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SUITABILITY AND RELEVANCE OF THE FAIR VALUE MEASUREMENT UNDER IFRS 13 VS HISTORICAL COST: APPLICATION TO THE LEBANESE BANKING SECTOR

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Abstract

The aim of this research is to discover the opinions of the Lebanese banks regarding the relevance of the fair value method. Furthermore, this study will provide an additional insight into the suitability of the fair value measurement in a developing economy like that of Lebanon, and in an absence of an active financial market. For the benefit of this deductive research, a quantitative methodology was solely employed. Using a questionnaire of 14 questions measured with a Likert Scale (pre-coded questions), and a sample of 61 Lebanese Banks, the data was collected through a combination of some self-administered surveys, and some in person questionnaire-style interviews. The collected data was subjected to statistical tests using SPSS software. The main results showed that Lebanese banks consider the fair value measurement under IFRS 13 relevant compared to the traditional historical cost method. Nevertheless, the relevance of fair value in times of financial turbulence differs from its relevance in times of financial stability. Bearing in mind the limitedness of research on this topic in Lebanon, this paper offers a significant contribution to the field. Upcoming studies will build on this analysis with the help of a larger sample. In addition, Lebanese banks will become more aware about the importance of the switch to the fair value method compared to the historical cost, and will seek to enhance their maturity level in this vein and to imitate international banks' financial disclosures.

Keywords: Fair Value Under IFRS 13, Value Relevance, Financial Crisis, Lebanese Banks.

JEL classification: M40, M41, M48.

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1 Introduction

Fair value is not an emerging notion in accounting. Yet, its use increased sharply during the last decade for several reasons (Cerveira & Oliveira, 2012). Following the disturbing scandals that troubled the financial world in the early 2000s, involving companies such as Enron, Vivendi, Worldcom, Tyco International, stock market investors questioned the quality of accounting information (Mistral et al., 2003). In addition, the larger transformations in financial markets were characterized by an increased complexity of companies, many mergers and acquisitions, transactions in derivatives, and the globalization of financial markets (Power, 2010). As a consequence, the demands of users for the information published in financial statements changed (Ene George et al., 2014). The traditional method of historical cost appeared to be no longer valid. As Casta and Colasse (2001) stated, the whole context has been seriously disrupted, and the evaluation convention that was previously adapted is no longer suitable. Hence, the regulators turned towards the principle of fair value, whose main challenge is to restore the quality of accounting information (Škoda & Sláviková, 2015).

In this context, the essential question of this research paper is the following: "Is the change towards using a valuation model based on fair value rather than historical cost a more suitable and relevant approach to valuation, especially in the case of banks in Lebanon?"

Fair value accounting has garnered a lot of attention in the literature (Thesing & Velte, 2021) because of concerns about: the relevance of the three levels of fair value (Black et al., 2022; Filip et al., 2021; Liao et al., 2020; Yao et al., 2018;), the added value of fair value in comparison with the established model of historical cost (Kaya, 2013; Liao et al., 2020; Zijl & Hewlett 2022;), and the effects of fair value on the stock market and its influence on bank resilience during periods of crisis (Adwan et al., 2020; André et al., 2009; Ene George et al., 2014; Škoda & Sláviková, 2015; Tama-Sweet & Zhang, 2015).

Most of these studies are concerned with developed economies. This study presents a non-traditional examination of the research on the fair value relevance. The aim of this empirical research is to generate a novel contribution, providing the reader with objective information, taking into consideration a less developed market and economy. There are no studies that show the results of the application of the fair value specifically in Lebanon, which provides an important contribution to the literature.

With the purpose of delving deeper into the issues raised above, the contribution of our research will be centered around the subsequent questions:

1. Did the abandonment of the historical cost principle to the privilege of fair value improve the relevance of disclosed financial statements?
2. Is the value relevance of fair value seen equally during all types of economic situations: periods of crisis and bank risks vs financial stability?

This paper is divided in two parts. The first part presents a comprehensive literature review on the subject. This review informed the development of the theoretical framework and stated hypotheses. Likewise, in the second part, we will describe our research methodology and sampling procedure. The collected data will be subjected to statistical analysis using SPSS software. This section will conclude with a discussion of results, to address the above-listed research questions.

2 Literature Review

The concept of fair value under IFRS standards is central to this paper. Therefore, the characterization of fair value will be done strictly according to the instructions of IFRS 13. This standard defines fair value and establishes a hierarchy between the data necessary for calculations, based on their more or less observable characters. In addition, we will shed some light on the accounting quality of relevance of the fair value method. Since this method is considered as an opposing accounting method to the historical cost, it is crucial to discuss these two rivals valuation systems and demonstrate how fair value is more suitable than the cost principle method. Furthermore, an assessment of the debate regarding the pertinence of the fair value method during periods of financial crisis is necessary.

2.1 Basis of the Fair Value Concept Under IFRS 13 and the Attribute of Relevance

It is now common for any new standard issued in the field of accounting to refer to fair value and support its use in the measurement of balance sheet items (Busso, 2014*)*. After six years of combined thinking with its peer the Financial Accounting Standards Board (FASB), the International Accounting Standard Board (IASB) introduced a new standard IFRS 13 Fair Value measurement (Škoda & Sláviková, 2015). The main precursor was the onset of the 2008 real estate crisis (Ramli et al., 2021), which was characterized by a turbulent environment and a drying up of liquidity: two conditions not favorable to fair value. The aim of IFRS 13 is to strengthen consistency and comparability in fair value measurements and related disclosures (Filip et al., 2019).

