The effect of IFRS 9 on comparability[1]

JOANA CARDOSO FONTES[a], ARGYRO PANARETOU [b] and CATHERINE SHAKESPEARE [c]

[a]*Universidade Catolica Portuguesa, Catolica Porto Business School, Research Centre in Management and Economics, Portugal;*

[b]*Lancaster University Management School, Lancaster University, Lancaster, UK;*

[c]*Stephen M. Ross School of Business, University of Michigan, Ann Arbor, MI, USA*

ABSTRACT: This study examines the impact of IFRS 9 adoption on accounting comparability in the banking industry. Our findings indicate that overall the adoption of IFRS 9 is associated with a decrease in accounting comparability. The adoption of the expected credit loss model is identified as the primary driver of reduced comparability, while we provide some evidence that IFRS 9 classification and measurement framework and IFRS 9 hedge accounting rules are associated with an increase in comparability. Although we document a decline in comparability during our sample period, we do not draw conclusions on the long-term impact of the expected credit loss model on comparability or its effect on the informativeness of accounting numbers.

Keywords: IFRS 9; IAS 39; comparability; financial instruments; banks.

Data availability: All data is available from public sources.

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1. Introduction

Comparability is one of the key qualitative characteristics that enhances the usefulness of financial information. Providing high quality accounting information on financial instruments is crucial, as these instruments play a significant role in market stability. However, accounting for financial instruments is challenging because they contain features that make their valuation process complex and opaque to investors. Recognising the need to improve the reporting of financial instruments, the International and the US Accounting Standard Boards have dedicated considerable time and resources to amending the relevant accounting standards in the last decade.

As a result of this process, the International Accounting Standards Board (IASB) introduced *IFRS 9: Financial Instruments* (IASB 2014a).[2] IFRS 9 replaces *IAS 39: Financial Instruments: Recognition and Measurement* (IASB 2008) and introduces a few significant changes. Under IFRS 9, financial assets are classified and measured based on their contractual cash flows characteristics and the way the entity intends to manage them. Moreover, it introduces a forward-looking model for the recognition of credit losses, that uses statistical methods and a broader range of additional evidence to recognise probable future loan losses. Further, IFRS 9 changes hedge accounting. The new hedge accounting rules enable instruments to qualify more easily for hedge accounting treatment, in an attempt to better reflect the risk management of the entity in the financial statements. IAS 39 was widely regarded as controversial due to its inherent complexities (Armstrong et al. 2010). IFRS 9 is expected to simplify accounting for financial assets, thereby increasing the understandability of accounting information on financial instruments (IASB 2014b), potentially resulting in increased comparability.

[2] IFRS 9 is effective for annual periods beginning on or after 1 January 2018, with early application permitted.

This paper investigates the effect of IFRS 9 adoption on accounting comparability, providing post-implementation evidence. The objective of introducing IFRS 9 is to provide financial statement users with relevant and useful information regarding financial instruments. While improving relevance and understandability of information are the key objectives of IFRS 9, in IASB's view the usefulness of information must be assessed against all qualitative characteristics in the Conceptual Framework, including comparability (IASB 2014b). Accounting numbers are considered comparable if, when two entities face similar (different) economic outcomes, the entities report similar (different) accounting amounts (Financial Accounting Standards Board (FASB) 2010, IASB 2018). We conduct our tests using an international sample of banks that are IFRS users. We focus on banks for two main reasons. First, financial institutions are the main users of financial instruments for which IFRS 9 applies (McDonough et al. 2020). As such, banks are significantly affected by the changes in the accounting for financial instruments introduced by IFRS 9, namely the classification and measurement (C&M) framework, the expected credit loss (ECL) model for recognition of credit losses and the new hedge accounting rules. Second, limiting the sample to a single industry reduces the likelihood that comparability is driven by industry differences in the quality of implementation of the accounting standards (Leuz 2010, Barth et al. 2012).

The effect of IFRS 9 adoption on accounting comparability is not clear *a priori*. On the one hand, IFRS 9 can improve comparability across banks. The new C&M framework allows entities to align the measurement of their financial assets with the way they intend to manage them. Further, the incurred credit loss model (ICL) included in IAS 39 was often criticised for its inadequacy in addressing credit losses effectively (De Haan and Van Oordt 2018). The ECL model enables banks to incorporate information regarding future expected losses into the loan loss provisioning, thus potentially improving informativeness about banks' risk (Hashim et al. 2019). Similarly, if IFRS 9 hedge accounting rules simplify and extend the implementation of

hedge accounting as intended by the standard setters, accounting numbers will better reflect bank's risk management. These will result in banks' income better reflecting their economics, thus improving accounting comparability.[3]

