the relationship between bank size and performance. Some big banks have lower ROA than others and this further supports the idea big banks do not necessarily have better performance. Total assets are used to indicate how big the banks are, (big banks have more total assets). 32 Smaller banks are on the other hand have a few total assets than big banks and this is what set the difference between small and big banks in terms of total assets (Hirindu Kawshala, 2017). Ebenezer, Omar and Kamil (2017) used regression analysis to examine how capitalisation influences the profitability of banks in the USA. The findings showed that bank capitalisation causes an improvement in bank performance and that the relationship is significant at 5% significance level. The results supported observations made by Ozili (2017), and this leads to the conclusion that banks that are well capitalised have lower chances of going bankrupt and this reduces the need to raise additional funding either by borrowing or by issuing shares. Borrowing and issuing shares are financing strategies that are used to raise funds by firms if firms do not have enough funds. Thus when banks are undercapitalized, borrowing or issuing shares are some of the key strategies banks can use to raise funds (Ozili, 2017). The decision to borrowing or issue shares is determined by the cost of capitalisation. Hence, the cheaper the method, the more favourable it will be to use that method to raise funds (capitalise).

Bank performance has remained vulnerable to bad macroeconomic changes even though efforts might be done to diversify and employ financial engineering methods to guard against risk (Topak, & Tırmandıoğlu Talu, 2017). But a period of high economic performance allows banks to issues more loans which offers them a chance to obtain high-interest rates which improves the quality of assets (Ebenezer, Omar & Kamil, 2017). A study by Ozili (2017) outlined that periods of high economic performance are accompanied by a rise in disposable incomes which can trigger high savings and high borrowing activities. High borrowing and saving activities by consumers can trigger a rise in bank earnings.

Some studies examine the influence of macroeconomic variables on bank performance. For instance, Ali and Puah (2019) conducted a study to examine how economic and financial stability affects bank profitability. The findings showed that bank profitability tends to increase in times of high 33 economic and financial stability. However, in times of financial stability such as with cases of inflation, bank profitability will be low or possibly negative. This implies that economic events such as a financial crisis will harm profitability. This can be supported by a study conducted by Borio, Gambacorta and Hofmann (2017) which showed that economic indicators such as GDP, employment and FDI will have a positive effect on profitability. However, the effect of money supply on bank profitability has in different cases been established to either cause a negative change in profitability or a positive change in profitability. This can be attributed to arguments an increase in the money supply means that consumers will be left with excess money which they can afford to save with banks (Hirindu Kawshala, 2017). Banks will in return uses those savings to issue further loans and possibly invest in other assets. Thus, an increase in saving and investments which occur as a result of increases in money supply has a positive effect on bank profitability. But when increases in money supply result in inflation, the value of assets (loans and other fixed interest-bearing assets) owned by the banks will decline to cause a decline in profitability (Hasanov, Bayramli & Al-Musehel, 2018).

1.9 The role of fair value accounting in banks

Amel-Zadeh, Barth and Landsman (2017) assert that FVA provides an accurate description of the organisation true income. The provided suggestions were in support of the argument depicting that it is practically impossible for managers to manipulate financial statements prepared using FVA methods. This is vital in banks that have been rocked with severe corporate misconducts. Such conducts have affected the reputation of banks and even led to the closure of several banks worldwide. A notable example is when bank managers use asset sales losses or gains to lower or boost net revenue. This provides a wrong picture of the bank to its stakeholders and shareholders. Thus, applying FVA ensures that losses or gains from any price change for an asset or liability are reported in the period in which they occur (Adegboyegun et al., 2020). Furthermore, Argimón, Dietsch and Estrada (2018) noted that an increase in liability value reduces net income and that a decrease in liability enhances net income. Alternatively, this implies that a decrease in asset value reduces net income and an increase in asset value enhances net income.

Khan (2019) reckons that FVA is vital for providing an accurate valuation of bank assets and liabilities. This continuously happens on an ongoing basis to users of the bank's reported financial information. Meanwhile, an increase or decrease in either the price of the bank’s assets and liabilities entails that its value has either increased or decreased. Therefore, FVA is seen as a method that ensures that the value of the bank’s assets and liabilities reflects its market values (Takacs & Szucs, 2017).

Despite, all these benefits of applying FVA, studies do acknowledge that applying FVA has inherent limitations. For instance, Amel-Zadeh, Barth and Landsman (2017) established that there are value reversal challenges linked to the application of FVA. This is because the trading of bank assets and liabilities in the financial markets is subject to change. Furthermore, the prices of assets and liabilities can be become volatile and may fluctuate substantially at times. Consequently, Paoloni, Paolucci and Menicucci (2017) contend that using FVA, banks evaluate the current value of certain assets and liabilities even in volatile market conditions, potentially creating large swings in the value of those assets and liabilities. This implies that FVA may provide unreliable information and impair the rational decision-making process.

There also limitations linked to market effects disadvantages as FVA negatively affects the financial market (Corona, Nan & Zhang, 2019). Such is common, especially when bank assets are revalued downward due to falling prevailing market trading prices (McInnis, Yu & Yust, 2018). Such can force banks to dispose of those assets on the impression that they are not profitable or have lower market values. Therefore, it is worthy to note that FVA plays vital roles in banks and most of these roles have positive effects on banks. However, care is needed to address limitations related to the application of FVA by banks, especially during a financial crisis.

1.10 Literature review on FVA

There are studies on the use and relevancy of FVA and they all point to different aspects. As a result, much is needed to examine the relevancy and informativeness of the FVA method. Nelson (1996) did a study that explores the implications of FVA for commercial banks using a deductive reasoning approach. The findings made from the study showed that FVA does not always result in favourable outcomes. As such, the study showed that much of the volatility experienced by banks and in capital markets was a result of the use of fair value accounting. The study further showed that FVA is associated with adverse effects such as different capital and earning figures. Such imposes effects on bank indicators such as solvency and this goes on to affect the relevancy and informativeness of the FVA method.

1.10.1 Value relevance of fair value in the equity market

Barth et al. (2001) did a study that examined the relevance of fair value in equity markets. The study reckons that fair value is relevant when it can predict the market value of equity. This means that fair value is considered to be more effective when it highly predicts the market value of equity and the lesser it does so, the less effective it will be.

In a study by Hitz (2007), it was outlined that FVA is much more relevant in the banking industry when used to determine its relevance to offer useful information on financial instruments. The study was based on information collected from banks in the United States of America. It was noted that the relevance of FVA is ascertained by its potency to offer more additional information as opposed to historical cost.

Landsman. (2007) drawn insights using data collected from the year 1971 to 1990 to determine the importance of FVA over historical cost. The goal was to examine the extent to which FVA is reliable and relevant in determining the value of investment securities. The findings revealed that FVA offers more and relevant details about the value of investment securities as opposed to historical cost especially in active investment securities markets. The findings were reinforced by related findings established by Laux and Leuz (2009) which showed that the results extend to include net assets listed in a firm's balance sheet. The findings are also similar to findings established by Emerson, Karim and Rutledge (2010) which revealed that losses and gains made by insurance companies were also positively correlated with stock returns as postulated by FAS 107.

Fiechter and Novotny-Farkas (2011) conducted a study that showed that there is high relevancy that is associated with investment securities. However, there are studies such as the one by Magnan, Menini and Parbonetti (2015) which consider these findings to vary and be different concerning other liabilities and assets. The study also considers such results to be weak and mixed though relevant in certain circumstances. However, the relevancy of FVA can mostly be high in circumstances that are characterised by high periods of high values that exceed book values. This entails that the situation among capital and debt market firms in Jordan might cause the results to be significantly different. But loans, securities held-to-maturity, and losses and gains made from selling securities. (Landsman, 2007).