IFRS 13 proposed a more targeted definition to fair value that eliminates inconsistencies found in different standards, saying that it is "the price that would be received to sell an asset

or paid to transfer a liability in an orderly transaction between market participants at the measurement date" (IFRS 13, Par 9). Therefore, according to IFRS 13 fair value is an exit price (Busso, 2014). This means what you get in return for an asset if you sold it at a given moment. In this context, fair value is a market-based measurement rather than an entity-specific measurement (Yao et al., 2018).

In order to assess fair value, IFRS 13 arranged the data in ascending order of visibility (Ramli et al., 2021) from levels 1 through 3. If the fair value is determined by observing the value quoted directly on the financial market (referred to as mark-to-market). Obviously, this is the most preferred level (according to the IASB) since the market operatives are passive 'observers' of prices (Power, 2010). In case of a total absence of an active market, the assessment of fair value is developed internally by the company using price models or cash flow methodologies (referred to as mark-to-model). The problem of information asymmetry between management and investors (agency problems) appears particularly at the level 3 inputs (Yao et al., 2018; Zijl & Hewlett, 2022;), because everyone thinks selfishly to maximize their own return. The investors find it difficult to check the accuracy of the amounts disclosed (Tama-sweet & Zhang, 2015). In between the other two levels, level 2 refers to the fair value of a similar, but not identical, item in an active or non-active markets, and requires some adjustments (Yao et al., 2018). Filip et al. (2019) found that levels 1 and 2 are more relevant than level 3 fair values, since it is easy for top management to bias fair value estimates due to the possibility of judgment and subjectivity. For Siekkinen (2017), all three levels of fair value are value-relevant as long as the board is independent, large and heterogeneous.

Proponents of fair value compliment this method for being relevant. But what does this attribute mean? According to the IASB, an accounting information is relevant if it helps the users of the information to make appropriate valuations, and influences the decisions made by the users. Relevant value is a predictive, unbiased, confirmatory value and includes information that is exploited by the investors during the valuation of a firm's equity (Song, 2015). In accordance, value relevance is one of the main attributes of information quality (Aladwan & Saaydah, 2015). Since fair value is a valuation system based on anticipation, the transition to a fair value accounting has led to greater relevant information (Tama-Sweet & Zhang, 2015). So, can fair value be considered a relevant method? Are all three levels of fair value relevant? If so, then in which market conditions? The remainder of this paper aims to address these questions.

2.2 Suitability of the Fair Value Measurement Versus Historical Cost Method

The subject of 'disclosure quality' is of paramount importance nowadays (Dvořák, 2017). Consequently, the choice of a relevant valuation model in accounting is a controversial issue at the moment (Yao et al., 2018; Zijl & Hewlett, 2022).

Historical cost, an opposite valuation method to fair value, is the total of expenses spent by the company for the appropriation of a property, without subsequently modifying its value even if the latter changes over time (Adoko, 2016). As a principle of evaluation, advocates of historical cost testify that it is a coherent measure, because it ensures a permanent evaluation over time (Ene George et al., 2014). Additionally, the attribute of objectivity is granted to historical cost since the valuation can be confirmed by several independent evaluators given that the purchase price is fixed and clear (Kaya, 2013). In addition, it is considered a robust pillar of prudence (Kaya, 2013). Consequently, the historical cost method is unlikely ever to be excluded in its entirety (Zijl & Hewlett, 2022).

With the never-ending changes in the world of financial markets and in order to fill in the gaps found in the historical cost accounting model, the international authorities decided to put an end to this inadequate method and replace it with a completely innovative value measurement that refers to the fair value market (Ene George et al., 2014). Nevertheless, historical cost represents the most reliable measure of the fair value at the transaction date (Kaya, 2013). Meaning, the fair value is in fact the historical cost at the transaction date but with subsequent adjustments to the original value, while the historical cost does not tolerate changes (Song, 2015).

The application of fair value accounting is seen by its proponents as a fundamental advance in financial communication. Here is a comparison between the two opposites methods that proves the suitability of fair value when compared to historical cost:

- Fair value illustrates the real image of the company since it brings the entity's market value closer to its book value (Casta & Colasse, 2001). In addition, it also reflects the real exposure of companies to risks (Ben Ghodbane, 2015). Historical cost method provides a misdiagnosis of the economic and financial situations of the society, and transformation of the company's financial risk profile (Travers, 2008).
- Based on discounted future cash flows or statistical modelling, fair value is likely to provide accounting users with forecasts about their financial income (predictive value) (Zijl & Hewlett, 2022). Historical cost doesn't reflect in the financial

statements the evolution of market prices (it is a static value), so the value of the asset may be under/over-valued (Ene George et al., 2014).

- Fair value is the only method capable of recording financial instruments, intangible assets and goodwill in a reliable manner. On the contrary, a total absence of derivatives (by nature very risky) (André et al., 2009). The latter don't have a cost to be paid at the beginning or are limited to a small initial investment (Hamdi, 2006). For this reason, according to the historical cost method, they are off the balance sheet. In addition, the bookkeeping of the intangible assets is not mandatory regarding when using the historical cost method (Ben Ghodbane, 2015). This leads to hidden values in the official accounts.
- Fair value contributes to the comparison of similar assets/liabilities owned by different companies, regardless of when they are owned (Ene George et al., 2014; Zijl & Hewlett, 2022). Using the historical cost method, lack of comparing companies that may be economically similar but have had distinct strategic and accounting choices. In addition, it is impossible to compare within the same balance sheet of an entity between two identical assets but purchased on different dates (Plantin et al., 2008).
- Fair value is a contemporary, current (Zijl & Hewlett, 2022) and up-to-date value collected from the best estimator the market (Olante & Lassini, 2022). Historical cost leads to obsolete information which leads to inefficient financial decisions (Plantin et al., 2008).
- Fair value estimates what the investor receive in return from a certain amount. Historical cost provides investors with the cost of the investment (Plantin et al., 2008).

