# THE INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS) ADOPTION AND VALUE RELEVANCE

Hussen Amran Naji Al-Refiay<sup>\*</sup>, Sinan Salem Kasim Al-Shaikh<sup>\*\*</sup>, Azher Subhi Abdulhussein<sup>\*\*\*</sup>

\* Corresponding author, Accounting Department, Faculty of Administration and Economics, University of Karbela, Karbala, Iraq Contact details: University of Karbela, Karbala 56001, Fraha, Iraq

\*\* Accounting Department, Faculty of Management and Economics, Mustansiriyah University, Baghdad, Iraq

\*\*\* Accounting Department, Faculty of Administration and Economics, University of Karbela, Karbala, Iraq



How to cite this paper: Al-Refiay, H. A. N., Al-Shaikh, S. S. K., & Abdulhussein, A. S. (2023). The International Financial Reporting Standards (IFRS) adoption and value relevance. *Corporate & Business Strategy Review*, 4(1), 69–86. https://doi.org/10.22495/cbsrv4ilart7

Copyright © 2023 The Authors

This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0). https://creativecommons.org/licenses/by/ 4.0/

ISSN Online: 2708-4965 ISSN Print: 2708-9924

Received: 09.07.2022 Accepted: 30.01.2023

JEL Classification: M410, M480, M41, N24 DOI: 10.22495/cbsrv4ilart7

# Abstract

This research examines the impact of the International Financial Reporting Standards (IFRS) on value relevance (VR). It is reported that most previous studies that address value relevance relationships with the IFRS have found conflicting results. For example, a reduction in VR in the US but it enhances in most reviewed studies (Gao et al., 2022). According to the findings, the impact of implementing IFRS varies from country to country. In the UK, the IFRS adoption has decreased the book value (BV) while in France and Germany, has increased. After adopting IFRS during the financial crisis, the findings also suggest that the VR has fallen in these nations. All financial institutions trading on the stock markets of these three nations serve as a sample for this study. Quantitative methods are used to collect data for this study, while SPSS is used for statistical analysis. The data was analysed prior to IFRS (2000-2004), for the global financial crisis of 2008, and later IFRS (2006-2015). This study adds to accounting knowledge by analysing the results of IFRS adoption throughout the time frames. In addition, it helps accounting standards setters and policymakers in developing IFRS quality and establishing related policies.

Keywords: IFRS, Value Relevance, Reporting Quality, Financial Crises

Authors' individual contribution: Conceptualization — H.A.N.A.-R.; Methodology — S.S.K.A.-S.; Validation — H.A.N.A.-R., S.S.K.A.-S., and A.S.A.; Formal Analysis — S.S.K.A.-S.; Investigation — H.A.N.A.-R.; Data Curation — A.S.A.; Writing — Original Draft — H.A.N.A.-R.; Writing — Review & Editing — H.A.N.A.-R., S.S.K.A.-S., and A.S.A.

**Declaration of conflicting interests:** The Authors declare that there is no conflict of interest.

**Acknowledgements:** The Authors would like to begin by thanking the Faculty of Administration and Economics, University of Karbela, Iraq, for its financial support to do this research. Also, the Authors would like to thank their colleagues in Accounting Department for their help and recommendations throughout the research process.

VIRTUS

# **1. INTRODUCTION**

According to the official definition, International Financial Reporting Standards (IFRS) are a collection of financial reporting standards produced by the International Accounting Standards Board (IASB), recognised under the brand name, IFRS (Ray, 2011), which are adopted internationally by several countries around the world (IFRS Foundation, 2019). The IASB established this trademark. Scientists have found that IFRS is a high-quality collection of standards that enhances openness and harmonises accounting processes across countries (Horton & Serafeim, 2010). Financial statements are essential in making investment choices (Smith & Reiter, 1996). This is because the information included in financial statements is valuable and impacts the decisions made by investors (Putri et al., 2012).

It is becoming more critical for accountants, academics, and practitioners alike to comprehend the effect that the IFRS have on the reliability of financial statements (Rashid et al., 2021). Consequently, there has been a plethora of research conducted on the topic, with varying conclusions. Brüggemann et al. (2010) have shown that the adoption of IFRS has a beneficial effect on stock prices. This indicates that the financial reporting standards, which serve as accounting regulations for determining value results, have had an impact on investors (Manganaris et al., 2015). There are many reasons why investigating IFRS adoption and value relevance (VR) is important. For example, first, it provides efficient evidence of how a global accounting standard set affects accounting systems. Second, it provides cross-border comparability to find out how this set can affect different contexts. Third, it helps standards setters to develop this set and provide efficient evidence for regulators to enforce the IFRS.

Empirical research has shown that the IFRS has enhanced accounting information systems in various industrialised nations (Ballas et al., 2019). Armstrong et al. (2010) argue that the IFRS's implementation improves VR. Investors may find book value (BV) and earning per share (EPS) presented under IFRS are more useful in making investment judgments. Some academics have suggested that the IFRS have no effect on the economy, but that it might have a detrimental influence on accounting quality (Vinoth et al., 2021). Researchers have not discovered any evidence that the IFRS has diminished the usefulness of accounting data (Agostino et al., 2011; Hung & Subramanyam, 2007). In addition, several analysts have said that the lack of a substantial rise in BV means that IFRS-based accounting data is no longer VR (Agostino et al., 2011). Therefore, Lundholm and Myers (2002) view that decision makers' judgments based on essential examination of financial reports to uncover misestimate firms to be bound.

The primary goals of our research are to investigate IFRS's impact on VR in various countries during the financial crisis. The financial crisis impact many and various countries since 2007 (Lopes, 2018). The countries chosen for this study are the United Kingdom (UK), France, and Germany. To achieve this, choose three time periods: one before the introduction of IFRS (i.e., 2000–2004), one the financial crisis in 2008, and one after the IFRS between 2006 and 2015.

Germany, the United Kingdom, and France were selected so that the researchers could, among other things, make cross-national comparisons across institutions. As a second point in the European Union (EU), Germany, the United Kingdom, and France have the best accounting standards quality (Horton & Serafeim, 2010), and Germany's law regulations are robust. When comparing various accounting rule systems, strict adherence to established standards is essential. Finally, limiting the study to three nations allows the researcher to use additional statistical analysis, such as post hoc tests after the application of an ANOVA. As a fourth point, the accounting practises of the United Kingdom, France, and Germany are distinct one from one other. For the fifth reason, the accounting systems in Germany and France are stakeholderoriented, whereas those in the United Kingdom are shareholder-oriented (Ball et al., 2000). Finally, the IFRS is widely used by a sizable percentage of businesses in these nations. Because of this, the data will be more reliable.

Non-financial firms listed in selected countries will have their accounting quality examined by contrasting the value relevance both before IFRS and after IFRS introduction and again following the financial crisis. Ohlson's (1995) regression model is used to test the link of BV with EPS. Accounting information under IFRS and national Generally Accepted Accounting Principles (GAAP) in the UK, Germany, and France is compared using this approach to identify discrepancies in value and EPS. relevance. Using measures of BV the researcher tests whether the IFRS results in significantly higher BV and EPS than national standards, and whether the IFRS results in more significant BV and EPS at the time of the financial crisis than local GAAP. In addition, to find out whether the IFRS has the same impact in different countries.

As we have seen, IFRS adoption and the preparation of financial reporting on a worldwide scale lead to high-quality accounting information, as proven by the work of several academics. For example, as found by Ballas et al. (2019), the IFRS lead to more accurate profitability figures. However, some academics have claimed that the quality of systems has not changed accounting as a consequence of these regulations. This has made the topic of the effects of IFRS adoption more contentious than ever. In addition, not many scholars investigated IFRS adoption in a variety of settings in developed nations during the financial crisis. This research will thereby address the following questions:

*RQ1: Is the VR quality affected by the IFRS implementation?* 

*RQ2:* Does the VR change between the time before the IFRS introduction and the current crisis?

*RQ3:* How different are these three developed nations in terms of the impact of adopting IFRS?

The International Accounting Standards Committee (IASC) came into existence in 1973. To begin, IASC had nine members consisting of top accountants from Ireland, the United Kingdom, the Netherlands, Australia, Japan, Mexico, the United States, Canada, and Germany. Later, it expanded to include over a hundred people from 70 different nations. It was the primary mission of this group to



disseminate and apply International Accounting Standards (IAS) that would improve the financial reporting system's transparency, dependability, and relevance (Alfredson et al., 2006).

The aim of this study is to compare the three developed nations' BV and EPS before (2000–2004) and after (2006–2015) the implementation of IFRS and following IFRS implementation, throughout the height of the financial crisis (2008).

Using collected data from 17,408 firm-year observations this research provides imperial evidence to the existing body of accounting literature by analysing the long-term as well as the short-term impacts of IFRS implementation. Accordingly, this research is the earliest to compare the effects of IFRS implementation on accounting quality using non-financial firms during the crisis across three countries (the United Kingdom (UK), Germany (DE), and France (FR)). Having a clearer picture of the IFRS's global impact at the same time may also be useful to accounting institutions in these nations, since it may improve their familiarity with the IFRS's effects. Additionally, three nations have been contrasted to evaluate whether IFRS adoption impact the value relevance varies across these countries.

