NEAR EAST UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
DEPARTMENT OF BANKING AND FINANCE
BANKING AND ACCOUNTING PROGRAM

IS FAIR VALUE ACCOUNTING INFORMATION RELEVANT AND RELIABLE? EVIDENCE FROM CAPITAL AND DEBT MARKET INSTITUTIONS IN JORDAN

REBIN BILAL MOHAMMED

MASTER'S THESIS

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THESIS SUPERVISOR
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ACCEPTANCE

We as the jury members certify "Is Fair Value Accounting Information Relevant and Reliable? Evidence from Capital and Debt Market Institutions In**" prepared by Rebin Bilal Mohammed defended on … January 2020 has been found satisfactory for the award of degree of Master.**

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I **Rebin Bilal Mohammed**, hereby declare that this dissertation entitled " Is Fair Value Accounting Information Relevant and Reliable? Evidence from Capital and Debt Market Institutions In Jordan" has been prepared myself under the guidance and supervision of **"Assoc. Prof. Dr. Turgut Türsoy."** 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 through out the undertaking of this study.

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ABSTACT

IS FAIR VALUE ACCOUNTING INFORMATION RELEVANT AND RELIABLE? EVIDENCE FROM CAPITAL AND DEBT MARKET INSTITUTIONS IN JORDAN

The main emphasis of the study was to examine the relevancy and informativeness of fair value accounting method by drawing evidence from capital markets. The study also placed focus on establishing shortfalls associated with the use of fair value accounting method and how they impact the relevancy and informativeness of fair value accounting method. Secondary data from the year 2009 to 2018 collected from 9 companies composing of 5 capital market firms and 4 debt market firms was used to estimate a fixed effect regression model. Based on the redundant fixed effects test, it was noted that the fixed effect regression model was considered to be appropriate for the purposes of this study. The established results showed that level 1 fair value assets, firm size and net income were positively related with the stock prices of the capital and debt institutions. Level 2 fair value assets and fair value liabilities were noted to be negatively related to the stock prices of the capital and debt institutions. Recommendations were made that there is

Keywords: Fair value accounting, fair value assets, fair value liabilities, fairness, fixed effect regression model, net income,

ŐZ

IS FAIR VALUE ACCOUNTING INFORMATION RELEVANT AND RELIABLE? EVIDENCE FROM CAPITAL AND DEBT MARKET INSTITUTIONS IN JORDAN

Çalışmanın ana vurgusu sermaye piyasalarından kanıtlar alarak gerçeğe uygun değer muhasebesi yönteminin uygunluğunu ve bilgilendirilebilirliğini incelemekti. Çalışma ayrıca, gerçeğe uygun değer muhasebesi yönteminin kullanımı ve gerçeğe uygun değer muhasebesi yönteminin uygunluğu ve bilgilendirilebilirliği üzerindeki etkileriyle ilgili eksiklikler tespit etmeye odaklanmıştır. Sabit sermaye regresyon modelini tahmin etmek için 5 sermaye piyasası firması ve 4 borç piyasası firmasından oluşan 9 şirketten toplanan 2009-2018 yılları arasındaki ikincil veriler kullanılmıştır. Gereksiz sabit etkiler testine dayanarak, sabit etki regresyon modelinin bu çalışmanın amaçları için uygun olduğu düşünülmüştür. Tespit edilen sonuçlar, 1. seviye gerçeğe uygun değer varlıklarının, firma büyüklüğünün ve net gelirin sermaye ve borç kuruluşlarının hisse senedi fiyatları ile pozitif ilişkili olduğunu göstermiştir. Seviye 2 gerçeğe uygun değer varlıklarının ve gerçeğe uygun değer yükümlülüklerinin sermaye ve borç kuruluşlarının hisse senedi fiyatları ile negatif ilişkili olduğu kaydedilmiştir. Orada önerilerde bulunuldu

Anahtar Kelimeler: Gerçeğe uygun değer muhasebesi, gerçeğe uygun değer varlıkları, gerçeğe uygun değer yükümlülükleri, adalet, sabit etki regresyon modeli, net gelir, alaka düzeyi, büyüklük.

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ABBREVIATIONS

ASC	Accounting Standard Codification
DR	Debt Ratio
EPS	Earnings Per Share
FEM	Fixed Effect Model
FVA	Fair Value Assets
IASB	International Accounting Standards Board
IFRS	International Financial Reporting Standard
IFRS	Statement of Financial Accounting Standards
MPS	Market Price Per Share
REM	Random Effect Model
SP	Stock Price
TA	Total Assets
TBQ	Tobin's Q

INTRODUCTION

Background of the study

There are various methods that are employed to determine the value of assets and liabilities. One of the key approaches that is used to determine the value of assets and liabilities is the fair value approach. The use of the fair value approach is justified by reasons which point out that its use renders accurate valuation of both assets and liabilities of an institution (Penman, 2007).

Ideas provided by Laux and Leuz (2009) also reckons the same sentiments and showed that the use of FVA is essential for providing a true indication of the income status of a business. There are so many benefits that can be obtained from the use of FVA and they all differ in terms of the context in which they are being looked at (Nelson, 1996). This is notably true with regards to capital market activities which are surrounded by a lot of financial activities and different accounting standards (Landsman, 2007).

One of the key issues that is experienced with the use of accounting valuation methods relates to the need to make decisions based on established outcomes. For instance, a study by Benston (2008) expressed that the use of FVA offers investors with an accurate insight of the actual value of the organisations. As a result, investors are considered to make rational decisions based on the information provided through the use of fair value accounting.

But this is one of the most debatable area and studies often disagree on the use of the FVA method in terms of its relevancy and informativeness (Benston, 2008; Landsman, 2007; Penman, 2007; Song, Thomas & Yi, 2010). This study seeks to examine the relevancy and informativeness of the FVA method by drawing evidence from capital markets.

Research problem

FVA often attracts huge positive remarks among academic scholars as well as professionals. For instance, Landsman (2017) contends that the use of provides accurate valuation of business liabilities and assets. Which is essential because it shows how much the investors are liable to pay as well as receive from the sale of the assets. The use of value accounting is also applauded for dealing with the problem of the manipulation of financial statements (Power, 2010).

However, all these positive characteristics do not always reliability and relevancy of the provided information. This is because measurement errors are bound to occur at any point in time and this reduces the level of informativeness of FVA method (Barth, Hodder & Stubben, 2008). In addition, the source of the computed information can sometimes reduce the relevancy and informativeness of FVA methods (Veron, 2008).

As a result, both the benefits and shortfalls of using FVA can either cause an improvement or deterioration in relevancy and informativeness of FVA method. Moreover, there exist other situational events and circumstances which can compromise the relevancy and informativeness of FVA. But the problem is that this issue still remains to be explored especially in connection with capital market research. This study therefore seeks to examine the relevancy and informativeness of FVA by drawing evidence from capital markets.

Aims of the study

The main aim of this study is to examine the relevancy and informativeness of FVA methods by drawing evidence from capital and debt markets. The study also seeks to establish shortfalls associated with the use of FVA methods and how they impact the relevancy and informativeness of FVA method. This also includes finding solutions as to the possible ways which can be used to enhance the relevancy and informativeness of FVA.

Significance of the study

The study is of huge importance to investors as it provides details on the importance of using FVA methods and how it impacts their investment decisions. Secondly, it seeks to highlight ways through which other institutions and governmental bodies engaged in capital market activities can benefit from the use of FVA. The study also seeks to identify empirical gaps that exist in the study of the use of FVA.

CHAPTER 1

LITERATURE REVIEW

1.1. Definition and measurement of fair value

Fair value refers to the value of assets that one can get after it has been disposed or transfer a liability at market price at the measurement date (Financial Accounting Standard Board, thereafter FASB, 2006). In other words, economically, independent and knowledgeable parties will engage in transaction by setting an exit price through what is known as fair value (Paoloni, Paolucci & Menicucci, 2017).

There are a series of ways that are used to determine the value of an asset or liability and the acceptable method uses what is known as the three-tier hierarchy (Jiang, Wang & Xie, 2015). Fair value involves categorising assets and liabilities into the following levels;

- **Level 1 assets and liabilities:** These are assets and liabilities whose prices are quoted at in markets that corporations can obtain at a given period of time.
- **Level 2 assets and liabilities:** The value or price of assets and liabilities falling into this category are those that are not directly or indirectly considered as part of level 1 assets and liabilities. Examples include inputs, credit spreads, yield curves and interest rate whose value is determined using market data (Jiang, Wang & Xie, 2015)
- **Level 3 assets and liabilities:** Any assets and liabilities that fall under this category are established when no observable market information is not available (Ashbaugh-Skaife et al., 2006).

In addition, Levels 3 assets and liabilities are associated with the use of unobservable data and rely on a firm's knowledge about the underlying assumptions that are utilised to determine the price of an asset or liabilities by market participants.

Irrespective of whether a firm has used Level 1, Level 2 or Level 3, the basic idea involves surrounding the determination of the Fair Value of both assets and liabilities is that it involves the use of market-based measures.

1.2. Evolution of fair value in accounting theory and financial reporting regimes

Fair value is a concept that developed over time and its establishment dated from the early 40 but was not formalised until the year (Paoloni, Paolucci & Menicucci, 2017). The development of fair value measurement was in three different phases and these phases are discussed as follows;

1.2.1 Early use of fair value in accounting theory and financial reporting regimes

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

The inception of the idea fair value follows major developments that were necessitated by the establishment of the 1844 Joint Stock Companies Act (Wu, Thibodeau & Couch, 2016). The Act recommended that a company's assets be measured at their current prices as noted by the balance sheet date. That is, the extent to which a business is able to sustain its operations and meet daily obligations (Magnan, Menini & Parbonetti. 2015).

