



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

**THE IMPACT OF PRACTICING EXTENSIBLE BUSINESS
REPORTING LANGUAGE ON THE QUALITY OF
ELECTRONIC FINANCIAL REPORTS TO PROMOTE THE
EFFICIENCY OF THE IRAQI STOCK MARKET.A CASE
STUDY OF BANKS LISTED ON THE IRAQ STOCK
EXCHANGE**

ZANA ABDULRAHMAN HAKEEM SHEKH BZENI

MASTER'S THESIS

NICOSIA

2021

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MASTER'S THESIS

THESIS SUPERVISOR

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NICOSIA
2021

ACCEPTANCE

We as the jury members certify "The impact of practicing extensible business reporting language on the quality of electronic financial reports to promote the efficiency of the Iraqi stock market: a case study of banks listed on the Iraq stock exchange" **prepared by Zana Abdulrahman Hakeem defended on 29 June 2021 has been found satisfactory for the award of degree of Master.**

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DECLARATION

I Zana Abdulrahman Hakeem, hereby declare that this dissertation entitled "The impact of practising extensible business reporting language on the quality of electronic financial reports to promote the efficiency of the Iraqi stock market: A case study of banks listed on the Iraq stock exchange" has been prepared myself under the guidance and supervision of “**Assoc. Prof. Dr. Aliya IŞIKSAL**” in partial fulfilment of The Near East University, Graduate School of Social Sciences 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

This study is dedicated to my parents who have been a strong pillar in my life. Deepest appreciation also goes to my brothers and sisters who have proved to be a huge source of inspiration throughout the undertaking of this study. I also dedicate this dissertation to my lectures from Salahaddin University who has supported me throughout the process. I will always appreciate all they have done.

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*It is with utmost gratitude that I would like to express my sincere appreciation to my advisor **Assoc. Prof. Dr. Aliya IŞIKSAL** for her outstanding and remarkable insights. Her contribution greatly played a vital role in the successful completion of this study.*

ABSTRACT

THE IMPACT OF PRACTICING EXTENSIBLE BUSINESS REPORTING LANGUAGE ON THE QUALITY OF ELECTRONIC FINANCIAL REPORTS TO PROMOTE THE EFFICIENCY OF THE IRAQI STOCK MARKET: A CASE STUDY OF BANKS LISTED ON THE IRAQ STOCK EXCHANGE

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. The process involved distributing 176 questionnaires to 44 banks that are listed on the Iraqi Stock exchange. The collected responses were coded into Smart PLS3 and analysed to determine the inherent relationships between the study variables. The established findings proved that utilising extensible business reporting language has a high significant positive effect on the quality of electronic financial reports. It was depicted that XBRL has insignificantly and positive effects on stock exchange efficiency. Additionally, the quality of electronic financial reports does not significantly mediate the relationship between extensible business reporting language and the stock exchange efficiency. The study has addressed important issues related to high quality financial reporting methods and results influence stock market efficiency. Such is vital for developing conceptual frameworks needed to enhance transparency and good disclosure among financial institutions.

Keywords: Efficient market hypothesis, extensible business reporting language, quality of electronic financial reports, stock market efficiency, structural equation modelling.

ÖZ

IRAK BORSASININ VERİMLİLİĞİNİ ARTIRMAK İÇİN GENİŞLETİLEBİLİR İŞ RAPORLAMA DİLİNİN ELEKTRONİK FİNANSAL RAPORLARIN KALİTESİ ÜZERİNDEKİ ETKİSİ: IRAK BORSASINDA LISTELENEN BANKALARIN VAKA ÇALIŞMASI

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. Süreç, Irak Borsası'nda işlem gören bankalara 176 anket dağıtılmasını içeriyordu. Toplanan yanıtlar Smart PLS3'e kodlandı ve çalışma değişkenleri arasındaki doğal ilişkileri belirlemek için analiz edildi. Elde edilen bulgular, genişletilebilir iş raporlama dilini kullanmanın elektronik finansal raporların kalitesi üzerinde yüksek önemli bir olumlu etkisi olduğunu kanıtlamıştır. XBRL'nin borsa verimliliği üzerinde önemsiz ve olumlu etkileri olduğu tasvir edildi. Ayrıca, elektronik finansal raporların kalitesi, genişletilebilir iş raporlama dili ile elektronik finansal raporların kalitesi arasındaki ilişkiye önemli ölçüde aracılık etmez. Çalışma, yüksek kaliteli finansal raporlama yöntemleri ve sonuçları ile ilgili önemli konuların borsa verimliliğini etkilemesini ele almıştır. Bu, finansal kurumlar arasında şeffaflığı ve iyi açıklamayı geliştirmek için gereken kavramsal çerçevelerin geliştirilmesi için hayati öneme sahiptir.

Anahtar Kelimeler: Verimli piyasa hipotezi, genişletilebilir iş raporlama dili, elektronik finansal raporların kalitesi, borsa verimliliği, yapısal denklem modellemesi.

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ABBREVIATIONS

APT:	Arbitrage Pricing Theory
CAPM:	Capital Asset Pricing Model
EMH:	Efficient Market Hypothesis
QEFR:	Quality of Electronic Financial Reports
SEE:	Stock Market Efficiency
SEM:	Structural Equation Modelling
XBRL:	Extensible Business Reporting Language

INTRODUCTION

Background

The phenomenon of spreading globalization and a business organization's desire to reach new markets is beginning worldwide, which encourages them to look for a distinguished way for providing financial reports to investors. However, financial reports were within their traditional limits, but their limited capabilities could not meet or satisfy their requirements (Taylor & Dzurainin, 2010). Therefore, organizations and businesses began to view the internet as an excellent high-tech device and channel for communicating and distributing financial reports to customers worldwide.

Nevertheless, in the lack of a standardized and standard method for organizing and publishing financial reports electronically, a state of lawlessness appeared in electronic publishing as each association publishes its financial statements on the Internet. Ly (2012) asserts that this step was in an elective manner and several formats (such as Excel +/- Word MS, PDF, HTML, XM). Bovee et al. (2005) outlined that with the multiplicity of ways to display lists and the high charges of obtaining and analyzing information, investors have become a problem in dealing with these reports and comparing them, which may lose their significance. Thus, global demands for a standard method in organizing and broadcasting electronic financial reports increased. Accordingly, global attention was focused on creating a change (Arndt et al., 2006). Besides, Malhotra and Garritt (2004) highlight that global interest and the relevant professional organizations joined in this measure by making an essential change in organizing and publishing electronic financial reports. The purpose was to simplify the process of electronic financial reporting and production of high quality and set principles for using and exchanging these reports at the international level (Blake & Huang, 2009). These professional efforts have

resulted in the (Extensible Business Reporting Language) as it is recognized abbreviation “XBRL,”. It is considered a unified outline that can be significantly relied on in organizing and broadcasting electronic financial reports in a standardized manner and a multiplicity of formats that could be exchanged, analyzed effectively, easily, and at low cost (Ahmi & Nasir, 2019). Hence, the American Institute of Certified Public Accountants “AICPA” is considered the digital language for professionals (Hoitash, Hoitash & Morris, 2020). The global stock markets regulators have started adopting the XBRL language and obligating the listed companies to use it. This step will be reflected in the development of the stock markets and their investors. This interest in the XBRL language has increased after the global financial crisis, which originated in 2007 and negatively impacted stock markets and their investors (Chu & Ke, 2017). To this end, work began to find appropriate mechanisms to raise the efficiency of stock markets and define the role of the XBRL in supporting these mechanisms.

Meanwhile, we note that the Iraqi stock market did not take any clear measures to simulate these structural changes taken by the global stock markets. There is a clear gap between what the global stock market follows from the obligation to use the XBRL language to raise its efficiency, reduce the negative impacts of the global financial crisis, attract more investments, and follow what is followed by the Iraqi stock market. Srivastava (2009) contends that this lacks the tools that would enhance its efficiency, which attracts many investors in light of the problems and economic conditions that the country is currently going through. Moreover, it requires the concerned authorities to search for these tools for providing solutions to some of these problems, such as adopting the XBRL language and other tools (Hoitash, Hoitash & Morris, 2020).

Problem statement

Extensible Business Reporting Language is significantly linked to providing information (Ahmi & Nasir, 2019; Hoitash, Hoitash & Morris, 2020; Malhotra & Garritt, 2004) but this is noted distinct from traditional reporting methods for information differs in quality and impact on efficiency, especially of stock markets. Hence, there is a need to clarify how XBRL enhances the quality of information and how it affects the efficiency of stock markets.

The purpose of the study

The purpose of this research is to;

- 1) 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.
- 2) Explain the impact of using XBRL on the quality of both published electronic accounting information and electronic accounting disclosure leading to the development of high quality electronic financial reports.
- 3) Explore the capabilities of the XBRL and its impact on the quality of electronic financial reports as the main mechanism to develop the efficiency of the Iraqi stock market, along with several other mechanisms.
- 4) Examine if the quality of electronic financial reports mediates the relationship between extensible business reporting language and the efficiency of the Iraqi stock market.

Research hypotheses

Given the above-highlighted research objectives, the study proposes to formulate and test the following hypotheses;

- **H₁**: Extensible business reporting language has a significant positive impact on the quality of electronic financial reports.
- **H₂**: Extensible business reporting language has a significant positive impact on the efficiency of the Iraqi stock market.
- **H₃**: The quality of electronic financial reports has a significant positive impact on the efficiency of the Iraqi stock market.
- **H₄**: The quality of electronic financial reports mediates the relationship between extensible business reporting language and the efficiency of the Iraqi stock market.

Justification of the study

Studies on XBRL have been limited to corporate governance-related issues (Llias, 2017; Roohani, Furusho & Koizumi, 2009; Srivastava, 2009), and little has been done to extend the similar analysis to the study of quality reports and the stock market efficiency. As a result, this study seeks to contribute to existing studies by providing relevant insights regarding banks listed on the Iraqi Stock exchange. Studies that specifically address these issues with regards to banks listed on the Iraqi Stock exchange have been limited. The study aids in enhancing understanding of the importance of high-quality disclosure on stock market investment activities. Such is instrumental in providing theoretical and practical implications essential for improving the function and effectiveness of stock market activities.

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

AN ANALYTICAL STUDY OF THE NATURE OF THE EXTENSIBLE BUSINESS REPORTING LANGUAGE

1.1 Introduction

The subject of stock markets attracts considerable attention in research, such as studies that dwell on various factors' influence on stock prices (Thanasoulas, 2019). Much of the analysis has been restricted to the effects of macroeconomic variables (Siraji, 2021; Yeap & Gan, 2017) and structural imbalances (Lambertides, Savva & Tsouknidis, 2017; Mazier & Tiou-Tagba Aliti, 2012) on stock prices. Hence, gaps exist in other dimensions as little attention is devoted towards other factors like non-financial indicators' effects on stock prices.

Given situations where banks have been characterised by severe financial reporting issues (Adekunle & Asaolu, 2013), one can contend that the effects are far-reaching. Studies from previous acts showed that corporate financial reporting issues have effects on stock prices (Barth & Landsman, 2010; Ratiu, 2015). However, propositions made regarding the importance of financial reporting measures as the key to which these issues can be addressed have not been linked to the stock exchange or stock prices. This is because implementing acceptable and innovative financial reporting has significant effects on corporate performance (Ratiu, 2015), investment levels (Acharya & Ryan, 2016), and stock prices (Besimi & Bisheva, 2021; Siraji, 2021; Yeap & Gan, 2017). Acceptable financial reporting has a huge implication on the effective preparation, presentation, and exchange of information concerning IFRS guidelines. Thus, the banks' performance and stock prices will adjust about these aspects. In addition, other essential aspects drive investors' decisions to

invest in specific banks. For instance, Acharya and Ryan (2016) noted that acceptable and innovative financial reporting is vital because of its accuracy, transparency and efficiency benefits.

In the midst of all these circumstances, an analysis is required to address how the adoption of acceptable and innovative financial reporting standards influence both the quality of reported financial results and stock prices. This study, therefore, serves such important purposes and contributes significantly to both related theoretical and empirical constructs.

1.2 Theoretical literature review

Several competing theories can be used to determine the stock market efficiency, namely, capital asset pricing model (CAPM), arbitrage pricing theory (APT), and efficient market hypothesis (EMH). The CAPM theory plays a vital role in determining stock prices and capital costs.

There is a diverse view that can be obtained from these theoretical views. For instance, one can establish that the importance of having acceptable financial reporting results is to deal with corporate risks (Adekunle & Asaolu, 2013). The theories illustrate that there is a connection between risks and returns. Therefore, investors will require huge returns from banks to cater for the high assumed risks. In addition, either can assume a risk-averse approach and avoid investing in the banks (Barth & Landsman, 2010). Thus, the theories highlight that any information provided by banks listed on stock exchanges reflects the possible risks investors will assume by investing in the banks.

Theoretical views denoted by the EMH, CAPM and APT concord to the suggestion that information availability is essential for the effective functioning of stock markets (Kaushik, 2020; Thanasoulas, 2019; Širůček & Křen, 2017; Way et al., 2019). Both firms and investors rely on the supply and availability of good information in making decisions. The provided information has to possess

accuracy, reliability and transparency features if rational decisions are to be made. Furthermore, banks and other companies listed on stock markets are obligated to provide accurate and reliable information in a transparent manner (Besimi & Bisheva, 2021; Siraji, 2021; Yeap & Gan, 2017). This assists the stock market in effectively functioning and playing its duties.

These theoretical details depict that an efficient stock market relies on the effective availability of information. Thus, banks need to supply reliable and accurate information that is well presentable and understandable. Acceptable financial reporting programs and practices serve to achieve such purposes. What, therefore, remains to be explored is how they influence stock prices. Thus, this study builds on these ideas and establishes a link through which acceptable financial reporting programs and practices are related to stock prices.

1.3 The concept of stock market efficiency

Stock market efficiency is one of the key areas studies explore significantly but extending such analysis to other aspects has been a major issue. Besides, there are various aspects attached to the concept of stock market efficiency. Stock market efficiency relates to the availability of information. According to Fama, a stock market is efficient when its stock returns fully reflect all available securities price information (Tawfik, Hayek & Al-Smady, 2017). This is questionable as information asymmetry challenges are observable in markets. Furthermore, banks and other firms are likely to withheld certain information from other firms to make competitive gains. Thomsett (2019) reiterates that certain firms are reluctant to disclose specific information about their business activities. This is because any information disclosed by the bank has huge implications on its performance and stock returns.