Goh, Li, Ng and Yong (2015) highlighted that developing additional information takes time and can prove to be difficult in certain circumstances. However, the use of FVA was deemed to offer more information as compared to other accounting methods such as historical cost. This is also because FVA is so informative and hence has huge implications on decision making.

Chung, Goh, Ng and Yong (2017) contrasted the use of historical cost and FVA about FAS 115 and FAS 107. The results were significantly different from those established by Barth et al. (2001), Hitz (2007) and Landsman. (2007). The study results showed that there were no major differences between the level of information offered by historical cost and FVA approaches. The results also showed that relevance and informativeness were high among small banks as opposed to small banks.

Paoloni, Paolucci and Menicucci (2017) did a study that looked at the use of 3 tiers of FVA among banks in the USA with regards to their reliability in dealing with challenges posed by the financial crisis. It was considered that the reliability of the 3 tiers was mainly influenced by the availability of good corporate governance. As a result, the reliability of the 3 tiers was considered to be high in banks that have good corporate governance structures. The coefficient values were less than 1 and this implied that their relevancy and reliability is low. Possible reasons attributed this to uncertainty and market instability (Goh et al., 2009).

Ahmed et al. (2006) posit that the relevance of FVA is relatively high when used to ascertain the market value of nonfinancial assets, the long term tangible assets and derivatives. However, investors do sometimes consider the use of FVA as unreliable and irrelevant and hence can discredit the disclosure and recognition of FVA.

Some studies look at the extent to which information reliability is desirable to overvalue relevance. For instance, Dietrich et al. (2000) hinted that the relevance and reliability of FVA are positively related to each other while Muller and Riedl (2002) highlighted that the availability of appraisals techniques. Barth and Clinch (1998) established that there exists no kind of a related association.

A study by Fiechter and Novotny-Farkas (2011) used time-series data to assess the value relevance of FVA using data collected from a sample of 322 banks. The data was analysed by simply applying the modified Ohlson (1995) model. The results established revealed that the relevance of FVA varies according to institutional and firm-specific factors. In addition, this study sets forth evidence that fair value experienced a substantial discount during the financial crisis of that period. Thus, using FVA might not be a good answer to dealing with the problem affecting decision making in corporate institutions.

Studies that have been examined in this chapter, offer valuable ideas about the importance of FVA in capital and debt markets. These ideas are thus applicable in Northern Iraq's debt and capital situations. However, their applicability is limited by several factors such as according to institutional and firm-specific factors. This study, therefore, explores this gap in Northern Iraq's banking situations. Hence, there is a need to look at which circumstances under which it is effective and works better in Northern Iraq's debt and capital situations.

1.10.2 Value relevance of fair value in capital markets

Fair value has significant implications on capital and debt markets and its implications can be observed in many ways. A study by Armstrong et al. (2010) highlighted that debtholders and shareholders are affected by the use of FVA as it affects the decision-making process. This is because the produced financial reports contain information that has been produced using ideas proposed by fair value accounting. This information relates to the valuation of a firm's liabilities and assets as well as possible risks affecting its operations. The same information can be used to examine the feasibility at which projected cash flows are easily realised and thus making it easy for firms to make decisions on which investments or projects to invest in.

Blankespoor et al. (2010) contend that FVAoffers deep insights about the importance of fair value in making sound business decisions. It was noted that the relationship between bank leverage and credit risk exposure is easily examined by employing fair value concepts. In addition, findings from this study showed that a firm's leverage is more likely to be higher than those of other firms that use different methods by 6 times more. In other words, these results entail that fair value provides a relatively high level of accuracy in ascertaining a firm's value. Such findings also reiterated that a bank's position can easily be ascertained by using fair value measures. This was reinforced by insights provided by Cantrell et al. (2011) which showed that aspects such as credit losses can which can be made through the bank issuing out loans.

Meanwhile, not much has been done to examine this issue on a much broader level as there are limited studies that examine this issue. However, a study by

Kothari et al. (2010) contends that applying fair value techniques makes it feasible to verify financial information that is used to make important corporate decisions. Such pertain much to debt holders and equity holders. This is because it enables debt and equity holders to be able to deal with issues caused by asymmetric information and moral hazards. These problems are a result of asset substitution risks.

On the other hand, propositions were made that FVA enhances the relevance of financial reporting (Chung et al., 2017). However, it poses challenges with regards to the reliability of Levels 2 and 3 liabilities and assets and diminishes its reliability. As a result, using FV might not offer the desired results. Hence, FV cannot be said to reduce or improve the decisions made by investors. Thus, this study seeks to cover this gap by looking at the relevance and reliability of FV in capital and debt markets. The information provided in this study enhances understanding of the use of FV in making decisions and improving the operational capacity of a business.

1.10.3 Related studies

Bath (2006) defines FVA as a valuation method used to determine the value at which an entity instrument is given, liability settled and asset exchanged. The measurement method uses current and changes in prices of assets, increase or decrease in income from liabilities and realized losses or gains in the value of the asset. FVA is important to banks as it aids in the effective and transparent pricing of financial assets and instruments during a financial crisis. This is because a financial crisis makes it difficult to price financial assets and instruments as the markets will be surrounded by problems of irregularities and price rigidities (Bies, 2005). However, its importance is tied to the making of rational decisions using accurate, relevant and reliable information which both shareholders and stakeholders can rely on. For these reasons, FVA is significant and crucial for valuing financial assets and instruments during a financial crisis.

Meanwhile, FVA is highly crucial in the banking sector for reliability and relevance related reasons (Bath, 2006). According to Allat (2001), when the financial information provided by banks is of high-quality such information is considered to be reliable. This implies that the accountants have faithfully presented the financial details of the bank. In addition, this also entails that the financial information is not bias and does not have errors. Establishing the accurate value of the bank is vital in liquid markets where values can be determined accurately without any controversies reliable in such cases and this places a huge need to continuously apply improved accounting standards that deal with valuation and market-related challenges.

Landsman (2007) conducted a similar study on the implications of FVA in terms of relevancy and informativeness using ideas drawn from capital markets. The results provided strong support that the relevancy and informativeness of FVA are bound to change and may not yield the desired outcomes. The findings further highlighted that the relevancy and informativeness of the FVA method are subjected to shortfalls posed by the source of the computed information and measurement errors.

Various authors examine the importance of FVA in the financial crisis. However, few of them use empirical methods. Some authors such as (Brad et al., 2012) and (Laux & Leuz, 2009) compare the influence of accounting losses or gains happening from various accounting regulations and throughout the financial crisis. They argue that the influence of FVA is less than HCA although the impact of FVA during the financial crisis is obvious. A study by Shaffer (2011) illustrates that loan losses for large banks in the USA are more crucial than fair value losses, their Tier 1 have been decreasing by about 8% by the latter and the ratio of their TCE have been reducing by up to 50% by unrecognized losses on AFS securities. Brad et al. (2012) found similar results regarding the impact on the Tier 1 capital ratio.

However, these authors ignore the influence of trading assets and therefore, their results are considered weak.

Penman (2007) examined the effects of using the fair value on financial reporting quality. This was based on arguments about the contribution of the fair value towards improving the quality of financial reporting. Such ideas exhibited that the use of fair value does not always lead to an improvement in the quality of financial reporting. The findings, therefore, implied that the use of fair value is either a plus or a minus. Hence, deductions can be made that the issue of the relevancy and informativeness of the FVA method still needs further examination.

Benston (2008) used empirical insights to depict the shortcomings of FVA as highlighted by SFAS 157. It can be noted that insights obtained from SFAS 157 already depicts that there are inherent problems associated with the use of the FVA method. This entails that the relevancy and informativeness of the FVA method are subjective. The findings went on to show that fair value methods have drawbacks when it comes to the use of exit prices and causes companies to pay for assets at relatively high prices. The study also showed that the use of fair value can sometimes result in biasedness especially with regards to the valuation of non-financial assets. This also includes the valuation of both liabilities and assets. Hence, it is imperative to note that the relevancy and informativeness of the FVA method are subjective especially with regards to the valuation of assets and liabilities.

