

Equity financial instruments: use, determinants and usefulness from IAS 39 to IFRS 9

Meditari
Accountancy
Research

417

Zeting Zang

*School of Accounting, Finance and Economics, The University of Waikato,
Hamilton, New Zealand*

Humayun Kabir

*Department of Accounting, Auckland University of Technology,
Auckland, New Zealand, and*

Tom Scott

*Department of Accounting and Finance, The University of Auckland,
Auckland, New Zealand*

Received 13 March 2025
Revised 12 May 2025
Accepted 13 May 2025

Abstract

Purpose – This study is motivated by changes to the accounting for equity financial instruments (EFAs) under International Financial Reporting Standard (IFRS) 9 Financial Instruments. This study aims to improve understanding of firms' EFA usage, classification choices and the value relevance of EFA information before and after IFRS 9.

Design/methodology/approach – Using a sample of Australian Securities Exchange 500 firms, including financial and non-financial firms, the authors examine the use of EFA, its classification determinants and usefulness using descriptive statistics, logit models and value relevance models.

Findings – The authors find no change in the frequency of EFA after IFRS 9, differing from evidence in other jurisdictions. The determinants appear to have changed from being driven by the impact on earnings, indicative of an opportunistic motivation, to the size of the EFA post-IFRS 9 in non-financial firms. There is no change in the value relevance of the EFA amount post-IFRS 9.

Practical implications – This study contributes to the International Accounting Standard Board's understanding of the implementation of IFRS 9. Specifically, the authors add to the debate on whether to recycle fair value gains or losses on EFAs by showing that there is no impact on firms' use of EFA in practice.

© Zeting Zang, Humayun Kabir and Tom Scott. Published by Emerald Publishing Limited. This article is published under the Creative Commons Attribution (CC BY 4.0) licence. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this licence may be seen at <http://creativecommons.org/licences/by/4.0/legalcode>

This study is based on research conducted for Zeting Zang's PhD thesis, "Accounting for Equity Financial Instruments under International Financial Reporting Standard (IFRS) 9 Financial Instruments: Use, Determinants, Usefulness, and Cost", completed at Auckland University of Technology, 2025. The authors would like to thank the editor, Charl de Villiers, and the anonymous reviewers for their constructive comments. They also appreciate the valuable comments provided by Daifei (Troy) Yao, Warrick van Zyl, Asheq Rahman, and Borhan Bhuiyan on early drafts.

Conflict of interest statement: There is no material conflict of interest.



Originality/value – To the best of the authors' knowledge, this study is one of the first to examine accounting choices and the usefulness of accounting information for EFAs in both financial and non-financial firms in the context of the standard change.

Keywords IFRS 9, IAS 39, Equity financial instruments, Available-for-sale assets, Accounting choice, Value relevance

Paper type Research paper

1. Introduction

From January 2018, International Financial Reporting Standard (IFRS) 9 *Financial Instruments* replaced International Accounting Standard (IAS) 39 *Financial Instruments: Recognition and Measurement* [International Accounting Standards Board (IASB), 2020b]. One of the major changes in this new standard was the classification and measurement requirements for investments in equity instruments (hereafter EFAs). IFRS 9 requires all fair value measurements for EFA and the default presentation of the fair value gains or losses (FVGL) on EFA in profit or loss (IFRS 9, para 4.1.2 and 5.7.5). However, the standard allows firms to present the FVGL on certain EFA in other comprehensive income (OCI) and prohibits recycling of the cumulative FVGL on these EFA upon their derecognition (International Accounting Standards Board (IASB), 2019, para 4.1.2 and 5.7.5). Considering the potential impact on net profit, Sir David Tweedie, the former International Accounting Standards Board (IASB) Chair, expressed concerns about the potential abuse of this choice (Street, 2014). The IASB constituents also hold divergent views on this choice, the prohibition on recycling and the usefulness of the FVGL on EFA presented in OCI (EFRAG, 2015, 2022). However, it is less clear whether it is being abused in practice.

IAS 39 uses an available-for-sale category for EFA and requires the FVGL on these assets to be presented in OCI (International Accounting Standards Board (IASB), 2009b, para 55). Further, the standard requires that FVGL “previously recognised in OCI shall be reclassified from equity to profit or loss as a reclassification adjustment” at the time of derecognition (IAS 39, para 55). Several studies observe that firms tend to sell EFA to boost reported profit when the recycling of the FVGL on EFA is allowed (Barth *et al.*, 2017; Dong and Zhang, 2018; Lu *et al.*, 2023). However, the choice to classify certain EFA at fair value through OCI (FVTOCI) is irrevocable and the recycling of the FVGL on these EFA is not permitted under IFRS 9, which makes the EFA FVTOCI classification a major decision in this setting. The IASB allowed the classification choice in IFRS 9 on the belief that the separate presentation of the FVGL on certain EFA in OCI would be useful to investors.

Despite the above changes in the classification and measurement of EFA under IFRS 9, we do not have much evidence on how these changes affect firms and the value relevance of EFA. While the literature on the effects of IFRS 9 is gradually growing, limited attention has been given specifically to the classification and measurement of EFA (Awuye and Taylor, 2024). Pinto and Morais (2022) and Fang *et al.* (2022) include some discussion on EFA classification in their studies, providing evidence from Europe and China, respectively. We contribute to this developing literature by providing empirical evidence from Australia on whether the standard affects changes in EFA usage, what factors determine the classification of EFA and how the standard impacts the value relevance of EFA.

We focus on Australia because it adopts IFRS word for word and has a very rigorous enforcement regime (Brown *et al.*, 2014; Thomson, 2009). As a member jurisdiction that follows the IASB's pronouncements, Australia adopted IFRS 9 in line with its global implementation timeline, ensuring consistency with international accounting practices. Further, the international accounting literature demonstrates that financial reporting is heavily shaped by the institutional setting in which it is embedded (Isidro and Raonic, 2012; Nobes, 1998; Soderstrom and Sun, 2007). Thus, the effects documented in this study are likely the results of the new standard rather than a lack

of rigorous enforcement. Australia's adherence to IFRS 9 facilitates cross-country comparability and enhances the potential generalisability of the findings to other IFRS-adopting, English-speaking common law jurisdictions with similar institutional environments.

Using data from the Australian Securities Exchange (ASX) 500 firms three years before and after IFRS 9 adoption, we first find that there is no significant change in the use of EFA, including whether to invest in EFA or not, EFA classification choice, or holding amounts, across both financial and non-financial firms after IFRS 9's implementation. This result is consistent with findings in European banks (L \ddot{u} w and Erkelenz, 2022) but contrary to a Chinese study, which finds firms decrease their available-for-sale asset holdings before the mandatory adoption of the Chinese equivalent of IFRS 9 (Fang *et al.*, 2022). We propose that the difference could perhaps stem from the variations in the notice period given before the mandatory application of IFRS 9. Specifically, the period from issuance to implementation of IFRS 9 is approximately four years, relative to less than one year in China. Prior literature documents that familiarity with the standard enhances the confidence of preparers and investors in accounting information (Alali and Foote, 2012; Mala and Chand, 2015). Thus, we contribute to the debate of whether to recycle FVGL on EFAs by showing that there is no impact on firms' use of EFA in practice and suggest that a longer notice period before mandatory adopting IFRS 9 could facilitate the familiarity of the standard and mitigate firms' potential costs from avoiding being adversely impacted by standard changes.

Secondly, we investigate the determinants of EFA classification choice in non-financial and financial firms both before and after IFRS 9, respectively. The results show that the EFA effect on net income is the main determinant for the choice of EFA classification in non-financial firms before IFRS 9. In contrast, the EFA amount, which could reflect the underlying economics of the investment, is significant post-IFRS 9. This suggests a decrease in the potentially opportunistic use of the available discretion of accounting for the FVGL from EFAs post-IFRS 9. We do not find that EFA characteristics are a key driver for financial firms either pre- or post-IFRS 9. Thus, our second contribution highlights the potential exploitation of the classification discretion given in IAS 39 and one potential benefit of IFRS 9 in constraining the opportunistic use of discretion, given the prohibition on recycling.

Finally, we investigate whether the EFA amount and FVGL on EFAs are value relevant. We find that the EFA amount is value relevant for financial firms or when it is large for non-financial firms, with no change in the value relevance pre- and post-IFRS 9. There is no consistent evidence that the EFA effects on OCI or profit or loss are more value relevant post-IFRS 9. However, Pinto and Morais (2022) find the EFA effect on OCI is value relevance post-IFRS 9 only after IFRS 9 in a sample of the top 100 UK and 50 European firms. Considering prior research also has mixed views on the usefulness of OCI components (Cahan *et al.*, 2000; Isidro *et al.*, 2004; Khan *et al.*, 2018), our results are important as they highlight the need for caution in any optimistic interpretation of IFRS 9 in improving financial information usefulness.

These results would be of interest primarily to the IASB, national standard-setters, such as the Australian Accounting Standards Board and national accounting enforcement bodies, such as the Australian Securities and Investments Commission, who are interested in knowing how the recent standard changes affect financial statements and the usefulness of the resulting financial statement numbers. The result that the underlying economics of EFA, rather than opportunism, tend to drive the classification of EFA, would be of interest to investors and auditors who are interested in the existence of bias in the classification of EFA.

The rest of this paper is structured as follows. Section 2 provides the standard-setting background of equity instruments accounting, reviews the prior research literature and develops the hypotheses. Section 3 discusses the sample and research design. Section 4 reports on the use of EFA and descriptive statistics of the sample. Section 5 presents the results of the determinants and usefulness of the EFA classification choice. Section 6 concludes this study with a discussion.