This was followed by legal improvements that were meant to reinforce the effectiveness of fair value by instituting ways of recording the value of inventory at its prevailing balance sheet value. But the major challenge was that long-lived assets were not used as a bench mark and the preferable benchmark was operating assets. Georgiou and Jack (2011) contends that this led to the

widespread development and use of fair value in financial reporting with terms such as "fair value" and "fair return" being the norm.

On the other hand, the use of historical-cost–based was necessitated by observations made which showed that using fair value can result in a significant decline in the value of assets (Lee, 2008). As a result, propositions were made to use historical accounting methods (Scott, 2011).

Improvements were also made which led to the development of other accounting measures such as deprival value which were based on ideas developed from FVA (Chung et al., 2017). These changes considered that possible changes in liabilities and assets be included as part of changes in corporate income (Paoloni, Paolucci & Menicucci, 2017). However, more ideas were proposed to suggest that fair value be used as the best measure of the value of a firm's liabilities and assets. For instance, Scott (2011) contends that fair value gives a good indicator of the market value of a firm's liabilities and assets.

Wyatt (1991) also proposed that fair value is desirable becomes in includes changes in the market value of a firm's liabilities and assets as part of its corporate income. The major challenge that still exists is that fair value may not be in a position to offer indication as whether the price is the exit or entry price

1.2.2 Development of fair value in accounting regulation

The establishment of the Trueblood Committee Report in October 1973 necessitated major regulatory developments in the use of FVA. This was mainly as a result of increased efforts to deal with the rising problems of corporate scandals (Georgiou & Jack, 2011). These developments were also part of measures that were introduced to deal with accounting deficiencies that were observed with previous accounting frameworks.

Amendments were thus proposed with the initial ones focusing on establishing proper financial tools of setting and attaining good "Objectives of Financial Statements" (Hitz, 2007).

Meanwhile, suggested improvements were targeted at using predetermined conceptual frameworks such as the one established by the FASB. These frameworks encompassed the use of discounted cash flows, current replacement cost, exit values and historical cost for valuation purposes (Georgiou &Jack, 2011). Subsequent improvements later included aspects such

as lease accounting and revenue recognition as well as the determination of market values of fixed assets. But problems of lack of reliability, relevance, and comparability led to the continued use of HCA and the withdrawal SFAS No. 33 (Cole, 1992).

According to Hitz (2007), continued shortfall associated with the use of the HCA method resulted in a shift towards looking and incorporating balance sheet methods and items. But other researchers such as Ahmed et al. (2006), were against the use of such methods citing that they lack in formativeness. As a result, there is still contrasting arguments between the desirability of FVA and HCA.

Meanwhile, major developments that took place in the USA such as the Savings and Loan Crisis which took place in the early 1980s resulted in increased use and preference of FVA (White, 2003). This led to the establishment of quiet a number of problems associated with the use of HCA and the notable argument was that HCA resulted in managers making huge trading gains (White, 2003). As a result, this led to a major development in the use of FVA on a much broader regulatory level (Hitz, 2007)

1.3 Theoretical framework

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

The existence of conflicts between stakeholders and managers is believed to cause doubts as to whether managers will be able to manage the business in the best way possible (Magnan, Menini & Parbonetti. 2015). That is, managers are tasked with a responsibility of managing the organisation in a way that adds value to the shareholders. But the problem of self-interests can cause managers

to divert their attention towards engaging in activities that do not maximise shareholder value.

As a result, the principle agent theory implies that financial information needs to be disclosed in a way that allows owners of the business and other shareholders to make rational decisions. The disclosure of information has to be done in a manner that that is understandable, comparable, reliable and relevant (Wu, Thibodeau & Couch, 2016). This brings us to the idea of FVA which is composed of these four different attributes. Thus, by making use of FVA, problems posed by the principle-agent relationship can be eliminated if not, then eased.

The second issue that can be observed is the moral hazard problem which may cause owners of the business to lose their investments. The notion of moral hazard is based on a relatively similar idea that managers will seek to maximise their self-interests and they can engage in risks which business owners will have to be liable for (Ashbaugh-Skaife et al., 2006).

This can affect a firm's cash flows which stand a risk of falling below the required levels. As a result, monitoring and checking of managers' activities, the business operational activities and condition becomes a necessity. This therefore calls for methods which can be used to provide an accurate description of what is happening with the business. Such information can easily be provided through the use of FVA.

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

But the challenge is that risk distribution between stockholders and debtholders is relatively different. For instance, stockholders are more likely to absorb a relatively high level of risks as compared to debtholders. This is because stockholders are more inclined to be associated with high-risky projects as opposed to debtholders whose funds are tied to some relatively low risk projects.

Debtholders have a claim on projects undertaken and the extent to which they can claim gains made is limited by the level of the firm's performance (Jiang, Wang & Xie, 2015).

Meaning that if the business makes a loss, the debtholders may lose their claims. This is in contrast to shareholders who are bound to collect or receive all the gains made from a project. Stockholders are also in a position to lose a part if not all of their investments when the project goes wrong. These situations are characterised by a transfer of wealth from debtholders to stockholders and lack of information can cause high risk bearing.

It is therefore important to note that the above-mentioned issues need to be deal with and one of the easiest ways of doing so is to provide more information. This can be supported by ideas given by Chung et al. (2017) which showed that the problem of information asymmetry encountered through agency conflicts can be addressed by providing accounting information (Paoloni, Paolucci & Menicucci, 2017).

This will also help towards improving the efficiency of debt contracting as more information is availed about the present condition of the business, its ability to meet obligations as well as sustain operations. But the major concern is how does FVA affect the quality of decisions made, and to what extent is it relevant and reliable in describing the fair value of a firm. This study therefore seeks to examine these issues on a broader level and

This study therefore aims to provide details related to questions surrounding the examination of the relative decision-usefulness of FVA in providing information on how it affects stock prices which are considered to be a reliable indicator of a company's value (Jiang, Wang & Xie, 2015). This study also seeks to examine how related information on stock price (SP) is influenced by the debt ratio (DR), market price per share (MPS), earnings per share (EPS), Tobin Q (LTBQ) and firm's size as denoted by total assets (LTA) affect the value of capital and debt market institutions in Jordan.

Considerations were made based on the need to ascertain the importance of FVA with respect to its relevancy. For instance, Linsmeier (2010) considers that FVA is beneficial because it provides a good description of a business' true value. As such, FVA can be said to be relevant in decision making as it also

offers insights about the firms' financial position. This is because it records the value of liabilities and assets at their market value. Hence, FVA can be said to be a vital aspect or tool in decision making.

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

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

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

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

- Firstly, one of the key issues that affect the use of FVA is that it is considered to exacerbate the problem of procyclicality, volatility in financial reporting and to be too counter-conservatism (Penman, 2007). Plantin et al. (2007) regards that FVA1, FVA2 and FVA3 are bound to be manipulated and subject to estimation errors .

- Secondly, considering debtholders' asymmetric payoff function, they care more about the lower bound of firm value. Under historical cost accounting, assets are written down when their market value goes below the book value, but are not written up when the market value reverses (i.e., accounting conservatism). Such asymmetric write-offs better protect debtholders by biasing firm value more towards its lower bound. On the contrary, fair value allows for both asset write-down and write-up. As a result, the symmetric asset write-off renders fair value less protective to debtholders.

- On the other hand, the use of FVA affects a number of aspects and the first aspect has to do with the value of liabilities and assets. Allen and Carletti (2008) outlined that the values of liabilities and assets on a firm's balance sheet are subject to change in response to short term market changes. Such changes do not often comprise part of the liabilities and assets long term value.

- The other thing to consider is that the use of FVA may pose challenges during period of economic instability. Such was the case with the financial crisis as contagion effects spread to other sectors and (Allan & Carletti, 2008). The issue is that markets can be hindered or restricted when they are illiquid and yet too much volatility imposes effects on capital and debt markets. This can cause an inaccurate description of the value of the business and thus give decision makers an inaccurate picture of the business and the best possible strategy to adopt. Stock prices will on the other hand move in responses to such changes (Jain & Biswal, 2016). Hence, it is important at this stage to establish that FVA poses huge effects on the value of the firm and the extent to which it does so is reflected in stock prices.

Using details provided in this section, it is therefore important to note that FVA can sometimes fail to provide meaning details to both debtholders and stockholders. This affects stock prices and much of these effects are related to changes in the size of the capital and debt markets, DR, MPS, EPS, and TBQ. But this needs further examination and this is what this study seeks to accomplish.

1.4 Theoretical analysis on decision usefulness of FVA

The FASB's Conceptual Framework contends that good investment and/or financial decisions can be made based on the premise of FASB 1978, para. 34. That is, the importance of accounting methods such as FVA can be ascertained by looking at their level of understandability, comparability, reliability and relevance (Emerson et al., 2010). This section therefore looks at a much broader view of these aspects as follows;

1.4.1 Relevance

The FASB (1980) considers relevance as the extent to which information is able to address the underlying issues or concerns thereby allowing decision makers to make well informed decisions about past, present, and future events. This is one of the notable characteristics of accounting information and (Emerson et al., 2010) contends that good accounting information is one that is relevant at all the times and any circumstances.