Investors are the first to benefit from these vital qualities of fair value as the future of changes in values is paramount in the decision-making process. The rapidity of transmission of information is very important to investors who wish to be very responsive to market communications (Ben Ghodbane, 2015). By switching to fair value measurement, the users of financial accounting information are not limited to primitive information, which could be under/over-valued in the balance sheet (Ene George et al., 2014).

2.3 Fair Value Relevance During Periods of Financial Crisis: Opposite Findings

The disadvantages of fair value appear specially during periods of crisis when the liquidity of the markets dries up (Lenormand et al., 2012).

According to Allen and Carletti (2010), given the liquidity constraint, the valuation at fair value can no longer be based on market value. The major cause being that market prices are well below fundamental values (Ellul et al., 2015) because there is a considerable drop in transactions with actual effects on the demand. Hence, financial institutions assess fair value using models built by appraisers which are more subjective because of the personal judgment and discretionary estimates (Škoda & Sláviková, 2015). In addition, the lack of observable information in the market, produces misleading information.

Secondly, fair value is accused to incorporate excessive market volatility into companies' balance sheets, through instantaneous values, which has led to a pro-cyclical effect (Walliser, 2012). Opponents of the fair value approach went further to accuse this method to only work well within the framework of the Theory of the Efficient Financial Markets (Ouvrard & Signorini, 2016). Hence, market volatility also has an effect on the relevance of fair value (Song, 2015) because it will lead to inadequate financing and investing decisions. Thus, estimated fair values that are directly or indirectly withdrawn from the market (Level 1 and 2) are the ones most directly affected by market volatility (Song, 2015). As for Level 3 fair values, estimates are produced internally, therefore are not affected by the market volatility but rather by the subjectivity of the evaluators (Yao et al., 2018).

All in all, the three levels of fair value appear irrelevant during crisis which is consistent with other research in the area, which demonstrates that fair value measurements during period of illiquidity and crises become irrelevant and distorted (Aladwan & Saaydah, 2015). In this way, neither balance sheets nor income statements based on fair value measurement can accurately reflect all value relevant information. Following are some real examples that exhibit the lack of relevance that fair value holds in several financial crises.

Even a decade after the 2008 financial crisis, the question of the implication of fair value in spread of the crisis still sparks a vivid debate (Filip et al., 2019). The case of the investment bank Lehman Brothers during the subprime crisis in 2008 is an example of the ineffectiveness of the fair value measurement during periods of financial turbulence (André et al., 2009; Talbot, 2009). The bankruptcy was unexpected and very surprising. Fair value swelled the asset values, masked unrealized losses and provided the managers with the possibility of manipulations (Magnan, 2009). The values reported at fair value were very misleading, because until the time of the crisis, capital market participants believed that Lehman Brothers was solvent and had sufficient capital to avoid bankruptcy (Magnan, 2009).

Similarly, an analytical study on the three highly exposed worldwide banks during the Greek sovereign debt in 2011 - Crédit Agricole, Société Générale and BNP - shows that the Greek government bonds were valued through internal models using non observable inputs because of the illiquidity of the Greek debt. This reflected a non-representative situation. In addition, investors feared the Greek contagion to other European banks which could potentially have disastrous effects on the European financial system (Cerveira & Oliveira, 2012). Ellul et al. (2015) argued that fair value, causes potential contagion effects for other markets and other institutions during times of crisis (domino effect).

Since the last quarter of 2019, Lebanon in general and the Lebanese banking sector in particular have been witnessing severe events. Based on the analyses of the Lebanese Banks audit reports, the consolidated financial statements showed that the financial assets and liabilities, derivative financial instruments and assets and liabilities categorized as held for sale are assessed at fair value accordingly to IFRS 13. As a result of the uncertainty surrounding the economic crisis and the destiny of the Lebanese banking sector, the estimation of the fair value is not reasonable, because it is based on prices quoted in a market that is severely inactive and illiquid, or determined using cash flow valuation models made from observable market inputs, including interest rates, implied volatilities and credit spreads. Furthermore, the Lebanese banks stated that the disclosure at fair value of the investment securities which are issued by the Lebanese government and private entities, are based on inputs which are not indicative of economic reality and market conditions existing in Lebanon at the reporting date.

For many analysts fair value accounting is linked to contagion of risks between banks, especially in times of recession, and exacerbates every financial crisis (Xie, 2016). However, for Laux and Leuz (2010), a reasonable, objective and complete review of the data concluded that fair value played a small to no role in the crisis. For its advocates, the fair value methodology further served to highlight the mediocrity of the financial situation. Laux and Leuz (2010), specified that fair value accounting is very effective during crises because it provides warning signals in advance, indicating the arrival of financial turbulence. This helps credit institutions to take corrective actions and adequate measures as soon as possible. Hence, it is considered a market health indicator and a risk identifier.

3 Research Methodology

This survey is a result of a long period of consultation of publications and discussions closely related with the subject. Our literature findings were gathered from international articles published in academic databases like Google Scholar, ScienceDirect, Hal archive ouverte, etc.

With the intention of comparing theoretical aspect of fair value with practice in Lebanon, we decided to conduct a hypothetical-deductive investigation in this survey. The next section, specifies our hypotheses along with delimited variables.