Fama noted that firms like banks can be operating in either three market forms. That is a weak form efficiency where changes in stock prices are viewed as reflecting past stock price information (Širůček & Křen, 2017). Such a scenario implies that both banks and investors cannot benefit from such a situation and is practically impossible to make huge profits using previous information. In other words, previous stock prices are considered to be of insignificant use in projecting future stock prices. The weak form shows that current stock prices are influenced by other pertinent factors. This is considered valid in cases where published financial details are made available by banks. Investors will react to such details by either expressing their positive or negative sentiments, and such sentiments will either increase in stock prices or decrease in stock prices.

Peón, Antelo and Calvo (2019) noted that the weak form hypothesis postulates that current stock prices are interrelated with past stock prices. Their findings are a mere illustration of the idea that current stock prices are influenced by previous stock prices. Hence, this calls for banks to enact financial reporting standards and corporate governance erasures that enhance value, transparency and performance. The banks' current stock prices will have a significant effect on their future prices. Hence, current financial reporting measures like using XBRL to enhance financial reporting, use and communication standards will be vital for such cases. But it is practically impossible for banks and investors to make substantial gains in such a scenario (Cornell, 2018; Thomsett, 2019).

Secondly, all the available information can be reflected by stock prices resulting in a semi-strong form efficiency situation (Cornell, 2018). Again, both public and private information will be reflected by changes in stock prices (Širůček & Křen, 2017). However, information related to unemployment, interest rate, inflation rate, and the exchange rate will also be reflected as it is part of public information.

The banks' public announcement of mergers, dividends and other essential corporate events or outcomes substantially affects the market. This is because

stock prices reflect all the available information on the market (Dukiya & Perumal, 2021). Bowling, 2020) asserts that prices will additionally quickly adjust to new information made available on the market. However, he disregarded the idea of banks and investors making accurate stock predictions using public information. This dismisses the importance of public information in influencing banks' stock prices. Hence, we can restrict changes in banks' stock prices to internal aspects like XBRL, quality of reports, transparency, accuracy, reliability, etc.

Semi strong form efficiency ideas are established on the presumption that stock prices are influenced by a set of macroeconomic factors (Tawfik, Hayek & Al-Smady, 2017). The relationship is, however, considered to be either one-way or two-way depending on which variable between stock prices and macroeconomic variables is exerting more influence on the other (Bowling, 2020). Thus, the connection between these two stock exchange performance measures is illustrated as follows;

i. $SP_1 \rightarrow X_1$

One scenario asserts that a semi-strong form efficient situation comes into effect when stock prices and macroeconomic factors have a unidirectional connection linking them together (Kaushik, 2020; Way et al., 2019). However, the resultant effect is that stock prices will quickly adjust to changes in the availability of market information.

ii. $X_1 \rightarrow SP_1$

A semi-strong situation will hold valid when stock prices and macroeconomic factors are unidirectionally related (Atanasov, Pirinsky & Wang, 2020; Peón, Antelo & Calvo, 2019). As a result, both banks and investors stand chances of making abnormal gains from the stock markets.

iii. $SP_1 \leftrightarrow X_1$

In another case, the market is termed inefficient when stock prices and macroeconomic factors assume a bidirectional relationship (Bowling, 2020; Singh, Babshetti, & Shivaprasad, 2021). This scenario implies that changes in stock prices can be forecasted using macroeconomic factors.

iv. $SP_1 \leftrightarrow X_1$

Stock prices in such a case are temporally uncorrelated with macroeconomic indicators. The relationship is independent and this possibly suggests the existence of firm-specific variables influencing stock prices and can be related to XBRL produced findings. Such a scenario is regarded as efficient (Atanasov, Pirinsky & Wang, 2020; Peón, Antelo & Calvo, 2019; Singh, Babshetti & Shivaprasad, 2021).

Thirdly, changes in stock prices can reflect all the pertinent firm-specific and industry-specific information resulting in what is termed a strong form efficiency (Cornell, 2018). Such is valid and holds in practical industry situations as stock prices change in response to a combination of various driving factors. Banks' stock prices are influenced by numerous determinants and the strong form serves as a guideline of understanding how market and firm conditions influence bank's stock prices. Additionally, a strong form market tends to reflect both public and private information (Cornell, 2018; Thomsett, 2019). This entails that investors and other stakeholders have access to all the pertinent information needed to make investment decisions.

However, such a scenario implies that the banking market is highly competitive as all the banks and competitive financial institutions have access to public and private information. Hence, the disclosure of information of banks listed on stock exchanges can have tremendous effects on their stock prices. XBRL can be used to leverage on stock exchange listings and provide reliable information, which enhances trust and reliability among banks' stakeholders. Besides, XBRL enhances disclosure and transparency and hence, more investors and other

stakeholders are likely to be drawn towards buying the banks' stocks. This has a substantial positive impact on the banks' stock prices. But the challenge of having significant access to public and private information implies that no one can make substantial gains from trading on publicly announced information (Bowling, 2020).

Corporate governance issues in banks have been noted to be encompassing various forms of misconduct (Singh, Babshetti & Shivaprasad, 2021). For instance, Cornell (2018) noted that banks are being bewildered by severe issues of insider trading of mutual funds. XBRL can be used to restrict such activities and thereby making sure that the banks' stock prices are not manipulated. Fraud and cases of insider trading tend to undermine bank performance. Hence, strict corporate and legal governance procedures are needed to address these issues. Peón, Antelo and Calvo (2019) recommend that adopting XBRL enhances legal compliance and this will serve as a vital tool in banking in enhancing transparency and reliability in banks.

The strong form efficiency has significant implications regarding the disclosure of the information using XBRL. A study by Bowling (2020) noted that contemporary changes in stock prices are not influenced by investment funds under a strong form efficiency situation. This possibly points to non-financial bank matters having a significant influence on banks' operational capacity, performance and integrity. Cases, whereby banks' integrity is compromised, tend to affect their performance and stock prices (Singh, Babshetti & Shivaprasad, 2021). It becomes of huge essence for banks to enact measures that guard against issues compromising their integrity and values. Given suggestions indicating that XBRL is a powerful program that enhances accuracy and transparency (Dukiya & Perumal, 2021; Tawfik, Hayek & Al-Smady, 2017), one can contend that banks adopting XBRL will obtain substantial benefits.

Nevertheless, the adoption of XBRL practices needs to be aligned with changes in macroeconomic factors. This is because XBRL only focuses on internal

aspects of the organisation and realigns them with prescribed legal frameworks (Ahmi & Nasir, 2019). Realigning bank financial statements preparation and reporting standards using XBRL will serve relative importance to banks, and this is a foundation on which XBRL can be used to enhance operational effectiveness by making rational decisions. Besides, macroeconomic factors have always been known to exert an influence on stock prices (Peón, Antelo & Calvo, 2019).

It is with substantial consideration that XBRL and the quality of reported financial information have a significant effect on stock prices. Banks adopting XBRL tend to benefit a lot from XBRL through the effective preparation, presentation, and exchange of information concerning IFRS guidelines, accuracy, transparency and efficiency benefits. These aspects have positive combined effects on banks' stock prices.

1.4 The nature of the language of extensible business reports

The widespread development of information technology has necessitated various developments. One of the key areas which have been benefiting from such developments is financial reporting. Various financial reporting platforms have been introduced to cater for the diversity and importance to make rational decisions (Mayapada, Afdhal & Syafitri, 2020). A significant number of issues reported depicted that financial reporting required substantial improvements (Junus & Irwanto, 2021), and this has necessitated the rapid development of financial reporting programs like Extensible Business Reporting Language (XBRL).

XBRL is a financial reporting method that uses the internet and computer platforms to process and provide information about the business (Junus & Irwanto, 2021). XBRL used computer-assisted technology to provide financial

information in the form of language concepts (Mayapada, Afdhal & Syafitri, 2020).

It is of considerable benefit to note that XBRL is not confined to financial reporting but extends to encompass various aspects like comparing financial information (Besimi & Bisheva, 2021; Siraji, 2021; Yeap & Gan, 2017). This function is of vital importance as firms use it as part of their performance evaluation measures. Such efforts can encompass firm comparisons or industry analysis. In this manner, the performance of the business is compared with that of its counterparts. There is another vital aspect of exchanging information within and outside the company (Simanjuntak, 2017). XBRL is designed with inherent functions that allow users to exchange information. With high senses of urgency to make rational decisions before competitors make a move, XBRL becomes of huge essence for adopting in business. Organisational departments can harness the benefits of XBRL by ensuring that all departments are well and quickly informed of related information about the business.

Concerns regarding the use and application of accounting have also been another major issue affecting financial reporting. Studies acknowledge that the implementation of accounting standards is subject to manipulation and other challenges (Besimi & Bisheva, 2021; Siraji, 2021; Yeap & Gan, 2017). As such, they recommend the development of financial reporting programs that aid in addressing financial reporting challenges and limitations (Acharya & Ryan, 2016; Siraji, 2021). This is a notable issue in banking as banks have been criticised for engaging in misconducts that threaten their operational; capacity and survival. Thus, the adoption of XBRL is a welcomed step that helps in eradicating such issues.

The adopting of XBRL attracted several positive remarks as researchers denoted that its application in business aid in avoiding barriers limiting the exchange of information (Besimi & Bisheva, 2021; Yeap & Gan, 2017). As a result, they contended that XBRL facilitates the swift exchange of information

between departments and organisations. Good and fast access to information is essential for every organisation, especially at a time when an organisation has to make competitive decisions influencing its performance, growth and development. Lack of access to essential organisational information hinders financial managers and other organisational managers from making rational decisions. External stakeholders of the bank will also rely on the availability of such information in making their own informed decisions. Hence, XBRL can be said to bridge informational needs gaps and thus, providing stakeholders and internal organisational members with easy, fast and reliable access to information.

Simanjuntak (2017) reckons that XBRL is an innovative approach towards the digitalization of the financial information process, reporting, and sharing. Programming language XBRL features are capable of processing and providing information electronically without the need to re-enter data or translate financial data. As a result, XBRL is considered to be an effective contemporary financial statement preparation method (Ashok, 2019; Choi, 2016). Other notable observations made related to XBRL's capacity to effectively prepare, present, and exchange information concerning International Financial Reporting Standards.

The adoption of XBL has been widespread with countries like the United States and Indonesia using it in preparing and converting their financial reporting formats into XBRL format (Junus & Irwanto, 2021). A lot of attention has been linked to its considerable data communication and reporting benefits and studies cite that significant legal compliance improvements were observed in such countries and other countries worldwide following the adoption of XBRL (Belev & Unwe, 2019; Junus & Irwanto, 2021). Additionally, others underscored accuracy, transparency and efficiency benefits connected to using XBRL (Simanjuntak, 2017). More so, legislative compliance costs were significantly reduced following the adoption of XBRL in these countries (Junus & Irwanto, 2021).

XBRL “intelligently” analyses individual data facts, store it, exchange it with other computers and present it to users in a variety of ways. Thus, it provides substantial data processing benefits as data is swiftly stored, processed and communicated (Tawfik, Hayek & Al-Smady, 2017). In addition, the automatic coding and selection of data processes reduce errors and there is an inherent system that automatically checks information for errors.

The emergence of XBRL itself is based on the need for a language that can synergy financial statements that have been made by the company into a format that can be processed easily and can be understood by all aspects at the same time. Financial reporting becomes very important here because in the era of interconnecting these state borders in the economic barrier less visible, and this may be an opportunity for a country to attract foreign investors with financial reporting both reflecting the economic value of a company. It is expected also of good reporting and XBRL format companies in all areas ready to respond to risks that may threaten the company in achieving its goals (Simanjuntak, 2017).

XBRL comprises four vital elements essential for improving its understanding and use in financial reporting (Beerbaum, Piechocki & Mindlin, 2019; Simanjuntak, 2017)

- 1) XBRL specifications establish requirements and offer standards essential for using XML technology in creating XBRL taxonomies and document specifications.
- 2) A dictionary illustrating major data elements needed in creating documents, financial and business reports.
- 3) Instance documentation uses a series of commands that are designed in line with prescribed and applied taxonomy concepts.
- 4) A style sheet for producing various readable data formats meeting each specific user’s needs.

According to Simanjuntak (2017) the benefits of XBRL:

1. It improves electronic reporting systems used in companies to facilitate the easy and effective making of rational decisions.
2. It uses standardised financial reporting methods essential for analysing and comparing financial data. Such formats are vital for validating produced or reported details using automatic input error minimisation procedures.
3. XBRL is capable of processing information in various publication formats like TXT, Excel, HTML, PDF, and other desired formats.
4. There is significant use of standardised methods of identifying information. Consequently, it can be used by foreign investors in conducting an independent analysis and comparisons that match their preferences and standards.
5. Effective decision making coupled with better analysis, accurate and reliable data handling, fast and cost-saving automation benefits are linked to XBRL adoption.
6. XBRL provides various essential formats essential for developing business intelligence needed to evaluate and monitored companies listed on stock exchanges.

Mayapada, Afdhal and Syafitri (2020) stated that XBRL is vital in contemporary business situations characterised by numerous uncertainties and offers business platforms to improve their decision-making process. With an increase in competitive forces surrounding the operational capacity of banks, having vital and accurate information on time becomes of paramount importance. Therefore, implementing acceptable, contemporary and innovative financial reporting

practices like XBRL becomes instrumental in improving bank performance and competitiveness.

XBRL encompasses various functions which are essential to banks and an embodiment of their financial reporting practices. For instance, it is noted that XBRL caters for financial statement needs related to the preparation of the financial report, income statement, statement of changes in equity, and cash flow statement (Mayapada, Afdhal & Syafitri, 2020). These are the key financial statements used by banks and any other financial institution in highlighting the operational performance and condition of the bank. Therefore, rational decisions can easily and effectively be made as reliable and accurate information is timely made available to relevant stakeholders.

The provision of accounting information stems from accounting activities and hence it is important to have a good understanding of accounting activities. Drury (2008) asserts that the main purpose of accounting activities is to provide information that can be used to manage a business entity in a way that enhances its value. This value enhancement process involves the making of a series of decisions out of a given set of courses of actions that bank managers must choose from. As a result, the decision-making process can be said to be linked to three interrelated management processes of planning, directing, and controlling.

Crețu and Gheonea (2011), noted that the provision of information is critical for enabling organisational managers to evaluate their course of actions. The evaluation process encompasses the quantification of organisational objectives and goals using budgets to enhance the effectiveness of the adopted strategic and operational decisions. As a result, accounting information is widely known as an important source of information about internal business activities (Atrill & McLaney, 2009; Ahid & Augustine, 2012; Crețu & Gheonea, 2011). It is through this information that value is created by effectively managing, controlling and planning organisational activities. It is further noted from a study by Ahid and

Augustine (2012), that accounting information is vital for decision making because it helps (1) to determine costs and benefits, (2) develop long-term strategies and plans, (3) allocating resources and (4) control and evaluate business performance.