The importance of FVA is attached to ideas which consider it to be relevant as it is able to provide important details about the market's assessment of current economic conditions (Penman, 2007). This is important as it assists investors in making well informed decisions as they are mainly focused on value and not costs. Thus, for this reason, Shleifer (2000) considers HCA to be irrelevant in most cases as opposed to FVA which offers more and current information about a firm's operational capacity, position and condition.

The notion of relevance of FVA is based on the premise of market efficiency on which markets are considered to offer all the required information and to be in a competitive race for market share (Barberis & Thaler, 2003). But the problem of transaction costs can limit the extent to which markets are considered to be efficient. Laux and Leuz (2009) contend that investor irrationality and behavioural biases are also more likely to affect market prices and thereby rendering markets as inefficient. At this stage, prices will not be conforming to market fundamentals and the possibility of them doing so does not render HCA as the best. Further ideas provided by Laux and Leuz also showed that lack of current information is also another issues which restricts the informativeness nature of HCA and can thus be said to be capable of obscuring problems. Thus, the use of market values provided by the use of FVA discloses more information

However, FVA is sometimes effective is certain market conditions and ineffective as well. For instance, Prochazka (2011) highlighted that FVA is ineffective when markets are illiquid and prices are falling significantly. This can be noted by arguments given by King (2009), which showed that the financial crisis was also as a resulted of problems posed by the use of FVA and this is mainly because it distorts prices.

Prochazka (2011) rejected ideas which worked against the use of FVA citing that FVA does not cause 'forced sales' and distort the fair value of liabilities and assets. There is also a high level of order that follows transactions that are recorded using FVA as they reflect real economic conditions. In USA, the use of FVA was blamed for causing problems related to poorly performing loans and deficits (Power, 2011).

1.4.2 Reliability

When the provided information is free from bias and errors, one can consider it to be reliable (Emerson et al., 2010). FASB 20 states that reliable information is one that has not been manipulated and is effective in estimating the fair value of a business (FASB, 1980). There have been some developments which were introduced so as to enhance the reliability of FVA and these include the development of new and broader financial guidelines such as FASB 20 (FASB, 2011),

The FASB (1980) outlines that one of the major features of accounting information is verifiability. Meaning that it should be easy to verify both the sources and accuracy of the provided financial information (Barth, 2007). Emerson et al. (2010) posits that the chances of financial statements being manipulated are very low when FVA is used to prepare the financial statements and hence are considered to be reliable. Besides, the application of HCA is more convenient when managing corporate income and it conforms to GAAP standards.

There are problems that may be encountered as the use of FVA can results in the occurrence of the same issues which it is trying to eliminate. In this occurs in the wake of a series of financial manipulation which may have being orchestrated by managers. Problems of financial manipulations and estimation errors are highly observable with regards to the use of Level 2 and Level 3 fair

values (FASB, 2011). There are a number of incidences of fraud which took place as a result of the need to adopt the use of FVA and arguments are that these problems could have been avoided if HCA was used (Emerson et al., 2010; King, 2009; Power, 2011). But earlier improvements were targeted at addressing this issue focused on changing assumptions that are used to determine the fair value of a business' liabilities and assets (FASB, 2011). (FASB, 2011).

The other problem that is observable when using FVA is that the definitions of accounting reliability are subject to change over a given period of time (Barth, 2007). This tends to affect the way financial information is interpreted as well as the extent to which it is considered reliable. Barth also considers that good calculation of market values does not imply that it is a good indication of actual economic outcomes. As a result, relevance and reliability are intertwined together. This can be reinforced by ideas given by Barberis and Thaler (2003) which showed that HCA does not offer a good indication of current complex measures.

1.4.3 Comparability

The use of FVA should allow comparisons of financial information to be made. Chisnall (2000), outlined that comparability is an aspect that allows users of financial information to draw differences and similarities about two or more financial details. Emerson (2010) also supports the idea of using FVA and posits that it enables comparisons to be made between firms in different industries.

The concept of comparability is based on the premise that there is a common indicator that is being used to measure and compare the economic outcome or transactions. Thus, the need to use different indicators to measure and compare outcomes or transactions can present challenges (Barth, 2006).

There are also anomalies that exist which are caused by the use of many different measures of financial information. On the other hand, FVA makes it feasible to deal with the problem of using numerous measurement (Chisnall, 2000). Having multiple approaches to measure the same transactions can pose challenges for users of financial statements (Barth, 2006).

Prochazka (2011) contends that different valuation models can be used to measure that value of a liability or asset but there are different circumstances

under which each FVA model can be applied. This compromises the extent to which HCA can be used to make comparisons of financial information and decisions made using HCA reports. As a result, FVA offers good details about better ways of ascertain the value of liabilities and assets.

1.4.4 Understandability

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

A study by Jiang, Wang and Xie (2015) reckons that the use of FVA helps to improve individual users of financial statements understanding about the position of the firm. This is because the prices at which such information is reflected will be based on actual or current market values. Wu, Thibodeau and Couch (2016) noted that such understanding requires that one possesses the necessary knowledge and having the inability to do may hinder a person from having a better understanding of the produced financial statements.

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

1.5 Literature review on FVA

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

Such imposes effects on bank indicators such as solvency and this goes on to affect the relevancy and informativeness of FVA method.

1.5.1 Value relevance of fair value in the equity market

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

In a study by Song et al. (2010), it was outlined that FVA is much more relevant in in the banking industry when used to determine its relevance to offer useful information on financial instruments. The study was based on information collected from banks in the United States of America. It was noted that the relevance of FVA is ascertained by its potency to offer more additional information as opposed to historical cost.

Barth (1994) drawn insights using data collected from the year 1971 to 1990 to determine the importance of FVA over historical cost. The goal was to examine the extent to which FVA is reliable and relevant in determining the value of investment securities. The findings revealed that FVA offers more and relevant details about the value of investment securities as opposed to historical cost especially in active investment securities markets.

The findings were reinforced by related findings established by Ahmed and Takeda (1995) which showed that the results extend to include net assets listed in a firm's balance sheet. The findings are also similar to findings established by Petroni and Wahlen (1995) which revealed that losses and gains made by insurance companies were also positively correlated with stock returns as postulated by FAS 107.

Nelson (1996) conducted a study which showed that there is a high relevancy that is associated with the investment securities. However, there are studies such as the one by Eccher et al. (1996) which consider these findings to vary and be different in relation to other liabilities and assets. The study also considers such results to be weak and mixed though relevant in certain circumstances. However, the relevancy of FVA can mostly be high in

circumstances that are characterised by high periods of high values that exceed book values.

 This entails that the situation among capital and debt market firms in Jordan might cause the results to be significantly different. But loans, securities held-to-maturity, and losses and gains made from selling securities. (Park et al., 1999).

Biddle et al. (1995) highlighted that developing additional information takes time and can prove to be difficult in certain circumstances. However, the use of FVA was deemed to offer more information as compared to other accounting methods such as historical cost. This is also because FVA is so informative and hence has huge implications on decision making.

Khurana and Kim (2003) contrasted the use of historical cost and FVA in relation to FAS 115 and FAS 107. The results were significantly different from those established by Biddle et al. (1995), Kolev (2009) and Park et al. (1999). The study results showed that there were no major differences between the level of information offered by historical cost and FVA approaches. The results also showed that relevance and informativeness were high among small banks as opposed to small banks.

Song et al. (2010) did a study that looked at the use of 3 tiers of FVA among banks in the USA with regards to their reliability in dealing with challenges posed by the financial crisis. It was considered that the reliability of the 3 tiers was mainly influenced by the availability of good corporate governance. As a result, the reliability of the 3 tiers was considered to be high in banks that have good corporate governance structures. The coefficient values were less than 1 and this implied that their relevancy and reliability is low. Possible reasons attributed this to uncertainty and market instability (Goh et al., 2009).

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

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

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

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

1.5.2 Value relevance of fair value in capital markets

Fair value has significant implications on capital and debt markets and its implications can be observed in a number of ways. A study by Armstrong et al. (2010) highlighted that debtholders and shareholders are affected by the use of FVA as it affects the decision-making process. This is because the produced financial reports contain information that has been produced using ideas proposed by fair value accounting.

This information relates to the valuation of a firm's liabilities and assets as well as possible risks affecting its operations. The same information can be

used to examine the feasibility at which projected cash flows are easily realised and thus making it easy for firms to make decisions on which investments or projects to invest in.

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

Meanwhile, not much has been done to examine this issue on a much broader level as there are limited studies that examine this issue. However, a study by Kothari et al. (2010) contends that applying fair value techniques makes it feasible to verify financial information that is used to make important corporate decisions. Such pertains much to debt holders and equity holders. This is because it enables debt and equity holders to be able to deal with issues caused by asymmetric information and moral hazards. These problems are as a result of asset substitution risks.

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

1.5.3 Related studies

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

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

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

Landsman (2007) conducted a similar study on the implications of FVA in terms of relevancy and informativeness using ideas drawn from capital markets. The results provided strong support that the relevancy and

informativeness of FVA is bound to change and may not yield the desired outcomes. The findings further highlighted that the relevancy and informativeness of FVA method is subjected to shortfalls posed by source of the computed information and measurement errors.

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

CHAPTER 2

OVERVIEW OF CAPITAL AND DEBT MARKETS ACTIVITIES IN JORDAN

2.1 Introduction

A proper examination of the relevancy and informativeness of FVA used capital and debt markets can be made by first examining the economic situation that is prevalent in Jordan. This will also assist in further establishing shortfalls associated with the use of FVA and how they impact the relevancy and informativeness of FVA method. As a result, this provides details about the key firm and industry specific factors and a series of economic activities that had an influence on capital and debt markets in Jordan.