2. Related literature and hypothesis development

2.1 *Equity financial instruments accounting standard changes*

The Global Financial Crisis brought to light many issues relating to the intricacy and opaqueness of accounting for financial instruments, prompting the IASB to replace the financial instruments accounting standard IAS 39 with IFRS 9 [[International Accounting Standards Board \(IASB\), 2014](#)]. A completed version of IFRS 9 was issued in July 2014 with an effective date of on or after 1st January 2018, with early application permitted [[1](#)].

One cause of financial instruments' accounting complexity comes from the classification and measurement of EFA. Under IAS 39, EFA is classified as held for trading if it is acquired for the purpose of selling in the near term or if there is evidence of a recent actual pattern of short-term profit-taking (IAS 39, para 9). However, the default EFA classification is available-for-sale assets, which is a residual category that captures assets that do not meet the criteria of any of the other categories (e.g. held-to-maturity assets or loans and receivables) within the standard, and management has the intention to hold them for a longer period ([BDO, 2018](#); [Taylor, 2017](#)). EFA shall be measured at fair value except for those that do not have a quoted price in an active market and whose fair value cannot be reliably measured, which shall be measured at cost [[International Accounting Standards Board \(IASB\), 2008](#), para IN4 and BD2; IAS 39, para 43 and 46]. IFRS 9 removes the classification categories and cost measurement from IAS 39 and results in the default classification of EFA as fair value through profit or loss (FVTPL) but allows fair value through other comprehensive income (FVTOCI) option ([Barnoussi et al., 2020](#); IFRS 9, para 4.1.2 and 4.1.4). The IASB allows the FVTOCI option to address firms' strategic investments, which are more of holding than trading instruments ([Street, 2014](#)).

Under IAS 39, the cumulative FVGL on available-for-sale EFAs that are "previously recognised in OCI shall be reclassified from equity to profit or loss as a reclassification adjustment upon derecognition (IAS 39, para 55)". However, IFRS 9 prevents firms' FVGL on EFAs from being recycled to net income when EFA is derecognised once FVTOCI is chosen at initial recognition (IFRS 9, para 5.7.5). The prohibition of recycling brought intense discussion when the IASB was developing IFRS 9. The European Financial Reporting Advisory Group (EFRAG) considers that the irrevocable FVTOCI option for EFA is unlikely to appeal to long-term investors, and decision usefulness may be reduced without recycling ([EFRAG, 2015](#); [Lów and Erkelenz, 2022](#)). Sue Lloyd, the former IASB vice chair, said, "Recycling can provide a confusing presentation of performance. The Board's view is that when an investment is held for strategic purposes (i.e. the intended narrow population), these gains and losses are not part of an investor's performance ([Lloyd, 2018](#))". Thus, whether recycling should be allowed and the impact on decision usefulness remains an area of concern for standard setters [[International Accounting Standards Board \(IASB\), 2022](#)].

2.2 *Determinants of equity financial instruments classification choice*

Under IAS 39, management's intended holding period is important in EFA classification; however, it introduces ambiguity and increases the possibility of earnings management when recycling FVGL to net income is allowed ([Barth et al., 2017](#); [Dong and Zhang, 2018](#); [Lu et al., 2023](#)). The IASB has the intention to reduce management discretion and subjectivity in classifying EFA by making the FVTPL a default classification under IFRS 9, but allows irrevocable election of FVTOCI at initial recognition ([Elnahass et al., 2018](#); [Mechelli et al., 2020](#)).

The determinants of accounting choices when selecting one accounting method over another have been discussed in extant literature; however, there is a lack of evidence on the determinants of firms' EFA classification choice, particularly in the context of IFRS 9's implementation ([Da Costa et al., 2020](#); [Israeli, 2015](#)). Using a sample of the top 100 UK and 50 European firms (FTSE 100 and EURO STOXX 50 firms), [Pinto and Morais \(2022\)](#)

identify leverage as the main factor driving the reclassification of available-for-sale assets to FVTOCI in the IFRS 9 transition year, while also examining the determinants of firms' EFA holdings before and after IFRS 9. Therefore, it is of interest to know what drives firms' EFA classification choice and whether it changed after IFRS 9.

Firstly, we identify the amount of EFA that may indicate how a firm manages such assets. Due to differing business natures, non-financial and financial firms may have different motivations for investing in equity instruments. Pecking order theory suggests that non-financial firms distribute their excess cash to shareholders or prioritise the excess cash as a source of internal financing rather than investing in securities for capital gain. However, many EFAs are viewed as strategic investments with the intention of establishing or maintaining a long-term operating relationship with the investee entity [International Accounting Standards Board (IASB), 2009a, para BC68]. For non-financial firms, when EFA amount comprises a larger portion of total assets, management is more likely to ensure the investment aligns with the firm's overall strategic goals, and is, accordingly a strategic investment. Therefore, we predict that the EFA amount is positively related to the FVTOCI choice after IFRS 9, since an EFA investment need not be strategic to be classified as available-for-sale assets as per IAS 39.

Financial firms are normally deeply integrated into the capital market with a primary focus on investment activities. In line with the business objective in financial firms, EFA is mainly held for generating profit through trading and diversifying investment portfolio risk. Under IAS 39, EFA classification may need to be based on managers' holding intention to either trade in a short-term or hold for a longer period for risk management, regardless of the amount [2]. Similarly, financial firms' approach to managing EFAs may remain unchanged after IFRS 9 – whether they trade for profit-taking or hold for risk management – which is unrelated to the EFA amount. Therefore, we predict that there is no relationship between EFA amount and its classification choice in financial firms, regardless of IFRS 9 adoption. We state our first determinant hypothesis as follows:

H1a. There is a positive relationship between EFA amount and FVTOCI classification choice in non-financial firms after IFRS 9, while there is no relationship in financial firms, regardless of IFRS 9 adoption.

Secondly, making the EFA classification choice by considering the EFA effect on net income or the level of fair value hierarchy may imply firms' opportunistic use of the choice. Literature documents earnings management behaviour through realising FVGL on available-for-sale assets in both financial and non-financial firms in countries that allow the recycling of the FVGL on EFAs. Barth *et al.* (2017) and Dong and Zhang (2018) find that the US banks manage earnings by selectively trading available-for-sale assets to realise their FVGL from equity to profit or loss. Lu *et al.* (2023) provide evidence in Chinese non-financial firms that only when firms' net income is positive or FVGL on available-for-sale assets is large enough to offset negative net income, firms smooth their earnings through realised gains and losses on available-for-sale assets [3].

On the one hand, FVTOCI option enables firms to avoid earnings volatility when the fair value of EFA fluctuates and manipulate earnings when recycling is allowed under IAS 39. On the other hand, FVTPL option provides a potential source of earnings that can be reflected in net income immediately. However, since EFA classification may be based on the purpose of holding such assets, EFA effect on net income may not be considered when making classification decisions. Therefore, we examine whether EFA classification choice is used opportunistically by considering EFA effect on net income and state our second determinant hypothesis as follows:

H1b. There is no relationship between EFA effect on net income and FVTOCI classification choice, regardless of IFRS 9 adoption.

Finally, when there is no quoted price in an active market, Level 3 fair value hierarchy can be applied to EFA measurement. [Song et al. \(2010\)](#) find that banks recognise greater changes in assets measured at Level 3 fair value when they have lower earnings. [Laux and Leuz \(2010\)](#) document that banks reclassify assets measured at Level 1 fair value to Level 3 fair value during the Global Financial Crisis to avoid recognising the impairment losses. It is possible that FVTPL is preferred when EFA is measured at Level 3 fair value compared to Levels 1 and 2, as firms have more discretion over the fair value movements and are able to control earnings volatility. Therefore, we examine whether Level 3 fair value measurement for EFA drives firms' classification choice and state our third determinant hypothesis as follows:

H1c. There is a negative relationship between EFA Level 3 fair value measurement and FVTOCI classification choice, regardless of IFRS 9 adoption.

2.3 Usefulness of equity financial instruments information

EFA amount accounts for an important portion of firms' total assets, particularly in financial firms ([Awuye and Taylor, 2024](#); [Dong and Zhang, 2018](#); [Lu et al., 2023](#)). [Khurana and Kim \(2003\)](#) find that fair value provides a higher quality of information than historical costs for available-for-sale assets in bank holding companies. Since IFRS 9 eliminates the cost alternative permitted by IAS 39 and mandates all fair value measurements for EFA, it is of interest to know the extent to which EFA amounts provide incremental explanatory power to firms' share prices and whether it is changed after IFRS 9. We examine the value relevance of the EFA amount and state our hypothesis as follows:

H2a. EFA amounts are value relevant, regardless of IFRS 9 adoption.

Research on examining the usefulness of FVGL on EFAs is limited, and there are no conclusive results on the value relevance of OCI in the literature. [Cahan et al. \(2000\)](#) and [Isidro et al. \(2004\)](#) do not find incremental value relevance of OCI. However, [Khan et al. \(2018\)](#) find that fair value movement of available-for-sale assets is one of the two components that drive the value relevance of OCI. EFRAG expresses concerns about the relevance of reported net income if FVGL on EFAs cannot be recycled to profit or loss once FVTOCI is chosen under IFRS 9 ([EFRAG, 2015](#)). However, a different view suggests that if recycling does not improve users' access to information, it should be abandoned without introducing complexity to financial reporting ([Rees and Shane, 2012](#)). [Pinto and Morais \(2022\)](#) examine a sample of FTSE 100 and EURO STOXX 50 firms and document that FVTPL option for EFA provides incremental value relevance both before and after IFRS 9, while FVTOCI option becomes value relevant after IFRS 9. Therefore, we examine whether the FVGL on EFAs is value relevant and whether the reporting location (either profit or loss or OCI) makes a difference to investors, especially when recycling is prohibited under IFRS 9, and state our hypothesis as follows:

H2b. EFA classification does not affect the value relevance of FVGL on EFAs, regardless of IFRS 9 adoption.