The IASB has mandated that all publicly traded companies prepare their financial reports based on the IFRS, making IFRS adoption a hot topic over the past decade. This is done so that investors and creditors have access to a consistent and reliable set of financial reports (Barth et al., 2008). All prior research has shown conflicting findings on the effect of IFRS on VR. Some researchers, such as Barth et al. (2008), Liu et al. (2012), Bartov et al. (2005), and Judge et al. (2010) have shown that BV and EPS have more value significance under IFRS. Others have contended that the IFRS puts less emphasis on BV and EPS (Hung & Subramanyam, 2007). When the performance and economic situation of the business are not presented following the IFRS, the value relevance may be harmed (Soderstrom & Sun, 2007).

The remaining structure of this paper is as follows. Section 2 addresses the relevant literature. Section 3 analyses the methodology that has been used to conduct the empirical study. Section 4 covers the findings and Section 5 illustrates the discussion. Section 6 concludes the paper.

# 2. LITERATURE REVIEW

The results of previous empirical investigations may be broken down into a few broad groups. According to the first group of research, the lack of an appreciable rise in book value renders accounting data irrelevant and independent of the IFRSs (IFRS). Armstrong et al. (2010), Wang, (2008), and Horton and Serafeim (2010) report that IFRS improved the value relevance, which, in turn, benefited investors. Additionally, IFRS enables organisations to evaluate the value relevance, allowing investors to make a better decision (Isaboke & Chen, 2019). Value relevance is defined as the ability of financial reports in summarising data and it affects the value of a company's stock (Hellström, 2006). Brown et al. (2006) view that accounting profits describe knowledge contained in market prices.

The primary goal of an accounting information system is to aid investors in making informed investment choices (Ball & Brown, 1968). An empirical look at financial statements has yielded information on whether or not investors utilise them in making choices and how they are reflected in stock prices. There is evidence that investors utilise financial statements as a source of value-relevant information when assessing stock prices. Financial statement information is also useful when it influences investor behaviour and forecast accuracy (Ball & Brown, 1968).

Many experts and scholars have utilised and debated the value relevance since its creation (Ravenscroft & Williams, 2009). When the value relevance is strong, investors are said to make better judgments. Value relevance captures the importance and trustworthiness (Barth et al., 2001).

Both conditional and unconditional conservatism exist, with the former representing the equity book value and the latter the net assets (Manganaris et al., 2015). Conditional conservatism and VR are thought by researchers to have an impact on accounting quality (Manganaris et al., 2015).

When there is a high degree of accounting expertise, it protects investors better, as Chebaane and Othman (2014) noted. IFRS adoption is a means to this end. Furthermore, developing economies' adoption of IFRS and regulatory frameworks has improved the value relevance (Chebaane & Othman, 2014). Earnings may be more meaningful to the value of a company under IFRS, according to the study of some scholars (Barth et al., 2008; Alali & Foote, 2012).

This research looks at the United Kingdom, Germany, and France to find whether there has been a decline in accounting quality because of IFRS in these industrialised countries. Additionally, it attempts to examine the adoption of IFRS in diverse settings. Accounting data for listed firms in the stock markets in Germany, the UK, and France will be analysed to see how much of an impact it has on the stock price. The IASB asserts that using IFRS would lead to higher-quality financial statements. To boost the efficiency and competitiveness of businesses, IASB and IASC set out to create a unified, high-quality accounting standard.

Due to IFRS's limitations on accounting entries, the financial report quality has improved. The accounting amounts improve accounting quality by giving investors more data with which to make informed financial choices (Barth et al., 2008). Researchers have shown that providing investors with fair value helps both parties. Furthermore, they validated that IFRS's fair value technique improves the quality of accounting (Landsman, 2007).

Accounting amounts for businesses that implemented IFRS were found to be greater than accounting amounts for enterprises that did not adopt IFRS in an investigation conducted by Barth et al. (2008). Furthermore, they discovered that timely loss recognition accounting amounts were high, whereas earning smoothing and management were reduced following IFRS implementation. Other researchers, such as Devalle et al. (2010), Iatridis and Rouvolis (2010), Barth et al. (2012), and Manganaris et al. (2015), find similar results. In addition, comparable to earlier studies like Barth et al. (2008), Gjerde et al. (2008), Judge et al. (2010), and Dechow et al. (2012) find that under IFRS, EPS has a greater value significance. Several authors, including Barth et al. (2008), Dechow et al. (2012), Bartov et al.



(2005), and Judge et al. (2010), have corroborated this finding. This study's authors anticipate that IFRS will significantly increase the equity book value of and earnings share.

Adopting IFRS, according to several studies, improves the usefulness of accounting data (Clarkson et al., 2011; Aubert & Grudnitski, 2011). Adoption of IFRS influence the improvement of VR greatly (Bartov et al., 2005; Barth et al., 2008; Avwokeni, 2018). However, some researchers have shown contrasting findings (Barth et al., 2012). After implementing IFRS, certain nations, like Greece, saw a rise in companies' BV and EPS (Iatridis & Rouvolis, 2010). Accounting information in Norway did not become more valuable as a result of IFRS (Gjerde et al., 2008). It was shown that with the introduction of IFRS in various European nations, BV declined while EPS grew. Da Silva de Jesus (2009) analysed 70 financial listed companies' BV and EPS prior to and later IFRS implementation (during the crisis). After implementing IFRS, it was discovered that BV and EPS both fell.

Other academics have shown that although EPS went up as a result of IFRS implementation, the BV fell dramatically. If we take Norwegian companies as an example, it is found that under IFRS, the BV was lower than under the GAPP of Norway and EPS is the other way around (Gjerde et al., 2008). However, other researchers document that under IFRS, BV and EPS have risen (Manganaris et al., 2015). Bartov et al. (2005) examine the VR under the GAAP of the US, the GAAP of Germany, and the IAS for firms listed on the Frankfurt Stock Exchange. They observed no substantial difference between the GAAP of the US and IAS earnings, and both have greater coefficients than the GAAP of German earnings. While Hung and Subramanyam (2007) record that BV and EPS under the GAAP of Germany were not as value relevant under IAS.

IFRS financial reports are more value relevant, as shown by data from the Chinese stock market (Chen et al., 2001; Liu & Liu, 2007). However, additional research, such as Prather-Kinsey (2006), Ertuğrul (2019), and Babalyan (2001), conducted in diverse settings in developing nations including Turkey, South Africa, and Mexico, showed contradictory results relating to the value relevance under IFRS implementation. The foregoing reasoning suggests (in a different form) the following hypotheses:

*H1: IFRS affect positively the book value of equity. H2: IFRS affect positively earning per share.* 

#### 2.1. IFRS adoption in several countries

Following Ohlson's (1995) regression model, the data from the United Kingdom, Germany, and France were to examine whether variances in context affect the VR. Furthermore, the ANOVA test is used to evaluate the impact of IFRS on value relevance in various nations. Preceding studies revealed that after France and the UK adopted the IFRS, the VR grew but fell in Spain, Germany, and Italy. In the United Kingdom, the company's BV rose, but it fell in Spain, Germany, Italy, and France. Germany and France both had a rise in the firms' net income per share, whereas Italy saw a fall (Devalle et al., 2010). The findings, however, were contradictory when these nations were analysed separately. This is because these two factors are profoundly affected by the myriad of cultural and linguistic specifics that characterise each nation (Devalle et al., 2010).

Since the publication of the IFRS, several studies have analysed the impact these standards have had on the usefulness of accounting data from a variety of viewpoints. Differences in outcomes may be attributed to the fact that the factors influencing the use of financial records vary from nation to country (Devalle et al., 2010). According to Al-Refiay et al. (2022), the IFRS are not the only standards and enforcement that impact accounting quality. Listing rules, EU requirements, and business law all contribute to the ruleset. Self-enforcement, judicial review, the judicial system, institutional monitoring, the media, and public opinion are all tools for ensuring compliance. The capital market and liquidity are aided by the adoption and implementation of IFRS. These gains from revised accounting standards, however, are contingent on rigorous enforcement of the new rules. However, each nation has its own standards, so a change in one country's enforcement may not necessarily have an effect on the others (Barth & Israeli, 2013). Forcing the adoption of IFRS entails numerous severe kinds of capitalism that may arise, and the differences in accounting standards have to be addressed since there are different types of capitalism and no one can tell which one is superior. Závodný and Procházka (2022) find that the VR increased due to the IFRS adoption in two countries (the Czech Republic and Hungary) more than in Poland. The effect of IFRS on audit quality investigated by other scholars. They noted that other government rules also had a role in shaping the financial statements alongside accounting standards. On top of that, supervisory systems that are more stringent have less of an impact on businesses that use IFRS (Al-Taee & Flayyih, 2022). The following hypothesis arises from the above discussion:

*H3: The adoption of IFRS has a substantial variance impact on BV and EPS in various countries.* 

#### 2.2. IFRS adoption during crisis

Most companies tried to sell assets simultaneously during the financial crisis as a means of reducing leverage. The market became very illiquid because of this. Therefore, these assets needed to be recorded for a longer period. Organizations were urged by IFRS to switch to the fair value technique from the historical cost base.