Simulation studies can be used to find the influence of FVA on capital ratio and bank's capital (Gup & Lutton, 2009; Valencia et al., 2013). However, there are drawbacks in their findings including simulating information is different from real information for banks as simulated data may not represent real bank data. Thus, real data should be used for analyzing bank data. Market reactions have been used by (Amel-Zadeh & Meeks, 2013) to the FVA usage to capture the influence of FVA throughout the crisis. However, Brad et al. (2012) stated that it is difficult to control the influence of the other variables when they applied regression models.

Song, Thomas and Yi, (2010) did a study that provided support to established results by Benston (2008) but extended the analysis to include corporate governance mechanisms. The findings showed that different valuation methods such as FVA impose effects on corporate governance mechanisms as well as investment decisions. This is mainly because the use of FVA is associated with its standards, procedures and requirements and shareholders and other stakeholders often approach such information using a different perspective. This in turn affects corporate governance mechanisms as well as the extent to which is relevant and informative.

The provided related studies are just an insight into some of the key issues characterised by the use of fair value accounting. Furthermore, it is imperative to note that the use of fair value account ting is still surrounded by issues that need further exploration especially concerning capital market activities that are associate with numerous financial transactions. This study, therefore, seeks to examine the relevancy and informativeness of the FVA method by drawing evidence from capital markets.

There is little evidence that FVA integrated into the economic crisis in a potential way as discussed by Najeb and Abdullah (2014). There is debate concertation about this issue. One of the major problems is that many advantageous properties are lost by FVA especially when prices are not available in the potential markets. Some effective models should be applied. This issue makes fair value complicate to be verified and determined. Thus, there is a possibility to improve the operational details and rules of FVA. He also stated that the role of FVA is limited statements and capital ratios of banks except in the trading situations of large banks. This means that the rules of existing FVA is fragile and the report of FVA has an impact on the managerial decision making and also has an effect on independent accountants who unfolded financial statements. To define gains and underlying the impacts of the transaction on the balance sheet, a manager should define fair values for assets.

There are debates in favour of that the idea FVA has made the financial crisis worse in the USA. For instance, one argument is that indicators of market prices for certain assets were weak throughout the financial crisis. The American Bankers Association (ABA) explains that FVA affects the identification of OTTI (American Bankers Association, 2008).

The financial crisis of 2008-2009 may be seen in different ways. Interest rates in some countries had been reduced as lower as zero for micro-businesses. The European and US banks lost more than one billion during the crisis (Reuters, 2009). The issues of liquidity may arise when the inappropriate liquid has been provided by the economic institutions to meet commitments financially. An example of this issue could be the unexpected withdraw of deposits of customers (De Haan et al., 2009).

Paoloni, Paolucci and Menicucci (2017) acknowledged the role of FVA in improving European banks’ earnings quality. Such is linked to the accurate pricing of both assets and liabilities. In another study, McInnis, Yu and Yust (2018) established that FVA offers significant and vital financial statements compared to current GAAP for banks. This entails that FVA allows banks to make rational decisions and the effectiveness and quality of such decisions are high when compared to other valuation methods. This was also echoed by Yao et al. (2018), who depicted that FVA improves the quality of the bank’s earning as bank managers adopt rational decisions that maximise the use of investors’ funds.

Bouzgarrou, Jouida and Louhichi (2018) demonstrated that there are substantial differences between bank profitability during and before the financial crisis. These comparisons were drawn from examinations made between domestic versus foreign banks. Both banks exhibited similar bank profitability patterns before, during and after the crisis. Notable changes in bank profitability after the crisis were attributed to effective bank management strategies. Hence, Kurdistan banks can obtain the same benefits on the condition that they adopt effective bank management strategies.

Mirzaei (2019) underscored the importance of dealing with the effects of a financial crisis citing that it undermined the market power among UAE banks. These observations mirror the situation with the Kurdish bank and require major attention. The findings depicted that banks tend to lose their competitiveness during a crisis and calls for the strategic implementation of financial and non-financial measures.

Hussien et al. (2019) demonstrated that the performance of Islamic banks was adversely affected by the prevalence of the 2008 global financial crisis. The related suggestions denoted that this was due to a fall in banking activities as bank customers exercised caution towards their use of their funds. Concerns were also raised citing that a financial crisis affects market share and banks end up competing for a limited portion of a market's share.

These reviewed insights demonstrate that there is a significant connection between a financial crisis, FVA and bank performance. Additionally, it can be inferred from these ideas that a financial crisis has disastrous effects on bank performance and the value of the bank. Other essential bank functions are also adversely affected as the financial crisis undermines their capacity to generate revenue or improve operational conditions and activity levels. Hence, the importance of FVA in ensuring that asset and liability values provide an accurate reflection of such values to guide both managers and investors in making rational decisions.

1.11 Hypothesis formulation

Hypotheses were developed concerning the effects of a financial crisis on fair value accounting and bank performance. Hypotheses were also established based on the effects of adopting FVA on bank performance in banks, and the mediating effects of FVA on the connection between a financial crisis and bank performance.

(a). The effects of a financial crisis on fair value accounting

Bank tend to react differently to different operational and economic situations in both good and bad economic conditions. Hence, the resultant effects on performance and other strategies might be different. One of the key strategies banks have been suggested to apply during the financial crisis is FVA (McInnis, Yu & Yust, 2018; Paoloni, Paolucci & Menicucci, 2017).

Previous studies have of long suggested that proper accounting standards are needed to promote reliability and acceptable financial statement preparation and reporting standards (Corona, Nan & Zhang, 2019; Paoloni, Paolucci & Menicucci, 2017). Yao et al. (2018) contend that FVA is part of efforts to promote good corporate governance practices in organisations like banks. In this way, the adoption of FVA is not linked to a financial crisis.

A study by Amel-Zadeh, Barth and Landsman (2017) highlight that FVA is instrumental for properly align the organisation’s balance sheet and profit statement values in line with prevailing market values. Banks using FVA have a reputation for ensuring that products offered or assets bought and sold are reflecting market values. A mismatch between market values and what banks pay or receive has huge implications for their performance. Hence, Adegboyegun et al. (2020) consider that FVA is vital for making sure that the value of the banks’ assets is reflection current market values.

In another study by Argimón, Dietsch and Estrada (2018), prices were noted to be excessively high during a financial crisis and thus making the use of historical prices irrelevant. Exorbitant prices require effective accounting standards that reflect current market prices as prices continuously change due to changes in economic activities and variables as triggered by the financial crisis. Adopting FVA becomes instrumental in ensuring that revenues and costs are not underestimating. This helps banks by ensuring that correct and reliable financial details are presented to shareholders and stakeholders.

Meanwhile, there is a lack of consensus regarding the application of FVA. Most studies consider FVA to be a valuation method that seeks to ensure that companies use proper accounting standards that do not overestimate their values (Corona, Nan & Zhang, 2019; McInnis, Yu & Yust, 2018). This suggests that FVA is not a direct way of dealing with a financial crisis and its related effects but rather becomes a way of dealing with the effects of a financial crisis, especially when there is inflation. FVA uses market values, which are bound to change significantly, especially when prices are sky-rocketing because of inflation. This places concerns regarding the effects of a financial crisis on FVA as the direct link has to be established. Moreover, Takacs and Szucs (2017) consider that the adoption of FVA by an organisation like banks is not triggered by economic problems but rather by accounting needs and concerns. Such ideas imply that the adoption of FVA is needed whether there is a financial crisis or not, thereby excluding the prevalence of a financial crisis as a cause. This lack of clarity regarding the effects of a financial crisis on the adoption of FVA needs to be examined and tested. As a result, we can thus, formulate the following hypothesis to test the validity of such ideas;

- **H_1:** A financial crisis has no significant positive effects on fair value accounting.