On the other hand, comparability may be compromised as a result of the discretion involved in applying IFRS 9. Evidence suggests that there is a significant diversity across banks regarding the business model assessment, which may result in the use of different measurement bases for similar financial assets (EBA 2021). In addition, under the new C&M rules, non-solely payments of principal and interest (non-SPPI) consistent instruments are measured at fair value through profit and loss (FVPL). This may not reflect how banks intend to manage these assets. Further, as a forward-looking model, the ECL model requires a higher degree of managerial judgement compared to the ICL model. Evaluation of credit losses does not only rely on easily verifiable information, but also on subjective and less verifiable information. Thus, the process is prone to both managerial error and manipulation (Bischof et al. 2022, Oberson 2021). Finally, the new hedge accounting rules can also be opportunistically explored, as IFRS 9 does not mandate numerical thresholds for hedging effectiveness as a prerequisite for hedge accounting treatment.

Our findings suggest that the adoption of IFRS 9 is associated with an overall decrease in comparability. This holds true both for within-country comparability and cross-country comparability. The three main categories of changes introduced by IFRS 9 - namely the C&M framework, the ECL model, and the new hedge accounting rules – can influence comparability to varying degrees and may even impact in different directions. To better understand the impact of these changes on comparability, we examine banks that are likely to be more significantly affected by each specific category separately. In order to identify the banks affected by each

[3] We use the terms 'accounting comparability' and 'comparability' interchangeably to refer to comparability of accounting information as captured by the relationship between earnings and returns. We provide further details in section 3.

category, we hand-collect and examine transitional disclosures that reflect the effects of moving from IAS 39 to IFRS 9.

First, we anticipate that the effect of the C&M framework on comparability will be more pronounced for the group of banks that are most influenced by the business model and cash flow characteristics assessments. These are the banks that measure equity instruments, previously classified as available for sale (AFS), at FVPL post-IFRS 9.[4,5] AFS equity instruments were measured at fair value through other comprehensive income (FVOCI) under IAS 39. Second, we anticipate the effect of the ECL model on comparability to be more pronounced for banks that show an above-median transitional change in their loan loss allowances. Finally, since IFRS 9 allows entities to choose between continuing with the hedge accounting requirements of IAS 39 or adopting the new hedge accounting rules, banks affected by hedge accounting are those that choose to apply hedge accounting under IFRS 9. Our results suggest that the reduced comparability is driven by the introduction of the ECL model. We also provide some evidence that the C&M framework and the new hedge accounting rules have a positive effect on comparability.

Our results add to the literature that examines the drivers of accounting comparability and complement the studies that document the effects of changes in accounting standards on comparability (Barth et al. 2012, Yip and Young 2012, Fontes et al. 2025). We also contribute to the literature that looks at the effects of the ECL model adoption, showing that it can result in reduced comparability (Gaffney and McCann 2019, Ertan 2021, López-Espinosa et al. 2021, Oberson 2021). Our results are also particularly relevant to accounting standard setters by

[4] Loew et al. (2019) find that the balance sheet structure of banks under IFRS 9 is broadly similar to the balance sheet structure under IAS 39, with the exception that the use of the FVOCI category declined relatively to FVTPL. The decline in the use of FVOCI category is likely driven by the change in the measurement of AFS equity instruments.

[5] Banks that have non-SPPI consistent instruments, other than equity securities, might also be influenced by the new C&M framework. However, we do not have comprehensive data available to capture this.

providing post-implementation evidence on IFRS 9 adoption. While, on average, ECL model has led to more timely recognition of credit losses (López-Espinosa et al. 2021, Oberson 2021), we document reduced comparability as a potential downside of the IFRS 9 requirements. In this way, we help standard setters identify areas where further clarification and guidance can improve the usefulness of financial information.

Although we provide evidence that, on average, IFRS 9 is associated with a decrease in comparability, there are some caveats that should be considered when interpreting the results. First, we do not draw any conclusions regarding the long-term effects of IFRS 9 on comparability or its general impact on the informativeness of accounting numbers. Further, as discussed in Bischof and Daske (2016), changes in accounting standards can also change investment behaviour, affecting the composition of the balance sheet *per se*. Our study does not examine these behavioural changes, and therefore, we cannot draw conclusions on the economic consequences of IFRS 9.

When we assess the impact of each category of IFRS 9 changes on comparability, the number of observations decreases due to data unavailability. We recognise that this is a limitation of our sample and reduces the generalisability of the findings. Further, we capture C&M-affected banks based on equity instruments at FVPL and hedge accounting-affected banks as those that adopt the IFRS 9 hedge accounting rules. Given that equity instruments at FVPL represent a small percentage of banks' financial assets and only a small number of banks adopt the new hedge accounting rules, the results regarding these effects must be interpreted with caution. For instance, it is possible that only those banks anticipating benefits from IFRS 9 hedge accounting rules have chosen to adopt them. If this is the case, the positive impact on comparability might diminish once IFRS 9 hedge accounting becomes mandatory for all banks. While the pre- and post-IFRS 9 design allows each pair of banks to serve as its own control, we acknowledge that it may not fully address potential endogeneity arising from banks'

decisions to use the IFRS 9 option for measuring equity at FVOCI or to adopt the IFRS 9 hedge accounting rules.