The planning process involves the determination of an organisation's goals and visions and mapping ways through which such goals and visions can be attained (Drury, 2008). Alternatively, it can be viewed as the conversion of goals and visions into specified means of activities and resources which help to ensure that such stated goals and visions are attained (Walther & Skousen, 2009). Managers are responsible for making sure that all the stipulated plans are put to effective and tangible activities through the initiation and directing of organisation activities. Putting objectives into action is a notable way of making sure that the company reaches stated goals and attains a desired level of performance. However, organisational activities do not always go as planned and there always exist some risks that some adverse outcomes will be observed. This is the main reason why managers must be well equipped and prepared to identify and deal with potential deviations in courses of actions and outcomes which hinders the attainment of the stipulated goals and visions (Drury, 2008). Walther and Skousen (2009), considered such activities to be known as controlling activities whose sole aim is to make that the realised outcomes follow the established plans. The control process also includes several aspects such as performance measurement and evaluation which sees observed outcomes being compared against the set targets over a given period. It is through these activities and processes that business value is creat (Drury, 2008).

1.5 The Impact of the XBRL

XBRL affects numerous aspects but its effects are considered to be classifiable into three distinct aspects. That is, general effects, impact on external users and impact on internal users. These aspects are discussed broadly as follows;

1.5.1 General Impact of the XBRL

Previous studies have shown that XBRL offers substantial benefits capable of enhancing data integrity and reliability, notably when used in data transferring processes. Uyob, Saad and Ahmi (2019) depicted that business and financial information can assume and reflect high levels of transparency and integrity when XBRL is used in preparing financial statements. Additionally, Uyob, Saad and Ahmi established that XBRL provides easy access to information, thus, making it time effective in making effective decisions. Besides, they also highlighted that XBRL possesses technical functions that allow organisations to screen information for errors, consistency, validity, reliability and other essential needs.

XBRL provides various forms of analysing and reporting financial information, which organisations can utilise and enhance the meaning of their financial reports. Moreover, investors, financial analysts, governments, and other organisations can use XBRL to extract various kinds of information for decision-making purposes. Another major key benefit of XBRL was linked to process information and compile reports using prescribed regulations. That is, users can program XBRL and code it to follow certain accounting or financial rules and thus, making the computed findings highly and legally compliant.

Simanjuntak (2017) noted that adopting XBRL assisted in improving the information environment, especially in countries like Japan. The benefits of

adopting XBRL were further extended to reducing information asymmetry. On the other hand, Belev and Unwe (2019) highlighted that firms listed on stock exchanges using XBRL had a lower cost of equity ratios or margins. Their study also denoted that applying XBRL reduces the cost of equity capital. Besides, they indicated that using XBRL is subject to many factors which govern its effectiveness and benefits. As such, companies were recommended to take strategic action and decisions when adopting XBRL practices. These observations are essential in analysing and guiding banks in adopting XBRL. This will form part of the practical recommendations given to financial institutions listed on stock exchanges.

1.5.2 Impact of XBRL on the external user perspective

An external user can be described as entities or individuals who do not participate in running or managing the business but are interested in the financial information of the company (Ashok, 2019). Examples include government agencies, creditors, investors, financial analysts, and external auditors. External XBRL stands to gain substantially from XBRL as it allows them to gather the required financial information (Junus & Irwanto, 2021). The vitality of XBRL to external users encompasses major aspects like dealing with corporate fraud. The introduction of XBRL is believed to have been necessitated by efforts to deal with severe fraudulent activities in corporations (Choi, 2016). A study by Ahmi and Nasir (2019) highlights that anomalies are another issues, which XBRL have managed to contain to a relatively high extent.

The decision to analyse how organisations like banks stand to benefit from the adoption of XBRL relies on the examination of several factors. For instance, Ahmi and Nasir (2019) depicted that XBRL can be used by organisations as part of efforts to analyse forecast behaviour. This is based on assertions depicting that the forecasting effectiveness can merely be enhanced by applying

programs like XBRL. Their findings showed that there were tremendous improvements in forecast accuracy following the implementation of XBRL programs.

Dukiya and Perumal (2021) assert that the quality of decisions made can be improved by implementing XBRL. They noted that the rationality of decisions made is subject to changes in various factors, which organisations might not be capable of controlling. Thus, the forecast accuracy provided through XBRL helps organisations to make informed decisions leading to improvements in corporate performance. An investment decision is another aspect, which companies and investors have to approach with tremendous caution. XBRL can provide them with various options to choose from and provide a possible indication of the nature of assets, activities and corporations they need to devote their resources towards.

XBRL was adopted in China and has spread across the world. But the major challenge has been linked to theoretical underpinnings related to its applications and implications both from a practical and academic perspective (Ashok, 2019). Additionally, researchers like Ahmi and Nasir (2019), noted that it may require considerable time before XBRL appreciates in business value.

Meanwhile, using XBRL is subject to various concerns. For instance, investors have been noted to demonstrate signs of resentment towards XBRL (Ashok, 2019). Dukiya and Perumal (2021) noted that analyst has a negative approach towards XBRL. Related reasons showed that XBRL usability has inherent challenges which firms may struggle to address. Such limitations also pose challenges towards improving the effective use of XBRL in organisations. On the other hand, Junus and Irwanto (2021) dismissed some of the established benefits of using XBRL citing that XBRL does not always result in an improvement in the accessibility and usability of financial information. But still, studies recommend that XBRL be increasingly adopted by organisations as it

enhances both the accessibility and usability of financial information (Ahmi & Nasir, 2019; Dukiya and Perumal, 2021; Junus & Irwanto, 2021).

Tawfik, Hayek and Al-Smady (2017) conducted a study aimed at illustrating that adopting XBRL lowers price delay and stock return synchronicity. The findings noted that imposing mandatory XBRL adoption requirements enhances its usage among analysts and boosts analyst forecast accuracy (Mayapada, Afdhal & Syafitri, 2020). The findings also exhibited that XBRL influences investors' behaviour, most specifically foreign investors' behaviour. Improvements in corporate conduct, quality of the information provided and decisions made significantly increases foreign investors trading turnover ratio as organisations adopt XBRL.

Ahmi and Nasir (2019) related the adoption of XBRL to improvements in price and non-price loan terms. This is because XBRL regulates an organisation's conduct and default behaviour thereby reducing its riskiness. The results were significantly different from those that did not adopt XBRL. Also, borrower's values and risks are viewed as being reflected and managed using XBRL. Consequently, a consensus was reached citing that XBRL contributes towards improving the quality of available and disclosed information, and reducing information asymmetry between borrowers and lenders.

1.5.3 Impact of XBRL on the internal user perspective

Internal users refer to individuals within an organisation responsible for dealing with specific operational activities (Mayapada, Afdhal & Syafitri, 2020). With XBRL, it has its internal users responsible for managing it and others in that specific organisation making use of its reported data. Both internal users are confined to using XBRL to make rational decisions that enhance the operational capacity of the organisation. Some studies assert that XBRL aids in improving organisational efficiency as employees are providing with the right type and amount of information required to make decisions (Dukiya & Perumal, 2021; Tawfik, Hayek & Al-Smady, 2017).

The interaction between organisational activities entails that each department will rely on other departments for information and XBRL can be used to bridge the informational gaps within the organisation (Ahmi & Nasir, 2019). There is an element of information being disseminated between departments at relatively lower costs (Junus & Irwanto, 2021). As such, one can regard XBRL as beneficial for adopting in banks. More so, it is compelling to note that XBRL reduces financial preparation and reporting errors (Ashok, 2019; Choi, 2016). In some circumstances, XBRL is essential as part of an innovative approach towards dealing with manual data re-entry problems (Ashok, 2019). Encouraging banks to adopt and implement XBRL practices should serve an important role as banks are awarded an opportunity to enhance their regulatory compliance levels (Mayapada, Afdhal & Syafitri, 2020). Choi (2016) noted that regulatory compliance is also linked to internal laws which employees and departments have to comply with. Additionally, information asymmetry has been established to have been limited by the adoption of XBRL practices. Hence, one can assert that the adoption of XBRL is vital for enhancing internal and external bank functions and activities.

1.6 Accounting disclosure and financial reporting

The preparation of financial statements caters for specific organisational and stakeholders' needs (Roychowdhury, Shroff & Verdi, 2019). Organisations through their managers use financial statements to assess the performance of the business (Pavlopoulos, Magnis & Iatridis, 2019). That is, financial statements provide indications as to whether the business is making profits or losses. In such cases, organisational managers can assess which organisational activities or bank assets are generating more profits. Subsequently, more investments can be channelled to those productive and high income-generating activities or bank assets. Thus, financial statements have a prime focus of aiding organisations like banks to maximise their revenue earning capacity. Other studies regard financial statements as vital for enhancing the rational and productive use of organisational resources as assets (Chychyla, Leone & Minutti-Meza, 2019; Markota Vukić, Vuković & Calace, 2018).

Regarding the effective ability of financial statements to indicate loss generating activities or bank assets is also another vital use or role of financial statements (Mokhtar, 2017). This is banks can devise strategies to determine the causes of such losses. Such leads to proper identification of loss-making operations and related strategies needed to overturn the bank's misfortunes.

Mahboub (2017) notes that organisational managers' performance can be analysed by how much profits they have generated as a department and organisation overall. This is evident by the principal-agent theory asserting that managers are agents of the organisation, whose mandate is to ensure that owners of the business obtain high returns on their investments. Stakeholders and the board of directors can use the information provided in the financial statements to assess whether managers are performing as expected (Swait, Patel & Maroun, 2018). Banks like other organisations compete for market and

industry share (Venturelli, Caputo, Leopizzi & Pizzi, 2019), hence, it is organisational managers' duty to ensure that the organisation captures sufficient market and industry shares. Failure to attain such levels can cause banks to lose market share and suffer from a decline in performance levels (Roychowdhury, Shroff & Verdi, 2019). This can lead the bank out of the market or industry. Thus, financial statements are a benchmark through which bank managers' performance can be assessed concerning market and industry share, development, growth and survival. For these reasons, financial statements are viewed as essential in any organisation, and their benefits are believed to go beyond these benefits.

Mahboub (2017) reiterates that information must be provided to stakeholders to allow them to make rational decisions regarding their dealings with the organisations. Creditors can use financial statements to gauge their future dealing with the banks. That is, to assess as to whether they should lend continue lending money to the banks. That is, they can gauge the bank's creditworthiness. A highly liquid bank can pay its debts on time without affecting the creditors' revenue inflows. There are diverse stakeholders interested in the bank's financial statements. For instance, governments can utilise financial statements to assess their compliance with tax regulations and legal requirements like market capitalisation. Societies are also important stakeholders banks need to consider because their influence and perceptions affect bank performance (Venturelli, et al., 2019). Social activities have an essential bearing on bank activities and bank activities are also affected by social activities. The relationship between social activities and banks is linked to corporate social responsibility (Roychowdhury, Shroff & Verdi, 2019). Societies expect banks to perform certain social activities that either contributes to their welfare or improve their environment (Mokhtar, 2017).

A study by Mokhtar (2017) highlights the importance of using financial statements as linked to the holding of share decisions. Other studies also reckon

the same and established that performance details shown in the financial statements have an influence on share prices (Chychyla, Leone & Minutti-Meza, 2019; Markota Vukić, Vuković & Calace, 2018). As such, investors will examine such information and determine whether it will have an adverse effect on the share prices. Besides, performance analysis can be done to assess the potential ability of the banks to continue generating high share price and interest or dividends returns in the end. Besides, shareholders are the owners of the bank and must continuously assess whether they should continue holding the bank's shares or dispose of them. These kinds of decisions are guided by the kind of information provided in the financial statement.

Mahboub (2017) denotes that financial statements analysis leads to improved decisions and plans. This is because most of the information provided in financial statements, especially of banks listed on the exchange market is highly reliable (Swait, Patel & Maroun, 2018). This entails that better decisions and plans will be taken either by bank managers, stakeholders or shareholders. This is classified as performance analysis and it encompasses other essential aspects like effectiveness and efficiency. Hence, one can contend that financial statement analysis is vital for banks in making well-informed and effective decisions and plans. Banks operate with a long-term perspective, which requires continuous assessment of their effectiveness and efficiency in handling investors' funds, and the banks' assets (Pavlopoulos, Magnis & Iatridis, 2019). Realizing the bank's goal is a key aim and obligation bank managers must attain. Mokhtar (2017) notes that failure to attain stated goals limits the bank's operational effectiveness. On the other hand, Swait, Patel and Maroun (2018) contend that failure to attain stated goals incapacitates the bank from continuing operations. Hence, financial statements provide details about the bank's capacity to attain stated goals and meet the required shareholders' objectives. Besides, studies reckon that financial statement analysis is vital for managing an organisation (Chychyla, Leone & Minutti-Meza, 2019; Markota Vukić, Vuković & Calace, 2018).

Nevertheless, banking operations are distinct from ordinary organisational activities and this also includes the preparation of financial statements. Such differences are due to the notion that banks' acquire revenue from services and assets whereas ordinary organisations obtain revenue from product sales (Mokhtar, 2017; Swait, Patel & Maroun, 2018). This implies that the nature of financial statements prepared will be significantly different, and this includes the nature of ratios and financial analysis tools used to analyse the banks' performance. For instance, ratios like return on assets, net interest margin and return on equity are significantly applied in financial institutions to measure and assess changes in bank performance. Both returns generated from using the bank's assets, revenue generated by interest-earning assets and revenue generated from the shareholders' equity are computed using details provided in the financial statements. Therefore, the importance of financial statements and reporting in banks is huge and cannot be underestimated.

1.7 Corporate governance and financial reporting

Corporate governance is vital in organisations like banks and various studies acknowledge its significance in improving bank performance and reputation and growth (Al-Khonain & Al-Adeem, 2020; Sikka & Stittle, 2017). Corporate governance is defined as a set of practices, rules and processes used to manage an organisation (Paulinus, Oluchukwu & Somtochukwu, 2017). This entails that there are obligations imposed on banks to follow predetermined sets of rules practices, rules and process to effectively execute their intended mandate. The significance and effectiveness of corporate governance in banks relates to how such practices, rules and processes are established. Besides, there must be standards through which bank managers can check to determine if the bank is adhering to such practices, rules and processes.

Meanwhile, financial reports can be used to measure and assess the extent to which bank managers are adhering to the stated set of practices, rules and processes designated by the board of directors. For example, budgets can be allocated to each department and managers are required to observe the stipulated budget limits at all costs (Jananto, & Firmansyah, 2019). Therefore, financial statements provide a measure through which budget limits and performance are evaluated. Such information is usually available in cash budgets, which records cash inflows and expenditures.