2.2 Details of Jordan's economic situations

It is worthy to note that the Jordanian economy has been showing strong signs of withstand economic shocks. The Economic Policy Council (ECP), (2019), contends that this comes after a period of severe potential threats posed by the 2008 financial crisis. However, it is apparent to note that Jordan monetary authorities struggled to contain the effects of the crisis but the efforts paid off and are still being enjoyed. However, the key economic issues that have been affecting Jordan are unemployment and low levels of economic growth (CBJ, 2018). This has been against a background of high security costs, low foreign investment inflows and rising food prices (CBJ, 2018).

Besides, the issue of Jordan's economic resilience can be supported by insights shown in figure 2.1 depicts that Jordan's GDP has been on a positive trajectory path. Such a notable growth pattern can be seen to have significantly started from the year 1992 onwards. From the year 1993, Jordan's GDP rose from US$27 billion to US$27 billion.
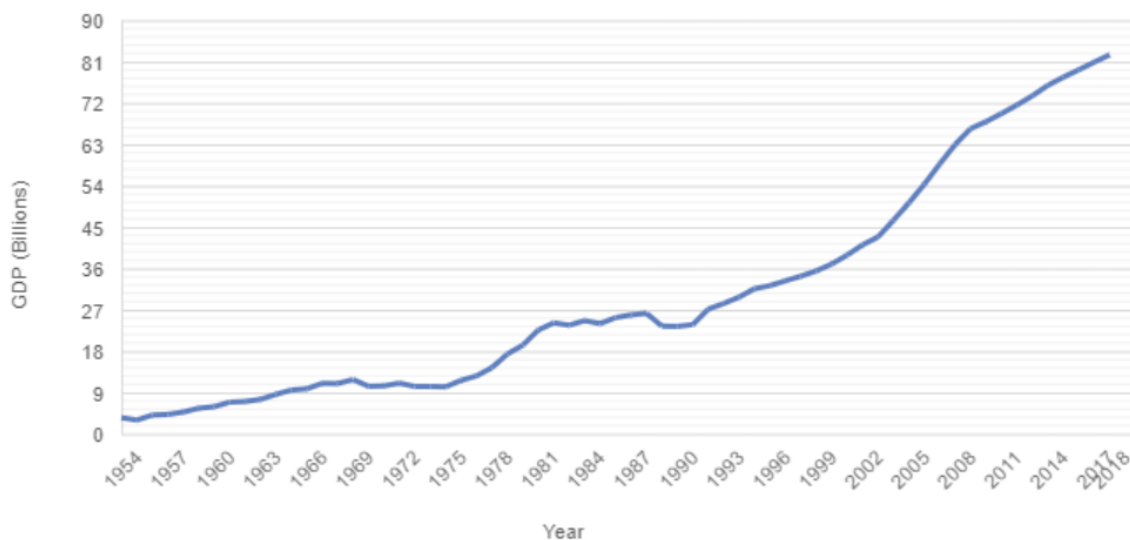
Figure 1: An insight of Jordan's economic performance .

Source: *World Economics (2019)*

As a result, the period 1993 to 2018 was a period marked with major economic improvements. This was characterised by major improvements in the financial sector together with other industries such as the manufacturing sector. During the same period, Jordan's manufacturing sector contributed more than 20% of Jordan's GDP (ECP, 2019). In addition, the ECP highlighted that more liquidity was injected in 2017 into the economy to deal with problems posed by the growing national debt.

Such funds were distributed through the financial sector and hence it can be said that capital and debt market firms in Jordan benefit from the government's effort to boost Jordan's economic performance. This is because capital and debt market obtained more funds which they made use of to generate more revenue through service charges and interest rates. A

broader in sight of other economic indicators that can be used to shed more light on Jordan's economic performance is shown in table 2.1.

Figures provided by the World Bank in 2019 revealed that Jordan's major economic problem has been the growing debt problem which grew from US$95.6 billion in 2017 to US$96.2 billion in 2018. Inflation was also another major issue as it rose by 0.6 percentage points from 3.3 to 3.6% in 2018.

Table 1:

Insight of Jordan's major economic indicators of the year 2017 and 2018.

Indicator	2017	2018
Fiscal balance	-2.2	-1.8
FDI	5.0	5.0
Current account balance	-10.7	-9.6
Debt	95.9	96.2
Real GDP	2.0	2.1
Inflation	3.3	3.9

Source: World Bank (2019)

The economy of Jordan can be noted to have improved in terms of fiscal balance which improved from a deficit of -2.2 to --1.8 between the same period. The same can also be said about the current account balance whose deficit shrank from -10.7 to -9.6 while FDI inflows remained constant at 5% (see Table 2.1).

Figure 2: Employment by sector.

Source: ECP (2019)

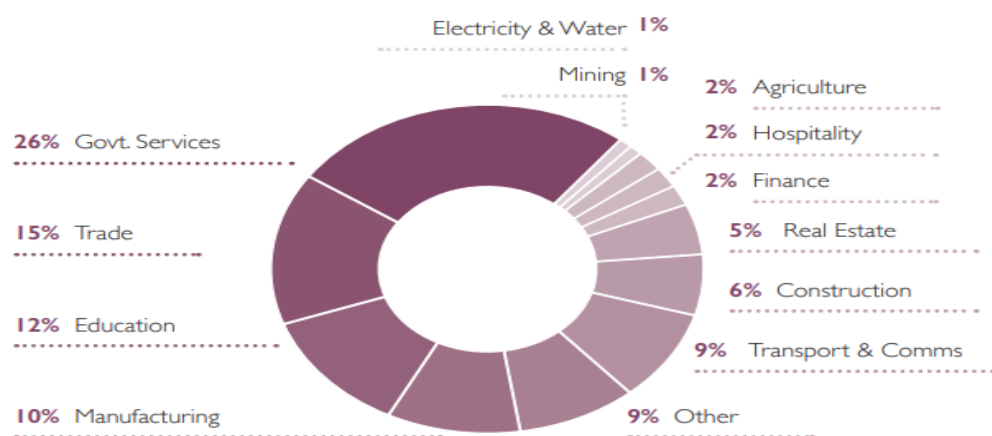The financial sector which encompasses the likes of capital and debt market institutions did not contribute much in terms of easing unemployment problems. this is because it employed 2% of the unemployed labour force in 2018.

Jordan's construction, finance, transport, tourism and hospitality, mining, services, and manufacturing sectors were the major contributors of the notable economic progress observed in the year 2018. Information provided by Exchange Jordan (n.d) revealed that such progress was a result of the government introducing a lot of structural adjustments programs. These programs were mainly targeted at ensuring that the government's revenue base rises by at least US$635 million and reduce government's expenditure.

Meanwhile, the economy of Jordan continued to experience huge signs of improvements following the governments' effort to take advantage of gains posed by Public-Private Partnerships. Such policies and/or measures were also targeted at promoting an increase in capital spending (Jain & Biswal, 2016).

However, major challenges to such efforts were being triggered by the need to contain huge expenditure that was being spent towards containing the high influx of refugees. This posed huge threats towards containing the problem of unemployment. This was against a backdrop of huge efforts made by the government to boost employment levels. As a such, the government of Jordan employs about 26% of the Jordan's labour force (ECP, 2019). Further observations made from Figure 2.2 revealed that the finance, hospitality, construction and transport industries contributed 2%, 5%, 6% and 9% respectively.

2.3 An insight of Jordan's finance sector

The finance sector is a notable key driver of Jordan's economic progress as it provides the much-needed funds to stir economic activities (Ibrahim & Henefah, 2016). In the midst of the positive developments observed in the financial sector, a growing number of mergers and acquisitions have been playing huge positive roles towards fostering such improvements. However, it was observed that the challenge of an economic slowdown was inflicting

drawbacks against efforts to foster financial development (Abu-Ghummi et al., 2016). The study further devotes considerable efforts towards examining pro-growth policies, credit bureau and capital markets development that took place in Jordan over the past years. These are herein examined as follows;

2.3.1 Pro-Growth Policies

The Central Bank of Jordan (CBJ) has always been a chief cornerstone of Jordan's economic growth and stability. A lot of policies enacted by the CBJ have been focused on fostering financial development and stability, and economic growth and development (CBJ, 2018). Though some policy makers are against the idea of monetary expansion (Alzoubi, 2016; Kikhia, 2015), the CBJ has been opting to loosen its monetary stance. This was highly evident from the year 2015 as the reduced interest rates as part of its pro-growth monetary policy. This monetary strategy has proved to be useful as it has managed to boost competition within Jordan's expanding and developing financial sector (ECP, 2018). This has resulted in positive spill over effects as consumers could easily secure home loans at low interest rates. On the other hand, the rediscount rate was reduced to 3.75% while the overnight deposit rate was also reduced to 1.5% in 2016 (CBJ, 2018). The CBJ expansionary monetary policy also caused a surge in inflation as the recorded inflation rate rose to 2% in the same period.

2.3.2 Credit Bureau

The credit bureau regulates credit or borrowing activities within the entire economy and is supervised by the CBJ (CBJ, 2018). The CBJ highlights that one of the goals of the credit bureau is to promote the ease of doing business in Jordan. This goes a long way in fostering the operations of credit market institutions in Jordan. High debt thresholds were introduced to increase access and availability of credit to customers and corporations.