This study's research methodology adopts a quantitative approach, for which we designed a questionnaire to understand how banks in Lebanon judge the relevance of fair value. This technique is excessively used in opinion polls. In addition, the empirical data collected from the questionnaire allows for statistical analysis of the two stated hypotheses.

3.1 Hypotheses Development and Conceptual Framework

A hypothesis is one of the possible answers to a question (Nehme et al., 2004). Research questions were asked in the introduction, for which we will propose in this paragraph plausible answers.

Choosing a suitable evaluation basis is crucial since it affects the information transferred to the users of financial statements and thus the decision making (Yao et al., 2018). Relevance is a fundamental attribute for useful accounting information. Although fair value reveals current market values in the financial statements, the possibility of management's manipulation may damage its relevance (Mark-to-Model technique) (Tama-sweet & Zhang, 2015). On the other hand, the historical cost can be manipulated via subjective depreciation/amortization methods, rates and residual values. In addition, it can be used to hide losses or to exaggerate booked profits through a sale (Zijl & Hewlett, 2022). Ironically, proponents of each valuation model accuse the other method of being more susceptible to manipulation.

All in all, book value and fair value may be somehow relevant for decisions, but which is more relevant is an empirical question which relies on the setting. Not all prior surveys support the use of fair value over historical cost.

Therefore, this study attempts to gauge, through the first part of the questionnaire, the point of view of the Lebanese banks regarding which of the two contradictory valuation

systems -Fair value or historical cost- is considered more relevant and suitable to adopt in their financial communications.

The first hypothesis of this paper is stated as follows:

H_1: Fair value under IFRS 13 improves the relevance of the information disclosed compared to the traditional historical cost method.

As described above, the fair value disclosure can be secured from different source of inputs, ones from active markets and others from inactive markets. Therefore, the value relevance of the fair value estimates of each level is influenced by market situations (Tama-sweet & Zhang, 2015). In every financial crisis, the relevance of fair value is questioned especially by banks. Due to its contagion effect, the fair value measurement is suspected to disrupt the entire financial system. Many voices recommend the abandon of this method during periods of crisis (André et al., 2009). For the proponents of the fair value method, it has been a true indicator of the market situation. Through our second hypothesis, we want to know the position of Lebanese banks in this interminable debate, taking into consideration the fact that the banking sector and the financial system in Lebanon haven't been affected by the subprimes crisis in 2008. The contribution of this investigation to the literature is to report the opinions of an illiquid/inactive market regarding the implementation of fair value during crises.

The second hypothesis is stated as follows:

H_2: The relevance of the fair value method is perceived similarly regardless of market conditions.

A conceptual framework helps to recapitulate graphically the main ideas of the study. Figure 1 shows the hypotheses and encompasses the variables with the predictions based on the results of previous studies.

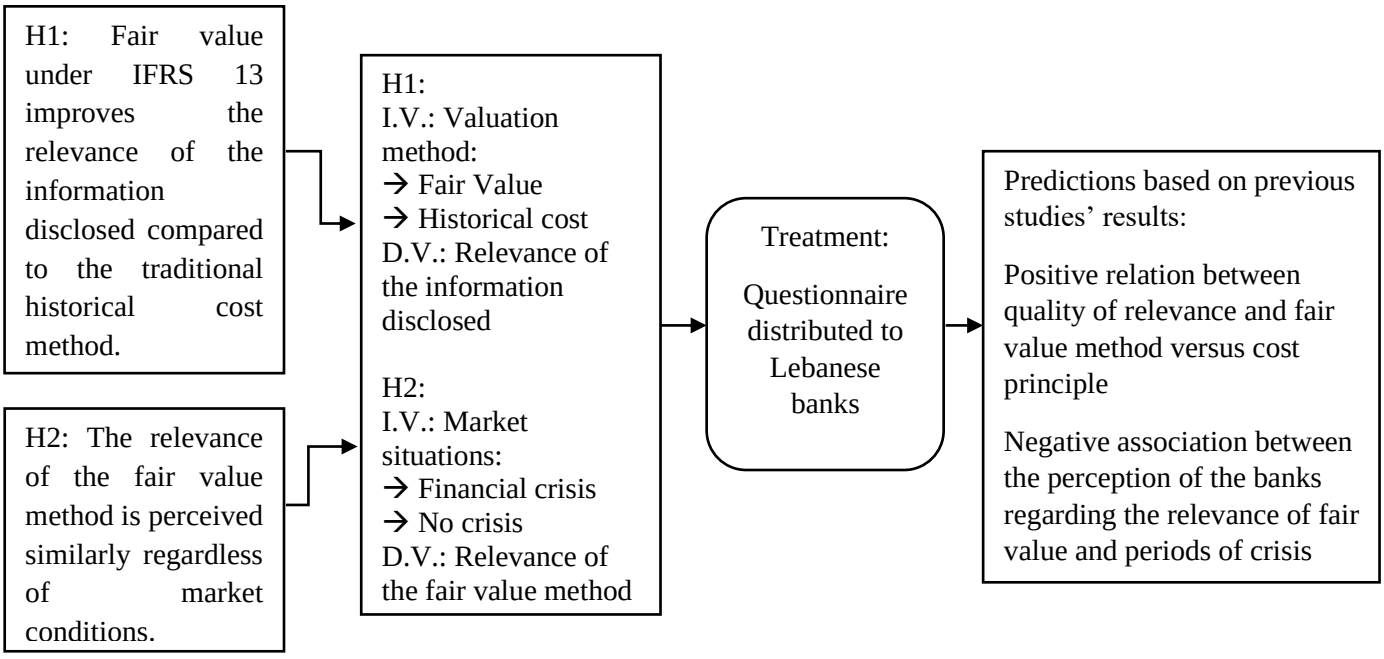

Figure 1: Conceptual Framework of the study.