3. Research method

3.1 Data and sample

Our initial sample comprises ASX 500 firms [4]. ASX 500 firms represent more than 90% of the market capitalisation of ASX firms, and firms that are not in the ASX 500 have few EFAs.

Our main purpose is to examine the use, determinants and usefulness of EFA and whether they have changed after IFRS 9. Based on this objective, we require a firm to be listed on ASX three years before and after IFRS 9 adoption. The time-series data provides comparability and allows us to analyse the impact of IFRS 9 on firms' EFA applications. We exclude 110 firms that do not have a six-year listing period (three years before and after IFRS 9 adoption) on ASX. We exclude managed funds, firms that do not use IFRS and insurance companies that are exempt from adopting IFRS 9 until IFRS 17 is effective. Panel A in [Table 1](#) displays our sample selection process and results in a final sample of 2,262 observations with 377 unique firms.

We collect EFA information from firms' annual reports by hand. Firstly, we identify the year of initial application, i.e. the year in which firms first apply IFRS 9. Since the IASB issued IFRS 9 in 2014 and allowed early adoption, 44 unique firms (11.7%), including 12 from the financial sector, applied for IFRS 9 earlier than its effective date [\[5\]](#). The remaining 333 firms (88.3%) applied IFRS 9 after it went into effect. Given that the majority of our sample firms have 30th June as the balance date, 2019 is the most common year of initial application for ASX 500 firms. We denote the year of initial application as year t for firm i , and year $t-1$, $t-2$, $t-3$ and $t+1$, $t+2$ represent years before and after IFRS 9 adoption.

Secondly, we search firms' annual reports to check whether they have EFAs or not. We use available-for-sale assets information under IAS 39 if there is no separate disclosure of the portion of EFA in available-for-sale assets. The term EFA is used both before and after IFRS 9 for simplicity. Panel B in [Table 1](#) displays our sample distribution by Global Industry Classification Standard (GICS) sectors. In total, 39.48% of the sample (893 observations) have EFAs. Out of all the sectors, the financials have the highest percentage (80.65%) of observations (300 observations) that have EFAs, which is in line with the nature of the sector.

Thirdly, if the firm has EFAs, we then collect the balance amount, the classification choice (either FVTOCI or FVTPL), the FVGL effect and fair value hierarchy for firms' EFAs. For firms that have multiple EFAs and disclose them in separate lines, we collect the aforementioned information for each EFA line item and aggregate it. If there is no disclosure of the FVGL on EFAs, we assume that it is either zero or immaterial and assign zero to FVGL for that firm-year. An example of how EFA information is disclosed in a firm's annual report during the year of initial application can be found in [Appendix 1](#). All other firm data (e.g. firm financials, corporate governance, etc.) are collected either manually from firms' annual reports or from the Refinitiv database.

4. Research design

4.1 Determinants of equity financial instruments classification choice

A firm may have multiple equity investments that are classified into different categories. We define a firm as an FVTOCI user if any of its EFA is classified as FVTOCI [\[6\]](#). We specify the following logistic model to test *H1* over samples that have EFAs:

$$\begin{aligned}
 FVTOCI_{i,t} = & \beta_0 + \beta_1 EFAamt_{i,t} + \beta_2 EFAeffect_{i,t} + \beta_3 EFAMEas_{i,t} + \beta_4 LEV_{i,t} \\
 & + \beta_5 CEOCOMP_{i,t} + \beta_6 LogTA_{i,t} + \beta_7 ROEadj_{i,t} + \beta_8 ACIND_{i,t} + \beta_9 BIG4_{i,t} \quad (1) \\
 & + \beta_{10} ANALYST_{i,t} + YearFE + IndustryFE + \varepsilon_{i,t}
 \end{aligned}$$

where *FVTOCI* is an indicator variable that equals one if a firm i is an FVTOCI user in year t ; zero otherwise. *EFAamt* is the EFA balance amount at year-end deflated by total assets in testing *H1a*. To test *H1b*, *EFAeffect* measures EFA effect on net income and is calculated as

Table 1. Sample selection process and distribution by GICS sector

<i>Panel A: Sample selection process</i>			
ASX 500 firms in year 2022		Unique firms	Firm-year observations
Exclude: firms do not list on ASX for six years (three years pre- and post-IFRS 9 adoption)		500	3,000
Managed fund		-110	-660
Firms do not use IFRS		-3	-18
Insurance firms that are exempt from adopting IFRS 9 till IFRS 17 effective		-9	-54
Total sample		-1	-6
		377	2,262
<i>Panel B: Sample distribution by GICS sector</i>			
Sector	No. of firms	%	No. of obs
Consumer staples	15	3.98	90
Real estate	35	9.28	210
Materials	88	23.34	528
Financials	62	16.45	372
Energy	22	5.84	132
Consumer discretionary	43	11.41	258
Industrials	27	7.16	162
Utilities	7	1.86	42
Health care	32	8.49	192
Communication services	18	4.77	108
Information technology	28	7.43	168
<i>Total</i>	<i>377</i>	<i>100</i>	<i>2,262</i>
			No. of obs have EFA
			38
			75
			250
			300
			54
			34
			36
			4
			24
			44
			34
			893
			% of obs have EFA
			42.22
			35.71
			47.35
			80.65
			40.91
			13.18
			22.22
			9.52
			12.50
			40.74
			20.24
			39.48

Source(s): Table by authors

the absolute value of a ratio of any FVGL on EFAs to net income. For *H1c*, *EFameas* is an indicator variable that equals one if firm *i* uses Level 3 fair value hierarchy to measure any of its EFAs in year *t*, and zero otherwise.

We control for firm contracting incentives since prior literature provides evidence that accounting choice is determined to influence one or more contractual arrangements (Alves, 2019; Fields *et al.*, 2001; Murphy, 2000). Firstly, existing research documents that firms with high financial leverage are at greater risk of breaching debt covenants and are more likely to choose the accounting method to reduce earnings volatility (Israeli, 2015). Pinto and Morais (2022) find that firms with high leverage have greater contractual risk and reclassify more available-for-sale assets to FVTOCI only during the IFRS 9 transition year. We include *LEV*, which is the leverage calculated by total liabilities divided by total assets, as a control. Secondly, literature shows that managers take advantage of the discretion allowed in accounting standards to increase their compensation, especially short-term incentives (Guidry *et al.*, 1999; Healy, 1985; Murphy, 2000). EFA classification choice affects firms' net income, which has an immediate effect on profitability. As an important metric of business performance, net income is a common factor in considering management compensation (De Angelis and Grinstein, 2015; Graham *et al.*, 2005). We control for *CEOCOMP*, which is computed as the ratio of the CEO's variable compensation (including cash bonus and equity awards) to total compensation, in our model.

Following Pinto and Morais (2022), we also control for firm size (*LogTA*) and profitability (*ROEadj*). Larger firms are more likely to have more surplus cash and invest in EFAs. Therefore, we control for firm size and measure it as the natural logarithm of total assets (*LogTA*). Da Costa *et al.* (2020) and Barlev *et al.* (2007) suggest that firms with a high return on assets (ROA) would face greater demand from others and are likely to choose income-increasing accounting methods. We use return on equity before any FVGL on EFAs effect (*ROEadj*) rather than ROA, since ROE is more consistent with the investor decision-making objective of financial reporting (Zang *et al.*, 2022) [7].

Moreover, we control for corporate governance factors that monitor firms' compliance with accounting standards for financial reporting quality improvement (Schäuble, 2019). We include audit committee independence (*ACIND*) as a control since effective monitoring by the audit committee improves the accuracy of financial estimates and constrains opportunistic actions made by managers (Ashbaugh-Skaife *et al.*, 2006; Dechow *et al.*, 1996; Larcker *et al.*, 2007; Srinidhi *et al.*, 2011). We control for *BIG4* if firm *i* is audited by the Big 4 in year *t*. Literature documents that prestigious auditors are more likely to identify managers' opportunistic behaviour and have a strong incentive to enforce higher earnings quality (Francis and Wang, 2008). We also control for analyst coverage (*ANALYST*) because a high analyst coverage contributes to firms' information disclosure and monitors firms' financial reporting quality (Yu, 2008).

To test whether the determinants of firms' EFA classification choices have been changed after IFRS 9, we examine the determinants model in samples before and after IFRS 9 separately. With different holding purposes, we estimate the model for non-financial and financial firms separately. To control for potential industry variations in EFA classification choice as well as time-specific effects, we include industry and year fixed effects [8]. All continuous variables in this study are winsorised at one per cent on both tails to minimise outliers' influence. Standard errors are clustered at the firm level. The detailed definitions of variables are listed in Appendix 2.

4.2 *Usefulness of equity financial instruments information*

To extend our knowledge regarding the relevance and reliability of equity instruments' accounting as reflected in equity values, we test the value relevance of (1) EFA amount and (2) FVGL on EFAs. Based on an extensively used [Ohlson \(1995\)](#) model, we follow other value relevance studies and estimate the price-level regression model over samples that have EFAs ([Barth et al., 1996, 2001](#); [Khan et al., 2018](#); [Liao et al., 2021](#)):

$$Price_{i,t} = \beta_0 + \beta_1 BVE_S_{i,t} + \beta_2 CI_S_{i,t} + \varepsilon_{i,t} \quad (2)$$

where *Price* = the share price of firm *i* in year *t*, three months after its balance date; *BVE* = book value of equity; *CI* = total comprehensive income. All variables except *Price* are deflated by the number of outstanding shares (denoted by *_S*). Although many studies use net income in the value relevance model ([Barth et al., 1996](#); [Ciftci et al., 2014](#); [Pinto and Morais, 2022](#)), we use *CI*, because the [Ohlson \(1995\)](#) model is based on the clean surplus rule. Further, considering the objective of examining the usefulness of FVGL on EFAs in both profit or loss and OCI, comprehensive income fits in this study.