Performance targets are also attached to corporate governance practices as they are considered to dissuade managers from engaging in corporate misconduct (Almaqtari, Hashed, Shamim & Al-ahdal, 2021). Additionally, Agyei-Mensah (2018) states that managers aim to maximise their self-interests to obtain high packages, rewards and benefits. However, this is usually at the expense of the shareholders' interests, and financial statements can be used to assess the extent to which managers are maximising their self-interests. Hashmi, Salahuddin and Nawaz (2019) regard such efforts and activities as corporate misconduct, which must be avoided at all costs. Thus, financial statements can be said to make it feasible for the board of directors to monitor managers' activities and ensure that they are in line with the bank's corporate governance practices. For instance, audited results in conjunction with the produced financial statements provide details of fraudulent activities committed by the bank managers. Thus, corrective measures can be taken to deal with potential corporate governance misconducts.

Nevertheless, there is subjective debate regarding the potential effectiveness of financial statements in dealing with corporate governance problems faced by banks. For instance, Hashmi, Salahuddin and Nawaz (2019) contend that using financial statements to deal with corporate governance misconduct is ineffective because of the four underlying factors influencing corporate governance. Consequently, it is believed that the effectiveness of corporate governance practices in banks revolves around four vital factors namely;

- 1) **State legal regulation:** Governing national rules and regulations influence organisational activities. Studies highlight that the major limiting factor that restricts organisational activities is government legislation (Almaqtari, Hashed, Shamim & Al-ahdal, 2021). The imposed laws must not always be conducive and favourable for organisations to operate under such laws. Such is a common feature with the financial sector, which is heavily regulated by the government. Agyei-Mensah (2018) notes that the imposition of rules and regulations on banks is meant to facilitate their operations and ensure that they operate prudently. This follows a series of corporate misconducts involving the embezzlement of funds, money laundering and other criminal offences committed by banks around the world (Paulinus, Oluchukwu & Somtochukwu, 2017). Hence, such activities can be restricted by stiffening laws and controlling bank activities. Strict laws are known for enhancing operational effectiveness in the banking sector (Jananto, & Firmansyah, 2019). Others noted that consumer trust and confidence in the banking sector is high when there are stiffer laws preventing banks from engaging in such activities (Al-Khonain & Al-Adeem, 2020; Sikka & Stittle, 2017). Thus, corporate governance practices are more effective when reinforced by effective government regulations. Such regulations can require banks to publish their returns on either a semi-annual or annual basis to promote transparency. In this way, financial reporting serves as a tool that

governments use to determine the banks' transparency and obedience to state laws.

- 2) **Internationalization or globalization:** Globalisation patterns have been predominantly on high levels and spreading considerable worldwide. Globalisation exposes local banks to international markets as well as international competition (Almaqtari et al., 2021). This can also involve the distribution of several distinct banking products and services to cater for changes in the global economy. New products and services entail that governments and banks have to adjust their financial statements to cater for these products and services. In some cases, different accounting procedures are required to record such transactions (Jananto, & Firmansyah, 2019). This is because of currency differences and Agyei-Mensah (2018) proposed that harmonization of financial statements be used to ensure that the prepared financial statements are understandable and capable of being used in two or more countries. Thus, without harmonization, it is practically impossible to compare financial statements of two branches located in two different countries. Inflation is also noted to be a key element that influences the recording and interpretation of financial statements (Jananto, & Firmansyah, 2019). Hence, different valuation methods are used to address such challenges. For instance, fair value accounting is applied to capture current prices as in the case of an inflationary environment (Paulinus, Oluchukwu & Somtochukwu, 2017). Using historical costing methods in such cases can underestimate revenue inflows and cause banks to pay more in terms of expenses. Both banks and the government must govern all these changes and developments. Hence, the connection between corporate governance and globalisation is significant and studies consider this vital, especially in the banking sector (Al-Khonain & Al-Adeem, 2020; Sikka & Stittle, 2017).
- 3) **Outside minority shareholders:** Minority shareholders have distinct preferences in the banks' operational activities. As such, they try to

safeguard their interests and ensure that majority shareholders do not override them (Sikka & Stittle, 2017). Hence, they tend to press towards the implementation of acceptable and significant conduct and governance in banks.

- 4) **Majority shareholders:** Majority shareholders usually aim to protect their investments (Sikka & Stittle, 2017), and ensure that they get profitable returns on their investments (Paulinus, Oluchukwu & Somtochukwu, 2017). Consequently, they can introduce certain governance procedures and practices that curb bank managers from operating in a manner that jeopardises their interests. This is because bank managers may resort to maximizing their self-interests at the expense of the majority shareholders' interests.

1.8 Corporate governance practices in the financial sector

Corporate governance practices in the and financial sector have been attracting considerable attention in research (Al-Khonain & Al-Adeem, 2020; Sikka & Stittle, 2017). Studies opine that corporate governance practices are linked to numerous financial and non-financial activities of the bank (Ashok, 2019; Junus & Irwanto, 2021). This entails that banks' corporate governance practices can stand to boost or restrict their financial and non-financial activities as available findings demonstrate that this is a prominent feature in the financial sector (Chychyła, Leone & Minutti-Meza, 2019; Pavlopoulos, Magnis & Iatridis, 2019).

Roychowdhury, Shroff and Verdi (2019) illustrated that there is a significant connection between corporate governance practices and the quality of reported earnings. Organisations implementing acceptable corporate governance practices were noted to have reported high-quality earnings. These findings suggest that improvements in earnings obtained by shareholders are feasibly obtained when corporate misconduct are alleviated from banks. Hence, it can be suggested that using reported financial results in line with acceptable corporate

governance practices helps shareholders to obtain higher returns on their invested funds.

Pavlopoulos, Magnis and Iatridis (2019) depicted that performance levels between banks using acceptable corporate governance practices were significantly higher than those of banks riddled with corporate governance problems. Such performance levels were attributed to improvements in departmental and managerial performance. This is because corporate governance practices were noted as imposing obligations on managers to perform better to secure their positions. Nevertheless, the reported financial results were used as benchmarks for measuring both individual and managerial performance.

Paulinus, Oluchukwu and Somtochukwu (2017) did a study that was relatively similar to this study and the goal was to find ways through which AIS aids in the decision-making process of governmental institutions in Saudi Arabia. It was noted that the notable role of AIS is to the acquisition and distribution of information (informational roles). The other roles were noted to be decision making and these decisions were related to operation and marketing decisions making purposes. By examining this further, we can establish that the roles of the quality of electronic financial reports are not limited to informational and decision making roles but also extend to include other roles. These other roles are yet to be determined and this study will help to determine all the necessary roles of AIS especially with regards to banks in Iraq

A study by Choi (2016) established that the roles of the quality of electronic financial reports are mainly restricted to the monitoring of organisational activities, decision making and efficient management. Meaning that we can extend and classify these roles into strategic investment purposes and risk management purposes as well as operation and marketing decisions making purposes. These results in the development of four roles of the quality of

electronic financial reports. This study will thus focus on these roles in banks in Erbil. These roles are relatively different from the roles established by El-Dalabeeh and Al-Shbiel (2012) based on information collected from hospitals operating under King Abdullah University. The findings simply pointed and emphasised that AIS plays a vital role in the development and growth of a medical institution. This was supported by results obtained in a study by Onaolapo and Odetayo, (2012) in Nigeria. Though the study by Onaolapo and Odetayo focused on construction companies, the findings were almost the same as those established by Ahmi and Nasir (2019) which considered the quality of electronic financial reports to be important because it contributes towards the development and growth of an institution.

Meanwhile, other studies found out that AIS is useful for organisations to grow and boost their performance but these studies showed that the quality of electronic financial reports is not related to in anyhow to improvements in performance (Chychyla, Leone & Minutti-Meza, 2019; Markota Vukić, Vuković & Calace, 2018). This suggests that there are challenges that hinder the effective use of AIS in organisations. But the problem is that these studies do not mention the exact nature of such problems. Thus, it remains to be known exactly what these problems are and how best they can be addressed. This study pays attention to these problems and highlights them. This is important as it helps and facilitates the effective use of quality electronic financial reports thereby causing an improvement in the quality of decisions made by banks. This will result in an improvement in bank performance which further stirs an improvement in financial innovation and an increase in the performance of banks

On the other hand, the importance of using AIS in the organisation is still being considered to be vast and capable of varying between organisations, sectors and nations (Venturelli, Caputo, Leopizzi & Pizzi, 2019). A study by Belev and Unwe (2019) showed that AIS contributes positively to changes in organisational performance. Meaning that an improvement in AIS increases

organisational performance. The way or channels through which the quality of electronic financial reports can effect positive changes in organisational performance is decision making. That is, the ability of organisations to make good and high-quality decisions related to operation and marketing decisions making purposes, risk management purposes, strategic investment purposes, and information acquisition and provision, is what drives up organisational performance. These roles though not directly implied have been noted to exist and take much wider attention in any organisation (Kariyawasam, 2016; Mwakio, 2017). Al-rabei et al. (2015) reiterated the same notion and pointed out that these roles encompass a lot of aspects and will cover elements such as human resources. This was observed to be similar to companies in Turkey (Esmeray, 2016).

The importance of conducting this study can be evident in studies that consider AIS as vital for making good and high-quality decisions. For instance, Ng'wandu (2013) AIS increases the easiness of executing organisational goals and performance of organisational duties. Douglas (2007) established that AIS results in an increase in clarity of both goals, purpose and vision as well as employees' duties. The importance of AIS in an organisation is further linked to aspects such as an increase in enterprise value and the rationalisation of decisions made by firms (Okoli & Nnena, 2012). This reinforces the need and importance of conducting this study by examining the impact of XBRL on the quality of electronic financial reports in Iraq.

1.9 The roles of accounting information in banks

Accounting information plays a significant role in an organisation. This chapter provides information on the major roles of accounting information in an organisation.

1.9.1 Accounting information as a source of organisational knowledge

It is important to note that information enhances knowledge and the same can be said about the use of accounting information in an organisation. A study by Mokhtar (2017) reinforced that accounting information changes the way individuals think and thus causing them to generate and disseminate more knowledge. The ability to think and generate more knowledge in an organisation revolves around the activities of an organisation. Thus, accounting information will be in a position to provide more knowledge when it considers what is taking place in an organisation. Of which the knowledge creation process revolves around the synthesis of individual actions and thinking processes. The importance of creating knowledge is important especially in the era where competition is increasingly getting intensive (Venturelli et al., 2019). Thus, a lack of understanding about human activities and organisational activities can hinder organisations from making the best use of generated knowledge. As a result, such organisations can end up succumbing or exposed to too much organisational pressure from competitors as the operational environment continues to get complex environment. Information can be an effective and strategic process by simply having a better understanding of the organization and this is termed "knowing organization" (Mokhtar, 2017). Thus, decision-making is based on the premise of good knowledge-creating and they all revolve around a perpetual series of education and adoption.

Due to the nature of uncertainty and dynamics of the business environment, the production and provision of information are vital as the business environment is characterised by a lot of changes (Swait, Patel & Maroun, 2018). This will help an organisation to help understand what is taking place in its environment and

thereby formulate objectives and decisions that improve the performance of the organisation. This is also because an organisation's level of failure and success is determined by the way it responds to changes in market dynamics and forces. Hence, the organisation's range of influence and identity is determined by the established legal structures and fiscal ground. In addition, the organisation's reach and role are also shaped by societal norms and public opinion. Furthermore, the idea by Mokhtar (2017) showed that there is a strong interconnected relationship that exists between an organisation and its environment. Thus, it is important to ensure that the organisation keeps track of such changes and devise better ways of dealing with organisational and environmental changes. Cues and signals are produced from changes that take place in both the organisation and its external environment. But the problem is that the generated information might be vague and complex to process and this requires the provision of accounting information to decompose the information into meaningful and useful details. Better decisions can thus be made based on the provision of detailed and structured information which managers and investors can put to effective use (Mokhtar, 2017). This will help to warrant the continuity of existence and sound growth in organisational performance.

Meanwhile, it is of huge importance to establish that organisations will be much more capable of making sound strategic decisions when they are capable of generating new knowledge. Processes are thus needed to create, structure and process details and convert them into organisational knowledge. Organisations must go through a process of organisational learning so that they can be capable of generating ideas and convert them into knowledge. Ahmi and Nasir (2019) noted that organisational knowledge can be classified into cultural knowledge, explicit knowledge and tacit knowledge. These diverse types of knowledge are derived from different sources and hence it is important for organisations to strongly consider society's norms, beliefs and values,

organisational procedures, routines and rules, and individuals' level of experience and expertise.

Mahboub (2017) believed that organisations always focus on developing their form of cultural, explicit and tacit knowledge. The ability of an organisation to survive, grow and expand into other markets is thus based on the ability of the organisation to generate and make use of these three forms of knowledge. This entails that the inability to produce and put to effective use the combined forms of knowledge poses survival threats to an organisation.

Banks that are capable of converting the acquired knowledge into valuable and more meaningful activities that adds value is in a much greater position to attain a competitive advantage. That is, knowledge plays a vital role when it has been put to effective use. It is through this knowledge that organisations will be able to maximise performance and gain an urge which they can use to continuously develop themselves (Venturelli, Caputo, Leopizzi & Pizzi, 2019). Moreover, the extent to which an organisation grows is also influenced by this knowledge conversion process. In addition, good decisions are also made based on this knowledge conversion process. A study by Choo (2006), revealed that the availability of tacit knowledge stirs up the availability of more options a bank can choose from. A study by Chychyla, Leone and Minutti-Meza (2019), outlined that the inability of an organisation to make good decisions is mainly because they lack tacit knowledge. Having more alternatives from which an organisation can choose is what causes it to choose the best alternative. This is mainly because more information would have been drawn to provide an organisation with alternatives from which it can choose. Swait, Patel and Maroun (2018), further states that organisations are always in need and search of alternatives to base their decisions. Rationality, in this case, is, therefore, the ability of bank managers to choose the best alternatives out of all the existing or provided

strategies (decisions). However, Roychowdhury, Shroff and Verdi (2019), contend that it is not always possible for individuals to come up with a set of different alternatives to choose from. This is mainly because bank employees' ability to look for and process information in a rational manner is limited. Hence, some complexities and uncertainties compromise the effectiveness of the decision-making process.

Given all the above-mentioned details, it, therefore, entails that information has to continuously flow between organisational members to aid them to make rational decisions. Moreover, the ability of organisations to create and enhance the availability of tacit knowledge is important for making sound decisions. The knowledge creation process can be organised in a way that causes an increase in organisational innovation and capabilities. These activities are in turn related to creativity, intelligence and innovation. Thus, the acquisition and provision of tacit and other forms of knowledge prepare the bank for benefiting from the increased organisational performance that emanates from good decisions made by the organisation.