3.2 Data Information and Sampling

After several revisions, the final questionnaire was formulated of 14 questions arranged with closed multiple choice questions according to the Likert scale in an effort to minimize the non-response rate and to reduce bias. The formulation of the questions encompasses five clauses from Strongly disagree to Strongly agree. In reality, the Likert scale is a working approach widely used in opinion polls. This method is preferable since the literature shows that the response rate for open-ended questions is low. The questionnaire is divided in two parts, each containing a series of questions closely correlated with the hypotheses. The first part highlights the impact of the switch to fair value method on the value relevance. It also gauges whether this evaluation system is more relevant compared to the precedent method of historical cost based on the point of view of the Lebanese banks. As for the second section, it emphasizes the opinion of Lebanese banks on the relevance of fair value during periods of crisis. A copy of the survey distributed to Lebanese banks has been included in Appendix.

As part of this research, we merged two key processes to collect responses from the Lebanese banks. As a first step, we resorted to the transmission of the questionnaire by e-mail for the entire population and to the concerned person. Three banks called us for a direct meeting with the chief accountant, during which we posed the questions to the interviewees and recorded

their oral statements. This method enriched our study with additional knowledge collected directly from an experienced person at the workplace.

To ensure validity and quality of collected data, the respondent population was targeted. The identification of banking institutions active in Lebanon for the year of 2021 was done through Central Bank of Lebanon published complete list of banks. The banking industry is the target population for the main reason that these institutions are obliged by the Central Bank to apply IFRS norms, and consequently they have significant amounts of fair value assets and liabilities in their financial statements. In this study, the population targeted is also our sample since we decided to distribute our questionnaire to all Lebanese banks. So, the sample consists of 61 Lebanese banks. The survey was forwarded to the chief accountants at participating Lebanese banks due to the technical nature of the questionnaire. Finally, we received from each bank only one completed questionnaire, in order to prevent repetitions that risk redundancy.

Some studies in the literature positively link the size of the bank and the value relevance of the fair value method because larger banks are thought to have better expertise to make reliable fair value estimates (Liao et al., 2020; Yao et al., 2018). Interestingly we modified our main analysis to include size of bank as a control variable. To determine size of respondent banks, we followed the classification provided by the Central Bank of Lebanon. Thus, the sample is divided into four groups: Alpha, Beta, Gamma and Delta. The control variable is equal to 1 if the bank type is Alpha, and 0 otherwise. This helps to explore whether or not the research findings are influenced by the size of the bank.

After several reminders, we received 32 completed responses, among them 3 interviews (a response rate of 52%).

3.3 Data Reliability

Cronbach's Alpha testing was conducted to assess the internal consistency of the questionnaire items. Since the questionnaire is divided in two independent parts, the reliability testing was done separately for each.

CRONBACH'S ALPHA	NUMBER OF ITEMS
0.675	**7**

Table 1: Results of Cronbach's Alpha for the set of questions related to H1.

CRONBACH'S ALPHA	NUMBER OF ITEMS
0.738	**7**

Table 2: Results of Cronbach's Alpha for the set of questions related to H2.

Table 1 and 2 summarizes the results obtained from Cronbach's Alpha using SPSS Software. It is essential that the coefficient be greater than 0.7 (Nunnally, 1978) to be able to confirm the internal consistency. The first table shows a Cronbach Alpha = 0.675 < 0.7. Cucos (2022) explained that if the scale is composed of less than 10 items, it is hard to attain a high Alpha value. In such cases, an Alpha value > 0.5 is considered acceptable (Cucos, 2022). The second table displays a result of 0.738 > 0.7. Basically, we can certify that there is an internal consistency between the questions. We can affirm the representativeness of our measuring instrument.

4 Results and validation of the hypotheses

The following section presents the results of the statistical analysis.

4.1 Normality and Student's T Tests Related to Hypothesis 1

Prior to any test, the normality of the dependent variable (D.V.), represented in this hypothesis by "the Relevance of the information disclosed" score between these two independent variables (I.V.): Fair value method vs historical cost method should be studied.

The Kolmogorov-Smirnov normality test was operated. We assume a null hypothesis: the variable is normal; and an alternative hypothesis: the variable is not normal. We accept the null hypothesis that the variable is normal (Figure 2), because the normality test displayed a sig. (0.200) > 0.05.