(b). The effects of a financial crisis on bank performance

The effects of a financial crisis are diverse and range in distinct forms depending on the nature of a financial crisis in existence. Studies also consider that these effects can differ depending on the nature of the firm (de Haan & Kakes, 2020) and industry (Asmid et al., 2019) under consideration. Thus, a financial crisis is expected to exert different effects on banks and this study builds on these ideas to explores how a financial crisis affects bank performance and the adoption of FVA.

Sironi (2018) highlights that a financial crisis undermines banking activities, which means that it restricts banks' operational capacity. Banks usually adopt risk-averse strategies during the prevalence of a financial crisis and this can cause operational capacity to decline, and in turn, reduce bank performance. Such denotes the existence of an adverse relationship between a financial crisis and bank performance.

Asmid et al. (2019) contend that banks tend to scale down their lending activities amid a crisis. Lending activities are adjusted in relations to banking and macroeconomic environments. Thus, a good economic outlook indicates that customers have a high potential to pay back borrowed loans on time. On the contrary, a financial crisis makes challenging for bank customers to pay back borrowed funds. Hence, banks suffer from a decline in bank revenue as interest revenue falls. Additionally, Nelson (2020) noted that banks funds can lye idle as banks exercise cautions towards minimising both risks and losses. Thus, this translates to an opportunity cost in terms of future revenues banks could have earned, and when such costs are compared with rising costs, banks can suffer losses.

The effects of a financial crisis on banks seems inevitable especially when bank customers have a negative perception about the bank's capacity to deal with the financial crisis. For instance, de Haan and Kakes (2020) contends that banks usually fear that the value of their bank savings and investments will be adversely affected by a financial crisis. Hence, they would withdraw their funds from banks before they lose value. This goes along with suggestions given by McInnis, Yu and Yust (2018) denoting that financial crisis has long been associated with adverse economic conditions restricting consumption, production and operational activities. Thus, bank customers will also resort to rational behaviour by diverting their funds to productive activities to avoid losing their funds due to inflation. Besides, Corona, Nan and Zhang (2019) note that inflation is always high during a financial crisis and bank customers resort to spending rather than saving.

Adegboyegun et al. (2020) conducted a study illustrating that the benefits of adopting FVA are somehow relatively unique but similar in all contexts. This means that two firms in two different countries can experience similar favourable changes in financial reporting and outcomes from adopting FVA. By the same principle, expectations are that FVA will help create acceptable financial reporting standards and practices in banks that encourage good corporate governance practices. All these changes work towards improving bank performance.

Evidence provide in this section is substantial to note and establish that a financial crisis hinders bank performance. The effects are transmitted through changes in banks' operational activities and capacity, customers' engagement levels with banks, borrowing and lending levels, perceptions, rational behaviour etc.

Amid all these insights, it becomes imperative to establish that a financial crisis hinders bank performance. But this is still yet to be examined concerning Kurdistan banks. On the contrary, the effects are noted to be diverse and have distinct effects on banks. Such observations make it contrasting to relate similar findings in two distinct economies like Kurdistan and other western or European countries. hence, this study seeks to test this notion and thus, proposes the following null hypothesis;

- **H_2:** The financial crisis has no significant negative effects on bank performance.

(c). The relationship between fair value accounting and bank performance

The effects of FVA on bank performance can be illustrated by comparing its usefulness with other similar principles like historical valuation methods. According to Amel-Zadeh, Barth and Landsman (2017), historical costing uses previous prices to determine the value of assets and liabilities. On the contrary, FVA uses current market prices to determine the value of assets and liabilities. Such a distinct feature entails that both valuation methods have a different effect on bank performance.

Adegboyegun et al. (2020) depict that using historical costing undermines the actual values, which should be reflected in the financial statements. This is because the value of assets and liabilities is underestimated in cases where the financial crisis is linked to high inflation rates. But in financial reporting, it is prudent to record assets at the price at which they were acquired and liabilities at a value at which they were incurred (Argimón, Dietsch & Estrada, 2018). Meanwhile, under normal conditions, FVA is preferable because of its ability to cater for market values of assets and liabilities.

The adoption of FVA has been linked to organisational performance (Argimón, Dietsch & Estrada, 2018; Khan, 2019; Takacs & Szucs, 2017). Relatively fewer cases examine such connections using bank-related situations. Thus, it is novel to explore such connection regarding banks in Kurdistan.

Meanwhile, related standards show that FVA has substantial effects on bank performance in diverse ways. For instance, Argimón, Dietsch and Estrada (2018) reckon that using FVA ensures that assets and liabilities are measured at their appropriate values, thereby avoiding misstatements or overstatements affecting financial performance. Khan (2019) reiterates that there is integrity, trustworthy and transparency benefits connected to the application of FVA. Hence, by adopting FVA, it is believed that more stakeholders would be willing to do business with the banks (Takacs & Szucs, 2017). Hence, FVA can be said to be having a positive effect on bank performance and this will be tested using the following hypothesis;

- **H_3:** Fair value accounting has no significant positive effects on bank performance.

(d). The mediating effects FVA

The mediating effects FVA on the relationship between a financial crisis and bank performance is still yet to be explored. That is, studies have not yet addressed this effect and this study is the first of its kind. A such, it argues that a financial crisis associated with high levels of inflation inflates prices. Thus, using historical cost pricing implies that revenue will be underestimated and costs will be overstated. This affects bank performance and can lead to substantial loses. Therefore, implementing FVA helps to avoid such problems and ensure that accurate assets and liabilities market prices are recorded. Additionally, FVA helps banks deal with the effects of a financial crisis, especially inflation leading to improved bank performance. Both scenarios (negative and positive) denote that plays mediatory roles in reducing the effects of inflation leading to improved performance. Therefore, this study seeks to test this assertion by formulating the following hypothesis;

- **H_4:** Fair value accounting has no significant mediating the effects of the financial crisis on bank performance.

Having reviewed the aforementioned studies and formulated the related hypotheses, the summarised hypotheses can be presented as follows;

- **H_1:** A financial crisis has no significant positive effects on fair value accounting.
- **H_2:** The financial crisis has no significant negative effects on bank performance.
- **H_3:** Fair value accounting has no significant positive effects on bank performance.
- **H_4:** • Fair value accounting has no significant mediating the effects of the financial crisis on bank performance.

The proposed hypotheses were connected into a conceptual framework capable of analysing the mediating effects of FVA on the relationship between a financial crisis and bank performance as shown in Figure 1.1. This will be further linked to an empirical model that will be empirically analysed to test the governing structural relationships.

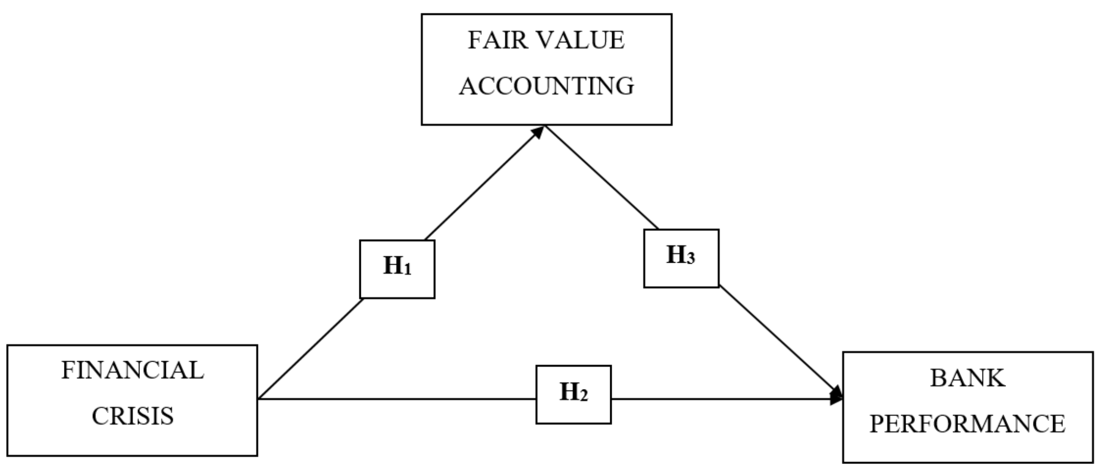

Figure 2.1: Conceptual framework

CHAPTER TWO

RESEARCH METHODOLOGY

2.1 Procedures

A quantitative research approach for collecting data using a questionnaire was used in conjunction with statistical tests to analyse the collected data. That is, primary data was collected using a questionnaire. The benefits of using a questionnaire allowed the researcher to obtain detailed information about the emotions of the participants (Crowther & Lancaster, 2012). Furthermore, such information is not easily available when secondary data is used (Walliman, 2010).