To investigate the incremental value relevance of EFA amount, we isolate the EFA amount (*AmtEFA*) from *BVE* and include *AmtEFA* as a separate component of the model. We also separate FVGL on EFAs in profit or loss or/and OCI from *CI* to examine the value relevance of FVGL. The effect of EFA on profit or loss is denoted as *PLEFA* and on OCI is denoted as *OCIEFA*. If there is no disclosure of firms' EFA effect, we assume it is zero and immaterial:

$$Price_{i,t} = \beta_0 + \beta_1 BVE_S^*_{i,t} + \beta_2 AmtEFA_S_{i,t} + \beta_3 CI_S^{**}_{i,t} + \beta_4 PLEFA_S_{i,t} + \beta_5 OCIEFA_S_{i,t} + \varepsilon_{i,t} \quad (3)$$

where *BVE_S** is computed as *BVE_S - AmtEFA_S*. *CI_S*** is *CI_S* excluding *PLEFA_S* and *OCIEFA_S*. To examine whether value relevance changed after the adoption of IFRS 9, we test the model on samples before and after IFRS 9 for non-financial and financial firms separately.

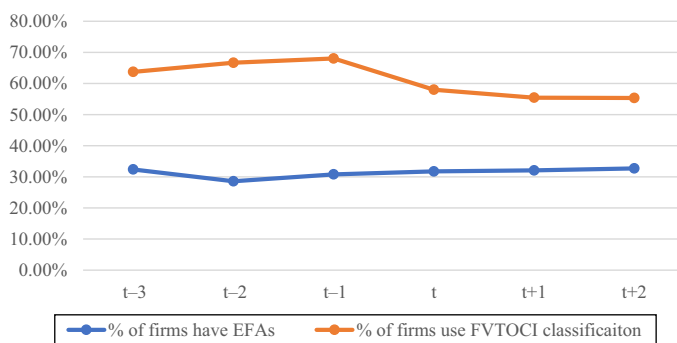
5. The use of equity financial instruments and variables descriptive statistics

5.1 *The use of equity financial instruments and classification choice*

To address our first research objective of understanding the use of EFA and whether it changed after IFRS 9, we examine firms' EFA holding behaviour from three perspectives: whether to invest in EFA or not, EFA classification choice and EFA amount. [Figure 1](#) presents the percentage of firms that have EFAs and the use of FVTOCI classification throughout the six years surrounding IFRS 9 adoption in non-financial and financial firms, respectively.

As shown in Panel A of [Figure 1](#), the percentage of non-financial firms that have EFAs is around 31% over the six years around IFRS 9 adoption, with no significant variation in the Chi-square test (untabulated). In line with [Zang et al. \(2022\)](#), we also do not find significant changes in the percentage of FVTOCI users of firms that have EFAs with the Chi-square test, even though there is a decrease from 68.0% one year before IFRS 9 to 58% in the initial adoption year. [Table 2](#) displays the descriptive statistics of EFA amount to total assets. The EFA amount comprises around 3% of total assets on average in each of the six years around IFRS 9 adoption. We compare EFA amount one year before and after the adoption of IFRS 9 with a *t*-test and do not find significant differences.

Panel A: EFA use and classification in non-financial firms



Panel B: EFA use and classification in financial firms

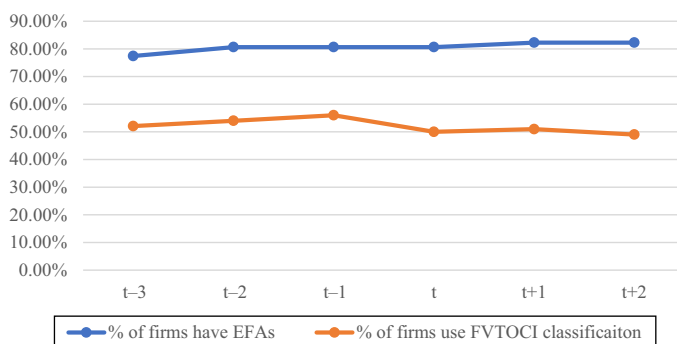


Figure 1. EFA use and classification before and after IFRS 9 adoption

Source: Figure by authors

Panel B of Figure 1 shows EFA use and classification choice in financial firms. Using the Chi-square test, there is no significant difference in whether or not to invest in EFA over the six years, given that around 80% of financial firms have EFAs each year. About 52% of financial firms with EFAs are FVTOCI users each year, with no significant changes over the six years. In each of the six years around IFRS 9 adoption, the EFA amount represents, on average, about 37.7% of the total assets of financial firms, as shown in Table 2. Again, we do not find a significant difference in EFA amount one year before and after IFRS 9 adoption in financial firms with a *t*-test.

The results show that IFRS 9 does not change the use of EFA in both non-financial and financial firms regarding whether or not to invest in EFA, EFA classification choice, or EFA amounts, and this result is consistent with Zang *et al.*'s (2022) study in Australia and Löw and Erkelenz (2022)'s study in European banks. However, Fang *et al.*'s (2022) study in China finds that firms sell their available-for-sale assets after the announcement but before the implementation of the Chinese equivalent of IFRS 9 to avoid being adversely affected by new accounting standards. We note that the notice period given before the mandatory adoption of IFRS 9 is different between China and Australia. The IASB completed the requirements for changing EFA accounting standards under IFRS 9 in July 2014 and

Table 2. EFA amount to total assets before and after IFRS 9 adoption

	N	Mean (%)	Non-Fin		N	Mean (%)	Fin	
			Median (%)	SD (%)			Median (%)	SD (%)
<i>t</i> + 2	103	2.68	0.58	5.86	51	38.95	15.59	41.44
<i>t</i> + 1	101	3.39	0.44	7.63	51	37.09	13.79	40.00
<i>t</i>	100	3.08	0.45	6.80	50	38.58	19.23	40.23
<i>t</i> - 1	97	3.16	0.80	6.42	50	37.70	19.90	40.23
<i>t</i> - 2	90	2.85	0.61	5.15	50	37.06	11.64	40.02
<i>t</i> - 3	102	2.98	0.83	5.66	48	37.00	11.95	39.42
Total	593	3.02	0.56	6.30	300	37.74	13.67	39.91

Note(s): This table describes the statistics of EFA amount to total assets in the six years from three years before IFRS 9 adoption (*t* - 3) to three years after IFRS 9 adoption (*t* + 2) in non-financial (Non-Fin) and financial (Fin) firms, respectively

Source(s): Table by authors

required mandatory adoption almost four years later. However, China announced its Chinese version of IFRS 9 in March 2017 and required implementation of the same as IFRS 9 in January 2018 (Fang *et al.*, 2022). Literature documents that familiarity with the standards facilitates greater confidence in preparers and investors in the quality of accounting information (Alali and Foote, 2012; Liu and Liu, 2007; Mala and Chand, 2015). The short notice period of less than one year in China may cause firms to overreact to the financial consequences and respond by selling available-for-sale assets. The results imply that a longer notice period before the mandatory adoption of IFRS 9 facilitates familiarity with the standards and mitigates the potential cost caused by overreaction to the standard changes. The change in the recycling requirement for FVGL on EFAs from equity to profit or loss upon derecognition has no practical effect on EFA use.

5.2 Sample descriptive statistics

Panel A of Table 3 presents summary statistics of variables used in the determinants model of equation (1) in non-financial and financial firms before and after IFRS 9 application, respectively. On average, the EFA amount (*EFAamt*) comprises 3.0% of total assets with a median value of 0.7% in non-financial firms before IFRS 9 and 3.0% (0.5%) on average (median) after IFRS 9. The average (median) EFA amount is 37.3% (13.0%) of total assets in financial firms before IFRS 9 and 38.2% (14.7%) after IFRS 9. The mean (median) FVGL on EFAs (*EFAeffect*) comprises 8.3% (0.3%) of net income before IFRS 9 and 8.5% (0.2%) after IFRS 9 in non-financial firms. The FVGL on EFAs accounts for a higher portion of net income in financial compared to non-financial firms, as reflected in the average *EFAeffect* of 35.6% before and 36.5% after IFRS 9. Firms that have a Level 3 fair value hierarchy to measure any of their EFAs (*EFAmeas*) increased after IFRS 9 in both non-financial (76 firms increased to 103 firms) and financial firms (39 firms increased to 53 firms).