 The new regulations are vital for reducing the high interest rates that are changed by microfinances as they try to stay afloat in business. This is due to the competitive pressure posed by low interest rates charged by banks (Kikhia, 2015). However, the major challenge is that it is apparently difficult of banks to accurately determine the actual risks levels at these new thresh holds.

2.3.3 Capital Markets

These are one of the most widely open and developed capital markets in the world with the launch of the Amman Financial Market in 1978 (CBJ, 2018). Thus, the AFM is responsible for regulating capital market in Jordan. Major reforms were introduced in 1997 and these allowed the AFM to introduce new structural reforms that were in line with international standards (CBJ, 2019). The structural reforms also made it possible to for the AFM to function as a trader and regulator at the same time. The developments were also characterised by the introduction of a new laws that facilitated the issuing of new financial instruments. In addition, the Securities Depository Centre, Jordan Securities Commission and ASE were also by products of the AFM.

Table 2:

2018-2022 sectoral growth and investment targets .

Sector	Expected growth (%)	Required investment (US$m)
Agriculture	*10*	*113m*
Manufacturing	*10*	*530m*
Transport and ICT	*12*	*334m*
Tourism and hospitality	*5*	*169m*
Construction	*15*	*254m*

Source: ECP (2019)

Though the construction sector is required to grow relatively higher than other sectors at a rate of 15%, the required contribution is relatively lower than that of the manufacturing sector and stands at US$254m.
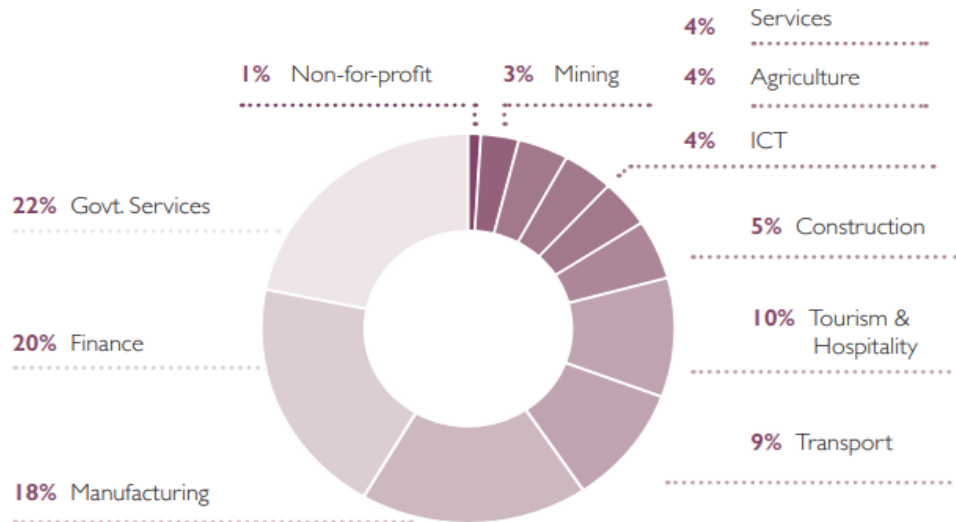
Figure 3: Sectoral contribution to Jordan's economy**.**

Source: ECP (2019)

It is also of no doubt at the Jordanian government plays a key role in the development of its economy as it contributes 22% towards GDP. Banks and other financial institutions can also be noted to be contributing much to the development and growth of Jordan's economy as noted by as 20% contribution towards GDP growth.

The importance of the manufacturing sector in Jordan's economy can also be supported by the observed findings shown in figure 2.3 which revealed that the manufacturing sector contributed 18% towards GDP growth in 2017. Hence, it can be said the manufacturing sector is important for the growth and development of Jordan's economy as well as social empowerment by boosting employment levels.

2.4 The role of the Amman Stock Exchange

Generally, any stock exchange company is designed to assist companies to secure the required capital funding by providing them with access to a pool of private and institutional investors. Stock markets also constitute a huge part component of a secondary market through which investors and companies are brought together (Hoang et al., 2016). It is in this way that companies can raise funds by issuing shares and shareholders can also dispose off their shares (Jain & Biswal, 2016). Stock markets also serve an important role of

offering capital to investors and companies (Manu, 2017). Ideas provided by Dwyer and Kotey (2015) showed that stock markets play an important role of ensuring that efficient price discovery exists in the entire Jordanian financial market. The other essential aspect of stock markets that cannot be neglected is that they offer accurate and timely company disclosure and trading information needed by investors to make sound decisions (Jain & Biswal, 2016).

Meanwhile, the ASE was formed in March 1999 as a private corporation that operates with no profit intentions (incentives) but with financial and administrative freedom (ASE, n.d). As its stand, the ASE has full authorization to trade securities under the governing authority of a board of directors that is composed of 7 members (ASE, n.d). The establishment of the ASE was as a result of a restructuring exercise that was carried out on the Jordan Capital Market in the same year. This result in the establishment of Securities Depository Center (SDC), Jordan Securities Commission (JSC) and the ASE.

The ASE conducts its operations in line with the principles of liquidity, efficiency, transparency and fairness (ASE, n.d). This is made possible by the adoption of internal directives with regards to listing and market division standards. Such efforts are made possible through joint cooperation between the JSC and the ASE. The ASE is a prominent member of the World Federation of Exchanges, Federation of Euro-Asian Stock Exchanges and Arab Federation of Exchanges.

Under the ASE, stocks are traded using a two-tier system in which the first tier seeks to provide more information to the investor so that he gains full knowledge of the firm he intends to invest in (ASE, n.d). This tier system can be said to be important for promoting transparency. Meanwhile, the second tier serves to make sure that all requirements are adhered to prior to listing a company on the ASE. These requirements include things like the number of shares issued, free-float etc., (ASE, n.d).

Since its inception, the ASE has been in a good position to promote good trading and managed to enhance the performance of public shareholding

companies which showed that their [performance rose from JD1.1 billion in 2013 to JD1.2 billion in 2014 (ASE, n.d). As it stands there are more than 218 companies that are listed on the ASE (exchangejordan.com).

2.5 Chapter summary

This chapter has offered insights about Jordan's economic activities, events and trends, an overview of Jordan's manufacturing industry and shaded more light on the role of the Amman Stock Exchange. The established ideas have shown that the economy of Jordan have been strong sings of resilience since the period 2000 to 2018.

Hence, this is enough to rule out the effects of macroeconomic indicators on the estimated model. In addition, there has been notable sound structural stability in its financial and non-financial markets and hence the inclusion of dummy variables can also be ruled out as well. Meanwhile, the manufacturing sector is one of the fastest growing sectors in Jordan. It also con tributes a lot towards eco nomic growth. In addition, Jordan's manufacturing sector plays a key role in the attainment of the 2018-2020 vision to have the economy expand at an annual rate of more than 5%.

 Moreover, Jordan's manufacturing sector has been playing a key role towards promoting social and economic development. As it stands, it is the second largest employer of Jordan's total labour force next to the government. Hence, the importance of the finance sector in Jordan cannot be underestimated as it goes to affect a number of key indicators which include exports, FDI inflows, exchange rate and foreign currency inflows.
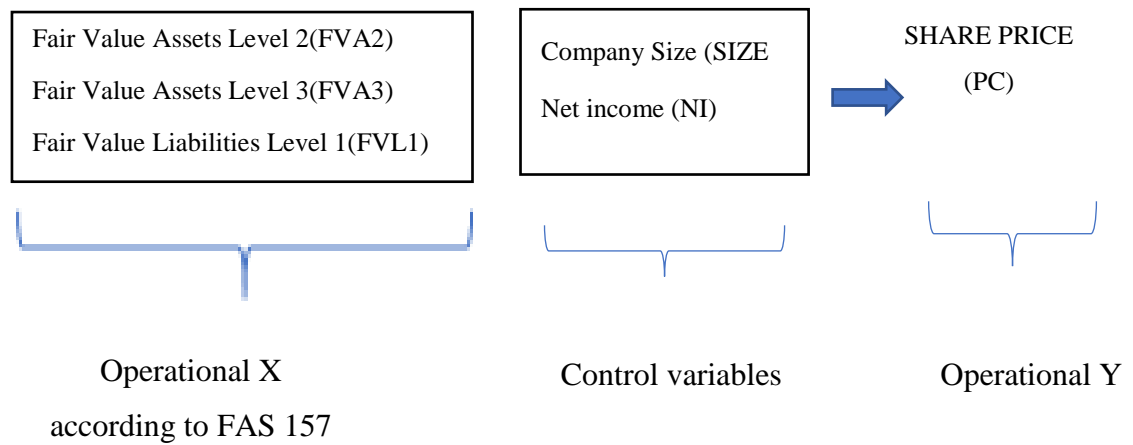
Figure 4: Conceptual framework.

Source: Author (2019)

The independent variables were operationalised based on the application of FAS 157 on

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter places a significant amount of focus towards looking at the research approach that was used to carry out this study. This is important so as to establish ways through which answers to the proposed research questions can be obtained. This methodological approach also provides important ways of exploring if FVA information relevant and reliable. This chapter therefore, looks at unit root, panel data estimation, data collection and analysis, and robustness tests.