On a balance sheet, the fair value indicates the actual monetary worth of all assets and liabilities. As a result, shareholders and investors are better able to evaluate the profile risk and take appropriate measures (Ball, 2006). In contrast, fair value may cause erratic behaviour since it allows the balance sheet value to be determined by the rapidly changing market, rather than by the underlying worth of assets and liabilities (Allen & Carletti, 2008).

The focus of IAS 39 is on acknowledgment and evaluation. This crisis standard was one of the most discussed financial tools. The primary focus of IAS 39 is to recognize and measure financial assets and liabilities. Information reported in financial statements must comply with IAS 32. Information disclosure is at the heart of IFRS 7 (Lopes & Rodrigues, 2008). To conform to the fair value, companies reclassified assets that were worth less than what they paid for them. The result was massive losses that exacerbated the financial crisis. Fair value was the impetus for amendments to IFRS 7 and IAS 39 by the IASB at the close of 2008.

During the financial crisis, it was said, the IFRS did not have the same impact as it had before or after. As an additional note, the IFRS adoption contributed to the demise of numerous businesses during the financial crisis. Many academics have contended that the crisis was precipitated in large part by flaws in the accounting system (André et al., 2009). Companies devalued their assets in order to be associated with subprime loans, Andre et al. (2009) noted further. They pinned the loss on the fair value (IFRS) since they had no plans to liquidate the assets. Consequently, it is not useful to use fair value as a yardstick.

Accounting practises including equity book value and earrings share after IFRS adoption, were analysed for 70 financial listed corporations over two time periods: during and after the financial crisis. A decline in equity was discovered in the books, despite the fact that IFRS allowed for a rise in earnings per share during the financial crisis (da Silva de Jesus, 2009). The recent financial crisis highlighted the need for greater transparency in the financial markets (Devalle et al., 2010). As a result of the write-down of assets on the balance sheet, the stock price and credit rating of companies suffered during the financial crisis (Bissessur, 2009). Other researchers looked at how investors reacted to companies' profit reports after they factored in one-time costs. According to their research, profits dropped and the crisis rendered them less relevant (Elliott & Hanna, 1996).

Research shows that BV and EPS tend to fall at the time of financial crises (Flayyih et al., 2022). This research will test the hypothesis that the VR was different prior to and following the IFRS implementation, two time periods that are of particular importance due to their potential effects on the economy.

This financial crisis has highlighted the importance of a company's BV and EPS. In conclusion, Ball et al. (1968) stated that accounting information is used by investors. Investors also utilise accounting quality. Investors are better safeguarded if accounting quality is excellent, according to Chebaane and Othman (2014). Therefore, many studies have looked at accounting quality to see whether IFRS adoption enhances accounting quality and they have discovered conflicting findings.

Prior researchers, such as Babalyan (2001), Chen et al. (2001), Prather-Kinsey (2006), Liu and Liu (2007), Hung and Subramanyam (2007), Gjerde et al. (2008), Ertuğrul (2019), Iatridis and Rouvolis (2010), Aubert and Grudnitski (2011), Clarkson et al. (2011), Barth et al. (2012), and Manganaris et al. (2015), have shown conflicting results regarding accounting quality whether it increased or decreased after IFRS implementation. The VR is higher following the IFRS than under local GAAP by several studies, including those by among others, reported contradictory findings. Some studies have identified a positive correlation between equity book value and earnings share, whereas others, such as those of da Silva de Jesus (2009) and Gjerde et al. (2008), have found no such correlation.

# **3. RESEARCH METHODOLOGY**

The ontology and epistemology of the study are discussed in this section, as well as the philosophy and methods used in the research. Additionally, the research design for the study's methodology and research approach is presented here.

Research may be conducted using any number of different ideas and methodologies. Since researchers' worldviews vary, there is no right or incorrect choice of paradigm (Saunders et al., 2011). Saunders et al. (2011) have provided a useful model for understanding research design and technique in the corporate world; they call it the "research onion". There are seven levels to be peeled back before you can get to the core of the onion, where your answers to the study's questions lie. Moreover, these levels need to be connected with each other to keep the study going.

Since the study's stated goals include investigating whether or not adopting IFRS has altered the relevance of accounting to business value, the researchers will utilise a deductive methodology. The single-method, quantitative approach will be used in this study. The research used information obtained from Datastream.

# 3.1. Research sample

Non-financial firms that were listed on the stock markets of London, Frankfurt, and Paris between 2000 and 2015 make up the 17,408 firm-year observations used in this research. There were three phases to this period. The first period lasted from 2000 to 2004 (just before IFRS was adopted). At this point, the analyst might compare each company's pre-IFRS BV to its pre-IFRS profits per share and pre-IFRS price. The second period lasted from 2006 to 2015 and followed the introduction of IFRS. By comparing the outcomes of this phase with those of the previous one, the researchers were able to assess the effect of IFRS adoption. The third phase occurred during the 2008 financial crisis (while the crisis really began in 2007, this research uses 2008 to symbolise the financial crisis). This is because 2008 was the year when the crisis was at its worst and had the most impact on companies bottom lines. This step allowed the researchers to examine whether these three factors changed throughout the economic downturn.

The capital market size, regulatory framework, and accounting standards in these three nations were specifically selected because they vary from one another. Shareholders are prioritised under the UK accounting structure, but in many European nations, the protection of third parties is given less weight (La Porta et al., 1997). Statistics for these three nations were culled from Datastream. Due to the unique accounting requirements of the financial industry, banking, and insurance, these industries were left out of the analysis. Moreover, businesses without complete information were not included. Table 1 presents the final sample observations.



Table	1.	Research	sample
-------	----	----------	--------

Details	UK	German	France	Total
Beginning firms	738	593	457	1788
Banking	20	16	20	56
Financial	206	171	46	423
Life-coverage	11	3	1	15
Non-life-coverage	18	7	6	31
Losing data	50	85	40	175
Firm observations	433	311	344	1088
Year observations	6928	4976	5504	17408

According to Table 1, the sample included 465 observations for the UK, 311 observations for Germany, and 344 observations for France (a total of 6928, 4976, and 5504 year-observations).

#### 3.2. Research model

We will utilise Ohlson (1995) to determine whether selected firms in these developed countries (France, the UK, and Germany) have a better BV and EPS following IFRS implementation. the model is applied twice: first, prior to IFRS between 2000 and 2004, and later IFRS between 2006 and 2015. Second, prior to IFRS between 2000 and 2004, and later IFRS during the financial crisis in 2008. This helps to test the first, second, and third hypotheses.

Following is the basic framework:

$$P_{it} = 0 + 1BVEPS_{it} + 2EPS_{it} + \varepsilon_{it} \tag{1}$$

Value-related accounting information has been studied through the lens of returns or prices. Nonetheless, Kothari and Zimmerman (1995) claim that the price is more efficiently preferable to earnings. Also, the two variables, equity book value and net income, used in price specification allow for testing the value relevance (Hung & Subramanyam, 2007).

Researchers, among others, used BV and EPS to measure VR (Hung & Subramanyam, 2007; Gjerde et al., 2008; Cordazzo & Rossi, 2020; Ustuner, 2010; Alali & Foote, 2012). To determine VR, numerous studies have utilised BV and EPS as the independent variables while price share as the dependent variable

(Alali & Foote, 2012). Therefore, these characteristics are used in this research to evaluate the usefulness of accounting data. The variables and their meanings are shown below.

The dependent variable:  $P_{it}$  — the price of the share for the company *i* at the close year *t*.

The independent variables:  $BVPS_{it}$  refers to a share equity book value for company *i* at the close year *t*;  $EPS_{it}$  refers to EPS for company *i* at close year *t*; and  $\varepsilon$  refers to the error term.

The third hypothesis may be tested by a comparison of these three nations using the ANOVA test.

# 4. RESULTS

Using SPSS, the data was analysed using a variety of tests to check the hypotheses and determine the connection between the IFRS and VR factors. Price, BV, and EPS data for all time intervals "between" are presented in Tables 4, 3, and 2, correspondingly, for the United Kingdom, France, and Germany (2000 and 2015).

#### 4.1. Descriptive statistics

#### 4.1.1. Descriptive statistics for Germany

Germany's total number of year observations for each variable is shown in Table 2 (311 observations  $\times$ 16 years = 4976 year-observations). BV has a mean of 40.3130 throughout all time periods, with a median of 7.6.