Meanwhile, Roychowdhury, Shroff and Verdi (2019) contend that organisations that can leverage their knowledge sources will be in a position in such a way that it benefits in three distinct ways. Foremost, the bank will be in a much better position to respond to competitive pressure in the best way and earliest possible time. This is important especially after considering that the banking environment is increasingly getting more competitive and posing a lot of challenges for organisations. Secondly, it causes the organisation to have a better examination of its strengths and weaknesses. Thirdly, Thierauf (1999), considers that it also causes banks to benefit from increased internal efficiency which helps to boost productivity levels. The reasons being that bank managers are well versed, alert and prepared to handle organisational threats as well as take advantage of bank opportunities. This according to Mahboub (2017), is important for making it easy for the organisation to adapt to changes in its environment.

1.9.2 The role of accounting information on investment decision

There are a considerable number of studies that examine the relationship between accounting information and investment decision. For instance, a study by Chychyla, Leone and Minutti-Meza (2019), established that there is a positive interaction between accounting information and investment decision. This entails that both an increase and improvement in the availability of accounting information will result in an improvement in investment decisions made by banks. The existence of a positive relationship between accounting information and investment decisions has been subjected to a lot of controversies. For instance, Michael (2013), posits that there are potential instances where a negative relationship between accounting information and investment decision can be obtained. That is, the use of accounting information can sometimes cause a decline in the quality of investment decisions made by bank managers. Chychyla, Leone and Minutti-Meza (2019), highlighted that some vast improvements and benefits can be obtained by capital market firms by using accounting information. However, Swait, Patel and Maroun (2018) mentioned that ambiguities in the use of accounting information stand as a major hindrance to the use and importance of accounting information by firms. The other reason is that accounting information is subject or more prone to suffer from errors. Meaning that errors affect the reliability and validity of accounting information when making decisions. Wrong decisions can be made when wrong information is provided and hence it is important to ensure that correct and accurate information is provided all the time.

Mahboub (2017), established that the extent to which investors rely on the use of published financial details is determined by the authenticity of the information. The study was carried out using information collected from Nigeria's public sector. Investors often at times make decisions based on information depicted in the financial statements. Hence, due diligence and adequate care must be given when preparing and organizing accounting information. The established results

showed that accounting information is of huge importance and its use among investors is high. Also, good investment decisions are made on the premise of good and high-quality information. In addition, the study also suggested that studying the effects of accounting information on investment decisions is sometimes difficult. This is because of the use of a lot of methods to calculate and determine certain investment indicators. As a result, the study suggests that well advanced financial algorithms and systems be used to compute and estimate the required models and indicators.

Markota Vukić, Vuković and Calace (2018) noted that good management decisions are made on the availability of high-quality information. Of which, the provision of high-quality information is based on the use of prescribed accounting standards. Venturelli et al. (2019) contend that accounting information is prepared to specifically cater for two important aspects. The first aspect is to ensure that information is prepared based and on the stipulated accounting standards to cater for the objectives of financial reporting. The second aspect involves the preparation of financial information with the sole aim of fulfilling the required economic decision-making targets. The importance of making these two distinct categories is that it makes it possible to prepare financial details and reports to meet the desired objectives. This will also help to make sure that the prepared financial statements remain meaningful and useful to their intended users.

A study by Simanjuntak (2017) hinted that good investment decisions rely on the provision of sound accounting information. The study employed Pearson's correlation test and regression analysis to examine the effects of accounting information on the decision-making abilities of firms in the private sector. The results showed that accounting information is vital when making important investment decisions. However, this effective use of accounting information requires investment in information (IT) technology. This is because IT is there to foster efficiency and effectiveness in the use of organizational resources as well

as the making of good investment decisions. This is also established by looking at the overall performance of the business.

Much of the information that is desired by investors pertains to risk, profitability and liquidity and financial information help investors to indicate the nature of risks, profits and liquidity scenarios they are bound to face if they are to invest in that particular firm. Moreover, financial information provides more information about the use of investors' and/or shareholders' funds. This also includes the effective use of an organisation's assets. As a result, it is worthy to establish that the effects of financial information on decision making are subjective but under normal circumstances, it aids firms in making good investment decisions.

1.9.3 Information as a competitive asset

Uyob, Saad and Ahmi (2019) noted that the nature of the market, business, economic and global complexities makes it a challenge to make certain important decisions. Consumers, on the other hand, are increasingly getting subjected to a lot of sophisticated changes which require a special approach to be used by firms to lure them to continually engage them into dealing with the firm. These issues require innovative and well-advanced business tools that are capable of analysing the provided information and present it in a meaningful way that is easy to understand. Moreover, firms are more likely to gain a huge competitive advantage when such advanced business tools are used to analyse and present financial information.

Uyob, Saad and Ahmi (2019, noted that an increase in the amount of data that needs to be processed forces firms to adopt new and well advanced technological tools. Such an innovative drive results in a fast and effective way of analysing, processing and presenting the information. Nowadays, competitive banks are those that can process and present information easily and cost-effectively and make a move before other competitors do so. Simanjuntak (2017), highlighted that good quality information that is provided at the right time

at a low cost provides firms with an ability to make well-informed decisions. Thus, the continuous ability of banks to benefit from increasing high-quality information supply should be leveraged on high investments in technology.

The benefits of using financial information to make decisions that improve the bank's competitive position are based on the premise that financial information can be analysed in so many different forms and ways. This helps to indicate trends, patterns, recurrences, forecasts etc., of previous, current and future outcomes (Chychyla, Leone & Minutti-Meza, 2019; Markota Vukić, Vuković & Calace, 2018). Financial information communicates different kinds of external and internal details of the organisation. Firms that are capable of recognising and making use of the revealed details are well-positioned to take advantage of market opportunities and lure customers from other firms. However, the major problem of relying on financial information is that it is bound to change at any time and this requires that firms position themselves so that they do not miss on such changes. Hence, a competitive urge can be lost when firms fail to consider and deal with changes in financial information. Mokhtar (2017), recommends that firms must be creative and innovative when devising ways to make the best use of financial information. Meaning, customer trends and behaviour can also be predicted by using financial information and thus making it relatively easy for firms to predict consumers' possible or likely behaviour. Hence, gaining a competitive position is feasible especially when consumer, market and industry examinations are made using the provided financial information.

With all these ideas in mind, it is therefore important to note that information is vital and its existence makes it possible for banks to make well-informed decisions. The development of information is based on the existence of tacit knowledge which organisations must invest so much in (Chychyla, Leone & Minutti-Meza, 2019; Markota Vukić, Vuković & Calace, 2018). Thus, organisations that have a greater capacity to generate more and sound information can be presumed to benefit a lot. Such benefits are mainly in the

form of good decisions which enhance both the performance and competitive position of the firm. This will help the firm to survive and expand in the future. Hence, it is essential to consider information as both a resource and an asset which an organisation must possess so as to make effective decisions. Information enhances the ability of an organisation to take advantage of market opportunities and deal with challenges affecting the firm. This is important especially in a business and/or economic environment which is characterised by a lot of changes (Markota Vukić, Vuković & Calace, 2018). Changes in both the internal and external business environments provide opportunities for firms to grow as well as challenges that can undermine both the performance and growth of the firm. All these challenges can be averted when managers engage in a transformational process through which new ideas are introduced and effective strategies are formulated and implemented. The implementation of effective strategies will play a vital role in maximising the use of a firm's assets and resources in a manner that will enhance existing and future profits levels. As a result, the bank will benefit from an increase in shareholder and organizational value. This in turn will result in the creation of economies of scale which boost productivity and operational capacity.

1.9.4 Accounting information as an important part of information system

Changes in both domestic and market conditions impose competitive pressure on firms especially banks. The stability of the financial system and that of the economy are based on the existence of sound economic policies instituted by monetary authorities (Venturelli, Caputo, Leopizzi & Pizzi, 2019). But much of the stability can be attributed to the ability of banks to devise strategies that help them to cushion against the effects of increased market competition. However, both policymakers and managers rely on the existence of good and reliable information when making decisions. Some studies suggest that accounting information needs to be integrated with information systems (Chychyla, Leone & Minutti-Meza, 2019; Markota Vukić, Vuković & Calace, 2018). Such integration

is believed to be capable of making it easy for firms to make quick and effective decisions. This shows that accounting information and information systems are to some extent work hand in hand when making decisions.

The relationship between the use, role and importance of accounting information in information systems is unilateral and can be examined in several ways. Firstly, organisations can use information systems to collect information by storing it in databases that are easily accessed by other departmental and/or members (Junus & Irwanto, 2021).

Secondly, the stored information needs to be processed timely and in a cost-effective way. Thus, information systems provide a way through which organisational information can be processed timely and in a cost-effective way.

Thirdly, the processed information has to be presented in an easily understandable way and information systems make it feasible to accomplish that. Thus, managers can take advantage of the benefits of having well-advanced information systems to collect, process and present information in a way that is easily understandable by both investors and other stakeholders (Choi, 2016). This helps them to make good decisions. Managers of the organisation will also benefit from these information systems as they are also able to make good decisions that benefit the organisation on time.

As a result, information systems can be said to help allow organisations to communicate information to their users (governments, creditors, investors and other stakeholders). This is important irrespective of the size of the organisation as decisions must be made all the time regardless of whether they will benefit stakeholders or shareholders or other individuals other than these two groups of individuals (Chychyła, Leone & Minutti-Meza, 2019).

Overall, accounting information can be said to be important because it enhances the quality of decisions made by firms. The improvement in the quality of

decisions is based on the existence of reliable and credible information. Banks and other institutions can thus benefit from such aspects as their performance improves with every successive and good decision made by the managers. Investors will also gain huge confidence in the firm together with its managers with regards to the prudent use of the organisation's resources and assets. These indicators are bound to improve when good, reliable and credible information is made available. Consequently, the financial system will grow and innovate as more and more individuals build their trust and confidence in the bank managers to deliver. Hence, decision making and accounting information can be said to be important on both social, corporate, sectoral and economic levels.

Markota Vukić, Vuković and Calace (2018) did a study that looked at the importance of accounting information in decision making and the established findings strongly contend that accounting information is essential for effective decision making. But the challenge lies in identifying ways through which such effects can be attained. This study proposes to identify ways through which such effects can be attained thereby enhancing the enterprise value of banks.

Kennedy (2013) conducted an empirical investigation of the contributions made by computerised accounting among companies listed on the stock exchange. The sole aim was to determine the adequacy and of such a method to detect, correct and prevent security breaches and acts of fraud. The information was drawn from a collection of companies from different sectors of the economy using a total of 118 questionnaires. It was noted that there are significant distinctions between companies using computerised accounting and those that do not. As such, the level of security was discovered to be high among companies using computerised accounting as opposed to companies that do not use computerised accounting. Further details also showed that the level of fraud and errors made among companies using computerised accounting were very low. However, it was noted that the adoption of companies computerised

accounting does not always provide the best condition for eradicating errors and fraud. As a result, it was recommended that there is much more that is needed to improve the use of computerised accounting among companies using listed on the Sri Lankan stock exchange. The suggested methods recommended that there be an increase in managerial support and supervision, increased control and monitoring activities.

Chychyla, Leone and Minutti-Meza (2019) did a similar study which was before the study by Kennedy (2013) and looked at the role of electronic accounting information systems (EAIS) in Palestinian companies. The effort was paid towards looking at the extent to which electronic accounting information system is capable of improving and meeting the desired or expected needs. That is, the implementation of EAIS was posited to aid organisations in performing the required functions. The results showed that the adoption and implementation of EAIS cause organisations to be capable of performing the stipulated activities effectively and efficiently. Hence, causing them to meet the given objectives and attain better performance levels. Thus, the use of EAIS was considered to be correlated with increased control, supervision and monitoring. Changes in these aspects were in turn responsible for major performance improvements.

Belev and Unwe (2019) assessed circumstances determining the adjustment of accounting information. The study involved the examination of information collected from manufacturing companies. The study does not address the roles that are played by accounting information but rather deals with issues affecting the use and importance of accounting information. The most important hindrance to the use and effectiveness of accounting information was noted to be managerial approaches used in organisations. The study reckons that certain managerial approaches hinder the usefulness of accounting information. The advice was given to ensure that employees must be given enough room to accomplish their organisational goals. As a result, the use of appropriate top and bottom methods was seen as the best possible way of eradicating such

problems. The challenge with this study is that it does not give details as to what roles are played by accounting information. Therefore, this study seeks to address such issues.

Ahmi and Nasir (2019) consider that accounting information systems as a set of interconnected methods or parts that are targeted at collecting, processing, classifying and publishing financial results to provide details about the organisation in terms of its position and performance. With regards to that, the study bases its support on a study by Al-Rawi and outlines that AIS should be organised in a way that enhances its ability to provide quality information. It was established that the ability of AIS to provide quality information is determined by the relevance of accounting information, its timeliness, a form of reporting used to present the accounting information together with the reliability of such information. Moreover, decisions makers were noted to determine the usefulness of accounting information through the way they perceive the roles and usefulness of accounting information. With regards to that, it, therefore, becomes important to conduct studies that can examine the roles of accounting information. This is what this study seeks to accomplish.

Uyob, Saad and Ahmi (2019) highlighted that the roles of accounting information can be examined by looking at ideas that are used to measure the effectiveness of AIS. This was supported by a similar study which was done by Swait, Patel and Maroun (2018) which showed that the determinants of such effects are timeliness, ease of use, format, accuracy and nature of contents of accounting information. In addition, it was noted that the benefits of accounting information can be weighed by looking at the extent to which they improve the quality of decisions made by firms. This implies that the roles of accounting information are to improve the quality of decisions made by firms which in this case relate to the performance of an organisation. As a result, the roles of accounting information to improve the quality of decisions made by firms will be examined by the extent to which they affect the performance of firms in North Iraq.

Irrespective of the roles played by accounting information, it is important to consider that accounting information must assist in the processing of firms' transactions, boost internal controls and performance evaluation mechanisms, and improve the decision-making process. This will help in providing high-quality information which enables firms to maintain and boost their competitive positions.

1.10 Presentation and evaluation of previous studies

This part of the researcher will address several previous studies that dealt with the topic of research or one of its aspects. These studies were divided into:

- 1) Studies that investigate the importance of XBRL as an electronic tool for preparing and publishing financial reports electronically.
- 2) Studies dealing with the effect of XBRL on stock markets.