Panel B of Table 3 contains descriptive statistics for variables used in the value relevance model. The average (median) share price three months after its balance date (*Price*) is 6.3 (2.6) before and 8.0 (3.0) after IFRS 9 in non-financial firms, compared to 11.9 (5.1) before and 12.9 (4.3) after IFRS 9 in financial firms. The mean value of EFA amount deflated by total outstanding shares (*AmtEFA_S*) is 0.16 before and 0.19 after IFRS 9 in non-financial firms, compared to a larger amount of EFA in financial firms with an average *AmtEFA_S* of 3.1 before and 3.0 after IFRS 9. The average *OCIEFA_S* for non-financial firms is 0.001

Table 3. Descriptive statistics of variables

	Pre-IFRS 9 Non-Fin firms (n = 289)		Post-IFRS 9 Non-Fin firms (n = 304)		Pre-IFRS 9 Fin firms (n = 148)		Post-IFRS 9 Fin firms (n = 152)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<i>Panel A: Descriptive statistics for variables used in the determinants study</i>								
EFAamt	0.030	0.007	0.030	0.068	0.373	0.130	0.382	0.403
EFAeffect	0.083	0.003	0.085	0.257	0.356	0.000	0.365	0.813
LEV	0.378	0.371	0.392	0.201	0.445	0.222	0.452	0.356
CEOCOMP	0.381	0.414	0.245	0.226	0.340	0.367	0.300	0.260
LogTA	20.515	20.665	21.054	2.042	21.815	20.831	21.951	2.606
ROEadj	-0.042	0.079	0.448	0.298	0.107	0.083	0.084	0.119
ACIND	78.588	100.000	84.467	24.778	86.597	100.000	86.162	22.428
ANALYST	6.377	5.000	6.711	4.945	6.047	2.000	5.454	6.090
<i>Dichotomous variables</i>								
	Yes	%	Yes	%	Yes	%	Yes	%
FVTOCI	191	66.1	171	56.3	80	54.1	76	50.0
EFAmeas	76	26.3	103	33.9	39	26.4	53	34.9
BIG4	231	79.9	262	86.2	126	85.1	133	87.5
<i>Panel B: Descriptive statistics for variables used in the value relevance study</i>								
Price	6.315	2.627	8.027	14.521	11.903	5.075	12.897	22.083
BVE_S	3.324	1.481	4.090	7.123	6.923	2.775	9.999	10.745
AmEFA_S	0.156	0.010	0.193	1.016	3.101	1.049	5.899	5.434
CI_S	0.278	0.118	0.424	1.124	0.799	0.288	1.370	1.316
OCIEFA_S	0.001	0.000	-0.007	0.062	0.025	0.000	0.008	0.102
PLEFA_S	0.000	0.000	0.002	0.026	0.013	0.000	0.012	0.064

Source(s): Table by authors

before and -0.007 after IFRS 9, respectively, whereas for financial firms, it is 0.025 before and 0.008 after IFRS 9, respectively. In non-financial firms, the average *PLEFA_S* is 0.000 before and 0.002 after IFRS 9, whereas in financial firms, it is 0.013 before and 0.012 after IFRS 9. Detailed variable definitions can be found in [Appendix 2](#).

6. Determinants and usefulness results

6.1 Determinants of equity financial instruments classification choice

Panel A in [Table 4](#) shows the results of EFA classification determinants in non-financial firms before and after IFRS 9, respectively. As shown in Column (1), non-financial firms are more likely to choose FVTOCI classification when EFA effect has a lower impact on net income before IFRS 9, given the coefficient -0.795 for *EFAeffect*. The result is consistent after we control for firm contracting incentives, firm size, profitability and corporate governance, showing that the negative relationship between *EFAeffect* and FVTOCI choice is significant at the 1% level, as displayed in Column (3). Column (2) presents the results of EFA classification determinants in firm-years after IFRS 9, showing *EFAamt* is significantly positively associated with FVTOCI choice. After including all the control variables, we find a similar result that the FVTOCI choice is preferred when EFA amount is large after IFRS 9, as shown in Column (4).

The results imply that there is a possible opportunistic use of the discretion given in IAS 39 by non-financial firms considering EFA effect on net income when making the classification decision. Non-financial firms may prefer to reflect FVGL on EFAs immediately in earnings when the effect is greater. In contrast, under IFRS 9, a larger EFA amount might indicate a strategic investment, for which FVTOCI is chosen in alignment with the standard.

Next, Panel B in [Table 4](#) presents the results of the determinants model in financial firms. As shown in Columns (1) and (2), EFA characteristics are not related to FVTOCI choice, regardless of IFRS 9 adoption. After controlling for firm contracting incentives, firm size, profitability and corporate governance, as shown in Columns (3) and (4), we find consistent results that EFA amount, EFA effect on net income or EFA measurement are not related to FVTOCI choice.

Since the initial year of IFRS 9 adoption is the only year that firms can reclassify their existing EFAs, we examine the determinants model on a sub-sample of firms in year t , as shown in Column (5), in both non-financial and financial firms. We find consistent results.

Overall, the determinants of EFA classification choice in non-financial firms changed from an EFA effect on net income before IFRS 9 to the EFA amount after IFRS 9. We infer that the potential opportunistic use of the EFA classification discretion in standards is mitigated after IFRS 9, although there does not appear to be a change for financial firms.

6.2 Usefulness of equity financial instruments information

Considering different EFA investing purposes, we test the value relevance model in non-financial and financial firms separately in both pre- and post-IFRS 9 periods, as shown in [Table 5](#). Firstly, we report the baseline model that book value of equity and total comprehensive income are significantly positively associated with share price in both non-financial and financial firms before and after IFRS 9, as shown in Columns (1)–(2) and (5)–(6) in [Table 5](#), and the results are consistent with existing literature ([Khan et al., 2018](#); [Rees and Shane, 2012](#)).

Secondly, we separate the EFA amount from the book value of equity and the effect of FVGL on EFAs from comprehensive income as reported in Columns (3)–(4) and (7)–(8) before and after IFRS 9 in non-financial and financial firms, respectively. As shown in Columns (3)–(4), both EFA amount and FVGL on EFAs do not provide incremental value relevance for non-financial firms, regardless of IFRS 9 adoption. In contrast, the EFA amount

Table 4. EFA FVTOCI classification choice determinants

DV = FVTOCI	(1) Pre	(2) Post	(3) Pre	(4) Post	(5) Initial
<i>Panel A: EFA FVTOCI classification choice determinants in non-financial firms</i>					
EFAamt	1.021 (0.400)	9.876*** (2.610)	2.461 (0.850)	13.991*** (3.120)	12.579** (2.370)
EFAeffect	-0.795* (-1.910)	0.084 (0.100)	-1.197*** (-2.730)	0.323 (0.370)	-0.258 (-0.270)
EFAmeas	0.358 (0.650)	0.206 (0.440)	0.239 (0.400)	-0.182 (-0.340)	0.127 (0.220)
LEV			-2.766** (-2.240)	-0.306 (-0.220)	-0.488 (-0.250)
CEOCOMP			-1.944** (-2.080)	0.693 (0.640)	1.509 (0.890)
LogTA			0.289*** (2.060)	0.103 (0.560)	0.011 (0.050)
ROEadj			-0.438 (-1.180)	-1.402 (-1.580)	-2.425 (-0.880)
ACIND			0.019** (2.460)	0.009 (1.130)	0.021 (1.430)
BIG4			0.682 (0.990)	0.468 (0.610)	0.041 (0.930)
ANALYST			-0.002 (-0.030)	0.118* (1.760)	0.111 (1.520)
Constant	1.737** (1.990)	1.454* (1.800)	-3.845 (-1.420)	-2.817 (-0.830)	-2.097 (-0.450)
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	No
N	277	301	277	301	99
Pseudo R ²	0.113	0.147	0.234	0.238	0.256
<i>Panel B: EFA FVTOCI classification choice determinants in financial firms</i>					
EFAamt	0.397 (0.450)	0.788 (1.030)	0.833 (0.640)	1.539 (0.890)	1.220 (0.610)
EFAeffect	0.203 (0.560)	-0.145 (-0.480)	0.094 (0.220)	-0.182 (-0.520)	-0.214 (-0.440)
EFAmeas	0.795 (1.260)	0.443 (0.750)	0.731 (1.100)	0.373 (0.580)	0.456 (0.580)
LEV			-3.148** (-1.960)	0.971 (0.380)	0.941 (0.290)
CEOCOMP			1.280 (1.240)	-1.139 (-0.740)	-2.262 (-0.970)
LogTA			0.409 (1.530)	0.598** (2.120)	0.654* (1.830)
ROEadj			-1.044 (-0.430)	1.833 (0.660)	3.972 (0.880)
ACIND			0.005 (0.260)	-0.013 (-0.920)	-0.015 (-0.820)
BIG4			0.408 (0.400)	0.399 (0.370)	1.320 (1.140)
ANALYST			0.023 (0.250)	-0.157 (-1.630)	-0.195 (-1.350)
Constant	-0.316 (-0.710)	-0.413 (-0.840)	-9.183* (-1.780)	-12.343** (-2.410)	-13.740** (-1.990)
Industry FE	No	No	No	No	No
Year FE	Yes	Yes	Yes	Yes	No
N	148	152	148	152	50
Pseudo R ²	0.031	0.017	0.129	0.177	0.216

Note(s): This table presents the results of the determinants of EFA FVTOCI classification choice before and after IFRS 9. The dependent variable *FVTOCI* is a binary variable that equals one if the firm classifies any of its EFA at FVTOCI, and zero otherwise. Panel A shows the results in non-financial firms and Panel B is the results in financial firms. Columns (1)–(4) examine different determinants on samples of pre- and post-IFRS 9, respectively. Column (5) examines the determinants model on a sub-sample of the initial IFRS 9 adoption year. All z-score (in parentheses) are based on standard errors clustered by firm. All continuous variables are winsorised at the top and bottom one percentile. See [Appendix 2](#) for detailed variable definitions. Two-tailed tests of significance: *** = <0.01, ** = <0.05 and * = <0.1