Table 2. Germany descriptive statisti
---------------------------------------

Variable	No	Average	Std doviation	Chaumann	Vurtosis	Minajaan	Mayimayima	P	Percentile	es
variable	NO.	Averuge	stu. ueviution	Skewness	KUTUSIS	Minimum	maximum	Q1	Q2	Q3
BV	4976	40.3	352.6	29.3	948.9	-328.9	12155.7	2.8	7.6	19.5
EPS	4976	1.9	44.7	8.6	255.6	-644.6	1089.3	0.0	0.5	1.9
PPS	4976	74.7	331.6	13.9	274.3	0.02	9196.5	4.6	13.1	35.4

The table also displays kurtosis, an indicator of distribution "kurtosis" and skewness, a measure of distribution symmetry. In the case of a normal distribution, both skewness and kurtosis equal zero (Pallant, 2013). Furthermore, a low skewness number on the left indicates positive skew, whereas a high skewness value on the left indicates negative skew (Tabachnick et al., 2001). Also, a positive kurtosis score indicates a skewed distribution (the tail is long and thin). When it is negative, though, it indicates a uniform distribution (Pallant, 2013). Table 2 shows that the skewness and kurtosis are both positive,

indicating that the distribution is skewed to the right and that the low value is located on the left. Histograms are useful for assessing distribution shape (Tabachnick et al., 2001). The equity book value over all time periods for the observations of Germany is shown in the histogram (Figure 1). Similarly, positive values of skewness and kurtosis are reported for other variables (earning per share and price) in Table 3. Consequently, the same meaning is suggested. The histograms for the additional variables are shown in Figure 2 and Figure 3.

Figure 1. The equity book value over the entire observation time in Germany



The BV histogram for German firms between 2000 and 2015 is shown in Figure 1. The data are shown to be regularly distributed. The data normalcy is further strengthened by this piece of evidence. The share price and earnings share

histograms for the German observations during the same time are shown in Figures 2 and 3, respectively. The outcomes are the same regardless of which numbers you use. As a result, one may draw parallels between this view and Figure 1.

Figure 2. Earnings share histogram for the total period of German firms



Figure 3. The share price histogram over the entire period for German observations



## 4.1.2. Descriptive statistics for France

Descriptive statistics for French observations from 2000–2015 are presented in Table 3. There were 344 total firms tracked, and 5504 total firm-years tracked.

Average BV, EPS, and share price all came in at 43.2521, 2.5563, and 70.1910, respectively. French observations had considerably higher means for the independent variables BV and EPS compared to the observations of Germany. However, the average French company's pricing is cheaper than the average German company's price.



Variable	No	Avaraga	Std doviation	Shanmass	Vurtosis	Minimatura	Mayimaum	j	Percentile	s
variable	NO.	Averuge	sia. aeviation	Skewness	KUTUSIS	Minimum	Maximum	Q1	Q2	Q3
BV	5504	43.2	146.3	9.2	104.3	-252.4	2405.9	4.2	12.8	33.3
EPS	5504	2.5	15.7	2.6	183.5	-380.4	307.3	0.0	0.9	2.8
PPS	5504	70.1	311.4	12.7	194.9	0.03	6550.0	6.8	19.5	47.5

Table 3. Descriptive statistics for French observations

When we take a closer look at the table, we see that both the skewness and kurtosis are positive. As a result, identical interpretations would be applied to these variables in terms of their low-value position and peakiness. Equity book value, earnings, and price all had median values of \$12.8585, \$0.9355, and \$19.5000, respectively. When compared to the medians for German observations, these values are much higher. Equity book value and price share histograms are shown in Figures 4, 5, and 6.

The graphs demonstrate that the French observation data is normally distributed, but with some imperfections due to the non-zero skewness and kurtosis. The equity, earnings, and share price all have a positive skew. They also have a long, skinny tail, indicating that the distribution is skewed toward one end.

In terms of skew and peak, the data histograms for the French and German observations are very similar.

Figure 4. The equity book value for the whole observation period in France



Figure 5. French observations of earnings per share for the whole time







# Figure 6. The share price over the entire observation period in France

#### 4.1.3. Descriptive statistics for the UK

The descriptive statistics for the observations in the UK are presented in Table 4. The number of years for which data is available is 6928, and the total of the UK firm-year observations is 6928.

When compared to the medians of equity book value for the observations of Germany and France, the mean is 2.1. Furthermore, the average earnings share in the UK is 0.16, in Germany is 1.9, and in France is 2.5. Alternatively, the price share mean is 390.3, which is relatively higher than the German and French findings. The skewness of EPS has a negative sign, which means the low value is on the right (Pallant, 2013). Skewness and kurtosis are both positive, while all the other factors are. This suggests that the data has a positive skew and a peak.

Table 4. Summarized descriptive statistics for UK observations

Variable	Ma	4.00000.000	Std downstion	Channess	Vuntorio	Mirairaaru	Mayimayan	Percentiles		
variable	NO.	Averuge	sta. aeviation	Skewness	Kurtosis	Minimum	махітит	Q1	Q2	Q3
BV	6928	2.1	4.8	5.4	85.1	-84.2	81.8	0.3	0.9	2.3
EPS	6928	0.1	1.3	-13.8	388.1	-44.4	14.0	0.0	0.09	0.2
PPS	6928	390.3	684.2	5.4	48.4	.21	12300	61	177.6	426.3

The UK equity book value histograms of EPS and price per equity (PPE) are depicted in Figures 7, 8, and 9. Equity book value and price histograms indicate the minimum value on the left, while price

histograms display the minimum value on the right. These charts as a whole demonstrate the normality of the UK observation data.

Figure 7. Equity book value over the entire UK observation set



VIRTUS





Figure 9. The share price for all UK observations



#### 4.2. Correlation

The next step will be to analyse and discuss the correlation tables for the observations in the UK, Germany, and France. The linear connection between two variables may be characterised by their magnitude and direction, respectively, via the use of correlation analysis (Pallant, 2013). Many other kinds of tests may be performed to characterise interrelationship different the of factors. The degree of association between continuous variables is determined by calculating a Pearson product-moment correlation. Earnings share, equity book value, and share price are shown to be continuous variables in the data. In order to examine the connection between these factors, we give

the results of a Pearson product-moment correlation test for the UK, France, and Germany. Independent variables in the same study must have a low correlation (between 0.7 and 1). If there is an excessive amount of correlation between two variables, one of them must be eliminated from the final results (Tabachnick et al., 2001).

## 4.2.1. Germany's correlation

The magnitude and direction of the inter-variable correlations are displayed in Table 5. Pallant (2013) states that the value of correlations can be anywhere from -1 to +1. When the plus sign is present, the two variables are correlated; when the minus sign is present, the opposite is true.

Table 5. The correlations between different factors in German observations

Variable	BV	EPS	PPS
BV	1.0		
EPS	0.6**	1.0	
PPS	0.4**	0.2**	1.0

Note: \*\*. significant correlation at 0.01 level (2-tailed).

The table above shows that there are only positive correlations among the various factors. As the BV and EPS share grow, so does the price.

Moreover, the dependent variable is highly correlated with the independent variables. Cohen (1988) suggests that a correlation of 0.10–0.29 is

weak, 0.50-1, and 0.30-0.49 is moderate. Based on the German data, we find a moderate association between BV and EPS, a minor correlation between price and EPS, and a high relationship between BV and EPS. The correlation between the free variables is 0.602, which is below the critical value of 0.7. Therefore, both factors were kept.

#### 4.2.2. Correlation for France

The positive correlations between the variables are shown in Table 6. Large relationships are also seen between PPS and BV, as well as between EPS and BVPS, there is a medium correlation with the stock price. Since the 0.524 connection between book value and EPS is less than 0.7, both metrics are retained.

Table 6. The correlations between different factors in French observations

Variable	BV	EPS	PPS
BV	1.0		
EPS	0.5**	1.0	
PPS	0.7**	0.4**	1.0
Motor ** gianific	ant convolution a	$\pm 0.01$ level (2 to	ilad)

Note: \*\*. significant correlation at 0.01 level (2-tailed).

The table above displays the observed correlation between various variables in France. The correlations between PPS and EPS, between EPS and BV, and between PPS and BV range from weak to strong. Independent variables must not have excessively strong correlations. They are, therefore, kept on staff.

#### 4.2.3. Correlation for the UK

Overall, in Tables 5, 6, and 7, we can deduce that the link between PPS and BV is lowest in Germany (0.481) and strongest in France (0.735). However, the correlation between share PPS and EPS was lowest in the UK at 0.256 and greatest in France at 0.478. When the explanation of the correlation tables for the observations in these three nations is complete, we will move on to the discussion of the regression tables.

Table 7. Correlation for the UK

Variable	BV	EPS	PPS
BV	1.0		
EPS	0.3**	1.0	
PPS	0.6**	0.2**	1.0

Note: \*\*. significant correlation at 0.01 level (2-tailed).

## 5. DISCUSSION

The regression outcomes for Germany, France, and the United Kingdom are shown in Tables 8, 10, and 11, respectively. There are three sections in these tables, and Panel A shows the regression findings for the variables in each nation between 2000 and 2004. Panel B displays the findings in 2008, during the crisis, whereas Panel C displays the outcomes from 2006 to 2015, after the implementation of IFRS. More specifically, for these three nations, we use a combination of industry and time dummies to account for the year and industry-fixed effects over time periods.

One interval dependent and two or more continuous independent variables, as described by Pallant (2013), need the use of multiple regression to probe the connection between them. It would also show how well each independent variable predicts the dependent one. In other words, it is a representation of data about the whole model and its constituent variables' relative importance.

Multiple regression may be broken down into three distinct subtypes: a hierarchical model, a stepwise model, and a standard model (Pallant, 2013). The independent variables are put into the regression equation all at once, as is done with standard regression (Ohlson's, 1995, model regression), in this investigation (PPS is regressed on EPS and BV linearly).