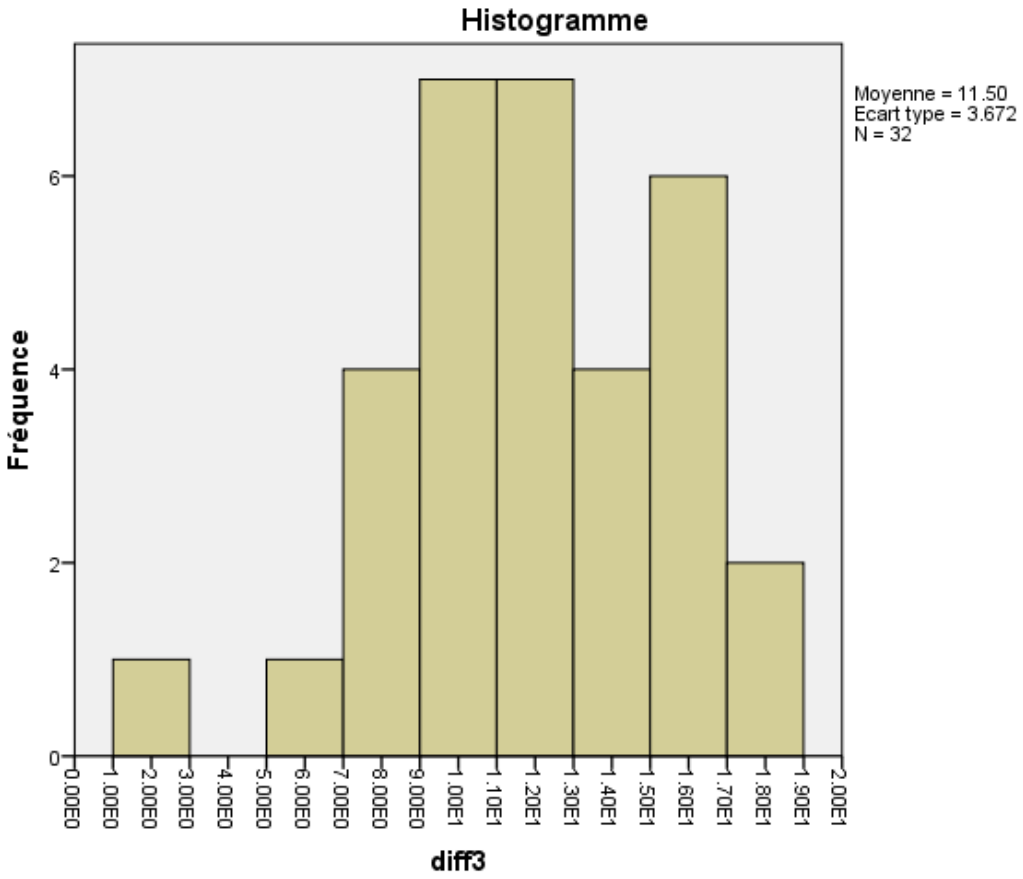

Figure 2: Histogram showing a normal distribution of the endogenous variable.

A parametric T-test for paired samples was determined as a suitable choice for comparing the means of the two independent variables in this case fair value method vs historical cost method. The purpose is to identify a significant relation between the dependent variable and one of the independent variables. Because of this, we can extract a statistical decision about the first hypothesis. Before undertaking the T test, it is necessary to set the statistical hypothesis:

H0: Null hypothesis: There is no significant difference between the paired population means. $\mu_1 = \mu_2$

H1: Alternative hypothesis: There is a significant difference between the paired population means. $\mu_1 \neq \mu_2$

Where μ_1 is the population mean of independent variable 1 (fair value), and μ_2 is the population mean of independent variable 2 (historical cost).

We compare the relevance of the information score between the two methods. Table 3 gives the basic information about the two variables. Average score for relevance of the information using fair value is 16.25 > 4.75, which is the average score for historical cost. 95% Confidence Interval was used to test the hypotheses.

	Mean	**Number of response**
Relevance of information x Fair value	16.25	32
Relevance of information x Historical cost	4.75	32

Table 3: Means of the variables.

Table 4 provides us with the Student's T test results with the difference in means between the two samples (11.5), and more importantly, the *p*-value of the test which is equal to (0.000). Since this *p*-value is < 5%, the null hypothesis of equality of means is rejected. There is therefore a significant average difference between relevance of the information using fair value and historical cost, with the former being greater.

	Relevance of information x Fair value / Relevance of information x Historical cost
Difference in means	11.5000
T test result	17.716
Statistical significance	0.000

Table 4: T-test result.

From the results, we can say that H1 is confirmed. Therefore, based on the opinions of the Lebanese Banks it is accepted that fair value improves the relevance of disclosed accounting information and is more suitable than the traditional historical cost method.

4.2 Normality and Wilcoxon Signed-Rank Test Related to Hypothesis 2

As usual, we start by testing the normality of the dependent variable which in this hypothesis is "the relevance of the fair value method" score between two market situations: independent variable 1: financial crisis and independent variable 2: no crisis (efficient markets).

The Kolmogorov-Smirnov normality test indicates that the variable is not normal because the p-value equal to (0.000) is < 0.05. H0 (the variable is normal) is therefore to be rejected (Figure 3). For this, the nonparametric test Wilcoxon Signed-Rank test should be administered to conclude a valid result about the hypothesis.