To capture comparability, we rely on the fundamental association between earnings and stock returns, and therefore, our results may not fully correspond to alternative methods of capturing comparability. It is also possible that our findings may not generalise to other industries where the use of financial instruments is more limited. Finally, our matching procedure may not fully eliminate the effect of other accounting or economic factors on comparability.

2. Institutional background

IFRS 9 replaced IAS 39 in 2018. The new standard introduced a number of changes in the accounting for financial instruments, including a different C&M framework for financial assets, a forward-looking model for the recognition of credit losses, and new hedge accounting rules, which aim to better reflect an entity's risk management in the financial statements.

IAS 39 classifies financial assets in four categories based on management intent.[6] Under IFRS 9, financial assets are classified and measured based on their contractual cash flows characteristics and the business model of the entity (the way the entity intends to manage the financial assets).[7] Under the new C&M framework, a financial asset is measured: (i) at amortised cost if its cash flows are SPPI consistent and the instrument is held with the intent of collecting contractual cash flows; (ii) at FVOCI if its cash flows are SPPI consistent and the instrument is held with the intent of both collecting contractual flows and for sale, and (iii) at FVPL if its cash flows are not SPPI consistent or the instrument is held for purposes other than

[6] These are held-for-trading, held-to-maturity, loans and receivables and held-for sale. Subsequent measurement attribute differs according to each category: (1) held-for-trading are measured at FVPL, (2) held-to-maturity are measured at amortised cost, (3) loans and receivables are measured at amortised cost, and (4) held-for-sale are measured at FVOCI.

[7] Leisenring et al. (2012) provide a discussion about the differences between business model and intent-based accounting and conclude that the impact of business model and management's intent on financial reporting is not different.

collecting contractual cash flows and for sale or if the fair value option is elected. The standard provides an exception for equity instruments where an entity can make the irrevocable election at initial recognition to measure the instruments at FVOCI. Until derecognition, fair value changes remain in other comprehensive income (OCI) and are not reclassified to profit or loss.

Under the ICL model, banks can recognise a credit loss on a loan only if there is objective evidence of impairment, as for example a missed payment. The ECL model under IFRS 9 is a forward-looking model, that uses statistical methods and a broader range of additional evidence to recognise probable future loan losses. The evidence includes information about past events and current and forecasted economic conditions. Under the ECL model, banks are expected to estimate and account for expected credit losses at the initial recognition of financial instruments and update the loss allowance regularly in order to timely reflect changes in their credit risk. Specifically, financial assets subject to impairments are categorised into one of three stages. Stage 1 includes newly issued financial assets, as well as financial assets for which credit risk has not significantly increased since initial recognition. Stage 2 includes financial assets for which credit risk has significantly increased since initial recognition, such as situations where borrowers experience actual or anticipated declines in revenue that significantly affect their ability to fulfil obligations. Financial assets in stage 3 are already credit impaired. For financial assets in stage 1, entities have to recognise 12-month ECLs, while for assets in stages 2 and 3 they have to recognise lifetime ECLs.

The changes to hedge accounting introduced by IFRS 9 aim to simplify its application and provide a better link between an entity's risk management practices and its financial reporting. The main changes include allowing a broader range of assets and liabilities to be used as hedging instruments, allowing a component of a non-financial item to qualify as hedging item, and introducing new eligibility criteria for hedging based on economic assessment of hedging relationship without specific numerical thresholds. Although IFRS 9 is

effective for annual periods beginning on or after 1st of January 2018, an entity may choose to continue applying the hedge accounting requirements of IAS 39. Even if an entity adopts IFRS 9 hedge accounting, it can apply the IAS 39 hedge accounting requirements for fair value hedges of interest rate exposures of a portfolio of financial assets/liabilities (often referred to as macro hedging).

3. Literature review and research question

3.1 Comparability and changes in accounting standards

The definition of comparability underlying IASB's conceptual framework considers that two entities have comparable accounting if they report similar (different) accounting amounts when they experience similar (different) economic events (IASB 2018). Comparability is one of the desired enhancing characteristics of financial reporting, yet its empirical construct is largely unspecified by standard setters (De George et al. 2016). Most of the literature examining the impact of accounting standards' changes on comparability uses comparability measures that are based on the relation between accounting numbers and stock returns. One of the measures mostly used in the literature is from De Franco et al. (2011), which regresses earnings on stock returns for pairs of firms, firm *i* and firm *j*, over prior 16 quarters and use the two sets of fitted coefficients to predict firm i's earnings using firm j's returns. Comparability is given by minus the sum of the absolute values of the difference of the two predicted earnings over the estimated period. Barth et al. (2012) employ a similar approach to develop a comparability measure using more extensive regressions of earnings on stock returns, cash flows, and prices.