These tables include the necessary information for assessing the results, including the coefficients and their respective significances. Based on our research, we anticipate that national GAAP will have a lower value relevance for BV and EPS than IFRS. Furthermore, they peak amid a financial crisis.

Impact of IFRS on Germany's economic performance after the financial crisis.

In Table 8, Panel A, B, and C represent the BV and EPS before IFRS adoption, following IFRS implementation, T — the time of the financial crisis, and after IFRS adoption, respectively.

The most important findings, taken from the German regression results, are shown in Table 8. The sample size should be determined first, using the following formula suggested by Tabachnick et al. (2001): Sample size = 50 + (8 \* the number of independent variables). According to Tabachnick et al. (2001), a total of 66 observations (50 + (8 \* 2)) constitute an adequate sample size for this investigation. This research used a larger-thanrecommended sample size of 17,408 participants (as all populations are addressed in the modal test).

Table 8 reveals that the R<sup>2</sup> values for all Panels (A, B, and C) are 0.3, 0.7, and 0.4, respectively. Panel A shows that BV and EPS were calculated in accordance with German GAAP explaining 35.4% of the volatility in price during the period of 2000–2004. As for the period 2006-2015, when IFRS was implemented, the independent variables had a greater capacity to explain the variation in price. The percentage of price variation during the financial crisis that can be attributed to independent factors is now greater than it was before the implementation of IFRS, at 77.5%. The findings also reveal that BV and EPS explain most of the price variation during the German financial crisis. The financial crisis had no effect on IFRS, as seen above. Adjusted  $R^2$  is also included in the table. When the sample size is small, this value may be substituted for R<sup>2</sup> to get a more accurate estimate of the population mean (Tabachnick et al., 2001). Adjusted  $R^2$  values for Panels A, B, and C are 34.8, 76.7, and 49.3, despite the greater sample size, these values did not improve.



	Panel A: Years 2000–200	4	
Details	Coefficient	Т	Significant
(Constant)	-19.4	-0.7	0.4
BV	4.1	28.2	0.0
EPS	-2.7	-10.6	0.0
Observations number	1,555		
R <sup>2</sup>	0.3		
Adjusted R <sup>2</sup>	0.3		
Industry dummy	Involved		
Time dummy	Involved		
	Panel B: Year 2008		
Details	Coefficient	Т	Significant
(Constant)	12.6	0.6	0.4
BV	1.2	23.2	0.0
EPS	0.8	2.4	0.0
Observations number	311		
R <sup>2</sup>	0.7		
Adjusted R <sup>2</sup>	0.7		
Industry dummy	Involved		
Time dummy	Involved		
	Panel C: Years 2006-201	5	
Details	Coefficient	Т	Significant
(Constant)	54.5	4.2	0.0
BV	0.3	32.3	0.0
EPS	0.5	5.3	0.0
Observations number	3110		
R <sup>2</sup>	0.4		
Adjusted R <sup>2</sup>	0.4		
Industry dummy	Involved		
Time dummy	Involved		

#### Table 8. German observations regression

Table 8 demonstrates that the BV and EPS are less than 0.01. This suggests their ability to forecast share price is quite high. Moreover, the t-values BV in all panels are 28.2, 23.2, and 32.3, respectively. These numbers are better than the corresponding t-values for EPS, which are -10.6, 2.4, and 5.3. As a result, the BV is more important than EPS in determining the stock price. The results also show that the combined t-value for BV and EPS in Panel C is greater than in Panel A, indicating that BV and EPS under IFRS are greater than under the GAAP of Germany. Support for the first and second hypotheses is provided by the findings in Panel C. Findings from other studies, including Chen et al. (2001), Armstrong et al. (2010), Horton and Serafeim (2010), Wang (2008), and Liu and Liu (2007), are consistent with the improvement in Germany's accounting system that we observed in 2008. According to previous studies, such as Bartov et al. (2005), Barth et al. (2008), Iatridis and Rouvolis (2010), Manganaris et al. (2015), Aubert and Grudnitski (2011), Clarkson et al. (2011), and Barth et al. (2012) report that the BV and EPS have been increased.

The results also reveal that in Panel B, the t-values for BV and EPS are lower than in Panel A. This indicates that under German GAAP, the BV and EPS would have been lower than they really were at the time of the financial crisis. Some scholars, like da Silva de Jesus (2009) and Hung and Subramanian (2007), agree that the BV has less value and significance. Although Hung and Subramanian's (2007) result shows that EPS has less value than it formerly did, it is consistent with the work of da Silva de Jesus (2009). Table 9 displays the model's equations as seen by German astronomers for these panels.

Table 9. German observations equations

Time period	Equation	
Prior to IFRS, 2000-2004	$Price_{it} = (-19.4) + (4.1 * Book value) + (-2.7 * EPS) + \varepsilon_{it}$	(2)
During the crisis, 2008	$Price_{it} = (12.6) + (1.2 * Book value) + (0.8 * EPS) + \varepsilon_{it}$	(3)
Following IFRS, 2006-2015	$Price_{it} = (54.5) + (0.3 * Book value) + (0.5 * EPS) + \varepsilon_{it}$	(4)

The following table displays regression results conducted on the sample collected from French firms. After IFRS implementation and throughout the financial crisis, the researcher anticipates that BV and EPS will become more valuable.

Table 10 shows the number of total observations in France before (3,720), during (344), and after the implementation of IFRS (3440). All Panels (A, B, and C) have  $R^2$  values of 0.7, 0.7, and 0.5, respectively. This demonstrates the extent to which BV and EPS in various time periods explain the price differential. The explanatory power is clearly at its maximum during the financial crisis and at its lowest following the implementation of IFRS. Adjusted  $R^2$  is also included in the table. These Panels' Adjusted  $R^2$  values are 0.739, 0.777, and 0.499, respectively; this is despite the fact that the sample size is rather big.

BV and EPS in all panels have significance values below 0.01, as shown in Table 10. This suggests their ability forecast share price (SP) is quite high. Also, in Panels A, B, and C, the t-values of BV are 33.5, 27.5, and 49.2, respectively; these values



are greater than the t-values of EPS, which are 13.3, -3.5, and 7.5. Therefore, BV affects SP more than EPS. Also, in Panel C, the BV has a greater t-value than in Panel A, but EPS has a smaller t-value. This indicates that the value significance of BV has increased as a result of IFRS implementation in French enterprises.

Some researchers, such as Devalle et al. (2010), find that BV is less under IFRS than under the GAPP of Spanish, German, Norwegian, Italian, and French companies, so the increase in BV in France is conflicting with their findings. IFRS affect EPS negatively.

Table 10. French observations regres	ssion
--------------------------------------	-------

	Panel A: Years 2000-2004		
Details	Coefficient	Т	Significant
(Constant)	9.8	1.1	0.2
BV	1.2	33.5	0.0
EPS	3.6	13.3	0.0
Observations number	1720		
R <sup>2</sup>	0.7		
Adjusted R <sup>2</sup>	0.7		
Industry dummy	Involved		
Time dummy	Involved		
	Panel B: Year 2008		
Details	Coefficient	Т	Significant
(Constant)	-20.7	-1.0	0.2
BV	2.2	27.5	0.0
EPS	-1.8	-3.5	0.0
Observations number	344		
R <sup>2</sup>	0.7		
Adjusted R <sup>2</sup>	0.7		
Industry dummy	Involved		
Time dummy	Involved		
	Panel C: Years 2006-2015		
Details	Coefficient	Т	Significant
(Constant)	-13.4	-0.8	0.3
BV	1.4	49.2	0.0
EPS	2.2	7.5	0.0
Observations number	3,440		
R <sup>2</sup>	0.5		
Adjusted R <sup>2</sup>	0.4		
Industry dummy	Involved		
Time dummy	Involved		

To rephrase, under French GAAP, EPS information was extra relevant to the valuation of the company than it would have been under IFRS. This refutes the findings of Gjerde et al. (2008), who report that under IFRS, EPS for Norwegian companies were greater than under national GAAP. The results of this experiment lend credence to the first theory and disprove the second.

Findings also reveal that in Panel B, BV and EPS's t-values are minor than Panel A's corresponding t-values. This implies that under French GAAP, BV

and EPS would have been higher had the financial crisis not occurred. Hung and Subramanian's (2007) conclusions that the financial crisis reduced the BV and EPS are validated. EPS may not seem like much, but da Silva de Jesus (2009) discovered that it has a greater value under IFRS. Even if equity is worth less on paper. This is consistent with the BV result and contradictory to the EPS finding that this research discovered during the financial crisis.

You can see the model's equations for the French observations of these panels in Table 11:

Table 11. Observations in France and their corresponding equation
---

Time period	Equation	
Prior to IFRS, 2000-2004	$Price_{it} = (9.8) + (1.2 * Book value) + (3.6 * EPS) + \varepsilon_{it}$	(5)
During the crisis, 2008	$Price_{it} = (-20.7) + (2.2 * Book value) + (-1.8 * EPS) + \varepsilon_{it}$	(6)
Following IFRS, 2006-2015	$Price_{it} = (-13.4) + (1.4 * Book value) + (2.2 * EPS) + \varepsilon_{it}$	(7)

The UK observations before, during, and after the adoption of IFRSs (Table 12). Panels A, B, and C have  $R^2$  values of 0.449, 0.486, and 0.531. This indicates that the BV and EPS, respectively, accounted for 44.9, 48.6, and 53.1 of the price variation throughout these times. The  $R^2$  value is the greatest following IFRS implementation and lowest during the financial crisis. For the same reasons as before, in all these panels the adjusted  $R^2$ was decreasing.