Source(s): Table by authors

Table 5. Value relevance of EFA amount and classification choice

DV = Price	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		
	Pre	Post	Non-Fin		Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	
BVS_S	0.470*** (5.290)	1.399*** (12.710)	0.665*** (5.870)	1.608*** (11.350)	0.976*** (6.990)	0.715*** (4.140)	1.026*** (8.190)	0.969*** (5.880)									
BVS_S*			-0.042 (-0.040)	0.837 (1.470)													
AmEFA_S			8.835*** (12.270)	2.261*** (3.080)													
CLS	8.930*** (12.320)	1.953*** (2.790)	21.021 (0.240)	-11.275 (-0.660)	5.760*** (5.630)	9.785*** (6.900)	5.839 (0.690)	4.509 (0.390)									
CLS**			-10.407 (-0.910)	2.848 (0.310)													
PLEFA_S			3.089 (1.640)	2.061 (1.230)	0.757 (0.770)	-0.410 (-0.290)	11.393*** (3.310)	4.089 (0.570)									
OCIEFA_S	3.359* (1.760)	2.542 (1.570)	Yes	Yes	No	No	Yes	No									
Constant	Yes	Yes	Yes	Yes	No	No	Yes	No									
Industry FE	Yes	Yes	Yes	Yes	No	No	Yes	No									
Year FE	Yes	Yes	Yes	Yes	No	No	Yes	No									
N	289	304	289	304	148	152	148	152									
Adj R ²	0.641	0.746	0.653	0.727	0.883	0.821	0.899	0.838									

Note(s): This table presents the results of examining the value relevance of firms' EFA amounts and classification choice before and after IFRS 9. The dependent variable *Price* is the share price of firm *i* three months after its balance date in year *t*. Columns (1)–(4) present the value relevance test results in non-financial firms and Columns (5)–(8) are the results in financial firms. Columns (1)–(2) and (5)–(6) are baseline models and show the value relevance of book value of equity (*BVE_S*) and total comprehensive income (*CLI_S*) before and after IFRS 9, respectively. Columns (3)–(4) and (7)–(8) show the value relevance of EFA amount (*AmEFA*) and EFA *FVGL* effect on profit or loss (*PLEFA_S*) or on OCI (*OCIEFA_S*) before and after IFRS 9, respectively. All variables are defined in Appendix 2. Figures in parentheses are *t*-statistics. All continuous variables are winsorised at the top and bottom one percentile. Two-tailed tests of significance: *** = <0.01, ** = <0.05 and * = <0.1

Source(s): Table by authors

is value relevant for financial firms both before and after IFRS 9 [Columns (7)–(8)]. *OCIEFA_S* is significantly positively associated with share price in financial firms before but not after IFRS 9, implying that IFRS 9 decreases the usefulness of EFA effect on OCI for financial firms.

Again, we conduct a number of robustness tests. Firstly, we further examine the value relevance model in a sub-sample of firm-years whose EFA amount is larger than the median. EFA amount becomes value relevant in both non-financial and financial firms after IFRS 9, suggesting IFRS 9 improves the value relevance of EFA amount when it is material to firms' assets. Secondly, we examine the value relevance model in a sub-sample of larger firms. Thirdly, the value relevance model is tested in sub-samples that have a larger EFA effect, either in profit or loss or in OCI. All sub-sample tests consistently show that *OCIEFA_S* provides value relevance only before IFRS 9 for financial firms.

Pinto and Morais (2022) find that EFA effect on OCI becomes value relevant after, but not before, IFRS 9 in the top 100 UK and 50 European firms; however, their value relevance models do not include any variable capturing the EFA amount, nor do they conduct separate analyses for financial and non-financial firms. In contrast, we find that the amount of the EFA is value relevant both pre- and post-IFRS 9 when material in both financial and non-financial firms. These differences could be the result of variations in institutional settings, sample size, constituents and models. Accordingly, our results suggest caution in the interpretation of IFRS 9 in improving information usefulness by having the market value of EFA amounts.

7. Conclusion

Accounting for financial instruments has long been an area of concern, especially after the Global Financial Crisis (Duh *et al.*, 2012; PwC, 2017). Due to its complexity, a completed and integrated standard for financial instruments-IFRS 9 – was not issued until 2014 as a replacement for IAS 39. IFRS 9 was effective on or after 2018, with early application permitted. One major change in IFRS 9 regarding the classification and measurement of EFA is the prohibition of recycling FVGL on EFAs from equity to profit or loss once FVTOCI is chosen at initial recognition. The contentious issue of whether to recycle FVGL on EFAs has been debated widely.

The findings from a sample based on firms in the ASX 500 three years before and after IFRS 9 adoption show that the use of EFA in practice, in terms of whether to invest in EFA or not, EFA classification choice and holding amounts, did not change significantly in both non-financial and financial firms after IFRS 9. There is a potential opportunistic use of the EFA classification discretion before IFRS 9 because the EFA effect on net income was an important driver of recognising the FVGL in OCI or the profit or loss in non-financial firms. However, this appears constrained after IFRS 9, where the amount of EFA is significant instead. Finally, we find that although the amount of EFA is value relevant, there is no change post-IFRS 9.

Our paper is among the first to contribute to the effect of IFRS 9 implementation. It has several implications for the IASB, national standard-setters and national accounting enforcement bodies:

- a longer notice period before the mandatory application of IFRS 9 allows stakeholders, including managers, investors, preparers and auditors, more time to familiarise themselves with the requirements of the new standard and facilitates a smooth transfer from IAS 39 to IFRS 9;
- there appears to be less use of the EFA classification choice to impact earnings under IFRS 9; and
- standard setters need to be cautious when evaluating the information improvement in IFRS 9.

This study is subject to three limitations, which provide potential opportunities for future research. Firstly, this study examines the use, determinants and usefulness of changes in accounting standards for EFAs, but it does not address the potential costs associated with those changes, such as the impact on audit fees, labour costs or the cost of capital. Future research could extend the analysis by examining the costs related to the EFA standard changes. Secondly, our study focuses on the Australian setting. Since the international accounting literature documents that the impacts of accounting standards may vary depending on the institutional settings (Isidro and Raonic, 2012; Soderstrom and Sun, 2007), future studies may investigate the effects of the changes in EFA accounting standard in other settings. This is important because IFRSs are applied globally; therefore, the IASB would be interested in evidence on the impacts of IFRS 9 from different settings to form an overall opinion on how the standard affects financial reporting. Thirdly, while our research design and empirical models mitigate the potential omitted variable bias, the paper may still suffer from this bias.

Notes

1. In 2016, the IASB introduced a temporary exemption from applying IFRS 9 for entities whose activities are predominantly related to insurance until IFRS 17 *Insurance contracts* is effective [International Accounting Standards Board (IASB), 2020a].
2. For many financial firms whose major business is investing, they diversify their portfolio by investing in different EFAs. They may prefer to hold a mix of equity assets across sectors or regions to reduce their risks from holding single equity and to hold for a longer term.
3. EFA accounting standards requirements in the USA, which is the Statement of Financial Accounting Standards (SFAS) No. 115 *Accounting for Certain Investments in Debt and Equity Securities* and in China, which is the Chinese Accounting Standards (CAS) 22 *Recognition and Measurement of Financial Instruments*, are comparable to IAS 39.
4. Australian Accounting Standards Board (AASB) 139 *Financial Instruments: Recognition and Measurement* is equivalent to IAS 39 and AASB 9 *Financial Instruments* is equivalent to IFRS 9.
5. Upon closer examination, 21 non-financial and 10 financial early adopters have EFAs. Due to sample limitations, we do not estimate our models separately for early adopters. However, when we exclude early adopters from our analyses, all results remain the same.
6. FVTOCI is only available after IFRS 9, but we use the term FVTOCI for available-for-sale assets that their FVGL are presented at OCI under IAS 39.
7. We examine other profitability ratios, such as ROA and net profit margin and find consistent results.
8. Incorporating industry and year fixed effects in the model helps reduce omitted variable bias by controlling for unobserved but constant differences across industries and over time (Abdallah et al., 2015; Hill et al., 2021).

References

- Abdallah, W., Goergen, M. and O'Sullivan, N. (2015), "Endogeneity: how failure to correct for it can cause wrong inferences and some remedies", *British Journal of Management*, Vol. 26 No. 4, pp. 791-804.
- Alali, F.A. and Foote, P.S. (2012), "The value relevance of International Financial Reporting Standards: empirical evidence in an emerging market", *The International Journal of Accounting*, Vol. 47 No. 1, pp. 85-108.