The procedure was to analyse data collected from a sample of 20 private and public banks based in Kurdistan. 10 questionnaires were distributed to each bank to collect information from accountants, economists, financial analysts, financial managers, and general managers about their perception of the effects of a financial crisis. Thus, a total of 200 questionnaires were distributed to accountants, economists, financial analysts, financial managers, and general managers professionals working in Kurdistan banks. Such was also done to assess how FVA can be used to ease such effects and enhance organisational performance (bank performance). This required Smart PLS 3 to test the mediating effects of FVA on the relationship between the financial crisis and bank performance.

The questionnaire was tested to determine if the bank employees would easily read and understand it as well as checking to determine it did not have double-barreled questions. The questionnaire's validity and reliability were tested using a series of factor analysis and Cronbach's alpha tests. The selected variables were subsequently used to establish the connection between FVA's roles or effects on bank performance during a financial crisis.

The research design is appropriate because it answers our study aims and our research question as proposed. Besides, the collected data will be important for allowing the use of various statistical methods that encompass regression analysis such as regression analysis. Such provided detailed insights into trends and changes in banking patterns during the occurrence of a crisis.

2.2 Participants

A purposive sample of 200 participants was used for this study. The participants are drawn from 20 private and public banks based in Kurdistan. The participants were randomly selected to obtain primary data by using a questionnaire. A purposive sample of 200 participants was used for this study and this is because it allowed the researcher to draw essential ideas from the relevant despondences (Brad et al., 2012). Purposive sampling was also suitable for use in this study because it was fit for addressing the scope and limitations of the study which were mostly restricted by a limited time frame.

2.3 Measures

A questionnaire was designed to investigate the impact of a financial crisis together with the mediating effects of the FVA on bank performance during a financial crisis. The questionnaire had three sections. The first section covered the demographic aspects of the participants while the second section measured FVA aspects. The last section focused on addressing matters related to changes in bank operations caused by the adoption of FVA during the financial crisis. The study used a five Likert scale 1 for “Strongly disagree”, 2 for “disagree”, 3 for “natural”, 4 for “agree” and 5 for “strongly agree”. The questionnaire was designed using ideas provided by Brad et al. (2012) and, Laux and Leuz (2009) but changes were made to suit this study’s intended objectives.

2.4 Data analysis methods

Due to the nature of possible FVA mediating effects between a financial crisis and bank performance, such a structural connection requires programs effective in modelling the structural connections between two or more variables (Savalei & Bentler, 2010). Hence, the application of Smart PLS3 was considered effective in this study. Smart PLS 3 is a data analysis program that analyses structural connections between two or more variables (Bollen, 2005). Additionally, Smart PLS3 can be used to estimate both the mediating and moderating effects between two or more variables (Savalei & Bentler, 2010).

The structural equation model (SEM) approaches assumes that the variables can be regressed together to determine their underlying relationships (Ko & Stewart, 2002). In such a case, this study highlights that bank performance (BP) is subject to changes in the prevalence of a financial crisis (FC) and the mediating effects of FVA. This is functionally demonstrated as follows;

$$BP = f(FC; FVA) \qquad (2.1).$$

Regression concepts were integrated to form a regression model which is an integral part of SEM. This produced the following model;

$$BP = \alpha + \beta_1 FC + \beta_2 FVA + \mu \qquad (2.2).$$

SEM uses a combination of factor analysis and regression analysis to test the variables for relationships and effects (Ko & Stewart, 2002). Both SEM and Smart PLS allow users to determine the estimated model's construct and discriminant validity (Bollen, 2005). They also allowed the estimated model to be checked for internal consistency using Cronbach's alpha test and a series of model fitness tests. These were essential for checking for misspecification in the estimated model. Such was conducted about the following hypotheses derived from the reviewed studies;

- **H_1:** A financial crisis has no significant positive effects on fair value accounting.
- **H_2:** The financial crisis has no significant negative effects on bank performance.
- **H_3:** Fair value accounting has no significant positive effects on bank performance.
- **H_4:** • Fair value accounting has no significant mediating the effects on the financial crisis on bank performance.

2.5 Ethical consideration

Considerations were taken to inform the participants about the purpose of this study using a written informed consent form. The consent form was essential for informing the participants that there were free to participate and opt of the study (Esser & Vliegenthart, 2017). That is, they were informed that the study was voluntary and that their participation does not attract any form of benefits nor lead to any form of punishment for providing any form of response. Considerations were also taken to ensure that the findings were not to be made public without the participants' consent. Such was done by ensuring that an application was submitted to the researcher's governing ethical committee.

2.6 Limitations of the study

This study was limited to the level of measuring FVA for banks and relied on questionnaires to observe the influence of FVA. The study focused on banks in Iraq, thus this study will not be generalized to other sectors because each sector has its features. Besides, it does not investigate the influence of FVA in large international banks during the financial crisis.

CHAPTER THREE

DATA ANALYSIS AND PRESENTATION

3.1 Introduction

The analysed results were obtained from computations of 160 private and public bank employees' responses comprised of 40 Accountants, 60 Economists, 20 Financial analysts, 20 Financial managers, and 20 General managers in Kurdistan. Thus, this chapter provides details of the obtained findings necessary for answering questions related to the ways FVA influences bank performance during a financial crisis. It also provides estimated empirical insights into the roles played by FVA and how it helps to ease the effects of the financial crisis on bank performance.

3.2 Demographic analysis

The 160 bank employees comprised 96 male employees and 64 female employees. 65% of the employees were in between the age group of 26-35 years, 24.38% between 36-45 years, 8.75% between 46-55 years, and 1.87% at least 56 years. 7.5% of the bank employees have been working for the banks for less than 1 year, 27.5% for 1-3 years, 48.75% for 3-6 years, and 16.25% for 6-10 years. The results are presented in Table 3.1.

Table 3.1: Demographic analysis

Variable	Description	Count	Percentage
Gender	Male	96	60.00
	Female	64	40.00
	Total	**160**	**100**
Age group	26-35 years	104	65.00
	36-45 years	39	24.38
	46-55 years	14	8.75
	56 years and above	3	1.87
	Total	**160**	**100**
Years of experience	Less than 1 year	12	7.50
	1-3 years	44	27.50
	3-6 years	78	48.75
	6-10 years	26	16.25
	Total	**160**	**100**

3.3 The application of FVA in banks

The questionnaire sought to establish details regarding the application of FVA in banks. All the 160 bank employees responded by indicating that their banks use FVA. This shows that there is a high considerable use of FVA by banks in Kurdistan. Meanwhile, 123 employees responded by indicating that using fair value accounting affects their daily duties compared to 37 employees, who indicated contrasting ideas. Hence, there is a need to ensure that there are effective accounting and management strategies aimed at making sure that FVA implementation activities do not interfere with bank activities. All the 160 bank employees indicated that the banks have enough financial resources to adopt and use fair value accounting. In addition, they also indicated that the banks have enough skilled and trained individuals to implement and FVA. This will help enhance effectiveness in implementing and using FVA in banks.