A study by Burnett, et al. (2006) explains the nature of the XBRL language, how it is used to produce and publish financial reports, the benefits and challenges resulting from its use. The study also attempted to clarify the direct link between the mechanisms of the XBRL language, reduce the cost of data acquisition, raise the efficiency of its operation, and improve the quality of published financial reports. The most important results of the study were the following:

- The use of the XBRL language will simplify the flow of financial information between the various programs, as it facilitates the process of distributing, retrieving and processing data, and also reduces the cost of producing and disclosing financial information, and dispensed activities that do not add value.
- The XBRL language codifies the financial statements using standardized and acceptable standards and then they are stored in central databases,

which allow all users to access them, especially via the Internet, which enhances the transparency and quality of published financial reports.

Janvrin et al. (2011) attempt to answer two main questions: the first - what is the financial reporting disclosure technology (Spreadsheet/PDF/XBRL) that non-professional investors prefer to complete the task of analyzing the financial statements? And the second - why did they choose this technology particularly? The results of the study came to show that after training the participants on the use of different technologies, 66% of the participants chose XBRL technology, while 34% chose the spreadsheets, while no participant chose the documents exchange files such as (PDF), and the participants chose the XBRL language because it achieved a number of advantages, including (increasing the efficiency of operations, "reducing time", increasing the level of data transparency, and the possibility of reuse), while the reason for the selection of other participants for the mathematical tables is the availability of adequate experience in dealing with them, and the study also found that one of the main reasons for choosing the participants for the XBRL language is the ability to increase investor awareness and awareness of the data, which supports the decision-making process, which is a positive point for defenders using XBRL language.

Stergiaki et al. (2013) conducted a study based on the argument that XBRL language is a tool that provides an evolving situation for the process of preparing, displaying, and exchanging financial reports in a standardized form at the international level. For this reason, many researchers tried to know the extent of acceptance of their use and their acceptance of accreditation, but they did not attempt to clarify the direct link between acceptance of accreditation and the use of XBRL language and the impact on different users. Therefore, the study tested the effect of using XBRL language on users in the European Union region and their acceptance, and the study sample consisted of 100 companies listed in different European Union countries (such as; Germany, France, Italy).

The results of the study came to confirm that most of the sample companies are completely satisfied with the outputs in the language of XBRL and that the users feel accepted and comfortable with them, and these results are encouraging and motivating for the companies that did not adopt the XBRL language to take positive steps towards its approval.

Jiu-jin et al. (2013) investigated the impact of the use of the XBRL language on the quality of the accounting information published electronically. The results of the study concluded that the XBRL language can improve the general standards for the quality of accounting information and to provide accurate and objective financial reports promptly and that the implementation of the XBRL language will enhance the transparency of accounting information in the capital market, reduce the level of information asymmetry, and improve the efficiency of the resource allocation process.

Ghani et al. (2014) placed focus on testing the extent of understanding and awareness of the financial reporting preparators in Malaysia for the XBRL language, which is a new mechanism for preparing financial reports, where 150 forms were distributed to accountants in different sectors to know the extent of awareness of the financial reports prepared about the language of XBRL before starting the full accreditation, and the study tried to know the extent of XBRL is compatible with accounting information systems in organizations. One of the most important findings of the study was that most financial reporting authors consider the XBRL language a useful decision-making tool and that they are compatible with accounting information systems and organizational infrastructure, and despite that, the views of the investigators came from relatively different how difficult it is to apply in the initial implementation stages. The results of the study concluded that XBRL provides the best method for preparing financial reports and electronic disclosure and that it will improve the performance of organizations and will impose strict control on the process of

preparing and presenting financial reports, which will increase the utility of accounting information and will enhance corporate governance.

Nevertheless, Wang (2015) explored the effect of XBRL on the quality of financial reports and the accounting career. For this study, a quality index evaluation model was built to examine the quality of financial reports. A variety of formatted financial reports from three typical XBRL-adopting regions were then evaluated. This study concludes that some of the contextual and accessibility qualities of financial reports have been greatly enhanced after using the XBRL format. There is no direct effect of XBRL on the accounting career, being that most business organizations have subcontracted the preparation of XBRL reports. However, relying on the study result one more thing that should account for is that the questionnaires and interviews conducted with accountants in XBRL-adopting companies also reveal that these specialists feel increasing compression both to prepare and to utilize XBRL-formatted financial information internally.

By presenting and extrapolating the first group of previous studies, the researcher concludes the following:

- ✚ There was various content of the business reports published on the Internet and there was no standardized way to prepare and publish them, which led the specialists to search for a standard tool for preparing and publishing business reports, and these efforts resulted in the emergence of the language of extended business reports XBRL.
- ✚ Previous studies have agreed that XBRL is considered a standardized tool for preparing and publishing business reports "especially financial reports", as it provides many benefits and benefits to all parties interested in financial information, the most important of which are: achieving the required operational efficiency, reducing costs and increasing the speed of the process of collecting, processing and presenting financial reports, Reducing

the possibility of errors, increasing the quality of information, providing more transparency and credibility to use the information, and enhancing corporate governance.

- ✚ The studies emphasized the enhancement of the XBRL language to the quality of the accounting information, which reflects an indication of the quality of the published financial reports, and the organizations that used it are completely satisfied with the outputs in the XBRL language, and the users feel accepted and satisfied given the advantages of the XBRL language.
- ✚ The XBRL language can increase the benefit of accounting information, and increase the efficiency of data analysis operations, therefore investors, especially non-professionals, prefer to deal with reports prepared in XBRL.

1.11 Hypothesis development

Connections linking XBRL, QEFR and SEE can be established using empirical analysis of related studies. Such is the main focus of the present study and the aim is to determine how the model variables are related. This will be crucial for formulating and testing the established hypotheses.

1.11.1 The impact of XBRL on the quality of electronic financial reports

Burnett et al. (2006) conducted a study aimed at explaining the nature of the XBRL language, how it is used to produce and publish financial reports, the benefits and challenges resulting from its use. The study also attempted to clarify the direct link between the mechanisms of the XBRL language, reduce the cost of data acquisition, raise the efficiency of its operation, and improve the quality of published financial reports. The most important results of the study were the following:

- The use of the XBRL language will simplify the flow of financial information between the various programs, as it facilitates the process of distributing, retrieving and processing data, and also reduces the cost of producing and disclosing financial information, and dispensed activities that do not add value.
- The XBRL language codifies the financial statements using standardized and acceptable standards and then they are stored in central databases, which allow all users to access them, especially via the Internet, which enhances the transparency and quality of published financial reports.

Janvrin et al. (2011) made attempts to answer two main questions: the first - what is the financial reporting disclosure technology (Spreadsheet / PDF / XBRL) that non-professional investors prefer to complete the task of analyzing the financial statements? And the second - why did they choose this technology particularly? The results of the study came to show that after training the participants on the use of different technologies, 66% of the participants chose XBRL technology, while 34% chose the spreadsheets, while no participant chose the documents exchange files such as (PDF), and the participants chose the XBRL language because it achieved a number Among the advantages, including (increasing the efficiency of operations, "reducing time", increasing the level of data transparency, and the possibility of reuse), while the reason for the selection of other participants for the mathematical tables is the availability of adequate experience in dealing with them, and the study also found that one of the main reasons for choosing the participants For the XBRL language Is the ability to increase investor awareness and awareness of the data, which supports the decision-making process, which is a positive point for defenders using XBRL language.

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consider the XBRL language a useful decision-making tool and that they are compatible with accounting information systems and organizational infrastructure, and despite that, the views of the investigators came from relatively different how difficult it is to apply in the initial implementation stages. The results of the study concluded that XBRL provides the best method for preparing financial reports and electronic disclosure and that it will improve the performance of organizations and will impose strict control on the process of preparing and presenting financial reports, which will increase the utility of accounting information and will enhance corporate governance.

A study by Wang (2015) explores the effect of XBRL on the quality of financial reports and the accounting career. For this study, a quality index evaluation model was built to examine the quality of financial reports. A variety of formatted financial reports from three typical XBRL-adopting regions were then evaluated. This study concludes that some of the contextual and accessibility qualities of financial reports have been greatly enhanced after using the XBRL format. There is no direct effect of XBRL on the accounting career, being that most business organizations have subcontracted the preparation of XBRL reports. However, Relying on the study result one more thing that should account for is that the questionnaires and interviews conducted with accountants in XBRL-adopting companies also reveal that these specialists feel increasing compression both to prepare and to utilize XBRL-formatted financial information internally. As result, we can formulate the following hypothesis;

- **H₁**: Extensible business reporting language has a significant positive impact on the quality of electronic financial reports.

1.11.2 The impact of XBRL on stock exchange efficiency

Yoon et al. (2011) conducted a study that deals with the effect of increasing the level of accounting disclosure of companies on the low level of information asymmetry in the stock markets, and the relationship of XBRL language to this issue. This study tries to answer an important question, which is whether adopting the XBRL language will reduce the information asymmetry phenomenon in the stock market in Korea? The study data was collected from 550 companies in the Korean stock market to compare the level of information asymmetry before and after the adoption of the XBRL language. One of the most important results was that the adoption of the XBRL language led to:

- Reducing the time and cost of publishing information on the stock market.
- Enhance the transparency and quality of business reports and the low level of information asymmetry for the Korean stock market.

The results also showed that the impact of the XBRL language on reducing information asymmetry is stronger for companies of large size than medium and small companies, and based on these results it is expected that the demand for applications and services for the XBRL language in the capital market will be growing, and Governments should encourage the adoption of XBRL in financial reporting.

Li et al. (2012) conducted a study that tests the effect of using the XBRL language on lowering the cost of financing. The results concluded that the adoption of the XBRL language for electronic financial reporting deposited reduced the cost of processing information for investors, affected the behaviour of financial analysts, increased the accuracy of expectations, and also enhanced the liquidity of the company's shares. This study confirms the ability of the XBRL language to reduce the cost of processing information that reduces the cost of financing, which increases the efficiency of the stock market, and that these

results are clearly shown in companies with a high rate of growth, which has liquidity in shares than other companies.

Kim et al. (2012) conducted a study that analyses the impact of the mandatory accounting disclosure of electronic financial statements using the XBRL language on the various aspects of the financial information environment and the changes that will occur as a result. The results of the study showed that the use of the XBRL language improved the efficiency of data analysis, and enhanced the flow of information and helped to achieve a smooth performance in the capital market, due to the presentation of financial statements in a unified format, which makes the XBRL language an essential tool for dealers in the stock market, and its use led to The low level of volatility of returns to securities, and results also showed that accounting disclosure in the XBRL language will reduce the severity of information risks, enhance accuracy and transparency, and thus reduce the level of information asymmetry, which will lead to a decrease in the cost of financing.

Another study by Hongming and Fengui (2013) examines the impact of using the language of XBRL for the companies listed on the Chinese stock market to disclose electronic financial reports since 2003, the extent of their impact on the level of information asymmetry, as well as their role in rationalizing the process of resource allocation, and the extent of their ability to achieve rapid and stable development of the capital market Chinese. One of the most important results of the study was that the initial implementation of the XBRL language in China enhanced the quality of financial reporting information, reduced transaction costs and the level of asymmetry of information, and brought benefits to investors in the capital market, The XBRL language will become a good foundation for the sound development of China's capital market and guide the resource allocation process.

A study by Benbouali and Berberi (2018) highlights the role of XBRL in electronic accounting disclosure and how it contributes to the revitalization and

efficiency of the stock market, to increase the awareness of Algerian institutions by including this new technology in the accounting disclosure procedures. To achieve the goal of the study, the researchers conducted a field study through the distribution of a questionnaire to some countries that practice the language of "XBRL" (Malaysia, South Africa, Romania, Oman). The conclusions of the study were as following:

- "XBRL" is a technique that can be used to assist the process of preparation of electronic financial reports transparently and objectively which is makes it available to users, simply and understandably that can be analyzed by financial analysts, comparable among the different business organizations of the world, enhance investors' confidence, the revitalization and the sustainability of the stock market.
- XBRL "enhances the distinctive characteristics of financial information and supports its fundamental principles, and plays a major role in assisting all stakeholders (analysts, auditors, institutions ...) by improving the quality of financial information and thereby enhancing the quality of decisions taken.
- There is a strong relationship between the XBRL language and the efficiency of the financial markets by helping them to provide the conditions of creating information consistency, achieving corporate governance principles, increasing trading volume, improving liquidity and accuracy in pricing etc.
- Using the XBRL by institutions listed on the stock market, will increase the number of investors, and thus achieve efficiency from those markets. As result, we can formulate the following hypothesis;

H₂: Extensible business reporting language has a significant positive impact on the efficiency of the Iraqi stock market.

1.11.3 The impact of quality of electronic financial reports on stock exchange efficiency

There have been several studies on the reaction of stock prices. Ahn and Kim (2018) examined the relationship between the cumulative abnormal returns (CARs) induced by various events and long-term operating performances in the post-event period. They gathered six events from the KRX Disclosure System from 2000–2011 and then ascertained the different CAR patterns. Based on the general valuation model, stock return or price should reflect the firm's fundamental value and they expected CARs to show a close relationship with the firm's fundamental value over a long horizon. However, no distinct relationship between CARs and operating performances was found. The stock price reactions which are temporary and unrelated to the firm's fundamental values were explained by market inefficiency in Korea

Badertscher et al. (2018) found that stock price reactions not only occur at the time of earnings announcements but can also occur when submitting reports relating to regulators (2018). They investigated the role of bank regulatory reports in the information environments of banks. It was revealed that stock prices experienced movement when there were announcements of regulations about banking resulting in instability in the stock price and trading volume. After bank regulators undertook a “modernization project” to speed the processing and public dissemination of regulatory reports, the banking industry routinely experienced abnormal stock price volatility and trading volume on the 30th day of the quarter. Based on the explanation above, the hypotheses that were built in the study:

- **H₃**: The quality of electronic financial reports has a significant positive impact on the quality of electronic financial reports.

- **H₄:** The quality of electronic financial reports mediates the relationship between extensible business reporting language and the quality of electronic financial reports.

After reviewing previous studies the researcher believes that all previous studies show global interest in the language of XBRL and the benefits of its use and its relationship to many thorny issues, including the efficiency of the stock market. However, Arab studies that dealt with the language of XBRL overlooked these issues; there is a clear weakness in keeping pace with Arab academic studies of foreign studies concerning the XBRL language and its impact on the quality of financial reports and the efficiency of the stock market, which makes it difficult to generalize the results of foreign studies to the Iraqi work environment. Also, the Iraqi shareholding companies are still publishing their financial statements either in paper or digital form even though foreign companies use the XBRL language in publishing financial reports, which shows that there is a problem in accepting financial reports for local business organizations with international activity, which highlights the additional research.