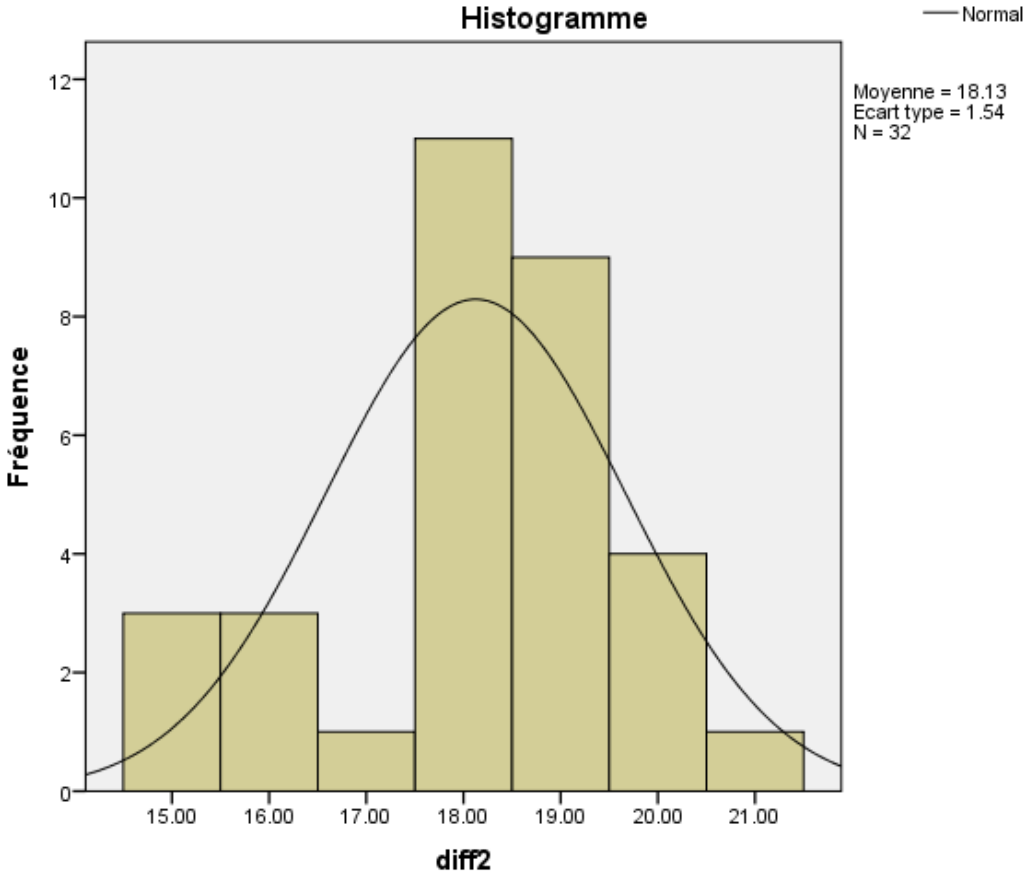

Figure 3: Histogram showing a non-normal distribution of the endogenous variable.

In this test, the average ranks are compared, against the Student's T test where the analysis is based on the means, but for the same purpose of knowing whether the dissimilarity between the groups is significant or not.

Before undertaking the Wilcoxon Test, it is necessary to set the statistical hypotheses:

H0: Average rank (no crisis) = Average rank (with crisis)

H1: Average rank (no crisis) # Average rank (with crisis)

Table 5 shows some interesting results about the opinion of Lebanese banks concerning the relevance of fair value regardless of the situation of financial markets. We can see from the table's legend that all the participants in our study had a higher perception of the relevance of fair value during the period of crisis than in the period of peace. However, zero

participants saw any change in the value relevance of fair value regardless of market conditions.

	Mean Rank	**Number of response**
Efficient market < Financial crisis	16.5	32
Efficient market > Financial crisis	0	0
Efficient market = Financial crisis	0	0

Table 5: Mean rank of the variables.

By examining the final test statistics (Table 6) we assess whether this obtained result led overall to a statistically significant difference. The data in Table 6 shows the result of the Wilcoxon test as well as Asymp. Sig. (2-tailed) value, which in this case is 0.000. Since the *p*-value for the test < 5%, the null hypothesis of equivalence of the middle ranks is denied.

	Financial crisis – Efficient markets
Result of the Wilcoxon test	-4.976
Statistical significance	0.000

Table 6: Wilcoxon test result.

For the second hypothesis (The relevance of the fair value method is perceived similarly regardless of market conditions) to be affirmed, Lebanese banks must have the same perception of the value relevance of fair value no matter the market status. However, the result of the Wilcoxon Test shows the opposite.

Based on these findings, we infer that H2 is rejected.

5 Discussions

To analyze the Lebanese banks' responses, several analytical tests were conducted. Based on the results obtained, and according to the Lebanese banks' opinions, our findings offer robust support for hypothesis 1 because we found a positive association between the quality of relevance and the fair value method when compared to the historical cost method. Nevertheless, this attribute of relevance varies depending on the market conditions. Plenty of

empirical studies were initiated on issues related to fair value method. One of the issues studied is focusing on the value relevance of fair value under IFRS 13 compared to the historical cost method and the relevance of fair value during periods of crisis.

A recap of some of the findings of the prior literature is presented below. Some are consistent with our own findings/analysis, whereas others are not.

- Many standards require a mandatory application of the fair value accounting. In a Zijl and Hewlett (2022) study, the authors demonstrate that in developing countries for instance, South Africa, where markets are underdeveloped, inactive and illiquid, the application of fair value doesn't produce relevant and useful information because preparers rely on unobservable, adjusted inputs and complex calculations. This reliance increases cost, effort and the subjectivity of the produced information.
- Liao et al. (2020) compared the value relevance of the two opposite methods fair value and historical cost during the subprime crisis of 2008.The authors investigated financial institutions from 25 different European countries. They noticed that compared to the historical cost method, fair value is more relevant during crises. In addition, the authors conclude that the two methods historical cost and fair value provide different information content relevant to investors' decision-making processes; thus, replacing one with the other measure would potentially reduce the usefulness of financial statements.
- Tama-sweet and Zhang (2015), observed the quarterly published data of the banking industry in two different periods representing two different states of the market: 1282 banks during the financial crisis (2008-2009) and 1481 banks under a normal economic period (2012-2013). They compose a model based on the Ohlson framework to test their stated hypotheses. They found unexpected results. First, in normal periods the value relevance of the fair value estimates is slightly higher than that of the non-fair value assets, namely book value. The difference becomes larger in situations of financial turmoil. Regarding the three levels of fair value inputs, the fair value estimates using levels 1 and 2 and non-fair value evaluation are more relevant during normal economic periods than those of crises. Whereas the value relevance of the level 3 data is identical in both market cases.
- Song (2015), demonstrated the impact of the market volatility on the relevance of fair value. Employing the Ohlson model, and based on a sample of US financial

companies, the author proved that when market volatility is high the fair values are significantly lower. Consequently, the relevance of fair value is negatively associated with the market volatility especially levels 1 and 2 inputs.