3.4 Bank employee responses on the effects of a financial crisis on banks

The study sought to finds ways through which a financial crisis affects banks in line with reviewed literature which denoted that a financial crisis affects banks in diverse ways. Thus, Table 3.2 shows the computed mean and standard deviations on the effects of a financial crisis on banks.

There was a high common agreement among the bank employees that banks competitive strategies are significantly affected by a financial crisis (MN: 4.50; SD: 1.64). This show that a financial crisis undermines the banks' effective use of resources and operational activities, which reduces their competitiveness. This is evidenced by relatively similar findings which denoted that a financial crisis makes it difficult for banks to operate (MN: 4.48; SD: 1.66). In addition, the findings revealed that total revenue inflows tend to decline during a financial crisis (MN: 4.47; SD: 1.82). This occurs due to some restrictions in banking activities. More so, it was noted that It is difficult to capture huge market shares during a financial crisis (MN: 4.45; SD: 1.98). all these findings are denoting that a financial crisis has severe adverse effects on bank operations and performance. On the other hand, Table 3.2 revealed that bank customers are not willing to deposit their savings with banks during a financial crisis (MN: 4.44; SD: 1.71).

Table 3.2: Bank employee responses on the effects of a financial crisis on banks

	M	SD
The bank is not willing to invest more in assets and operations during a financial crisis.	4.33	1.69
Bank customers are not willing to deposit their savings with banks during a financial crisis.	4.44	1.71
Competition among banks and non-banking financial institutions is usually high during a financial crisis.	4.36	1.83
A financial crisis makes it difficult for banks to operate.	4.48	1.66
A financial crisis has negative effects on bank performance.	4.08	1.84
The bank’s asset management strategies effectively planned out to deal with the effects of a financial crisis.	4.22	1.84
The bank’s liquidity management strategies effectively planned out to deal with the effects of a financial crisis.	4.26	1.84
The bank’s working capital management strategies effectively planned out to deal with the effects of a financial crisis.	4.13	1.29
The bank’s performance management strategies effectively planned out to deal with the effects of a financial crisis.	3.67	0.92
There are already available risk management strategies put in place by the bank to deal with the effects of a financial crisis.	3.88	1.03
The bank always responds on time during a crisis.	3.33	0.71
The bank’s strategies are effective in dealing with any form of a financial crisis.	3.27	0.66
The bank has enough capital to avoid the effects of a financial crisis.	3.45	0.98
The bank gets support from the central bank in dealing with the effects of a financial crisis.	3.14	0.64
Total revenue inflows tend to decline during a financial crisis.	4.47	1.82
Revenue inflows from the bank’s income-generating assets tend to decline during a financial crisis.	4.38	1.81
Bank deposits are low during a financial crisis.	4.33	1.66
Bank loans issued to customers are low during a financial crisis.	4.36	1.73
The bank’s income spent on investments and assets is negatively affected by a financial crisis	4.08	1.84
The bank’s operational capacity tends to decline during a financial crisis.	4.28	1.62
It requires more capital funds to enhance the bank’s operational capacity during a financial crisis.	3.01	0.44
Banks’ corporate social responsibilities negatively affected by a financial crisis.	2.62	0.32
A financial crisis can affect the bank’s image and reputation.	4.16	1.50
Bank customers’ perceptions of banks are easily affected by a financial crisis.	4.10	1.02
The bank’s market share tends to decline during a financial crisis.	4.13	1.14
The overall banking sector’s market share tends to decline during a financial crisis.	4.22	0.98
It is difficult to capture huge market shares during a financial crisis.	4.45	1.98
New banks can find it difficult to enter the market during a financial crisis.	4.35	1.72
Banks competitive strategies are significantly affected by a financial crisis.	4.50	1.64

The established evidence continues to demonstrate major concerns regarding the effects of a financial crisis on banks. It was additionally, noted that revenue inflows from the bank's income-generating assets tend to decline during a financial crisis (MN: 4.38; SD: 1.81) and that bank loans issued to customers are low during a financial crisis (MN: 4.36; SD: 1.73). Besides, it was noted that new banks can find it difficult to enter the market during a financial crisis (MN: 4.35; SD: 1.72), and that bank deposits are low during a financial crisis (MN: 4.33; SD: 1.66).

3.5 Correlation analysis

Correlation coefficient examinations were conducted by applying the Pearson coefficient test. The Pearson correlation coefficient examinations revealed that the variables financial crisis, FVA and bank performance were positively and significantly correlated with each other at 1%. Besides, a significantly high positive correlation of 0.658 was observed between the financial crisis and FVA. This implies that the occurrence of the financial crisis is most likely to stir observations regarding the increased adoption of FVA by banks.

Table 3.3: Correlation coefficient examinations

	Financial crisis	FVA	Bank performance
Financial crisis	1		
FVA	0.658*	1	
Bank performance	0.862*	0.784*	1

* Correlation coefficient significant at 0.01

Bank performance was positively correlated with a financial crisis by 0.862. This shows that bank performance will improve as the financial crisis deepens. Such can be related to an increase in bank charges and the value of non-fixed bank investments whose value increase in relations to high-interest rates required by banks to cover for the high risks. Furthermore, Bank performance was significantly and positively correlated with FVA by 0.784. The results suggest that bank performance will increase with the increased use of FVA.

3.6 Factor analysis

The collected responses were subjected to factor analysis to test the validity of the questionnaire responses in providing reliable explanations about the connection between a financial crisis (FC), FVA and bank performance (BP). All the variables had 14 variable elements each. The variable FC had 9 variables left after the factor loadings, FVA had 8 variables and BP 7 variables whose loadings were above 0.70. This implies that 5 FC, 6 FVA, and 7 BP variables were excluded in estimating a SEM. These variables can be said to have a significant influence on each respective variable and the overall connection between the variables.

Table 3.4: Factor analysis results

FINANCIAL CRISIS		FAIR VALUE ACCOUNTING		BANK PERFORMANCE	
Element	**Factor loadings**	**Element**	**Factor loadings**	**Element**	**Factor loadings**
FC2	0.76	FVA1	0.82	BP3	0.70
FC3	0.88	FVA2	0.83	BP4	0.81
FC4	0.84	FVA5	0.74	BP5	0.84
FC6	0.72	FVA7	0.81	BP7	0.74
FC7	0.94	FVA9	0.85	BP8	0.76
FC8	0.80	FVA10	0.72	BP11	0.78
FC10	0.83	FVA12	0.70		
FC13	0.79	FVA14	0.86		
FC14	0.75				

Construct reliability and validity tests were conducted on the established 9 FC, 8 FVA and 7 BP variables. The variables had composite reliability values exceeding 0.80 (FC=0.92; FVA=0.84; BP=0.82), and this implies that they are composedly reliable. Meanwhile, all the alpha values exceeded the standard cut off point of 0.70 (FC=0.94; FVA=0.82; BP=0.80), and this denotes that they have high internal consistency. There was construct validity because rho_A values exceeding 0.80

were obtained (FC=0.88; FVA=0.82; BP=0.84). in addition, the AVE values were above 0.60 (FC=0.60; FVA=0.66; BP=0.64). hence, conclusions can be made that the estimated model has the required construct reliability and validity requirements.

Table 3.5: Construct reliability and validity tests

	Composite Reliability	Cronbach's Alpha	rho_A	Average Variance Extracted (AVE)
FC	0.92	0.94	0.88	0.60
FVA	0.84	0.82	0.82	0.66
BP	0.82	0.80	0.84	0.64

Fornell-Larcker tests were conducted to further test the model for discriminant validity. Diagonal values of 0.87, 0.93 and 0.86 were obtained and these are greater than the column and row values. Hence, the variable model has the required discriminant validity capable of explaining the connection between a financial crisis, FVA and bank performance. Thus, one can proceed to estimate the SEM.