3.2 Research approach

The study adopted a quantitative analysis of value relevance and reliability of FVA with respect to capital and debt markets in Jordan. The initial approach involved the use of panel data unit root tests which include the Levin, Lin and Chu t, Phillips Perron (PP) and the Augmented Dickey Fuller test (ADF). This was followed by an outline of the panel data estimation technique and serial correlation tests that were used in the study. These steps are discussed in detail as follows;

3.2.1 Stationarity tests

Greene (2013) highlighted that it is important to carry out unit root tests so as to check and see if the data has unit roots or not. That is, to see if the data is stationary or not. The importance of unit root tests is to ensure that the obtained results are not spurious and thus making sure that reliable insights can be drawn from the results and appropriate suggestions given (Maddala & Wu, 1999).

Meanwhile, Gujarat (2013) defined a stationary times series as a series whose mean, variance and standard deviation are constant over a period of time. In doing so, the time series will be considered as predictable (Maddala & Wu, 1999). It is important to note that disturbances in a time series are bound to occur and this can be in relation to trends.

As a result, Levin, Lin and Chu (2002) proposed that detrending be used to make sure that the data becomes stationary. This can involve the use of indexes, logging and deflating (Choi, 2001). Choi further proposes that season-to-season or period-to-period methods be used to stationarise the data at first differences. This normally occurs when it is impossible to stationarise the data by de-trending (Levin, Lin & Chu, 2002).

There are ways that can be used to test for unit roots in panel data estimations but in this study focused was placed towards the use of the Levin, Lin & Chu t., ADF and the PP. this is because a combined use of these methods helps to deal with limitations in the use of one method. For instance, the use of the ADF for determining the presence of unit roots is often consider to be ineffective when non-seasonalised data is used (Gujarat, 2013).

3.2.2 Model estimation approach

Due to the fact that the study focuses on capital and debt markets in Jordan, the appropriate technique that was used to analyse the collected data is panel data model estimation approach. This is also because estimation panel models for different groups of different sample units will make it possible to examine the relationships between the variables when random effects (RE) and fixed effects (FE) are included into the analysis (Borenstein et al., 2010).

With regards to wait fixed effects, the basic assumption is that the behaviour of the parameters is fixed and this also includes the systematic effects of the parameters as well whereas the REM considers that systematic effects of the parameters are random (Hedges & Vevea,1998). The major feature is that random variable can either be single of multiple variability.

In practical sense, REMs are more realistic since variability in parameters and surrounding conditions always change and yet FEMs are based on the idea that such variability does not exist. However, the decision on which model to use rests on the results of the Hausman tests which is based on the need to test the hypothesis that the FEM offers the best explanatory power of the situation under con sideration as opposed to the REM (Baum, Schaffer & Stillman, 2003).

As noted from the conceptual framework depicted in literature review, the operationalisation of fair value relevance and reliability (share price (SP)) has been noted to be a function of fair value level 1 (FVA1) and level 2 assets (FVA2), fair value level 1 liabilities (FVL1), net income (NI) and firm size (SIZE). We can express this relationship in a functional form as follows;

SP = F(FVA1, FVA2, FVL1, NI, SIZE) …………………………………………………….(1)

At this stage we can introduce regression analysis concepts. That is, the constant $α_{it}$, parameters $β_1$ to $β_5$, and an error term $μ$. This will result in the establishment of the following regression model;

SP = $α_{it}$ + $β_1$FVA$_1$, $β_2$FVA$_2$ + $β_3$FVL$_1$ + $β_4$NI + $β_5$SIZE ……………………………….(2)

The data was converted into logarithms so as to deal with the problem of outliers and as a result, the problem of heteroscedasticity was dealt with (Greene, 2013). Thus, the final estimated model was based on the following expression;

LSP = $α_{it}$ + $β_1$LFVA$_1$, $β_2$LFVA$_2$ + $β_3$LFVL$_1$ + $β_4$LNI + $β_5$LSIZE …………………….. (3)

3.2.3 Panel model robustness tests

The estimation of panel models especially both FEMs and REMs requires that one conduct robustness tests so as to check to see which of the two offers reliable insights (Borenstein et al., 2010). It is in line with this idea that the Hausman test was applied. The aim was to determine as to whether the following hypotheses was valid;

- **H0:** The relevance and reliability of FVA to model or explain changes in stock prices of capital and debt market institutions in Jordan is best explained by the REM.
- **H1:** The relevance and reliability of FVA to model or explain changes in stock prices of capital and debt market institutions in Jordan is best explained by the FEM.

According to Schmidt, Oh and Hayes (2009), the acceptance of the null hypothesis will result in conclusions be made that there are errors in the estimated FEM. That is, using results provided by the FEM is considered to be surrounded by inconsistent estimates.

3.2.4 Serial correlation test

Serial correlation test was also used as part of model tests to determine if the error terms are correlated with each other or not. Durbin and Watson (1951) a situation involving the correlation of error terms is known as serial correlation. In any situation, errors terms can be positively correlated with error terms in another period (positive serial correlation) or negatively correlated with error terms in another period (negative serial correlation) (Gujarat, 2013). The general guideline is that the Durbin Watson value much be close to 2 and values below 2 are an indication of positive serial correlation and above 2 negative serial correlation (Durbin & Watson, 1951).

3.3 Population and sampling techniques

The study drew focus from capital and debt market institutions in Jordan. The reason being that the use of FVA has grown widely used by capital and debt markets not only in Jordan but also around the world. Hence, this study seeks to examine the informative nature of FVA which regards to reliable and relevant. A total of 9 out of the 13 companies were observed to be using FVA and this is followed by the need to adopt good corporate governance practices as instructed by the Amman Stock Exchange (ASE), (ASE, n.d). The 9 companies were composed of 5 capital market firms and 4 debt market firms. The names of the companies were withheld for privacy reasons and this is also in line with good ethical practices of privacy and confidentiality (Miller et al., 2012). Hence, the results obtained from the examination of these 9 companies are considered to mirror the use of fair value account ting with respect to capital and debt market institutions listed on the ASE (Etikan, Musa & Alkassim, 2016). Table 3.1 provides a description of the capital and debt market institutions listed on the ASE that were used for the purposes of this study.

Table 3:

Description of the study population.

Period	Company	Sector
2009-2018	Capital market firm 1	Financial
2009-2018	Capital market firm 2	Financial
2009-2018	Capital market firm 3	Financial
2009-2018	Capital market firm 4	Financial
2009-2018	Capital market firm 5	Financial
2009-2018	Debt market firm 1	Financial
2009-2018	Debt market firm 2	Financial
2009-2018	Debt market firm 3	Financial
2009-2018	Debt market firm 4	Financial

3.4 Operationalisation and justification of variables

The operationalisation of FVA was done using FAS 157 which considers that value accounting is done with respect of level 1 assets which include funds, bonds, stock and any other asset who price is based on price discovery. On the other hand, FAS 157 defines level 2 assets (FVA2) as assets that do not have a regular market price. Thus, the main difference between FVA1 and FVA2 is that FVA1 have a regular market price as opposed to FVA2. Level 3 assets (FVA3) and liabilities (FVL) whose fair value cannot be easily determined)). All these aspects are required to be reported at fair value (SFAS 157).

The operationalisation of the dependent variable stock price was based on the ideas which considered that the best way to determine the reliability and relevance of FVA is to relate it against share price (Goh et al., 2015; Song et al., 2010; Tetteroo, 2016). As a result, the relevance and reliability of FV Aused by capital and debt market firms in Jordan was examined based on the effects of FVA on stock prices. This is important because it helped in examining how the use of FVA affects the stock prices of capital and debt market firms in Jordan (Tetteroo, 2016). An outline of the study variables together with their definitions and justifications is given in table 3.2.

Table 4:

Definition of variables and expected signs.

Nature of the variable	Variable	Proxy Variable	Measure	Definition	Expected results
Dependent Variable	SP	stock price **(SP)**	%	Refers to the way a company's stock prices changes. A highly changing stock price is considered to be more volatile.	
Independent Variable	FVA1	Debt ratio **(DR)**	%	Level 1 assets include listed stocks, bonds, funds or any assets that have a regular mark to market mechanism for setting a fair market value. These assets are considered to have a readily observable, transparent prices and therefore a reliable, fair market value.	**+**
Independent Variable	FVA2	Market price per share **(MPS)**	%	Level 2 assets are financial assets and liabilities that are neither easy or overly complex to value. They do not have regular market pricing, although a fair value can be determined for them based on other data values or market prices.	**+** **-**
Independent Variable	FVL1	Earnings per share **(EPS)**	%	This is a valuation indicator which provides information of how well the price of a share stands in relation to earnings that will be obtained from holding that share	**+** **-**
Independent Variable	NET INCOME	Tobin Q **(LTBQ)**	%	The Tobin's Q equates the firm's assets replacement costs to its market value. That is, the replacement costs of a company's assets should equal its market value.	**+**
Independent Variable	Size	Total asset **(LTA)**	US$	It is mostly used to measure the size of a firm, notably banks. The higher the value of the firm's assets size, the bigger it is considered to be.	**+**

Table 5:

Descriptive statistics in log form.

Variable	Mean	Min.	Max.	Std.
Stock price	-2.053	-3.933	14.209	2.016
FVA1	1.006	-0.166	3.180	0.803
FVA2	-0.939	-2.566	13.400	1.756
SIZE	16.273	-0.991	18.630	2.146
Net Income	-0.645	-2.305	0.365	0.604
FVL1	15.160	-1.611	18.452	2.341

The highest mean that was observed was in relation to total assets which was observed to be stood at 16.273 while negative means were recoded with respect to SPV, EPS and Tobin's Q of -2.053, 0.939 and -0.645 respectively. The same applies to the maximum values that were recorded, with total assets recording the highest maximum value of 18.63 followed by total debt with 18.452, SPV with 14.209, EPS with 13.4, MPS with 3.18 and Tobin's Q with 0.365. High elastic changes in terms of standard deviations were not to exist with regards to total debt, total assets, SPV and EPS of 2.341, 2.146, 2.016 and 1.756 respectively.