Literature looking at the impact of accounting changes on comparability is mostly focused on IFRS adoption (De Fond et al. 2011, Barth et al. 2012, Barth et al. 2018, Yip and Young 2012). In general, these studies find an improvement in comparability post-IFRS adoption. Yip and Young (2012) cite accounting convergence and higher quality of information as the drivers of increased comparability.

A few studies look at the impact of specific standards or changes within a standard on comparability. Sarquis et al. (2022) investigate the impact of the introduction of IFRS 11 on comparability and find that comparability decreases as a result of the elimination of the proportionate consolidation method as an alternative way to account for interests in joint ventures. Fontes et al. (2025) investigate the impact of measurement choices on comparability using the fair value option adoption. They find that comparability increases if the fair value option elections comply with the intent of the standard setters to remedy accounting mismatches. Onali and Ginesti (2014) look at the pre-adoption market reaction to IFRS 9 using event studies around 13 announcements dates related to IFRS 9. They find a positive market reaction suggesting that enhanced comparability introduced by IFRS 9 outweighs the costs of implementation. This latter study provides pre-implementation evidence, whereas our study provides post-implementation evidence of IFRS 9.

3.2 The effect of IFRS 9

The study of Loew et al. (2019) investigates the IFRS 9 transition effect for a sample of banks supervised by the European Central Bank and find no significant changes in their balance sheet structure. The only exception is the assets measured at FVOCI, which decrease post-IFRS 9 relative to the assets measured at FVPL. Moreover, they find that the equity impact attributable to impairments represents the highest portion of the transition equity change.

Kvaal et al. (2023) discuss several issues raised by IASB in its request for information for the post-implementation review of IFRS 9. The study investigates the long-term changes in the balance sheet structure using a sample of 139 listed European IFRS-users banks for the period 2014 to 2020. Their results are largely consistent with the transition-year effect. The balance sheet structure of the banks remains largely unchanged. Although this evidence suggests that the impact of the new C&M framework on balance sheets structure is not significant, non-SPPI consistent instruments, such as equity instruments, had to be reclassified

under the new approach.[8] The study also refers that one possible reason for the insignificant impact on the balance sheet is the fact that banks may have adjusted their asset portfolio pre-IFRS 9 adoption to avoid fair value measurement.

Pinto and Morais (2022) examine the classification of equity instruments under IFRS 9. Under IFRS 9, entities can classify equity instruments at FVPL or use the irrevocable option to classify them at FVOCI, without recycling permitted. They find that, on average, firms reclassify a significant percentage of equity instruments from AFS under IAS 39 to FVPL (35%). This percentage is even higher in the banking sector (48%). Further, the study shows that changes in the fair value of equity instruments recognised both at FVPL and FVOCI are value relevant post-IFRS 9.

Several studies focus on the effects of the ECL model. This is not surprising, as this is the most fundamental change in IFRS 9 (Bischof and Daske 2016). Gaffney and McCann (2019) and Loew et al. (2019) show that the new model leads to an increase in provisions compared to the ICL model. While early evidence suggests that the ECL model improves the informativeness and timeliness of loan loss provisions compared to the ICL models (López-Espinosa et al. 2021, Oberson 2021), there are also some downsides associated with this new approach. Ertan (2021) shows that the transition to ECL model deteriorates the credit landscape for risky and opaque borrowers like SMEs, due to concerns about complex and costly provisioning requirements. In line with this finding, Bischof et al. (2022) find that banks reduce their lending to borrowers at the highest risk of experiencing rating downgrades post-IFRS 9. The adoption of the ECL model also has spillover effects. Li et al. (2022) show that, due to ECL model adoption, accounting-driven monitoring reduces firms' reliance on bank debt

[8] This could be the case for loans charging interest rates linked to ESG targets. Kvaal et al. (2023) provide a detailed discussion on this.

relative to public debt, while Lin et al. (2023) show that US banks with major IFRS subsidiaries increase loan spreads after IFRS 9 adoption.