Table 3.6: Forneell-Larcker criterion

	Financial Crisis	Fair Value Accounting	Bank Performance
Financial Crisis	0.87		
Fair Value Accounting	0.72	0.93	
Bank Performance	0.64	0.58	0.86

3.7 Path analysis

The SEM model was applied in assessing the relationship between a financial crisis, FVA and bank performance. This also included analysing the underlying mediating effects of FVA on the relationship between a financial crisis, and bank performance.

The results presented in Table 3.7 shows that the prevalence of a financial crisis is positively related to the adoption of FVA by banks by 0.23 units. This means more banks will increase the implementation of FVA standards and practices following the increase in the prevalence of a financial crisis by 1 unit. Therefore, hypothesis 1 is rejected as these results are consistent with similar studies established by Corona, Nan and Zhang (2019), denoting that the prevalence of a financial crisis causes banks to adopt precautionary accounting and financial measures aimed at reducing the effects of a financial crisis.

Table 3.7: Path analysis

Effect			Estimate	S.E.	C.R.	P	Hypothesis
FVA	<---	**FC**	0.23	0.04	2.71	0.00	Reject
BP	<---	**FC**	0.18	0.07	0.60	0.65	Accept
BP	<---	**FVA**	0.41	0.04	2.64	0.00	Reject

Table 3.7 results also show that a financial crisis has insignificant positive effects on bank performance by 0.18 units. These results are inconsistent with similar studies established by de Haan and Kakes (2020), denoting that the prevalence of a financial crisis reduces banks' operational capacity to lend and attract deposits and hence, their revenue inflow decline during a financial crisis. Thus, we can accept hypothesis 2 as bank customers also reluctant to deposit their money with banks and invest in banking activities with fixed interest rates as the value of their money declines during a financial crisis.

The result denotes that the adoption of FVA during a financial crisis leads to an increase in bank performance. This is because a 1 unit increase in the adoption or implementation of FVA during a financial crisis causes bank performance to increases by 0.41. Thus, we can accept hypothesis 3 and this aligns with previous standards considering that FVA is a precautionary approach to dealing with challenges and operational limitations affecting organisations like banks. Besides, the application of FVA is more convenient when managing corporate income and it conforms to GAAP standards. A study by McInnis, Yu and Yust, 2018) reckons that the use of FVA helps to improve individual users of financial statements understanding of the position of the firm. This is because the prices at which such information is reflected will be based on actual or current market values. Wu, Thibodeau and Couch (2016) noted that such understanding requires that one possesses the necessary knowledge and having the inability to do may hinder a person from having a better understanding of the produced financial statements.

3.8 Indirect effects

The secondary aim of this study was to establish if FVA mediates the relationship between a financial crisis and bank performance. That is, to test if there is an indirect relationship running from a financial crisis through FVA to bank performance. This was accomplished using the test of the indirect effect provided in SEM estimations.

Table 3.8: Mediating effects

Indirect effects	Coefficient	T Statistic	P-value
FC -> FVA -> BP	0.54	0.81	0.74

A moderate and insignificant indirect effect coefficient of 0.54 was obtained and this implies that FVA has insignificant mediating effects on the relationship between a financial crisis and bank performance. Therefore, hypothesis 4 of no significant effects were accepted. Table 3.9 provides a summary of the hypotheses results.

Table 3.9: Summary of the hypotheses results

Null hypothesis	Result	Decision
A financial crisis has no significant positive effects on fair value accounting.	0.00	Reject
The financial crisis has no significant negative effects on bank performance.	0.65	Accept
Fair value accounting has no significant positive effects on bank performance.	0.00	Reject
Fair value accounting has no significant mediating the effects on the financial crisis on bank performance.	0.74	Accept

3.9 Model fit

Lastly, model fitness tests were applied to test the validity and robustness of the estimated SEM results. This was accomplished using SEM model fitness tests shown in Table 3.10. The initial fitness condition is that the SRMR values must be lower than 0.8. Therefore, the model can be said to have no misspecification problems. In addition, both the Saturated Model and Estimated Model had SRMR values of 0.64 and 0.61, respectively. d_ULS and d_G values were insignificant at 0.05.

Table 3.10: Model fit

	Saturated Model	Estimated Model
SRMR	0.64	0.61
d_ULS	0.72	0.72
d_G	0.41	0.43
Chi-Square	482.50*	480.10*
NFI	0.84	0.82

NFI values of 0.84 and 0.82 were obtained in connection with the Saturated Model Estimated Model, which indicates high validity. In addition, both Chi-square values were significant at 1%. Therefore, the estimated SEM is valid for providing constructive ideas need by banks to improve their operational performance during the prevalence of a financial crisis. The results have theoretical and practical validity and have managed to provide the required empirical support regarded the connection between financial crisis, FVA and bank performance. Hence, these results will guide in providing suggestions to banks and for improving further studies.

CHAPTER FOUR

CONCLUSIONS, RECOMMENDATIONS AND SUGGESTIONS FOR FUTURE STUDIES

4.1 Conclusions

The study was primarily focused on answering the question of how does use of fair value influence organisational performance during the period of a financial crisis? Additionally, there was an attempt to verify if fair value accounting has significant mediating effects on the relationship between a financial crisis and bank performance.

Initial examinations made regarding the application of FVA in banks denote that there is a high considerable use of FVA by banks in Kurdistan. Hence, banks in Kurdistan are implementing international standards and making efforts to ensure that the quality of reported findings is credible and enhances the quality of decisions made. Thus, implementing FVA to ease the effects of a financial crisis is effective among Kurdistan banks, especially when they have the required financial resources to implement it

A financial crisis has severe and diverse effects on bank performance. The results of this study have provided significant evidence matching previous related studies. As such, banks' competitive strategies are significantly affected by a financial crisis as it undermines the banks' effective use of resources and operational activities, which reduces their competitiveness. Besides, a financial crisis makes it difficult for banks to operate and reduces banks' revenue inflows as their activities are restricted by the financial crisis. Besides, the study has established common agreements with previous studies that it is difficult to capture huge market shares during a financial crisis and bank customers are not willing to deposit their savings with banks during a financial crisis. Moreover, it aligns with suggestions denoting that new banks can find it difficult to enter the market, that bank deposits are low and income-generating assets tend to decline during a financial crisis. Hence, this evidence has demonstrated the severe effects of a financial crisis, and how it affects bank performance.

The study provided distinct effects regarding the correlations between a financial crisis, FVA and bank performance. Both variables were positively and significantly correlated with each other. Hence, it can be inferred at this stage that an increase in the prevalence of a financial crisis calls for FVA effective measures that help to improve bank performance. Bank performance will increase as banks adopt these strategies and align their performance goals using FVA produced financial reports.

The study has managed to attain its stated goals and proved that implementing FVA enhances bank performance as the bank's assets and liabilities are measured at prevailing market prices. Additionally, it was demonstrated that a financial crisis necessitates the adoption of an effective FVA approach by banks to curb its effects. However, the results were in contradiction with previous studies as they highlighted that bank performance will improve as the financial crisis deepens.

4.2 Recommendations

Having established resounding findings of the mediating effects of FVA on the relationship between a financial crisis and bank performance, the following recommendations were put forward;

- Bank managers must use a guided and mixed approach when using FVA to address its inherent limitations and ensure that it does not negatively affect the value of the bank's assets and liabilities.

- Bank managers must adopt effective bank management strategies to improve the performance of the bank by improving the quality of reported financial statement details and providing all the stakeholders with more and high-quality information.
- There is a need to ensure that there are effective accounting and management strategies aimed at making sure that FVA implementation activities do not interfere with bank activities.
- A combination of effective assets and liquidity management strategies are required to ease the effects of a financial crisis, and these should be used in conjunction with FVA implementation strategies.
- Economic management strategies like monetary and fiscal policies are required on a government level to assist banks in dealing with the effects of a financial crisis.