1.12 Conceptual framework

Having reviewed the aforementioned studies and formulated the related hypotheses, the present study, therefore, proposed to use the following conceptual framework shown in Figure 1.1;

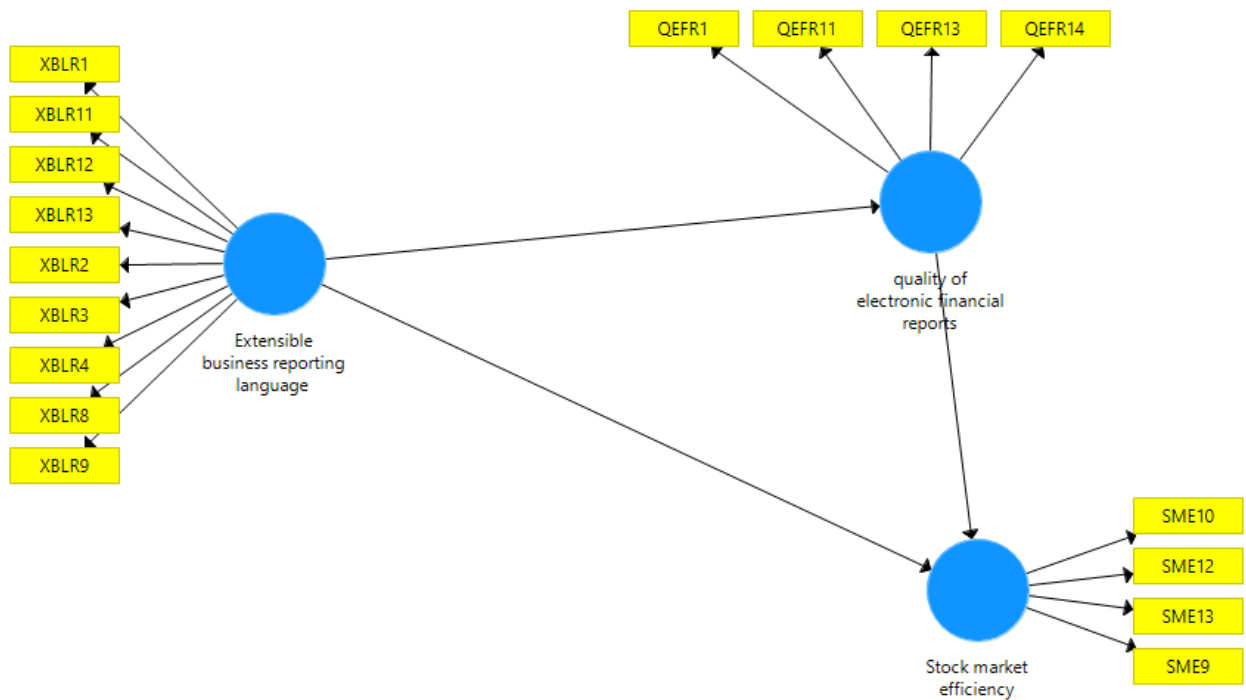


Figure 1.1: Conceptual model¹

¹ The conceptual framework shown in figure 1.1 includes the variables elements after applying Factor Analysis to determine the most suitable variables to use to examine the impact of practicing extensible business reporting language on quality of electronic financial reports to promote the efficiency of the Iraqi stock market.

CHAPTER TWO

RESEARCH METHODOLOGY

2.1 Research approach

A quantitative approach was used to examine the impact of practising extensible business reporting language on the quality of electronic financial reports to promote the efficiency of the Iraqi stock market.

The first step will be taken by receiving permission from the banks. Before distributing the questionnaire, the aim of the study was explained to the participants comprised of employees from the finance and accounting department of banks that banks listed on the Iraqi Stock markets. That is, the process involved distributing 176 questionnaires to banks that are listed on the Iraqi Stock exchange. The collected responses were coded into Smart PLS3 and analysed to determine the inherent relationships between the study variables. Conclusions and recommendations were made in line with the obtained findings.

The study used both (the inductive reasoning approach and the deductive approach). The study proposes to use the inductive reasoning approach to study and analyze several studies, research, and scientific references that dealt with the problem of the research or one of its aspects that supporting XBRL language. Meanwhile, this study will follow the deductive reasoning approach as the researcher use this approach to reveal the logical results for testing the basic hypotheses of the study through conducting a field study by distributing questionnaires to employees working for banks listed on the Iraqi stock exchange.

2.2 Population and sampling methods

The study is done on banks listed on the Iraq stock exchange. Each bank comprised of a general manager, chartered accountant, finance manager, and internal auditor drawn from 44 banks listed on the Iraqi Stock exchange. Thus, a total of 176 study participants were used for fulfilling the intended study objectives. Additionally, the 176 participants constituted a purposive sample needed to answer questions related to the impact of using XBRL on the quality of both published electronic accounting information and electronic accounting disclosure leading to the development of high quality electronic financial reports. Furthermore, several limitations and challenges were imposed by the Coronavirus pandemic. Consequently, the researcher had to adopt the purposive sampling method to determine the sample size. This is because purposive sampling allows the researcher to focus on important aspects without drawing severe attention to insignificant study aspects (Chu & Ke, 2017). As a result, a study sample of 176 respondents was deemed suitable for accomplishing the study's purpose. Thus, 176 questionnaires were distributed to employees working for 44 banks listed on the Iraqi Stock exchange.

2.3 Measurement tools

The data was collected using questionnaires. The questionnaire has close-ended questions that will be completed by employees working for 44 banks of joint-stock banks registered in the Iraqi Stock exchange. The questionnaire was prepared by the researcher by using the information on expert views obtained during the process of preparation. Such information is obtained from already available standard templates that are developed based on the concept of the impact of practising XBRL and its effect on the quality of accounting information (Blake & Huang, 2009; Taylor & Dzurainin, 2010). The templates are widely available for use and are found in a lot of academic books. However, changes were made by the researcher based on the objectives of the study with some changes. The questionnaires were distributed to the participants by hand. Moreover, it designed into two main parts. The first part contains general information on the form recipients, among these data (job title - educational qualification - years of experience) and the second part will contain some questions for covering hypotheses of the study. The questionnaire was structured as follows:

- Closed-ended questions: The respondents choose one of the five answers (quantitative methods).

2.4 Data analysis methods

Smart PLS3 was used to estimate the structural equation model (SEM) connecting the relationship between extensible business reporting language, quality of electronic financial reports and the efficiency of the Iraqi stock market. This is because SEM is feasible for assessing structural relationships between modelled variables (Chou & Bentler, 1995). SEM is considered to be a model estimation approach that uses factors analysis to determine the most suitable variable elements explaining a particular situation, and regression analysis to analyse structural relationships between the model variables (Savalei & Bentler, 2010). SEM simultaneously used two linear regression models to accomplish the purpose of this study, first one is for Quality of Electronic Financial Reports (QEFR) and the second one is for explaining changes in stock exchange efficiency (SEE) caused by changes in the independent variables.

The estimation procedure was based on the idea that stock market efficiency (SME) = F{QEFR; XBRL}

$$\text{QEFR} = \beta_1 + \beta_2 \text{XBRL} + \mu$$

$\text{SME} = \beta_1 + \beta_2 \text{QEFR} + \beta_3 \text{XBRL} + \mu$; where the parameters are denoted by β_1 and β_2 and the error term by μ . Such is important for testing the established hypotheses.

Using the established conceptual framework, the following hypotheses were formulated (see Figure 1.1);

- **H₁**: Extensible business reporting language has a significant positive impact on the quality of electronic financial reports.
- **H₂**: Extensible business reporting language has a significant positive impact on the efficiency of the Iraqi stock market.
- **H₃**: The quality of electronic financial reports has a significant positive impact on the efficiency of the Iraqi stock market.

- **H₄:** The quality of electronic financial reports mediates the relationship between extensible business reporting language and the efficiency of the Iraqi stock market.

2.5 Model fitness tests

The study applied model fitness tests to assess the model's capability to warrant reliable and valid results capable of suggesting authentic suggestions. This was accomplished using a normalised fit index, and using the Standardized Root Mean Squared Residual (SRMR). The reliability and validity of the model variables were examined using Cronbach's alpha, discriminant and construct reliability tests. The decision was to accept their reliability and validity when obtained values are at least 0.70, 0.80 and 0.80, respectively.

2.6 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 they were free to participate and opt out of the study (Esser & Vliegenthart, 2017). That is, they were informed that the study was voluntary and that their participation does not attract a form of benefit 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.

CHAPTER THREE

DATA ANALYSIS AND PRESENTATION

3.1 Introduction

The examines 168 collected responses from 44 financial institutions employees working for banks listed on the Iraqi Stock exchange. The bank or financial institutions employees were composed of 93 male employees and 75 female employees and 52.4% of the employees were between the age group of 26-30 years, 18.5% between 31-35 years, 16.1% between 36-40 years, and 13.1% 40 years and above. 64.9% of the employees had master's degrees, 29.2% had bachelor's degrees, and 6% had PhD degrees.

54 employees had 1-3 years of experience, 52 employees had 3-6 years of experience, 30 employees had 6-10 years of experience, and 32 employees had the least amount of experience of less than 1 year. The 168 financial institutions employees were composed of 80 Accountants, 43 Assistant Manager, 14 Accounting managers, 24 Finance managers, and 24 Other employees of various positions.

The study observed through Table 3.1 that financial information was being used at different periods. This provides indications of the importance and extent to which financial information is used by financial institutions listed on the stock exchange. As such, 36 employees used the financial information every month, 32 every quarter, 24 on a semi-annual basis and 76 on yearly basis.

Table 3.1: Demographic analysis of financial institutions employees

Variable	Description	Count	Percentage
Gender	Male	93	55.4
	Female	75	44.6
	Total	168	100
Age group	26-30 years	88	52.4
	31-35 years	31	18.5
	36-40 years	27	16.1
	41 years +	22	13.1
	Total	168	100
Educational qualification	BSc	49	29.2
	MSc	109	64.9
	PhD	10	6.0
	Total	168	100
Years of experience	Less than 1 year	32	19.0
	1-3 years	54	32.1
	3-6 years	52	31.0
	6-10 years	30	17.9
	Total	168	100
Job title	Accountant	80	47.6
	Assistant manager	43	25.6
	Accounting manager	14	8.3
	Finance manager	7	4.2
	Other	24	14.3
	Total	168	100
Use of financial reports	Monthly	36	21.4
	Quarterly	32	19.0
	Semi-annually	24	14.3
	Yearly	76	45.2
	Total	168	100

3.2 Factor analysis

Factor analysis was applied as part of the steps to ascertain which variable elements best explain the impact of extensible business reporting language on the quality of electronic financial reports and the efficiency of the Iraqi stock market. The variable extensible business reporting language initially had 15 variable elements which were later reduced to 9 variable elements following the application of factor analysis.

Table 3.2: Factor analysis results

	XBLR	SME	QEFR
QEFR1			0.794
QEFR 11			0.820
QEFR 13			0.803
QEFR 14			0.772
SME 9		0.833	
SME 10		0.844	
SME 12		0.809	
SME 13		0.759	
XBLR 1	0.772		
XBLR 2	0.730		
XBLR 3	0.726		
XBLR 4	0.701		
XBLR 8	0.759		
XBLR 9	0.791		
XBLR 11	0.753		
XBLR 12	0.753		
XBLR 13	0.762		

XBLR = extensible business reporting language, QEFR = quality of electronic financial reports; SEE = stock market efficiency

The variable quality of electronic financial reports had an initial number of 12 which were later reduced to 4 after factor analysis was applied. The variable the efficiency of the Iraqi stock market's variable elements were subsequently reduced to 4 after factor analysis (see Table 4.2). The computed variable elements had factor loadings that were above the standard 0.70 needed to

warrant a variable element as having a strong influence on a major variable (Peterson, 2000).

Construct reliability and validity were subsequently applied following the estimation of the variables' factor loadings. The Cronbach's alpha values were noted to be above 0.80 indicated that the variables have excellent internal consistencies. rho_A values of 0.903, 0.832 and 0.810 were obtained and thus, indicating that there was construct validity. Furthermore, composite validity was considered to be valid and inexistent as noted by values above 0.800.

Table 3.3: Construct reliability and validity tests

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
XBRL	0.903	0.903	0.902	0.563
SME	0.827	0.832	0.885	0.659
QEFR	0.809	0.810	0.875	0.636

The provided Fornell-Larcker results show that the diagonal values are greater than column and row values (Ab Hamid, Sami & Sidek, 2017). This proved that all the variables had the acceptable discriminant validity required to warrant the results as valid to explain if the quality of electronic financial reports significantly mediates the relationship between extensible business reporting language and the efficiency of the Iraqi stock market.

Table 3.4: Fornell-Larcker criterion

	XBRL	SEE	QEFR
XBRL	0.790		
SEE	0.699	0.8541	
QEFR	0.591	0.540	0.716

3.3 Model fit

Table 3.5. shows that the SRMR values which were below 0.8 while both the d_ULS and d_G values were insignificant at 0.05. This implies that the estimated model did not have discrepancies whatsoever. The Chi-square values were significant and the NFI values were above 0.70 and hence, this shows that the model was fit for fulfilling this study's intended purpose of explaining the impact of practising Extensible business reporting language on the quality of electronic financial reports to promote the efficiency of the Iraqi stock market.

Table 3.5: Model fit

	Saturated Model	Estimated Model
SRMR	0.073	0.073
d_ULS	0.822	0.822
d_G	0.372	0.372
Chi-Square	352.236	352.236
NFI	0.782	0.782

3.4 Path analysis

Figure 3.1 denotes that extensible business reporting language has a highly significant positive effect on the quality of electronic financial reports of 0.700. Such entails that improvements in XBRL will result in improvements in the quality of electronic financial reports by 0.700 units. Such confirms similar findings made by Janvrin et al. (2011) which depicted that XBRL encourages the use of similar and reputable accounting and financial reporting standards that promote transparency, reliability and enhance the quality of decisions made by users of financial statements. Thus, hypothesis 1 was accepted.