Finally, several studies report increased diversity in the measurement of loan loss provisions after the adoption of the ECL model. Oberson (2021) provides evidence consistent with managers using discretion inherent to forward looking loss recognition to smooth earnings, while the study of Du et al. (2022) provides evidence of unconditional conservatism in the ECL estimation process. Using a sample of European banks during the 2014 to 2019 period, Lejard et al. (2021) find that bank fixed effects become significant in explaining loan loss allowance post-IFRS 9. Furthermore, they observe a significant increase in the dispersion of the ratio of loan loss allowance to impaired loans after the adoption of the ECL models. These results suggest a higher heterogeneity in the measurement of provisions, and potentially a lower comparability of loan loss allowances across banks. Evidence of heterogeneity in the measurement of provisions is also provided in the studies by Gomaa et al. (2019) and Chae et al. (2018). Using a controlled laboratory environment, Gomaa et al. (2019) show that while the ECL model increases the amount and adequacy of provisions, managers' compensation scheme significantly affects both the amount and adequacy of provisions. Chae et al. (2018) show that under the US GAAP current expected credit loss standard model, differences in the methodology used to construct forecasts can significantly affect the amount of loan loss provisions. They conclude that this can potentially decrease comparability across banks.

Empirical evidence on the impact of hedge accounting rules under IFRS 9 is limited. This is likely driven by data availability, as entities have the option to continue applying the hedge accounting requirements of IAS 39. In a survey conducted by the European Banking Authority (EBA 2016), approximately half of the analysed banks showed intention to keep applying IAS 39 hedge accounting requirements post-IFRS 9 adoption. Mueller (2020) uses simulations to analyse the effects of cash flow hedging on portfolio earnings of firms. The study shows that,

compared to IAS 39, hedge accounting under IFRS 9 reduces earnings volatility. Providing evidence from the introduction of the new hedge accounting standard in the US (ASU 2017-12), Ali et al. (2024) show that firms increase the use of derivatives for hedging post-adoption. Further, the adoption of ASU 2017-12 leads to a reduction in information asymmetry and in the volatility of cash flows and earnings. As with IFRS 9, ASU 2017-12 was introduced to simplify hedge accounting treatment.

Our study directly examines the effect of IFRS 9 on the comparability of accounting information, as captured by the relationship between earnings and returns, using a post-adoption period that extends beyond those used in previous literature (Lejard et al. 2021). Moreover, we investigate the effect of each of the three categories of changes introduced by IFRS 9 (C&M framework, ECL model and hedge accounting), by identifying the banks that are likely to be most affected by each category.

3.3 Predictions for the effect of IFRS 9 on comparability

The new C&M framework still reflects a 'mixed measurement' model, combining fair value measurement with amortised cost measurement, and provides management with accounting choices, for example through the business model assessment and the use of the FVOCI option. Its impact on comparability is therefore not clear *a priori*. On the one hand, changes introduced by the C&M framework may enhance comparability. The business model assessment may allow entities to align better the measurement of their financial assets with the way they intend to manage them. This would result in a better reflection of their economics in earnings, improving the relationship between earnings and returns. Similarly, the SPPI assessment may result in more consistent measurement for similar instruments. For example, under IFRS 9 equity instruments must be measured at FVPL (as these fail the SPPI test).[9] Whereas under

[9] Entities can make the irrevocable election at initial recognition to measure investment in equity instruments at FVOCI. In this case fair value changes remain in OCI and are not recycled to profit or loss. According to Loew et al. (2019) this option is unlikely to be widely used given the prohibition of recycling. Furthermore, Kvaal et al.

IAS 39, equity instruments are measured at FVOCI if held as AFS, and at FVPL if held for trading. According to Kvaal et al. (2023), changes in the fair value of equity investments are indicative of the entity's performance, and therefore should be included in earnings. Moreover, according to Pinto and Morais (2022), changes introduced by the IFRS 9 C&M framework related to the measurement of equity instruments are value relevant. If this is the case, a consistent measurement of equity instruments at FVPL under IFRS 9 is expected to increase comparability.

On the other hand, the new C&M framework may decrease comparability. EBA's findings suggest that there is a significant diversity across banks regarding the business model assessment (EBA 2021). This could lead to banks using different measurement bases for similar items, thereby compromising comparability. In addition, FVPL measurement for non-SPPI consistent instruments may not accurately reflect how banks intend to manage these assets. In such cases, earnings may not be indicative of bank's economics, decreasing comparability. An example is an equity investment made and held with the purpose of investing in a particular country. If the entity does not intend to sell the equity, fair value changes in this investment may not be indicative of entity's performance. Further, managers may use the inherent flexibility in the business model assessment and the option to FVOCI for earnings management. This will obscure true economic performance, leading to a reduction in accounting comparability.