- Alves, S. (2019), "Accounting for investment property: determinants of accounting policy choice by Portuguese listed firms", *International Journal of Accounting and Taxation*, Vol. 7 No. 2, pp. 1-10.
- Ashbaugh-Skaife, H., Collins, D.W. and LaFond, R. (2006), "The effects of corporate governance on firms' credit ratings", *Journal of Accounting and Economics*, Vol. 42 Nos 1/2, pp. 203-243.
- Awuye, I.S. and Taylor, D. (2024), "Over half a decade into the adoption of IFRS 9: a systematic literature review", *Journal of Accounting Literature*, doi: [10.1108/JAL-11-2023-0204](https://doi.org/10.1108/JAL-11-2023-0204).
- Barlev, B., Fried, D., Haddad, J.R. and Livnat, J. (2007), "Reevaluation of revaluations: a cross-country examination of the motives and effects on future performance", *Journal of Business Finance and Accounting*, Vol. 34 Nos 7/8, pp. 1025-1050.
- Barnoussi, A.E., Howieson, B. and van Beest, F. (2020), "Prudential application of IFRS 9:(Un) fair reporting in COVID-19 crisis for banks worldwide?!", *Australian Accounting Review*, Vol. 30 No. 3, pp. 178-192.
- Barth, M.E., Beaver, W.H. and Landsman, W.R. (1996), "Value-relevance of banks' fair value disclosures under SFAS No. 107", *The Accounting Review*, Vol. 71 No. 4, pp. 513-537.
- Barth, M.E., Beaver, W.H. and Landsman, W.R. (2001), "The relevance of the value relevance literature for financial accounting standard setting: another view", *Journal of Accounting and Economics*, Vol. 31 Nos 1/3, pp. 77-104.
- Barth, M.E., Gomez-Biscarri, J., Kasznik, R. and López-Espinosa, G. (2017), "Bank earnings and regulatory capital management using available for sale securities", *Review of Accounting Studies*, Vol. 22 No. 4, pp. 1761-1792.
- BDO (2018), "Financial assets under IFRS 9 – the basis for classification has changed", available at: www.bdo.com.au/en-au/content/accounting-news/accounting-news-may-2018/financial-assets-under-ifs-9 (accessed on 8 Mar 2024).
- Brown, P., Preiato, J. and Tarca, A. (2014), "Measuring country differences in enforcement of accounting standards: an audit and enforcement proxy", *Journal of Business Finance and Accounting*, Vol. 41 Nos 1/2, pp. 1-52.
- Cahan, S.F., Courtenay, S.M., Gronnewoller, P.L. and Upton, D.R. (2000), "Value relevance of mandated comprehensive income disclosures", *Journal of Business Finance and Accounting*, Vol. 27 Nos 9/10, pp. 1233-1265.
- Ciftci, M., Darrough, M. and Mashruwala, R. (2014), "Value relevance of accounting information for intangible-intensive industries and the impact of scale: the US evidence", *European Accounting Review*, Vol. 23 No. 2, pp. 199-226.
- Da Costa, F.M., Liu, C., Rosa, G.C. and Tiras, S.L. (2020), "The commitment to income-decreasing accounting choices as a credible signal: reducing information asymmetry: the case of asset revaluations", *Contemporary Accounting Research*, Vol. 37 No. 4, pp. 2501-2522.
- De Angelis, D. and Grinstein, Y. (2015), "Performance terms in CEO compensation contracts", *Review of Finance*, Vol. 19 No. 2, pp. 619-651.
- Dechow, P.M., Sloan, R.G. and Sweeney, A.P. (1996), "Causes and consequences of earnings manipulation: an analysis of firms subject to enforcement actions by the SEC", *Contemporary Accounting Research*, Vol. 13 No. 1, pp. 1-36.
- Dong, M. and Zhang, X.-J. (2018), "Selective trading of available-for-sale securities: evidence from US commercial banks", *European Accounting Review*, Vol. 27 No. 3, pp. 467-493.
- Duh, R.-R., Hsu, A. W-h. and Alves, P.A.P. (2012), "The impact of IAS 39 on the risk-relevance of earnings volatility: evidence from foreign banks cross-listed in the USA", *Journal of Contemporary Accounting and Economics*, Vol. 8 No. 1, pp. 23-38.
- Elnahass, M., Izzeldin, M. and Steele, G. (2018), "Capital and earnings management: evidence from alternative banking business models", *The International Journal of Accounting*, Vol. 53 No. 1, pp. 20-32.

- European Financial Reporting Advisory Group (2015), “Endorsement advice on IFRS 9 financial instruments”, available at: www.efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FSiteAssets%2FEndorsement%2520Advice%2520on%2520IFRS%25209.pdf (accessed on 8 Mar 2024).
- European Financial Reporting Advisory Group (2022), “IFRS 9 financial instruments classification and measurement post-implementation review”, available at: www.efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FSiteAssets%2FIFRS%25209%2520PIR%2520-%2520EFRAG%2520Final%2520comment%2520letter%2520-%252028%2520January%25202022.pdf (access on 08 Mar 2024).
- Fang, X., Guo, Y., Mei, B. and Ye, J. (2022), “Implementation costs of IFRS 9 for non-financial firms: evidence from China”, *Accounting and Finance*, Vol. 62 No. 2, pp. 2781-2805.
- Fields, T.D., Lys, T.Z. and Vincent, L. (2001), “Empirical research on accounting choice”, *Journal of Accounting and Economics*, Vol. 31 Nos 1/3, pp. 255-307.
- Francis, J.R. and Wang, D. (2008), “The joint effect of investor protection and big 4 audits on earnings quality around the world”, *Contemporary Accounting Research*, Vol. 25 No. 1, pp. 157-191.
- Graham, J.R., Harvey, C.R. and Rajgopal, S. (2005), “The economic implications of corporate financial reporting”, *Journal of Accounting and Economics*, Vol. 40 Nos 1/3, pp. 3-73.
- Guidry, F., Leone, A.J. and Rock, S. (1999), “Earnings-based bonus plans and earnings management by business-unit managers”, *Journal of Accounting and Economics*, Vol. 26 Nos 1/3, pp. 113-142.
- Healy, P.M. (1985), “The effect of bonus schemes on accounting decisions”, *Journal of Accounting and Economics*, Vol. 7 Nos 1/3, pp. 85-107.
- Hill, A.D., Johnson, S.G., Greco, L.M., O’Boyle, E.H. and Walter, S.L. (2021), “Endogeneity: a review and agenda for the methodology-practice divide affecting micro and macro research”, *Journal of Management*, Vol. 47 No. 1, pp. 105-143.
- International Accounting Standards Board (IASB) (2008), *Discussion Paper: Reducing Complexity in Reporting Financial Instruments*, IFRS Foundation.
- International Accounting Standards Board (IASB) (2009a), “Financial instruments: classification and measurement basis for conclusion”, IASB, available at: www.ifrs.org/content/dam/ifrs/project/fi-classification-and-measurement/exposure-draft-2009/published-documents/ed-fi-classification-measurement.pdf (accessed 08 March 2024).
- International Accounting Standards Board (IASB) (2009b), *International Accounting Standard 39: Financial Instruments: Recognition and Measurement*, IFRS Foundation.
- International Accounting Standards Board (IASB) (2014), “IFRS 9 project summary: IFRS 9 financial instruments”, available at: www.ifrs.org/content/dam/ifrs/project/fi-impairment/ifrs-standard/published-documents/project-summary-july-2014.pdf (accessed 8 March 2024).
- International Accounting Standards Board (IASB) (2019), *International Financial Reporting Standard 9: Financial Instruments*, IFRS Foundation.
- International Accounting Standards Board (IASB) (2020a), “Staff paper: effective date of IFRS 17 and IFRS 9 temporary exemption in IFRS 4”, available at: <https://cdn.ifrs.org/content/dam/ifrs/meetings/2020/march/iasb/ap2a-amendments-to-ifrs-17-papers.pdf> (accessed 8 March 2024).
- International Accounting Standards Board (IASB) (2020b), “Work Plan-Timing of post-implementation reviews of IFRS 9 and IFRS 15”, available at: <https://cdn.ifrs.org/content/dam/ifrs/meetings/2020/october/iasb/ap8b-board-work-plan.pdf> (accessed 8 March 2024).
- International Accounting Standards Board (IASB) (2022), “Project report and feedback Statement-Post-implementation review IFRS 9 financial instruments—classification and measurement”, available at: www.ifrs.org/content/dam/ifrs/project/pir-ifrs-9/pir-ifrs9-feedbackstatement-portrait-dec2022.pdf (accessed 8 March 2024).

-
- Isidro, H. and Raonic, I. (2012), "Firm incentives, institutional complexity and the quality of 'harmonized' accounting numbers", *The International Journal of Accounting*, Vol. 47 No. 4, pp. 407-436.
- Isidro, H., O'Hanlon, J. and Young, S. (2004), "Dirty surplus accounting flows: international evidence", *Accounting and Business Research*, Vol. 34 No. 4, pp. 383-410.
- Israeli, D. (2015), "Recognition versus disclosure: evidence from fair value of investment property", *Review of Accounting Studies*, Vol. 20 No. 4, pp. 1457-1503.
- Khan, S., Bradbury, M.E. and Courtenay, S. (2018), "Value relevance of comprehensive income", *Australian Accounting Review*, Vol. 28 No. 2, pp. 279-287.
- Khurana, I.K. and Kim, M.-S. (2003), "Relative value relevance of historical cost vs. fair value: evidence from bank holding companies", *Journal of Accounting and Public Policy*, Vol. 22 No. 1, pp. 19-42.
- Larcker, D.F., Richardson, S.A. and Tuna, I. (2007), "Corporate governance, accounting outcomes, and organizational performance", *The Accounting Review*, Vol. 82 No. 4, pp. 963-1008.
- Laux, C. and Leuz, C. (2010), "Did fair-value accounting contribute to the financial crisis?", *Journal of Economic Perspectives*, Vol. 24 No. 1, pp. 93-118.
- Liao, L., Kang, H. and Morris, R.D. (2021), "The value relevance of fair value and historical cost measurements during the financial crisis", *Accounting and Finance*, Vol. 61 No. S1, pp. 2069-2107.
- Liu, J. and 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*, Vol. 6 No. 2, pp. 55-81.
- Lloyd, S. (2018), "IFRS 9 and equity investments", International Accounting Standard Board, available at: www.ifrs.org/news-and-events/news/2018/04/ifrs-9-and-equity-investments/#1 (accessed 8 March 2024).
- Löw, E. and Erkelenz, M. (2022), "Long and short-term investments by European banks—trends since the IASB published IFRS 9", *Australian Accounting Review*, Vol. 32 No. 4, pp. 440-459.
- Lu, R., He, W. and Zhang, X. (2023), "Using available-for-sale securities to smooth earnings: Evidence from China", *Abacus*, Vol. 59 No. 1, pp. 163-196.
- Mala, R. and Chand, P. (2015), "Confidence of accountants in applying International Financial Reporting Standards", *Corporate Ownership and Control*, Vol. 13 No. 1, pp. 56-65.
- Mechelli, A., Sforza, V. and Cimini, R. (2020), "Is IFRS 9 better than IAS 39 for investors' decisions? Evidence from the European context at the beginning of the transition year", *Financial Reporting*, Vol. 2020 No. 1, pp. 125-148.
- Murphy, K.J. (2000), "Performance standards in incentive contracts", *Journal of Accounting and Economics*, Vol. 30 No. 3, pp. 245-278.
- Nobes, C. (1998), "Towards a general model of the reasons for international differences in financial reporting", *Abacus*, Vol. 34 No. 2, pp. 162-187.
- Ohlson, J.A. (1995), "Earnings, book values, and dividends in equity valuation", *Contemporary Accounting Research*, Vol. 11 No. 2, pp. 661-687.
- Pinto, I. and Morais, A.I. (2022), "Classification of equity instruments under IFRS 9: determinants and consequences", *Australian Accounting Review*, Vol. 32 No. 4, pp. 411-426.
- PwC (2017), "IFRS 9, financial instruments: understanding the basics", available at: www.pwc.co.uk/who-we-are/regions/london/PwC-IFRS9-understanding-the-basics.pdf (accessed 8 March 2024).
- Rees, L.L. and Shane, P.B. (2012), "Academic research and standard-setting: the case of other comprehensive income", *Accounting Horizons*, Vol. 26 No. 4, pp. 789-815.
- Schäuble, J. (2019), "The impact of external and internal corporate governance mechanisms on agency costs", *Corporate Governance: The International Journal of Business in Society*, Vol. 19 No. 1, pp. 1-22.