NTER PRESS VIRTUS 81

	Panel A: Years 2000-2004		
Details	Coefficient	Т	Significant
(Constant)	105.3	3.9	0.0
BV	40.2	0.0	BV
EPS	-12.7	0.0	EPS
Observations number	2165		
R <sup>2</sup>	0.4		
Adjusted R <sup>2</sup>	0.4		
Industry dummy	Involved		
Time dummy	Involved		
	Panel B: Year 2008		
Details	Coefficient	Т	Significant
(Constant)	169.1	5.6	0.0
BV	67.1	16.8	0.0
EPS	60.2	3.8	0.0
Observations number	433		
R <sup>2</sup>	0.4		
Adjusted R <sup>2</sup>	0.4		
Industry dummy	Involved		
Time dummy	Involved		
	Panel C: Years 2006-2015		
Details	Coefficient	Т	Significant
(Constant)	54.5	4.2	0.0
BV	0.3	32.3	0.0
EPS	0.5	5.3	0.0
Observations number	3110		
R <sup>2</sup>	0.4		
Adjusted R <sup>2</sup>	0.4		
Industry dummy	Involved		
Time dummy	Involved		

#### Table 12. Regression using data from the UK

Table 12 (Panels A, B, and C) reveal that BV and EPS are not statistically significant. This suggests their ability forecast SP is quite high. Moreover, in Panels A, B, and C, the t-values for BV are 40.2, 16.8, and 28.2, respectively; these values are greater than the t-values for EPS in these same panels, which are -12.7, 3.8, and -10.6. This indicates that BV affects SP more than EPS. Furthermore, both BV and EPS in Panel C have smaller t-values compared to Panel A. Consequently, IFRS has impacted the value relevance negatively at the UK firms. In other words, accounting information prepared according to UK GAAP is extra valuable than that prepared in accordance with IFRS. Other researchers find consistent results which are no improvement in accounting quality following the introduction of

IFRS, such as Babalyan (2001), Prather-Kinsey (2006), Ertuğrul (2019), Agostino et al. (2011), and Barth et al. (2012). This result disproves the null and alternative hypotheses.

Findings also reveal that Panel B's BV and EPS t-values are smaller than Panel A's corresponding t-values. Because of this, the financial crisis saw a decline in BV and EPS compared to the results obtained using UK GAAP. Results (at the time of the financial crisis) congruent (inconsistent) with other researchers' findings, such as da Silva de Jesus (2009) when he analysed the BV and EPS after the IFRS adoption at the time of financial crisis, he discovered that the BV is less while EPS is high following the IFRS than national GAAP.

Table	13.	Obser	vations	in	the	UK	and	their	corresponding	equations
-------	-----	-------	---------	----	-----	----	-----	-------	---------------	-----------

Time period	Equation	
Prior to IFRS, 2000-2004	$Price_{it} = (105.3 + (98.7 * Book value) + (-74.3) * EPS) + \varepsilon_{it}$	(8)
During the crisis, 2008	$Price_{it} = 169.1 + (67.1 * Book value) + (60.2 * EPS) + \varepsilon_{it}$	(9)
Following IFRS, 2006-2015	$Price_{it} = (-19.4) + (4.1 * Book value) + (-2.7 * EPS) + \varepsilon_{it}$	(10)

Many factors, including the influence of other rules and enforcements that affect these variables, contribute to the observed discrepancies in the conclusions of this research. Examples include the statutory audit, EU legislation, and listing standards as well as company law (Ball, 2006; Brown, 2016) and corporate governance (Cordazzo & Rossi, 2020; Imhanzenobe, 2022). Furthermore, under more stringent supervisory regimes, the adoption of IFRS has less of an impact (Abass et al., 2022). Second, the increasing usage of fair value exchanged or obligations paid with competent and willing participants in arm's length transactions, may explain the increase or decrease in BV and EPS (Alfredson et al., 2006). Incorporating more timely information is central to the concept of fair value, which has two main applications: first, profits/losses in the financial statements regarding transactions like protections and derivatives. Second, losses for long-term assets (Ball, 2006). To comply with IFRS, transactions must be valued at their fair price rather than their actual monetary worth. Third, the increased mistake in measuring assets because IFRS demands utilising fair value to measure transactions rather than historical cost may account for the decline in the VR of BV and EPS after the introduction of IFRS at the time of the financial crisis. Also, as the financial crisis continued, market financial instruments became untradeable. BV and EPS were determined



to be under market control by Bhatia and Mulenga (2019) when the market failed to adequately respond to new information. That is why there will be more room for error in the measurements. This accords with the literature conclusion that BV and EPS are underreacted by the market.

The ANOVA findings for the combined BV and EPS reveal that the p-values are less than 0.05 to examine the influence of IFRS in the UK, Germany, and France. This suggests that the IFRS's impact on BV and EPS varies by country. There is a disparity among the mean IFRS scores of the three categories.

The results of the ANOVA test are shown in Tables 14 and 15 below.

Table	14.	The	results	of an	ı analysis	of	variance	(ANOVA)	) on	the	BV	in	each	countr	y
-------	-----	-----	---------	-------	------------	----	----------	---------	------	-----	----	----	------	--------	---

Price									
BV	Sum of squares	df	Mean square	F	Sig.				
Between groups	3349172416.	5513	607504	5.1	0.000				
Within groups	1396399267	11894	117403						
Total	4745571683	17407							

Table 15. Earnings per share from all countries, compared using the ANOVA test

Price									
EPS	Sum of squares	df	Mean square	F	Sig.				
Between groups	4057816830	10878	373029	3.5	0.000				
Within groups	687754852	6529	105338						
Total	4745571683	17407							

## **6. CONCLUSION**

The International Financial Reporting Standards (IFRS) are a set of global mandatory standards issued by the IASB and the FASB to facilitate the preparation of consolidated financial statements for use in a variety of jurisdictions. Better quality accounting data, comparability, and transparency will help investors and shareholders throughout the world make more informed investment choices (Barth et al., 2013). Many researchers have looked at how adopting IFRS can affect accounting quality, however, they have reached contradictory conclusions. Therefore, it is necessary to conduct tests of VR during the financial crisis and in other contexts to confirm or deny this notion. This research compared BV and EPS prior to and following IFRS implementation for two time periods (2000-2004 and 2006-2015) for firms in Germany, France, and the United Kingdom. This research also compared BV and EPS prior to and following IFRS adoption for two time periods (2000-2004 and during the financial crisis in 2008) for firms in these three countries (the financial crisis year). Third, applying the ANOVA test to calculate the F-test, we found that the IFRS has the same effect in various nations by determining if their adoption of the standards has a statistically significant impact. Because the studies in this research cover the period from 2000 to the present, the sample includes all non-financial enterprises. Ten hundred and eightyeight observations were gathered from three industrialised nations (Germany (311), France (344), and the United Kingdom (465)). Germany had 4976 year-observations, France - 5504, while the UK had 6928, respectively. Additionally, SPSS was utilised to run the regression model developed by Ohlson (1995).

These studies give evidence that, first, national GAAP BV and EPS for non-financial firms in these developed countries (from 2000 to 2004) have higher value relevance than IFRS at the time of the financial crisis in the year 2008. Second, when comparing the periods 2000–2004 and 2006–2015 and IFRS implementation, the outcomes are different

in these nations. The findings of diminishing VR of BV during the crisis are reliable with da Silva de Jesus's (2009), while the EPS is not. The findings were consistent with Závodný and Procházka's (2022) who investigate the effect of IFRS in the VR in four different regions including the Czech Republic, Poland, Slovakia, and Hungary.

Several limitations exist in this study, as it assessed the influence of IFRS as a regulation on accounting quality. Nevertheless, there are numerous other rules and implementations that might impact accounting quality, such as company regulation (Brown, 2016), corporate governance, EU legislation, and list standards. Therefore, not only the IFRS but also all these policies and enforcements have affected accounting quality. This research has not examined one or more of these additional policies and enforcements.

This study focuses on value relevance which measures accounting quality, while other factors can measure accounting quality including capital structure, earnings smoothing and management, and timely loss recognition. This study address IFRS in developed nations. While it fails to investigate developing nations. This examination eliminates financial firms and concentrates on non-financial businesses. Numerous models, such as the regression model, would be used to investigate the BV and EPS with the PPS to assess the accounting quality development. Since 2005, IFRS have been required for all European firms that are publicly traded on exchange. The IASB a stock has mandated the adoption of these guidelines. This means that they have become the most well-recognised benchmark throughout the globe. The financial statements of more than 100 nations are now being prepared using these new criteria. Investors and other shareholders in European nations with accounting practices that are stakeholder-oriented, including Germany and France, or shareholderoriented, such as the UK, need to comprehend the implications of adopting the IFRS. It is said that the IFRS would improve transparency, advance measurement, facilitate the international comparison financial accounts, and provide reliable of accounting data. In addition, if all businesses



throughout the globe adopted a common set of accounting standards, it would greatly improve usefulness, credibility, and the clarity of the information produced by accounting information systems (Ikpefan & Akande, 2012). So, it is very crucial that future scholars pay more attention to investigating the IFRS and how it affects accounting quality.