The impact of the introduction of the ECL model on comparability is also unclear *a priori*. The ECL model requires a higher degree of managerial judgement compared to the ICL model. Empirical evidence supports that heterogeneity of provisions is higher under the ECL model compared to the ICL model (Lejard et al. 2021, Gomaa et al. 2019). Since loan loss

(2023) argue that the FVOCI option for equity instruments imposes significant costs, including reduced transparency and increased complexity. They advocate eliminating this option in favour of a single classification and measurement model based on FVPL, which they suggest provides more useful and conceptually consistent information about future cash flows, particularly for financial institutions.

provisions impact earnings, the new ECL model may lead banks with similar loan portfolios to report different earnings, thus compromising comparability. Furthermore, managers may opportunistically explore the discretion of the ECL model (Bischof et al. 2022, Oberson 2021), which could further reduce comparability. However, to the extent that banks use the discretion provided by the ECL model to better incorporate information regarding future expected losses into their loan loss provisions, these provisions should become more informative about banks' risk post-IFRS 9 adoption. In turn, this could make earnings more reflective of a bank's economic performance, thereby enhancing comparability.

Finally, regarding the new hedge accounting rules, if they simplify the application of hedge accounting, we expect banks to more accurately reflect their hedging relationships in earnings. For example, the new rules do not require hedging effectiveness to fall within specific numerical thresholds for hedge accounting treatment. This flexibility enables both the hedging item and the hedging instrument to qualify more easily for hedge accounting, ensuring that changes in their value affect earnings simultaneously. As a result, earnings' volatility is expected to decrease, making banks' earnings more reflective of their economic performance. Therefore, we expect that the new hedge accounting rules will increase accounting comparability. However, if managers exploit the flexibility inherent in these new rules opportunistically, this is likely to compromise comparability.

To examine the effect of IFRS 9 adoption on comparability, we look at comparability pre- and post-IFRS 9 between banks that are IFRS users and implement IFRS 9 in 2018.[10] Given that the three broad categories of changes introduced by IFRS 9 (C&M framework, ECL model and new hedge accounting rules) may influence comparability in a different degree, and even in different directions, we further look at changes in comparability pre- and post-IFRS 9 for banks that are likely more influenced by each category.

[10] We use IFRS 9 implementation dates by country collected by López-Espinosa et al. (2021).

To identify the banks most affected by each category, we hand-collect and examine transitional disclosures that reflect the impact of moving from IAS 39 to IFRS 9. We anticipate that the effect of the C&M framework on comparability will be more pronounced for the group of banks that are most influenced by the business model and cash flow characteristics assessments. These are the banks that measure equity instruments, previously classified as AFS, at FVPL post-IFRS 9. Likewise, we anticipate that the effect of the ECL model on comparability is more pronounced for banks that show an above-median transitional change in their loan loss allowances. This reflects the pure accounting impact of moving from the ICL to the ECL model. Finally, IFRS 9 allows entities to choose between continuing to apply the hedge accounting requirements of IAS 39 and adopting the new hedge accounting rules. We expect that comparability is affected only for banks that adopt the new hedge accounting rules under IFRS 9.

4. Research design

4.1 Matched design

We conduct our tests using a matched sample design, where we match each bank with economically similar banks (one-to-many matching) (De Franco et al. 2011). To increase the pool of banks available for matching, and consequently our sample size, we match with replacement. The matched sample design is used to mitigate effects of economic differences between banks unattributable to IFRS 9 adoption. We match banks on two dimensions: business model and size, both measured at the date immediately before IFRS 9 adoption (2017Q4). First, we require banks to have the same business model. Banks with banking book activities have assets mostly consisting of loans that are measured at historical cost. Trading activities banks have assets mostly composed of trading instruments that are measured at fair value. Following previous literature, we use the ratio of loans to total assets to control for bank business model (Bischof et al. 2011). We classify a bank as banking book activities (trading

activities) bank if its ratio of gross loans to assets is above (below) the sample median in 2017Q4. Second, we require banks to have similar size, measured by total assets. Size is commonly used in the comparability literature to control for economic characteristics (Barth et al. 2012, Yip and Young 2012, Barth et al. 2018). In line with prior studies, we eliminate from our sample any matched pair for which the size difference exceeds 50% in absolute value (Barth et al. 2012). Finally, we match each bank with the four banks that are closest in size.[11] Additionally, we ensure that each selected pair of banks has data available for a minimum of four quarters and a maximum of 16 quarters both before and after IFRS 9 adoption (2018Q1).[12]

4.2 Comparability

To assess accounting comparability, we follow the methodology developed by De Franco et al. (2011). De Franco et al. (2011) measure has been extensively used in recent comparability studies (for example, Yip and Young 2012, Kim et al. 2016, Neel 2017, Choi et al. 2019).