Low inelastic responses were noted to be characterised with changes in MPS and Tobin's Q with values of 0.803 and 0.604 respectively.

3.5 Data analysis and sources

Eviews 10 was used to assist in the estimation of the panel data models. The estimation of the panel data models was done using annual time series data from the year 2009 to 2018 which was collected from the ASE. The data analysis procedures also included the use of descriptive statistics and correlation coefficient tests.

CHAPTER 4

DATA ANALYSIS AND PRESENTATION

4.1 Introduction

The major focus of this chapter is to provide details concerning the analysis of the collected data so as to provide answers to the proposed research questions. The data analysis was conducted using EViews 10 using annual time series data from the year 2010 to 2018. The data was for 9 companies and was composed of 5 capital market firms and 3 debt market firms and the estimation process involved the use of a FEM. The results are presented as follows;

4.2 Stationarity tests

The PP, ADF and Levin, Lin and Chu t., were used to test for the presence of unit roots. The detection of unit roots has a problem of undermining the reliability of the results obtained (Dickey & Fuller, 1951). Hence, it is always important to check and make sure that the data is stationary especially when the model estimation involves the estimation of a linear regression model (Kutner et al., 2005).

Table 6:

Stationarity test results.

	@ level					
	PP		*ADF*		*Levin, Lin & Chu t.*	
Variable	*Stat.*	*Prob.*	*Stat.*	*Prob.*	*Stat.*	*Prob.*
LMPS	38.5019	0.0033	19.6593	0.3523	-14.6116	0.0000
LEPS	51.0695	0.0001	28.0875	0.0607	-9.3490	0.0000
LTA	36.3309	0.0064	18.3269	0. 4343	-4.0127	0.0000
LTD	40.3054	0.0019	21.8422	0.0000	-4.5900	0.0000
LTBQ	42.3381	0.0004	17.3241	0.3649	-3.0947	0.0000
LSPV	61.8395	0.0000	34.8482	0.0042	-8.2167	0.0000
	@ 1st difference					
LMPS	68.5201	0.0000	40.7454	0.0017	-12.1630	0.0000
LEPS	83.2347	0.0000	54.1991	0.0000	-21.5323	0.0000
LTA	50.8042	0.0001	28.5080	0.0047	-9.2904	0.0000
LTD	70.3244	0.0000	35.3674	0.0085	-8.2719	0.0000
LTBQ	55.6118	0.0000	38.4313	0.0013	-17.5930	0.0000
LSPV	84.6049	0.0000	57.3962	0.0000	-21.2329	0.0000

* Newey-West automatic bandwidth selection and Bartlett kernel

4.3 Hausman test

It is important to first determine which of the two models between a FEM and REM offers good explanations about the examination of the relevancy and informativeness of FVA method in capital and debt markets. This can be accomplished by using the Hausman test. The Hausman test gives details about whether the FEM and REM has a better statistical significance needed to give explanations about the research topic (Hausman, Stock & Yogo, 2005). The proposed null hypothesis was stated as follows;

- **H$_0$:** The random effect model has a better statistical significance needed to explain the examination of the relevancy and informativeness of FVA method in capital and debt markets.
- **H$_1$:** The fixed effect model has a better statistical significance needed to explain the examination of the relevancy and informativeness of FVA method in capital and debt markets.

Table 7:

Hausman test

	Stat.	Df.	Sig.
χ^2	17.298894	5	0.0040

Using the established results, we can easily reject the null hypothesis that the random effect model has a better statistical significance needed to explain the examination of the relevancy and informativeness of FVA method in capital and debt markets. This implies that we can accept the alternative hypothesis since the p-value of 0.0040 is less than 0.05 with statistical value of 17.2989. Hence, it was concluded that the fixed effect model has a better statistical significance needed to explain the examination of the relevancy and informativeness of FVA method in capital and debt markets. Thus, we proceeded to test and see if the FEM has higher statistical consistency as opposed to the REM. This process involved the use of a redundant fixed effects test

4.4 Redundant fixed effects test

According to Allison (2009), it is important to test both the FEM to see if it is redundant or not. That is, to determine if it has a higher statistical consistency and this will also help to ensure that the results remain highly reliable (Wooldridge, 2010). A statistical value of 23.8340 was obtained and a probability value of 0.0012 which is less than 5%. As a result, it was concluded that the FEM results are reliable and will not cause any unreliable policy formulation problems. Hence, it is in this regard that a FEM was estimated. From this stage, it can be safely estimated a FEM.

Table 8:

Redundant fixed effects tests   .

	Stat.	Df.	Sig.
Cross section F	3.3025	(7, 59)	0.0050
χ^2	23.8340	7	0.0012

4.5 Fixed effect model estimation

Panel data model are usually estimation in pairs which include both the FEM and REM but for the purposes of this study, the Hausman test showed that the FEM is in a better position to offer good and reliable results. As a result, the FEM was used to provide answers to the outlined research questions.

Foremost, the decision to consider a variable as value relevant and reliable is when the coefficient is more than 1 (Tettero, 2016). With regards to level 1 assets, it can thus be noted that level 1 assets offer reliable and relevant explanation of changes in stock prices of capital and debt markets in Jordan.

Secondly, it can be seen that there is a positive relationship between level 1 assets and stock prices of 1.784. This can possibly be explained by the idea that investors respond positively to changes in level 1 assets. Song et al., (2010), established that this is relatively true because an increase in level 1 assets shows that the firms' have improved in managing the company's assets.

Table 9:

FEM test results .

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LFVA1	1.784413	0.358759	4.973847	0.0000
LFVA2	-0.786630	0.247298	-3.180899	0.0023
LSIZE	3.008772	0.785636	3.829729	0.0003
LNI	0.546709	0.234627	2.330117	0.0232
LFVL	-2.515515	0.531554	-4.732383	0.0000
C	-10.03731	5.252148	-1.911087	0.0609
$R^2 = 0.907$	*Adjust. R^2 = 0.888*	*F-stat.= 48.117*	*Prob. F-stat. = 0.000*	*DW stat. = 2.235*

The results show that there is a negative relationship between level 2 assets and stock prices. This can be supported by results provided by Goh et al. (2015), which showed that negative changes in stock prices are inevitable especially when investors respond negatively to changes in level 2 assets. In addition, the coefficient is less than 1 and hence, it can be said that level 2

assets have little relevance and reliability in explaining changes in the fair values of the companies' stock prices.

The size of the capital and debt market firms can be established to be responsible for positive changes in stock prices observed. This is because an increase in the size of the companies by 1 unit will result in an increase in the stock price by 3 units. Also, the size of the company can be said to have high relevance and reliability in explaining changes in the fair values of the companies' stock prices. This also implies that investors will respond positively to an increase in size of the company.

On the other hand, an increase in income by 1 unit will result in an increase in stock prices by 0.547 units. This possibly suggests that net income has little significance in explaining relevant and reliable changes in stock prices. The results are in contrary to findings established by Tettero (2016). Possible reasons suggest that investors are mainly interested in value as opposed to profits.

The results also provide strong support that level 1 liabilities impose hindrances on investment (Simko (1999). The relevance and reliability of level 1 liabilities in explaining changes in stock prices is high by in a negative way. This is mainly because liabilities reduce profits available for distribution to investors. The results show that an increase in liabilities by 1 unit is associated with a decline in stock prices by 2.516.

4.6 Serial correlation tests

The obtained Durbin Watson (DW) was used to test the estimated FEM to determine if it suffers from the problem of serial correlation. This was done by using the obtained DW value of 2.2347 and comparing it against lower and upper DW values provided in the DW statistical table. Vinod, (1973) proposed that the DW value must be above both the lower and upper DW values for one to conclude that there is no serial correlation. Using results provided in table 4.5, it can be seen that the DW value of 2.2347 is above both the lower and upper DW values. Hence, it can be concluded that the computed FEM is free from the problem of serial correlation.

Table 10:

Serial correlation test.

Description	FEM	
	DW$_L$	DW$_U$
	1.364	1.624
DW estimation values	2.2347	

4.7 Discussion of findings

The main emphasis of the study was to examine the value relevance and reliability of fair value accounting. This objective was verified by the estimation of panel FEM and the decision was to consider coefficients above 1 as having value relevance and reliability. Value relevance and reliability were operationalised in relation to FASB topic 820 which considers the stock price as better measure of value relevance and reliability.

The results have shown that an increase in level 1 assets is associated with a relevant and reliable fair value of the business as noted by changes in stock prices. This is in agreement with propositions made by theories on corporate determinants of stock prices. Such theories consider that an increase in the value and amount of assets held by the firm, signals investors of good asset management strategies being employed by the company's managers.

As a result, the value of the firm's stock will increase as investors respond positively to increase in size of the company (as measured by total assets). In addition, level 1 assets have been noted to offer relevant and reliable explanations of changes in the capital and debt market firms' fair value. These results are in agreement with propositions made by other previous studies.

The results also showed that a different relationship between level 2 assets and stock prices can also be negative. Tettero (2016), established by level 2 assets have a positive effect on stock prices. Such differences can be attributed to differences in operational environments. This is because some business and economic environments can support business initiatives which

cause the company to make more profits and increase in value. In addition, a decrease in stock prices caused by level 2 assets shows that investors are responding negatively to changes in stock prices.