- Kaya (2013), compared the two valuations methods: Fair value vs Historical cost. She declared that the financial world moved towards a more subjective, ambiguous, lack of reliability method by adopting the fair value. On the contrary, the historical cost method is built on a robust pillar of prudence. Even though the historical cost approach lacks relevance especially during inflation periods, and needs some improvements to reveal accurate reality, at least this approach is not produced by a valuation technique which makes it exposed to management manipulations.

6 Conclusion

After the debates and discussions initiated by the concept of fair value at the international level, this paper examines Lebanese banks' point of view regarding the relevance of the fair value method. Using a sample of 61 banks active in Lebanon in 2021, this research attempts to connect their opinions with theoretical findings. Based on the obtained results, we find that fair value under IFRS 13 is a more suitable and relevant method than historical cost, given the imperatives arising from the status quo of markets that are distinguished by transactional difficulties. Afterall, the market value incorporates information about a firm's future growth opportunities and the book value represents the value of assets in place at a certain past date (Olante & Lassini, 2022). The subprime crisis is considered the turning point towards the fair value measurement. In every financial crisis, the fair value method reveals its two main disadvantages. When the market becomes inactive and illiquid, the subjectivity of the evaluations increases because of the use of level 3 inputs. Even so, by using market based data, the fair value integrates excess volatility into the financial statements (Plantin et al., 2008). The business world was split between opponents and proponents of fair value. In Lebanon, based on the opinions of the bank representatives collected through the questionnaire, we found that the market conditions (financial crisis/ financial stability) impacts the relevance of fair value. This issue will continue to be debated.

Finally, we used two statistical tests to analyze the responses of our sample. We were able to confirm our first proposed hypothesis "*Fair value under IFRS 13 improves the relevance of the information disclosed compared to the traditional historical cost method*" by administering the Student's T test, which displayed a fair value score 11.5 higher than the

historical cost score. The results of the Wilcoxon test indicated that the second research hypothesis "*The relevance of the fair value method is perceived similarly regardless of market conditions*" is not valid because the average rank for the crisis category was considerably higher than that of non-crisis category. In addition, the classification of the banks in Lebanon didn't impact the result of the study because of the homogeneity of the work in the banking sector in Lebanon. We predicted that the better performing banks (Alpha banks) would produce more relevant fair value estimates, which is not the case in Lebanon.

Moreover, this study faced several challenges, limitations and obstacles. For example, the small size of Lebanon, and of the banking industry in particular, restricted the study to a small sample. In addition, many factors including competition between the bank and the severe Lebanese banking crisis, led to a non-cooperation of the chief accountants with the study. Another limiting factor was the low intervention of the Lebanese banks in the world financial markets which causes immaturity of the concepts. These barriers were gradually overcome and settled in order not to compromise the credibility of the results.

Despite best efforts to cover this topic broadly, the scope of this research area is vast, and there are a multitude of ways to explore it further, be it through use of different samples and statistical models, or even the country under study, etc. Therefore, future research based on new insights can be done, for instance, we suggest to undertake a study that investigates, using a sample of banks/ financial institutions/real estate institutions, the correlation between the designation of a valuation model (Fair value vs Historical cost) and the discrepancy between the images obtained for a single reality of the company, whether in terms of its stock market value or the evaluation of its income statement. Another interesting extension of the research is to link the characteristic of the corporate governance of a firm with the relevance of the fair value evaluations, given that the board of directors is responsible for preparing proper financial statements. Therefore, the environment of the board is very important and affects the quality of the information disclosed.

Appendix

Questionnaire Distributed to Lebanese Banks:

This questionnaire is developed in order to acquire the essential information for the realization of our study.

Part 1: Presentation of the bank

Company name:…….

The bank belongs to the group:

☐ Alfa

☐ Beta

☐ Gamma

☐ Delta

Part 2: Relevance of the fair value accounting model in the context of Lebanese banks

1- Quality of relevance of the fair value in accounting information

Questions	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1- Does the adoption of IFRS 13 Fair Value Measurement increased transparency in accounting reporting?					
2- Does the insertion of forecast information in the bank's accounting accounts allow to make effective assessments?					
3- The historical cost neglects the information related to intangible assets and financial instruments, does this permit to camouflage a significant part of the bank's activity?					
4- Does fair value let the investors to deduct the true value of the bank and identify the different risks that surround it?					
5- Do financial statements prepared at fair value increase investors' confidence in the information contained in these accounting documents?					
6- Does fair value accounting facilitate comparison between entities belonging to the same sector of activity?					
7- Does the historical cost accounting method include in the balance sheet values that are far from reality, which have become obsolete?					

2- Relevance of fair value in times of financial turbulence

Questions	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
8- Is a fair value valuation of assets always effective in times of financial crisis?					
9- Is abandoning fair value in favor of another accounting method during market disturbances a proposal to be rejected?					
10- In your opinion, during crisis situations, does fair value play the role of revealing the poor financial health of banks?					
11- Is fair value the most appropriate method of valuation only if the market is efficient?					
12- Does fair value accentuate the fluctuation of the bank's equity in times of crisis?					
13- Does fair value increase the volatility of the income statement during crises?					
14- Are fair value valuations reported in times of market disruption misleading and unfaithful?					

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