Two firms, *i* and *j,* have more comparable accounting systems if they report similar accounting amounts when they experience similar economic events, and report different accounting amounts when they experience different economic events. In line with the literature, we use earnings as a proxy for accounting amounts and stock return to capture the economic outcome. We first estimate each entity's functions as follows:

$$Earnings_{it} = \beta_0 + \beta_1 Return_{it} + \varepsilon_{it.} \quad (1)$$

Earnings is net income deflated by lagged market value of equity (MVE). *Return* is the cumulative percentage change in the monthly stock price over the quarter. The subscript *i* refers to bank and the subscript *t* refers to quarter t. The constant β_0 and the coefficient of *Return* represent the estimated accounting function for the bank and reflect how economic events are

[11] If we do not have four banks within our size criteria, we use a minimum of three banks. If a bank does not match with at least three other banks, we remove it from the sample.
[12] The sample size reduces significantly if we require a minimum of eight quarters.

reflected in accounting numbers. We estimate the accounting function for each bank, separately for before and after IFRS 9 adoption date, using quarterly data. The coefficients β_{0i} and β_{1i} estimated from equation (1) represent the accounting function for firm i for the given quarter. Using the same process, we estimate the accounting function for firm j (β_{0j} and β_{1j}). We then compute for each quarter, each bank's predicted earnings using (1) its own accounting function ($E(Earnings)_{it}^{i}$) and (2) the accounting function of the matched bank ($E(Earnings)_{it}^{j}$), holding the economic event (return) constant:

$$E(Earnings)_{it}^{i} = \beta_{0i} + \beta_{1i} Return_{it.} \quad (2)$$

$$E(Earnings)_{it}^{j} = \beta_{0j} + \beta_{1j} Return_{it}. \quad (3)$$

We then compute, for each quarter, the negative absolute difference in predicted earnings as:

$$DiffEarnings_{it} = -|E(Earnings)_{it}^{i} - E(Earnings)_{it}^{j}|. \quad (4)$$

We do the same process for the matched bank:

$$DiffEarnings_{jt} = -|E(Earnings)_{jt}^{j} - E(Earnings)_{jt}^{i}|. \quad (5)$$

Comparability *($Comp_{ijt}$)* is the mean of (4) and (5) for each matched pair of banks *i* and *j* in quarter *t*. The more comparable are the accounting numbers, the higher (i.e., less negative) should be the mean difference in earnings. For our univariate analysis, we calculate comparability per period. Comparability for the pre-IFRS 9 period is the mean (median) $Comp_{ijt}$ for all pairs in this period. Similarly, comparability for the post-IFRS 9 period is the mean (median) $Comp_{ijt}$ for all pairs in the post-IFRS 9 adoption period.

For our multivariate analyses, we estimate the following two models:

$$Comp = b_0 + b_1 IFRS9 + b_2 Size_{Ratio} + b_3 BusModel_{Ratio} + b_4 Leverage_{Ratio} + b_5 BtoM_{Ratio} + b_6 Enforc_{Pair} + \varepsilon. \quad (6a)$$

$$Comp = b_0 + b_1 IFRS9 + b_2 Group1 + b_3 Group1 * IFRS9 + b_4 Size_{Ratio} + b_5 BusModel_{Ratio} + b_6 Leverage_{Ratio} + b_7 BtoM_{Ratio} + b_8 Enforc_{Pair} + \varepsilon. \quad (6b)$$

IFRS9 is an indicator variable that equals 1 if *t* is in the post-IFRS 9 adoption period, and 0 otherwise. A statistically significant b_1 coefficient indicates that comparability changes between the pre- and post-IFRS 9 adoption periods. *Group1* captures the banks that are more affected by each category of changes introduced by IFRS 9. Specifically, we capture (i) changes introduced by the C&M framework using *Affected_CM=1*; (ii) changes introduced by the ECL model using *Affected_ECL=1*; and (iii) changes introduced by the hedge accounting using *Affected_HA=1*. The coefficient on *Group1*IFRS9* (b_3) shows the incremental effect on comparability post-IFRS 9 for the banks that are affected by each category of changes. To control for differences in size, business model, leverage and book to market, we include *Size_Ratio*, *BusModel_Ratio*, *Leverage_Ratio* and *BtoM_Ratio,* respectively (Yip and Young 2012, Lin et al. 2019). *Size_Ratio* is the ratio of the size of the smaller firm in the pair to the size of the larger firm in the pair. *BusModel_Ratio* is the ratio of the smaller value of *BusModel* (the ratio of book value of gross loans to total assets) to the larger value of *BusModel* of the two banks in the pair. *Leverage_ratio (BtoM_Ratio)* is the ratio of the smaller value of leverage (book to market) to the larger value of leverge (book to market) of the two banks in the pair. To control for cross-country differences in the enforcement of accounting regulation, we use *Enforc_pair,* an indicator variable that equals 1 when both banks in the pair are based in high enforcement countries or both in low enforcement countries, and zero otherwise (Yip and Young 2012).[13] To classify countries' level of enforcement, we follow Barth et al. (2012). We

[13] We do not use country's legal origin to control for cross-country differences in financial reporting as almost all banks in our sample are code law banks.

consider a country as a high enforcement country, if it has more than 0.5 in the public enforcement index provided in Leuz (2010), and a low enforcement country otherwise.