On the other hand, an increase in size of the capital and debt market firms has been noted to be causing positive changes in stock prices. This entails that large firms have a tendency to cause investors to favour and inject their funds in large organisations. This is mainly because of high returns on assets as signalled by better management capabilities to manage the firm's assets. Thus, an increase in a firm's level 2 assets entails that more shares will be demanded and thus causing an increase in the value of the share. More so, the value relevance and reliability of company size can thus be said to be relatively significant.

The established results also showed that has an adverse effect on fair market value as modelled by changes in stock prices. Such effects have been noted to be of little or negative value relevance and reliability. Such differences can be explained by the principal agent problem, which contends that managers seek to maximise profits whereas owners of the business seek to maximise the value of the company. Hence, cases to maximise the value of the firm's assets can be said to be detrimental for the debt and capital markets in Jordan. Hence, firm profitability is said to be of little or no value relevance and reliability with regards to changes in stock prices of debt and capital markets companies in Jordan.

Apart from all these studies, this study therefore plays a vital role of enhancing understanding on the application of FASB 157. This is also important for corporate governance purposes as well as the adoption of asset management practices.

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CHAPTER 5

CONCLUSIONS, RECOMMENDATIONS AND SUGGESTIONS FOR FUTURE STUDIES

5.1 Conclusions

The study was based on the need to examine the relevancy and informativeness of FVA method by drawing evidence from capital markets. The study also sought to find solutions as to the possible ways which can be used to enhance the relevancy and informativeness of FVA method. Preliminary insights showed that the use of FVA provides accurate valuation of business liabilities and assets. This is important because it shows how much the investors are liable to pay as well as receive from the sale of the assets. In addition, FVA also helps to deal with the problem of the manipulation of financial statements.

Most importantly, the information that is provided by using FVA is relevant for decision making and predicting the value of the firm. Such relevancy and fairness are mainly indicated by changes in stock prices which shows potential changes in the value of the firm. As a result, the use of FVA can thus be said to offer huge benefits to business institutions. However, all these positive characteristics do not always provide reliable and relevant information about the business.

 This is because measurement errors are bound to occur at any point in time and this reduces the level of informativeness of FVA method. Moreover, the source of the computed information can sometimes reduce the relevancy and

informativeness of FVA method. Thus, both the benefits and shortfalls of using FVA method can either cause an improvement or deterioration in relevancy and informativeness of FVA method. Besides, there exist other situational events and circumstances which can compromise the relevancy and informativeness of FVA method. But the problem is that this issue had not been explored especially in connection with capital market research. This study filled study gaps with regards to the relevancy and informativeness of FVA method by drawing evidence from capital markets.

The established results provide strong evidence that fair value level 1 assets offer a reliable and relevant explanation of changes in stock prices of capital and debt markets in Jordan. Such ability causes an increase in assets to further cause an increase in stock prices. This is mainly because investors respond positively to changes in level 1 assets which provide an indication of the capability of organisational managers to effectively manage the firm's assets. In other words, an increase in level 1 assets shows that the firms' have improved in managing the company's assets.

There is a negative relationship between level 2 assets and stock prices and this is because negative changes in stock prices are inevitable especially when investors respond negatively to changes in level 2 assets. Since the coefficient was established to be less than 1, it can be said that level 2 assets have little relevance and reliability in explaining changes in the fair values of the companies' stock prices.

Meanwhile, the size of the capital and debt market firms is responsible for positive changes in stock prices. Furthermore, the size of the debt and capital market companies in Jordan has high relevance and reliability in explaining changes in the fair values of the companies' stock prices. This is because the coefficient of the variable size was greater than 2 and thus implying that investors will respond positively to an increase in size of the company. However, relatively different deductions can be made with regards to an increase in income of the debt and capital market companies in Jordan.

Consequently, an in-net income of the debt and capital market companies in Jordan results in an insignificant increase in stock prices by 0.547 units. As a

such, the net income of debt and capital market companies in Jordan has little significance in explaining relevant and reliable changes in stock prices. But level 1 liabilities are said to impose hindrances on investment though their relevance and reliability of level 1 liabilities has negative effects on stock prices. More often, liabilities reduce profits available for distribution to investors. These results provide mixed sentiments about the relevancy and reliability of fair value accounting. Recommendations will thus be mad based on these findings.

5.1 Recommendations

Based on the idea that quite a number of firm specific factors have huge and different effects on stock prices recommendations can be made that;

- Good and effective asset management strategies are needed to allow the debt and capital market companies to make the best use of their assets. This will assist in increasing return on assets as well as the size of the companies.

- Good liability management strategies are needed to ensure that all the debts incurred by the firm are put into good use in a way that enhances the operational capacity of the firm.

- Performance appraisal and evaluation strategies are needed to boost the firms' income levels so that it does not fall to levels that compromise the firm's fair value.

- Good ethical standards coupled with good disclosure and fairness in the preparation of financial sentiments are needed so as to maintain good investor sentiments towards the company. This is because maintaining good investor relationships and sentiments is pivotal for ensuring a high demand of a company's stock.

5.3 Suggestions for future studies

The study combines ideas collected from two different financial market institution. As a result, suggestions can be made that future studies should focus on comparing the effects of FVA on the value of the company.

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LIST OF APPENDICES

Appendix 1: Hausman test

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	17.298894	5	0.0040

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
LMPS	1.784413	1.212512	0.102090	0.0735
LEPS	-0.786630	-0.149332	0.043195	0.0022
LTA	3.008772	1.027447	0.475577	0.0041
LTBQ	0.546709	0.683041	0.028523	0.4195
LTD	-2.515515	-0.994309	0.209532	0.0009

Cross-section random effects test equation:
Dependent Variable: LSPV
Method: Panel Least Squares
Date: 11/21/19   Time: 21:58
Sample: 2010 2018
Periods included: 9
Cross-sections included: 8
Total panel (balanced) observations: 72

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-10.03731	5.252148	-1.911087	0.0609
LMPS	1.784413	0.358759	4.973847	0.0000
LEPS	-0.786630	0.247298	-3.180899	0.0023
LTA	3.008772	0.785636	3.829729	0.0003
LTBQ	0.546709	0.234627	2.330117	0.0232
LTD	-2.515515	0.531554	-4.732383	0.0000

Effects Specification				

Cross-section fixed (dummy variables)

R-squared	0.907293	Mean dependent var	-1.998383
Adjusted R-squared	0.888437	S.D. dependent var	2.125156
S.E. of regression	0.709824	Akaike info criterion	2.314383
Sum squared resid	29.72716	Schwarz criterion	2.725448
Log likelihood	-70.31779	Hannan-Quinn criter.	2.478029
F-statistic	48.11770	Durbin-Watson stat	2.234792
Prob(F-statistic)	0.000000		

Appendix 2: Redundant fixed effect test

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	3.302462	(7,59)	0.0050
Cross-section Chi-square	23.803951	7	0.0012

Cross-section fixed effects test equation:
Dependent Variable: LSPV
Method: Panel Least Squares
Date: 11/21/19   Time: 21:46
Sample: 2010 2018
Periods included: 9
Cross-sections included: 8
Total panel (balanced) observations: 72

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LMPS	1.155580	0.162900	7.093812	0.0000
LEPS	-0.090984	0.127669	-0.712655	0.4786
LTA	0.831572	0.369221	2.252234	0.0276
LTBQ	0.631871	0.165335	3.821751	0.0003
LTD	-0.844255	0.265304	-3.182214	0.0022
C	-1.184108	2.051979	-0.577057	0.5659

R-squared	0.870969	Mean dependent var	-1.998383
Adjusted R-squared	0.861193	S.D. dependent var	2.125156
S.E. of regression	0.791764	Akaike info criterion	2.450549
Sum squared resid	41.37478	Schwarz criterion	2.640271
Log likelihood	-82.21976	Hannan-Quinn criter.	2.526078
F-statistic	89.10062	Durbin-Watson stat	1.617643
Prob(F-statistic)	0.000000		

Appendix 3: Fixed effect model estimation

Dependent Variable: LSPV
Method: Panel Least Squares
Date: 11/21/19   Time: 21:58
Sample: 2010 2018
Periods included: 9
Cross-sections included: 8
Total panel (balanced) observations: 72

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LMPS	1.784413	0.358759	4.973847	0.0000
LEPS	-0.786630	0.247298	-3.180899	0.0023
LTA	3.008772	0.785636	3.829729	0.0003
LTBQ	0.546709	0.234627	2.330117	0.0232
LTD	-2.515515	0.531554	-4.732383	0.0000
C	-10.03731	5.252148	-1.911087	0.0609

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.907293	Mean dependent var	-1.998383
Adjusted R-squared	0.888437	S.D. dependent var	2.125156
S.E. of regression	0.709824	Akaike info criterion	2.314383
Sum squared resid	29.72716	Schwarz criterion	2.725448
Log likelihood	-70.31779	Hannan-Quinn criter.	2.478029
F-statistic	48.11770	Durbin-Watson stat	2.234792
Prob(F-statistic)	0.000000		

PLAGIARISM REPORT

IS FAIR VALUE ACCOUNTING INFORMATION RELEVANT AND RELIABLE? EVIDENCE FROM CAPITAL AND DEBT MARKET INSTITUTIONS IN JORDAN

REBIN MOHAMMED

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