- Soderstrom, N.S. and Sun, K.J. (2007), "IFRS adoption and accounting quality: a review", *European Accounting Review*, Vol. 16 No. 4, pp. 675-702.
- Song, C.J., Thomas, W.B. and Yi, H. (2010), "Value relevance of FAS No. 157 fair value hierarchy information and the impact of corporate governance mechanisms", *The Accounting Review*, Vol. 85 No. 4, pp. 1375-1410.
- Srinidhi, B., Gul, F.A. and Tsui, J. (2011), "Female directors and earnings quality", *Contemporary Accounting Research*, Vol. 28 No. 5, pp. 1610-1644.
- Street, D.L. (2014), "An interview with Sir David Tweedie: reflections on ten years as the IASB's first chair", *Journal of International Financial Management and Accounting*, Vol. 25 No. 3, pp. 305-327.
- Taylor, D. (2017), "IFRS 9 explained – available for sale financial assets", BDO, available at: www.bdo.co.uk/en-gb/insights/business-edge/business-edge-2017/ifrs-9-explained (accessed 8 March 2024).
- Thomson, A. (2009), "Comment: Australia's adoption of IFRSs—a clarification from the AASB", *Australian Accounting Review*, Vol. 19 No. 2, pp. 153-153.
- Yu, F.F. (2008), "Analyst coverage and earnings management", *Journal of Financial Economics*, Vol. 88 No. 2, pp. 245-271.
- Zang, Z., Kabir, H. and Scott, T. (2022), "Does OCI presentation for equity financial assets matter?", *Australian Accounting Review*, Vol. 32 No. 4, pp. 427-439.

Consolidated Statement of Other Comprehensive Income

	2019 53 WEEKS \$M	2018 52 WEEKS \$M
Profit for the period	2,759	1,795
Other comprehensive income		
<i>Items that may be reclassified to profit or loss, net of tax</i>		
Effective portion of changes in the fair value of cash flow hedges	14	23
Foreign currency translation of foreign operations	76	(81)
<i>Items that will not be reclassified to profit or loss, net of tax</i>		
Change in the fair value of investments in equity securities	(9)	17
Actuarial loss on defined benefit superannuation plans	(3)	(1)
Other comprehensive income/(loss) for the period, net of tax	78	(42)

AASB 9 Financial Instruments (AASB 9)

AASB 9 is a new standard which replaced AASB 139 *Financial Instruments: Recognition and Measurement*. In previous periods, the Group early adopted AASB 9 (2013), and related amendments. AASB 9 (2014) superseded AASB 9 (2013) and introduced a new expected credit loss impairment model for financial assets and a new classification and measurement category 'fair value through other comprehensive income' for certain debt and equity instruments. **This amendment became effective in the current period and the Group adopted the amendment on 25 June 2018.**

An assessment was performed on the impact of the expected credit loss impairment model and the new classification and measurement category. Based on the assessment, the Group concluded that the impact on transition to AASB 9 (2014) was not material. Accordingly, no comparative amounts have been adjusted.

Figure A1. EFA reporting example from WOW 2019 annual report

Note(s): These figures are extracted from Woolworths Group Ltd (WOW) 2019 annual report on pages 73, 79, 88, 105 and 114. 2019 is the first year for WOW to adopt IFRS 9. EFA amount classified at FVTOCI is AUD 91m, measured with Level 1 fair value hierarchy. The fair value gains or losses effect for EFA on OCI is AUD -9m

Source: Figures courtesy from publicly available information

3.2 OTHER FINANCIAL ASSETS AND LIABILITIES



Other financial assets and liabilities consists of derivatives, the Group's holdings in listed and unlisted investments, and loans provided to related parties.

440

	2019 \$M	2018 \$M
Current		
Derivatives	45	53
Total current other financial assets	45	53
Non-current		
Derivatives	501	366
Listed equity securities	91	96
Investments in associates	59	57
Loans provided to related parties	41	3
Total non-current other financial assets	692	522
Total other financial assets	737	575
Current		
Derivatives	58	50
Total current other financial liabilities	58	50
Non-current		
Derivatives	24	61
Total non-current other financial liabilities	24	61
Total other financial liabilities	82	111



SIGNIFICANT ACCOUNTING POLICIES

Derivatives

Refer to Note 4.7 for details of derivatives.

Listed equity securities

The Group's investments in listed equity securities are designated as financial assets at fair value through other comprehensive income. Investments are initially measured at fair value net of transaction costs and, in subsequent periods, are measured at fair value with any change recognised in other comprehensive income. Upon disposal, the cumulative gain or loss recognised in other comprehensive income is transferred to retained earnings.

Figure A1. Continued

2019	CASH FLOW HEDGE RESERVE \$M	FOREIGN CURRENCY TRANSLATION RESERVE \$M	REMUNERATION RESERVE \$M	ASSET REVALUATION RESERVE \$M	EQUITY INSTRUMENT RESERVE \$M	TOTAL \$M
Balance at start of period	(43)	58	279	17	42	353
Effective portion of changes in the fair value of cash flow hedges, net of tax	38	-	-	-	-	38
Transfers to initial carrying amount of hedged items, net of tax	(24)	-	-	-	-	(24)
Foreign currency translation of foreign operations, net of tax	-	76	-	-	-	76
Share-based payments expense	-	-	62	-	-	62
Issues of shares to satisfy employee long-term incentive plans	-	-	(6)	-	-	(6)
Change in the fair value of investments in equity securities	-	-	-	-	(9)	(9)
Balance at end of period	(29)	134	335	17	33	490

4.7.4 Fair value measurement of financial instruments

Some of the Group's financial assets and financial liabilities are measured at fair value at the end of each reporting period. The following table provides information about how the fair values of these financial assets and financial liabilities are determined. They are grouped into levels 1 to 3 based on the degree to which the fair value measurement inputs are observable.

Level 1 Fair value measurements are those derived from quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 Fair value measurements are those derived from inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).

Level 3 Fair value measurements are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data (unobservable inputs).

	NOTE	FAIR VALUE ASSET		FAIR VALUE LIABILITY		FAIR VALUE HIERARCHY
		2019 \$M	2018 \$M	2019 \$M	2018 \$M	
Listed equity securities	3.2	91	96	-	-	Level 1
Forward exchange contracts and foreign currency options	4.7.1	17	42	-	(1)	Level 2
Cross currency and interest rate swaps	4.7.1	529	377	(82)	(110)	Level 2

There were no transfers between level 1 and level 2 during the period.

Figure A1. Continued

Table A1. Variable definitions

Variable	Definition
<i>Dependent variables</i>	
FVTOCI	Is a binary variable that equals one if any of firm <i>i</i> 's EFA is classified as FVTOCI in year <i>t</i> , and zero otherwise
Price	Is the share price of a firm <i>i</i> three months after its balance date in year <i>t</i>
<i>Independent variables</i>	
EFAamt	Is the EFA amount balance at fiscal year-end deflated by total assets
EFAeffect	Is the EFA effect on net income, calculated as the absolute value of a ratio that is any FVGL on EFAs divided by net income for firm <i>i</i> in year <i>t</i>
EFAmeas	Is a binary variable that equals one if firm <i>i</i> applies a Level 3 fair value hierarchy to any of its EFA measurement in year <i>t</i> , and zero otherwise.
LEV	Is total liabilities scaled by total assets
CEOCOMP	Is the rate of CEO compensation variable portions (including cash bonus and equity award) to total compensation
LogTA	Is the natural logarithm of total assets
ROEadj	Is return on equity that excludes any FVGL effect on EFAs
ACIND	Is the percentage of independent directors on the audit committee
BIG4	Is a binary variable that equals one if a firm <i>i</i> is audited by Deloitte, Ernst and Young, KPMG or PwC in year <i>t</i> and zero otherwise
ANALYST	Is the number of sell-side analysts covering the security
BVE_S	Is book value of equity scaled by outstanding shares
AmtEFA_S	Is the EFA amount balance at fiscal year-end scaled by outstanding shares
CI_S	Is total comprehensive income scaled by outstanding shares
PLEFA_S	Is the effect of FVGL for EFAs on profit or loss scaled by outstanding shares
OCIEFA_S	Is the effect of FVGL for EFAs on OCI scaled by outstanding shares

Source(s): Table by authors

Corresponding author

Zeting Zang can be contacted at: zeting.zang@waikato.ac.nz