## REFERENCES

- Abass, Z. K., Flayyih, H. H., & Hasan, S. I. (2022). The relationship between audit services and non-audit actuarial 1. services in the auditor's report. International Journal of Professional Business Review, 7(2), Article e0455. https://doi.org/10.26668/businessreview/2022.v7i2.455
- Agostino, M., Drago, D., & Silipo, D. (2011). The value relevance of IFRS in the European banking industry. 2. Review of Quantitative Finance & Accounting, 36(3), 437-457. https://doi.org/10.1007/s11156-010-0184-1
- Alali, F. A., & Foote, P. S. (2012). The value relevance of IFRSs: Empirical evidence in an emerging market. 3. The International Journal of Accounting, 47(1), 85-108. https://doi.org/10.1016/j.intacc.2011.12.005
- Alfredson, K., Leo, K., Picker, P., Procter, P., Radford, J., & Wise, V. (2006) Applying IFRSs. John Wiley & Sons 4. Australia Ltd.
- Allen, F., & Carletti, E. (2008). Mark-to-market accounting and liquidity pricing. Journal of Accounting and 5. Economics, 45(2-3), 358-378. https://doi.org/10.1016/j.jacceco.2007.02.005
- Al-Refiay, H. A. N., Abdulhussein, A. S., & Al-Shaikh, S. S. K. (2022). The impact of financial accounting in 6. decision making processes in business. International Journal of Professional Business Review, 7(4), Article e0627. https://doi.org/10.26668/businessreview/2022.v7i4.e627
- 7. Al-Taee, S. H. H., & Flayyih, H. H. (2022). The impact of the audit committee and audit team characteristics on the audit quality: Mediating impact of effective audit process. International Journal of Economics and Finance Studies, 14(3), 249-263. https://sobiad.org/menuscript/index.php/ijefs/article/view/1259
- André, P., Cazavan-Jeny, A., Dick, W., Richard, C., & Walton, P. (2009). Fair value accounting and the banking crisis 8. in 2008: Shooting the messenger. Accounting in Europe, 6(1), 3-24. https://doi.org/10.1080/17449480902896346
- 9 Armstrong, C. S., Barth, M. E., Jagolinzer, A. D., & Riedl, E. J. (2010). Market reaction to the adoption of IFRS in Europe. The Accounting Review, 85(1), 31-61. https://doi.org/10.2308/accr.2010.85.1.31
- 10. Aubert, F., & Grudnitski, G. (2011). The impact and importance of mandatory adoption of IFRSs in Europe. Journal of International Financial Management & Accounting, 22(1), 1-26. https://doi.org/10.1111/j.1467-646X.2010.01043.x
- 11. Avwokeni, A. J. (2018). On the value relevance argument: Do market participants place a premium on future prospects of the firm? Journal of Financial Reporting and Accounting, 16(4), 660-676. https://doi.org/10.1108/JFRA-02-2017-0012
- 12. Babalyan, L. (2001). Association between accounting earnings and stock returns as a measure of value relevance of accounting standards: Empirical evidence from the Swiss market. https://doi.org/10.2139/ssrn.301923
- Ball, R. (2006). IFRSs (IFRS): Pros and cons for investors. Accounting and Business Research, 36(Sup1), 5-27. 13. https://doi.org/10.1080/00014788.2006.9730040
- 14. Ball, R., & Brown, P. (1968). An empirical evaluation of accounting income numbers. Journal of Accounting *Research, 6*(2), 159–178. https://doi.org/10.2307/2490232
- 15. Ball, R., Kothari, S., & Robin, A. (2000). The effect of international institutional factors on properties of accounting earnings. Journal of Accounting and Economics, 29(1), 1-51. https://doi.org/10.1016/S0165-4101(00)00012-4
- 16. Ballas, P., Garefalakis, A., Lemonakis, C., & Balla, V. (2019). Quality of financial reporting under IFRS and corporate governance influence: Evidence from the Greek banking sector during crisis. Journal of Governance and Regulation, 8(4), 8-20. https://doi.org/10.22495/jgrv8i4art1
- 17. Barth, M. E., Beaver, W. H., & Landsman, W. R. (2001). The relevance of the value relevance literature for financial accounting standard setting: Another view. Journal of Accounting and Economics, 31(1-3), 77-104. https://doi.org/10.1016/S0165-4101(01)00019-2
- 18. Barth, M. E., Konchitchki, Y., & Landsman, W. R. (2013). Cost of capital and earnings transparency. Journal of Accounting and Economics, 55(2-3), 206-224. https://doi.org/10.1016/j.jacceco.2013.01.004
- 19. Barth, M. E., Landsman, W. R., & Lang, M. H. (2008). International accounting standards and accounting quality. Journal of Accounting Research, 46(3), 467-498. https://doi.org/10.1111/j.1475-679X.2008.00287.x
- Barth, M. E., Landsman, W. R., Lang, M., & Williams, C. (2012). Are IFRS-based and US GAAP-based accounting amounts 20. comparable? Journal of Accounting and Economics, 54(1), 68-93. https://doi.org/10.1016/j.jacceco.2012.03.001
- 21. Bartov, E., Goldberg, S. R., & Kim, M. (2005). Comparative value relevance among German, US, and international accounting standards: A German stock market perspective. Journal of Accounting, Auditing & Finance, 20(2), 95-119. https://doi.org/10.1177/0148558X0502000201
- 22. Bhatia, M., & Mulenga, M. J. (2019). Value relevance of accounting information: A review of empirical evidence across continents. Jindal Journal of Business Research, 8(2), 179-193. https://doi.org/10.1177/2278682118823307
- 23. Bissessur, S. (2009). The role of fair value accounting in the current financial crisis. Fiducie, 16(2), 10-14.
- 24. Brown, A. B. (2016). Institutional differences and international private debt markets: A test using mandatory FRS adoption. Journal of Accounting Research, 54(3), 679-723. https://doi.org/10.1111/1475-679X.12111
- Brown, W. D., Jr., He, H., & Teitel, K. (2006). Conditional conservatism and the value relevance of accounting earnings: 25. An international study. European Accounting Review, 15(4), 605–626. https://doi.org/10.1080/09638180601102198
- Brüggemann, U., Daske, H., Homburg, C., & Pope, P. F. (2010). How do individual investors react to global IFRS 26. adoption? https://doi.org/10.2139/ssrn.1458944
- 27. Chebaane, S., & Othman, H. B. (2014). The impact of IFRS adoption on value relevance of earnings and book value of equity: The case of emerging markets in African and Asian regions. Procedia – Social and Behavioral Sciences, 145, 70-80. https://doi.org/10.1016/j.sbspro.2014.06.012
- 28. Chen, C. J., Chen, S., & Su, X. (2001). Is accounting information value-relevant in the emerging Chinese stock market? Journal of International Accounting, Auditing and Taxation, 10(1), 1-22. https://doi.org/10.1016/S1061-9518(01)00033-7