4.3 Suggestions for future studies

The study is confined to the examination of the mediating effects of FVA on the relationship between a financial crisis and bank performance. As such, it does not address changes in bank performance before and after the financial crisis. Hence, comparative examinations are needed to compare bank performance before and after the financial crisis.

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LIST OF APPENDICES

Appendix 1: Research questionnaire

NEAR EAST UNIVERSITY
DEPARTMENT OF BANKING AND ACCOUNTING

THE MEDIATING EFFECTS OF FAIR VALUE ACCOUNTING ON THE EFFECTS OF A FINANCIAL CRISIS ON BANK PERFORMANCE

Dear Participant

I invite you to take part in a survey being conducted in partial fulfilment of the requirements of a Master's degree in Banking and Accounting and seek your views to understand how fair value influences organisational performance during the period of a financial crisis. The survey is being conducted to collect feedback from bank employees on their views about how fair value influences organisational performance during the period of a financial crisis.

While you will not experience any direct benefits from participation, information collected in this study may benefit the profession of marketing in the future by better understanding the role and implications of social media marketing on customer satisfaction.

Participation in this survey is highly valued, but voluntary. You are free to withdraw consent at any time. We will protect your anonymity and the confidentiality of your response to the fullest possible extent within the limits of the law.

Please note that your response is private and confidential. Individual respondents will not be identified in any data or reports and survey responses will not be linked with enrolment records. The survey should take about 10 minutes to complete. By completing and submitting this survey, you are indicating your consent to participate in the study. Your participation is appreciated.

If you have any questions about this survey or would like further information, please contact me for further information, or you may contact the Thesis Supervisor, Assoc. Prof. Dr. Aliya Işıksal at Near East University using the details provided below.

Thank you for considering your involvement in this survey.

Yours sincerely

Mohammed Khalid Mustafa
Student No: 20194480
Master's Student, Near East University
Department of Banking and Accounting
Email: mohammedkhalid8282@gmail.com

Assoc. Prof. Dr. Aliya Işıksal
Advisor, Near East University
Department of Banking and Accounting
Email: aliya.işıksal@neu.edu.tr

SECTION ONE: DEMOGRAPHY SECTION

1. Gender		
☐ Male	☐ Female	
2.. Age		
☐ 18-25 years	☐ 26-35 years	
☐ 36-45 years	☐ 46-65 years	☐ 66 years and above

3. How long have been working for the bank?	
☐ 1-3 years	☐ 4-6 years
☐ 7-9 years	☐ 10 years and above
4. Do your bank department use fair value accounting?	
☐ Yes	☐ No
5. Does the use fair value accounting affect your daily duties?	
☐ Yes	☐ No
6. Does the bank have enough financial resources to adopt and use fair value accounting?	
☐ Yes	☐ No
If your answers is yes, then does the bank have enough skilled and trained individuals to implement and use fair value accounting?	
☐ Yes	☐ No

SECTION TWO: INFORMATIVE SECTION

This section contains statements that measure the effects of inflation on the use of fair value accounting and bank perfo0rmance. Please tick your response according to the following scale:

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

		1	2	3	4	5
	Fair value accounting					
7	Fair value accounting provides accurate asset and liability valuation on an ongoing basis to users of the company's reported financial information.					
8	Using fair value accounting, gains or losses from any price change for an asset or liability are reported in the period in which they occur.					
9	While an increase in asset value or a decrease in liability value adds to net income, a decrease in asset value or an increase in liability value reduces net income.					
10	Fair value accounting can also present challenges to companies and users of reported financial information.					
11	Conditions of the markets in which certain assets and liabilities are traded may fluctuate often and even become volatile at times.					
12	Fair value accounting is the most agreed upon standard of accounting.					
13	Fair value accounting allows for asset reductions within that market so that a business can have a fighting and survival chance.					
14	If one business is seeing a reduction in net income thanks to asset losses, then this trend typically creates a domino effect throughout a region or an industry.					
15	Fair value accounting creates investor dissatisfaction because the loss of value in the net income becomes an income loss for the investors as well.					
16	Fair value accounting can artificially lower the successes that a business may have had.					
17	Some investors do not always notice that a company is using the fair value approach to accounting.					
18	Volatile assets can report changes in income that are not actually accurate to the long-term financial picture and create misleading gains or losses.					
19	Companies re-evaluate the current value of certain assets and liabilities even in bad market conditions, potentially creating large changes in the value of those assets and liabilities.					
20	The use of fair value accounting may further affect a down market adversely.					
21	Companies may not feel the need to sell an asset in a down market to prevent potentially further downward valuation of the asset.					

		1	2	3	4	5
	Financial crisis					
22	The bank is not willing to invest more in assets and operations during a financial crisis.					
23	Bank customers are not willing to deposit their savings with banks during a financial crisis.					
24	Competition among banks and non-banking financial institutions is usually high during a financial crisis.					
25	A financial crisis makes it difficult for banks to operate.					
26	A financial crisis has negative effects on bank performance.					
27	The bank's asset management strategies effectively planned out to deal with the effects of a financial crisis.					
28	The bank's liquidity management strategies effectively planned out to deal with the effects of a financial crisis.					
29	The bank's working capital management strategies effectively planned out to deal with the effects of a financial crisis.					
30	The bank's performance management strategies effectively planned out to deal with the effects of a financial crisis.					
31	There are already available risk management strategies put in place by the bank to deal with the effects of a financial crisis.					
32	The bank always responds on time during a crisis.					
33	The bank's strategy are effective to deal with any form of a financial crisis.					
34	The bank has enough capital to avoid the effects of a financial crisis.					
35	The bank get support from the central bank in dealing with the effects of a financial crisis.					
	Bank performance					
36	Total revenue inflows tend to decline during a financial crisis.					
37	Revenue inflows from the bank's income generating assets tend to decline during a financial crisis.					
38	Bank deposits are low during a financial crisis.					
39	Bank loans issued to customers are low during a financial crisis.					
40	The bank's income spent on investments and assets is negatively affected by a financial crisis					
41	The bank's operational capacity tends to decline during a financial crisis.					
42	It requires more capital funds to enhance the bank's operational capacity during a financial crisis.					
43	Banks' corporate social responsibilities negatively affected by a financial crisis.					
44	A financial crisis can affect the bank's image and reputation.					
45	Bank customers' perceptions towards banks are easily affected by a financial crisis.					
46	The bank's market share tends to decline during a financial crisis.					
47	The overall banking sector's market share tends to decline during a financial crisis.					

48	It is difficult to capture huge market shares during a financial crisis.					
49	New banks can find it difficult to enter the market during a financial crisis.					
50	Banks competitive strategies are significantly affected by a financial crisis.					

Thank you for your participation

ETHICAL APPROVAL

YAKIN DOĞU ÜNİVERSİTESİ

BİLİMSEL ARAŞTIRMALAR ETİK KURULU

09.06.2020

Dear Mohammed Khalid Mustafa

Your application titled **"The mediating effects of fair value accounting on the effects of a financial crisis on bank performance"** with the application number NEU/SS/2021/1022 has been evaluated by the Scientific Research Ethics Committee and granted approval. You can start your research on the condition that you will abide by the information provided in your application form.

Assoc. Prof. Dr. Direnç Kanol

Rapporteur of the Scientific Research Ethics Committee

Direnc Kanol

Note: If you need to provide an official letter to an institution with the signature of the Head of NEU Scientific Research Ethics Committee, please apply to the secretariat of the ethics committee by showing this document.

SIMILARITY INDEX

THE MEDIATING EFFECTS OF FAIR VALUE ACCOUNTING ON THE EFFECTS OF A FINANCIAL CRISIS ON BANK PERFORMANCE

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