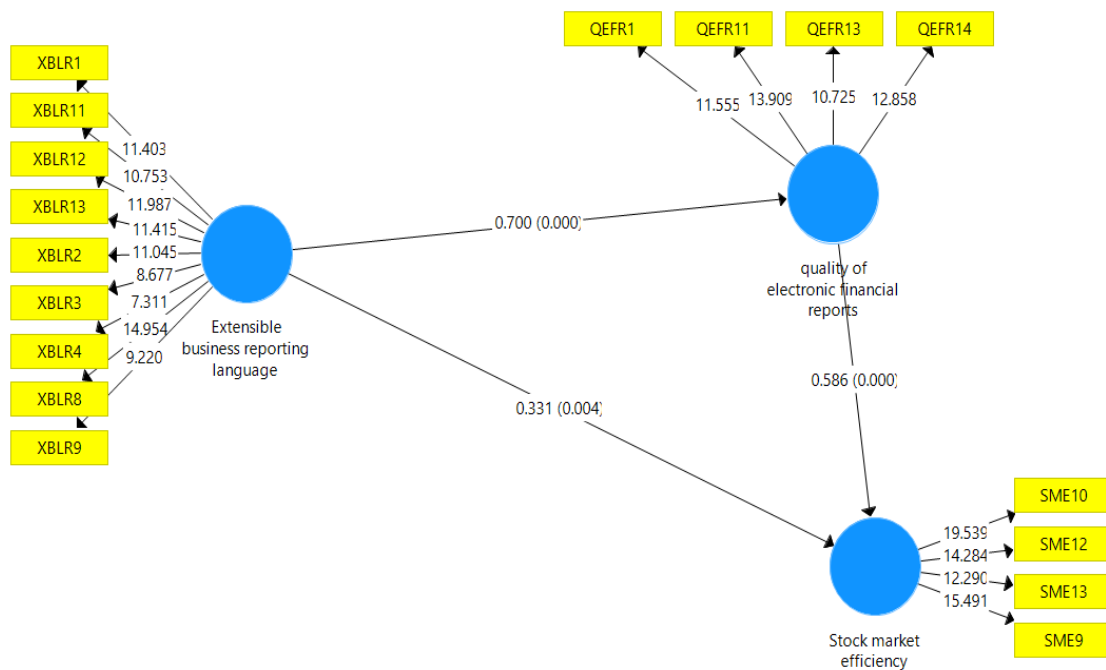


Figure 3.1: A path analysis

XBRL was noted to be significantly and positively influencing stock exchange efficiency by 0.331. This results in the acceptance of Hypothesis 2 and leads to inferences being made that XBRL has a significant positive effect on stock exchange efficiency. Such findings are in support of similar findings made by Li et al. (2012) showing that improvements in stock exchange efficiency are inevitable when sound reporting practices are enforced.

Figure 3.1 also shows that improvements in XBRL have a positive effect on stock exchange efficiency by 0.586 units. The relationship was significant at 5% and this possibly entails that enhancements in comparability, transparency and ease of reporting are essential for enhancing stock exchange efficiency. Such confirms with findings made by Jiu-jin et al. (2013) and Janvrin et al. (2011) which outlined that stock exchanges exhibit a high level of efficiency when sound and acceptable reporting standards are instituted to enhance good corporate governance and ethical practices. This led to the acceptance of hypothesis 3 (see table 3.6 for a summary of the obtained hypotheses results).

Table 3.6: Summary of the hypotheses results

Null hypothesis	Test method	Results	Decision
Extensible business reporting language has a significant positive impact on the quality of electronic financial reports	SEM	0.00	Accept
Extensible business reporting language has a significant positive impact on the efficiency of the Iraqi stock market	SEM	0.00	Accept
The quality of electronic financial reports has a significant positive impact on the quality of electronic financial reports	SEM	0.00	Accept
The quality of electronic financial reports mediates the relationship between extensible business reporting language and the quality of electronic financial reports	SEM	0.00	Accept

3.5 Indirect effects

The fourth hypothesis was formulated with an intention of testing if the quality of electronic financial reports significantly mediates the relationship between extensible business reporting language and the quality of electronic financial reports. The study findings showed that if the quality of electronic financial reports significantly mediates the relationship between extensible business reporting language and the efficiency of the Iraqi stock market in a positive manner of 0.410.

Table 3.7: Indirect effects

Hypothesis	Coeff.	T Stat	P Values
XBRL -> QEFR -> SEE	0.410	4.383	0.000

XBRL = extensible business reporting language, QEFR = quality of electronic financial reports; SEE = stock exchange efficiency

CHAPTER FOUR

CONCLUSIONS, RECOMMENDATIONS AND SUGGESTIONS FOR FUTURE STUDIES

4.1 Conclusions

The study was aimed at examining if the quality of electronic financial reports significantly mediates the relationship between extensible business reporting language and the quality of electronic financial reports. This was subsequently, followed by the formulation of four hypotheses which were used to answer the established research questions. Such was accomplished by applying an SEM approach.

The established findings proved that utilising extensible business reporting language has highly significant positive effects on the quality of electronic financial reports. Such findings were established to be in alignment with related previous studies. Possible reasons depict that XBRL encourages the use of similar and reputable accounting and financial reporting standards that promote transparency, reliability and enhance the quality of decisions made by users of financial statements.

The application and significance of XBRL vary with the context under which it is applied and is influenced by the nature of governing regulations. Such is true with the financial sector in which strict financial regulations are enforced and expected to be observed. Nevertheless, the findings of this study depicted that XBRL has insignificant positive effects on stock exchange efficiency. Such findings indicate that improvements in stock exchange efficiency are inevitable when sound reporting practices are enforced. In addition, changes in stock market efficiency could have been caused by other firm-specific variables and

governing regulatory systems instituted by the government through the central bank. This possibly entails that enhancements in comparability, transparency and ease of reporting are essential for enhancing stock exchange efficiency and that stock exchanges exhibit a high level of efficiency when sound and acceptable reporting standards are instituted to enhance good corporate governance and ethical practices.

The study also had an intention of testing if the quality of electronic financial reports significantly mediates the relationship between extensible business reporting language and the quality of electronic financial reports. The study findings showed that if the quality of electronic financial reports does not significantly mediate the relationship between extensible business reporting language and the quality of electronic financial reports. Such entails that they are essential for improving efficiency in recording and processing financial transactions. Such can also be vital for effectively communicating the established findings. The quality of electronic financial reports can also be used to limit fraud and the occurrence of errors. However, this can prove to be expensive and reduce profitability in the short run. Hence, this possibly explains the insignificant improvements in stock exchange efficiency. Such can also be linked to the training of employees to use the newly implemented quality of electronic financial reports.

The findings do support related insights established by previous studies regarding the idea that the quality of electronic financial reports mediates the relationship between extensible business reporting language and the efficiency of the Iraqi stock market. Such reiterates the need and importance of disclosing or reporting high quality, reliable and valid financial information. Thus, the quality of the information provided by financial institutions is regarded as vital for making critical rational decisions that enhance the efficiency of the stock markets. Investors and other stakeholders can engage in irrational or counter product behaviour such as panic selling or buying as a form of incorrect

responses to incorrect information. This affects stock prices and the stability of the stock market itself and hence, this reiterates the importance of using promoting the use of extensible business reporting language by financial institutions listed on the stock exchange.

The importance or contributions of XBRL lies in the notion that it helps reduce the cost of producing and disseminating financial information, and reduces data entry errors. Besides, XBRL can provide financial reports in a variety of formats and formats to meet the different needs of users. Moreover, XBRL helps solve problems that hinder the comparability of electronic financial reports and its capabilities can integrate financial and non-financial data.

Meanwhile, it is essential to establish at this juncture that providing the ability to uniformly classify financial statements, will allow financial analysts to improve the comparability of accounting information vertically and horizontally. XBRL enhances the quality of decisions about the overall performance of the organization via growth, effectiveness, productivity etc is made through accounting information. Furthermore, high-quality financial reporting enhance financial institution's ability to solve problems resulting from the different names of some accounting elements, policies used, or the levels of grouping accounts will improve the comparability feature.

The study has addressed important issues related to high-quality financial reporting methods and results that influence stock market efficiency. Such is vital for developing conceptual frameworks needed to enhance transparency and good disclosure among financial institutions. This also includes the provision of effective practical solutions to improve financial sector performance. Hence, the study has several theoretical and practical implications.

4.2 Recommendations

Using the established findings it is imperative to offer the following recommendations;

- Financial institutions regulatory authority must encourage financial institutions to use XBRL as a way of enhancing financial information disclosure, reliability and transparency.
- Good corporate governance principles regarding “disclosure and transparency” must be enforced at all costs by stock exchange officials. Such should strongly include related efforts being part of listing requirements and penalising offenders to further enhance the effective functioning of the stock market.
- Financial institutions must find innovative ways of using XBRL to reduce costs associated with obtaining and analysing information and addressing the problem of differing and conflicting financial statement formats and formulas.
- Financial institutions must strategically use other business methods and practices to improve the quality of the information disclosed and support the continuous flow of information.

4.3 Suggestions for future studies

It was observed during the study that different financial institutions have relatively different approaches towards XBRL. Hence, cross-sectional examinations of various financial institutions are needed. Such will foster comparative examinations between financial institutions and provide distinct and firm-specific insights regarding the roles and importance of XBRL on firms listed on the stock market.

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LIST OF APPENDICES

Appendix 1: Research questionnaire

The impact of practising Extensible business reporting language on quality of electronic financial reports to promote the efficiency of the Iraqi stock market.

Re: Participant Information Sheet and Informed Consent Form

Dear Participant,

The attached questionnaire is part of a research study that I am carrying out to understand the impact of using the XBRL language as an electronic tool to prepare and publish financial reports on increasing the quality of electronic financial reports, which is one of the main mechanisms to improve the efficiency of the stock exchange. The data collected with this questionnaire will be used to determine how the impact of practising Extensible business reporting language on the efficiency of the Iraqi stock exchange. By filling in the attached questionnaire you agree to participate in this study.

Please note that your participation in the study is voluntary. Your identity will not be revealed in any case to third parties. The data collected during this study will be used for academic purposes only and may be presented at national/international academic meetings and/ or publications. You may quit participating in this study at any time by contacting us. If you opt-out of the study, your data will be deleted from our database and will not be included in any further steps of the study. In case, you have any questions or concerns, please do not be hesitate to contact me using the following information:

Thank you for your time.

Yours faithfully,

Zana Abdulrahman Hakeem

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Section I

Personal details

Tick as you see appropriate (√).

Tick as you see appropriate (√).

1- **Age:** 20-25 25-30 30-35 35-40
 40-45 more than 45

2- **Gender:** Male Female

3- **Education Level:** Below Diploma Diploma B.Sc.
 M.Sc. PhD

4- **Years of Experience:**

Less than one year 1-3 years 3-6 years 6-10 years
 more than 10 years

5- **Job Title**

General manager Chartered accountant
 Finance Manager Internal auditors

6- **Using financial reports**

Monthly Quarterly Semi-annually Yearly

Section II: Informative section

This section seeks to acquire details about your perception towards how important it is to use the capabilities of the XBRL language as a tool for preparing and publishing electronic financial reports on other tools? Kindly provide your answers based on rating of 1-5 which corresponds to the following:

Agree	Sometimes agree	disagree
1	2	3

Tick as you see Tick as you see

	The importance of using the XBRL	1	2	3
7	XBRL labels provide detailed information on each item, whether it is included in the lists or in the accompanying notes.			
8	The XBRL language search engine makes it easy to access detailed information on any topic or item in the financial statements.			
9	XBRL can enter data and encode it once to be ready for electronic extraction to prepare all kinds of reports.			
10	XBRL helps reduce the cost of producing and disseminating financial information, and reduces data entry errors.			
11	XBRL can provide financial reports in a variety of formats and formats to meet the different needs of users.			
12	XBRL solves the different problem formats and different electronic financial statements formats			
13	XBRL allows changing the language of electronic financial reports.			
14	XBRL helps solve problems that hinder the comparability of electronic financial reports			
15	The XBRL language capabilities can integrate financial and non-financial data.			
16	XBRL helps to analyze data and reduces the time required for analysis.			
17	XBRL facilitates instant financial reporting.			
18	XBRL provides information to investors at the same time, eliminating unequal opportunities between them			
19	XBRL improves the quality of the information disclosed, and supports the continuous flow of information.			
20	The XBRL capabilities support two keys of corporate governance principles: "disclosure and transparency".			
21	The use of international financial reporting standards "IFRS" with the presentation of electronic financial statements in the language of XBRL provides consolidated financial reports in terms of form and content that are quality and their contents can be compared internationally.			

This part seeks to acquire details about your perception towards the Factors that help increase the quality of electronic financial reports under the use of the XBRL language. Kindly provide your answers based on rating of 1-5 which corresponds to the following

I completely disagree	I disagree	neutral	I agree	I completely agree
1	2	3	4	5

Tick as you see appropriate (√).

	Quality of electronic financial reports	1	2	3	4	5
22	Providing detailed information on the different items of the financial statements to users will help them in making effective decisions, which will improve the evaluation of accounting information.					
23	Automatic updating of information and providing of accounting information appropriate place and time will improve the quality of the accounting information published electronically					
24	Providing accounting information that reflects the events impartially and enhancing the ability to validate this accounting information, will support the objectivity feature.					
25	Providing the ability to uniformly classify financial statements, will allow financial analysts to improve the comparability of accounting information vertically and horizontally.					
26	Decisions about overall performance of the organization via growth, effectiveness, productivity etc is made through accounting information.					
27	Solving problems resulting from the different names of some accounting elements, policies used, or the levels of grouping accounts, will improve the comparability feature.					
28	Providing electronic financial reports in a timely manner on the websites of business organizations will help users rely on them to make their decisions on the basis of sound information.					
29	Utilizing the capabilities of the Internet to publish financial reports horizontally for business organizations, by providing internal links to link the components of financial reports horizontally, vertically and external links to link the organization's website and other websites will help users to make decisions properly, and will improve the quality of electronic accounting disclosure.					
30	Providing an advanced search option that helps users search for information related to a specific item will improve the quality of electronic accounting disclosure.					
31	Reducing costs associated with obtaining and analysing information, and addressing the problem of differing and conflicting financial statement formats and formulas.					
32	Assist non-professional users in obtaining the information related to the financial statements and combining it with the information of the disclosures supplemented when making the decision.					
33	Supporting accurate and efficient translation of financial reporting elements in more than one language will increase the benefit of electronic financial reports posted on organizations' websites, and attract international investors.					

This part seeks to acquire details about your perception towards the Mechanisms that help improve the efficiency of the Iraqi stock market, which are available when using the capabilities of the "XBRL" language. Kindly provide your answers based on rating of 1-5 which corresponds to the following

I completely disagree	I disagree	neutral	I agree	I completely agree
1	2	3	4	5

Tick as you see appropriate
(√).

	Stock exchange efficiency	1	2	3	4	5
34	Increasing the quality of electronic financial reporting.					
35	Supporting Corporate Governance Principles					
36	Use IFRS					
37	Improved comparability of information					
38	Improving the level of transparency in the stock market					
39	Reducing Information Asymmetry Level					

..... Thank you for your time ...

ETHICAL APPROVAL



BİLİMSEL ARAŞTIRMALAR ETİK KURULU

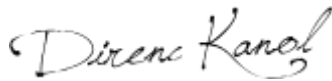
17.12.2020

Dear Zana Abdulrahman Hakeem

Your application titled **“Impact of Practicing Extensible Business Reporting Language on Quality of Electronic Financial Reports to Promote the Efficiency of the Iraqi Stock Market”** with the application number YDÜ/SB/2020/851 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



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