<u>VIRTUS</u> 84

- 29. Clarkson, P., Hanna, J. D., Richardson, G. D., & Thompson, R. (2011). The impact of IFRS adoption on the value relevance of book value and earnings. *Journal of Contemporary Accounting & Economics*, *7*(1), 1–17. https://doi.org/10.1016/j.jcae.2011.03.001
- 30. Cohen, J. (1988). Statistical power analysis for the behavior science (2nd ed.). Lawrance Eribaum Association.
- 31. Cordazzo, M., & Rossi, P. (2020). The influence of IFRS mandatory adoption on value relevance of intangible assets in Italy. *Journal of Applied Accounting Research, 21*(3), 415–436. https://doi.org/10.1108/JAAR-05-2018-0069
- 32. da Silva de Jesus, C. (2009). *The value relevance of equity book value and earnings of financial institutions* [Master's thesis, University of Amsterdam]. https://docplayer.net/156840624-The-value-relevance-of-equity-book-value-and-earnings-of-financial-institutions.html
- 33. Dechow, P. M., Hutton, A. P., Kim, J. H., & Sloan, R. G. (2012). Detecting earnings management: A new approach. *Journal of Accounting Research*, *50*(2), 275–334. https://doi.org/10.1111/j.1475-679X.2012.00449.x
- 34. Devalle, A., Onali, E., & Magarini, R. (2010). Assessing the value relevance of accounting data after the introduction of IFRS in Europe. *Journal of International Financial Management & Accounting*, *21*(2), 85–119. https://doi.org/10.1111/j.1467-646X.2010.01037.x
- 35. Elliott, J. A., & Hanna, J. D. (1996). Repeated accounting write-offs and the information content of earnings. *Journal of Accounting Research*, *34*, 135-155. https://doi.org/10.2307/2491430
- 36. Flayyih, H. H., Mutashar, S. S., & Murad, A. H. (2022). Measuring the level of performance of accounting units and their impact on the control environment. *International Journal of Professional Business Review*, 7(4), Article e0680. https://doi.org/10.26668/businessreview/2022.v7i4.e680
- 37. Gao, K., Wang, H., Joanicjusz, N., & Jarocka, M. (2022). Adaptive decision method in C3I system. *Computational Intelligence and Neuroscience*, 1–17. https://doi.org/10.1155/2022/6967223
- Gjerde, Ø., Knivsflå, K., & Sættem, F. (2008). The value-relevance of adopting IFRS: Evidence from 145 NGAAP restatements. *Journal of International Accounting, Auditing & Taxation, 17*(2), 92–112. https://doi.org/10.1016/j .intaccaudtax.2008.07.001
- 39. Hellström, K. (2006). The value relevance of financial accounting information in a transition economy: The case of the Czech Republic. *European Accounting Review*, *15*(3), 325–349. https://doi.org/10.1080/09638180600916242
- 40. Horton, J., & Serafeim, G. (2010). Market reaction to and valuation of IFRS reconciliation adjustments: First evidence from the UK. *Review of Accounting Studies*, *15*(4), 725–751. https://doi.org/10.1007/s11142-009-9108-5
- 41. Hung, M., & Subramanyam, K. (2007). Financial statement effects of adopting international accounting standards: The case of Germany. *Review of Accounting Studies*, *12*(4), 623–657. https://doi.org/10.1007/s11142-007-9049-9
- 42. Iatridis, G., & Rouvolis, S. (2010). The post-adoption effects of the implementation of International Financial Reporting Standards in Greece. *Journal of International Accounting, Auditing and Taxation, 19*(1), 55–65. https://doi.org/10.1016/j.intaccaudtax.2009.12.004
- Ikpefan, O. A., & Akande, A. (2012). International Financial Reporting Standard (IFRS): Benefits, obstacles and intrigues for implementation in Nigeria. *Business Intelligence Journal*, 5(2), 299–307. https://www.academia.edu/7683174 /International\_Financial\_Reporting\_Standard\_IFRS\_Benefits\_Obstacles\_And\_Intrigues\_For\_Implementation\_In\_Nigeria
   Imhanzenobe, J. (2022). Value relevance and changes in accounting standards: A review of the IFRS adoption
- 44. Initializendoe, J. (2022). Value relevance and changes in accounting standards. A review of the irrs' adoption literature. Cogent Business & Management, 9(1), Article 203057. https://doi.org/10.1080/23311975.022.2039057
- Isaboke, C., & Chen, Y. (2019). IFRS adoption, value relevance and conditional conservatism: Evidence from China. International Journal of Accounting & Information Management, 27(4), 529–546. https://doi.org/10.1108/IJAIM-09-2018-0101
- 46. Judge, W., Li, S., & Pinsker, R. (2010). National adoption of international accounting standards: An institutional perspective. *Corporate Governance: An International Review, 18*(3), 161–174. https://doi.org/10.1111/j.1467-8683.2010.00798.x
- 47. Kothari, S. P., & Zimmerman, J. L. (1995). Price and return models. *Journal of Accounting and Economics, 20*(2), 155–192. https://doi.org/10.1016/0165-4101(95)00399-4
- 48. La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1997). Legal determinants of external finance. *The Journal of Finance, 52*(3), 1131–1150. https://doi.org/10.1111/j.1540-6261.1997.tb02727.x
- 49. Landsman, W. R. (2007). Is fair value accounting information relevant and reliable? Evidence from capital market research. *Accounting and Business Research*, *37*(Sup1), 19–30. https://doi.org/10.1080/00014788.2007.9730081
- 50. Liu, C., Yao, L. J., & Yao, M. Y. M. (2012). Value relevance change under International Accounting Standards: An empirical study of Peru. *Review of Pacific Basin Financial Markets & Policies, 15*(2), 1150008. https://doi.org/10.1142/S0219091511500081
- 51. Liu, J., & Liu, C. (2007). Value relevance of accounting information in different stock market segments: The case of Chinese A-, B-, and H-shares. *Journal of International Accounting Research*, *6*(2), 55–81. https://doi.org/10.2308/jiar.2007.6.2.55
- 52. Lopes, J. D. (2018). How the financial crisis has changed the research agenda on banking regulation. *Journal of Governance & Regulation*, *7*(3), 37–46. https://doi.org/10.22495/jgr\_v7\_i3\_p5
- Lopes, P. T., & Rodrigues, L. L. (2008). Accounting for financial instruments: A comparison of European companies practices with IAS 32 and IAS 39. *Research in Accounting Regulation, 20,* 273–275. https://doi.org/10.1016/S1052-0457(07)00215-9
- 54. Lundholm, R., & Myers, L. A. (2002). Bringing the future forward: The effect of disclosure on the returnsearnings relation. *Journal of Accounting Research*, *40*(3), 809–839. https://doi.org/10.1111/1475-679X.00072
- 55. Manganaris, P., Spathis, C., & Dasilas, A. (2015). The effects of mandatory IFRS adoption and conditional conservatism on European bank values. *Journal of International Accounting, Auditing and Taxation, 24*, 72–81. https://doi.org/10.1016/j.intaccaudtax.2015.02.004
- 56. Ohlson, J. A. (1995). Earnings, book values, and dividends in equity valuation. *Contemporary Accounting Research*, *11*(2), 661–687. https://doi.org/10.1111/j.1911-3846.1995.tb00461.x
- 57. Pallant, J. (2013). SPSS survival manual. McGraw-Hill Education (UK).
- 58. Prather-Kinsey, J. (2006). Developing countries converging with developed-country accounting standards: Evidence from South Africa and Mexico. *The International Journal of Accounting*, *41*(2), 141–162. https://doi.org/10.1016/j.intacc.2006.04.007

<u>NTERPRESS</u> VIRTUS

- 59. Putri, N. K., Baridwan, Z., Supriyadi, & Nahartyo, E. (2012). Experimental test of framing and non-professional investor's decision: Study of risk information in IFRS No. 7. *Journal of Economics, Business, and Accountancy Ventura*, *15*(2), 305–316. https://journal.perbanas.ac.id/index.php/jebav/article/download/82/pdf
- 60. Rashid, R. N., Kareem, H. B., Ali, M. H., & Hasan, M. F. (2021). The role of internal control techniques in sustainable development to improve financial performance. *Estudios de Economia Aplicada, 39*(11), 1-14. https://doi.org/10.25115/eea.v39i11.6324
- 61. Ravenscroft, S., & Williams, P. F. (2009). Making imaginary worlds real: The case of expensing employee stock options. *Accounting, Organizations and Society,* 34(6–7), 770–786. https://doi.org/10.1016/j.aos.2008.12.001
- 62. Ray, S. (2011). Emergence of International Financial Reporting Standard in India's accounting scenario. *Research Journal of Finance and Accounting*, *2*(12), 47–65. https://www.academia.edu/1545154/11\_Emergence\_of \_International\_Financial\_Reporting\_Standard\_in\_India\_Accounting\_Scenario
- 63. Saunders, M., Lewis, P., & Thornhill, A. (2011). Research methods for business students (5th ed.). Pearson Education.
- 64. Smith, P. A., & Reither, C. L. (1996). Comprehensive income and the effect of reporting it. *Financial Analysts Journal*, *52*(6), 14-19. https://doi.org/10.2469/faj.v52.n6.2036
- 65. Soderstrom, N. S., & Sun, K. J. (2007). IFRS adoption and accounting quality: A review. *European Accounting Review*, *16*(4), 675–702. https://doi.org/10.1080/09638180701706732
- 66. Tabachnick, B. G., Fidell, L. S., & Osterlind, S. J. (2001). Using multivariate statistics. Allyn and Bacon.
- 67. The IFRS Foundation. (2019). Annual report 2019. https://www.ifrs.org/content/dam/ifrs/about-us/funding/2019/ifrsar2019.pdf
- 68. Ustuner, G. (2010). *The impact of mandatory IFRS adoption on value relevance: The case of Turkey*. LAP Lambert Academic Publishing.
- 69. Vinoth, S., Vemula, H. L., Haralayya, B., Mamgain, P., Hasan, M. F., & Naved, M. (2021). Application of cloud computing in banking and e-commerce and related security threats. *MaterialsToday: Proceedings*, *51*(Part 8), 2172-2175. https://doi.org/10.1016/j.matpr.2021.11.121
- 70. Wang, S. (2008). *Timing equity issuance in response to mandatory accounting standards change in Australia and the European Union* [Doctoral dissertation, Queen's University]. https://qspace.library.queensu.ca/bitstream/handle /1974/1308/Wang\_Shiheng\_200807\_PhD.pdf;jsessionid=4BFCB1B900E4F2E8387774A8BEBB4EDF?sequence=1
- 71. Závodný, L., & Procházka, D. (2022). IFRS adoption and value relevance of accounting information in the V4 region. *Economic Research-Ekonomska Istraživanja*. https://doi.org/10.1080/1331677X.2022.2102049

VIRTUS