4.3 Sample and data

We conduct our tests using an international sample of banks that are IFRS users. We focus on banks for two reasons. First, financial institutions are the main users of financial instruments for which IFRS 9 applies (McDonough et al. 2020). As such, banks are significantly affected by the changes in the accounting for financial instruments introduced by IFRS 9, namely C&M framework, forward-looking model for recognition of credit losses and new hedge accounting rules. Second, limiting the sample to a single industry reduces the likelihood that comparability is driven by industry differences in the quality of implementation of the accounting standards (Leuz 2010, Barth et al. 2012).

We draw our sample from S&P Capital IQ (previous known as SNL) as it provides detailed information on financial assets. We obtain the rest of the accounting data from S&P Capital IQ and market data from DataStream. We identify all active banks in S&P Capital IQ that (i) are classified in the banking industry; (ii) are listed during the sample period, i.e., have a price per share greater than zero in any of the fiscal year ends of the period 2014 to 2021; and (iii) prepare their financial statements under IFRS. The sample period begins in 2014, as this is the date when IFRS 9 was issued and since when banks can start adjusting their balance sheets towards the date of first adoption. We restrict the sample to countries that adopted IFRS 9 in 2018, based on the IFRS 9 adoption dates provided in Lopez-Espinosa et al. (2021). We also restrict the sample to banks that report data on a quarterly basis and with a fiscal year ending in December to ensure that each bank has the same sample period. Finally, we require banks to have data to compute the comparability metric and we delete from the sample four banks that are IFRS 9 early adopters. All variables used to compute the comparability metric are winsorised at 1% and 99% levels to mitigate the effects of outliers. After excluding banks

with missing data, our sample has 141 unique international banks, which we use for matching. Our sample selection process is summarised in Table 1 Panel A.

[Table 1 near here]

Panel B provides the matched samples used in our analysis. We match banks based on business model and size. We further match banks based on different (same) countries when we look separately at cross-country (within-country) comparability. After removing pairs that have a size ratio (smaller bank size to larger bank size) less than 50% and retaining only the four (or three if there are only three available) matched banks with the closest size distances, we are left with 12,758 bank-quarter observations (6,014 pre-IFRS 9 and 6,744 post-IFRS 9) to test for comparability across all banks. To test cross-country (within-country) comparability, we use 10,806 (5,301) bank-quarter observations, out of which 5,012 (2,579) are pre-IFRS 9 and 5,794 (2,722) are post-IFRS 9. The number of observations drops significantly for the within-country sample because some countries have less than three banks per country that are a good match. Panel C provides information about the distribution of the sample across all banks, by country. The sample includes 139 unique banks from 28 countries around the world.

Table 2 presents descriptive statistics for the variables used in our multivariate analyses. Variable definitions are provided in Appendix A. Panel A presents the descriptive statistics, considering the different samples used to test comparability. In columns (1) – (3), we use the pairs of banks matched based on business model and size, independent of the country of origin, to test for comparability across all banks (i.e., within-country and cross-country comparability); in columns (4) – (6) we use the pairs of banks from different countries matched based on business model and size, to test for cross-country comparability; and in columns (7) – (9) we use the pairs of banks from the same country matched based on business model and size, to test for within-country comparability. Panel B provides descriptive statistics for the variables used to test comparability across all banks, controlling for changes in each IFRS 9 category.

[Table 2 near here]

5. Results

5.1 Univariate analysis

Table 3 presents the results from our univariate analysis, using the samples of banks matched on business model and size as of 2017Q4. Panel A presents the results for comparability across all banks (i.e., within and cross-country comparability). To run these results, we use pairs of banks matched independent of the country of origin. From Panel A, we see that both the mean and median comparability decrease after IFRS 9 adoption. The differences are statistically significant at the 1% level.

[Table 3 near here]

To investigate whether the change in comparability is driven by cross- or within-country comparability, we run results separately for pairs of banks matched on different countries (cross-country comparability) and on the same country (within-country comparability). The results are presented in Panels B and C, respectively. Panel B shows that median comparability significantly decreases post-IFRS 9. This is also the case for mean comparability in Panel C. These results provide some evidence that both cross-country and within-country comparability decrease post-IFRS 9, suggesting that institutional differences are not likely driving the results. Accordingly, the results presented in Table 4 below are based on the sample of all banks outlined in Panel A.

[Table 4 near here]

Table 4 investigates how each category of change introduced by IFRS 9 influences comparability post-IFRS. For this analysis, we use hand-collected information from annual reports. As some banks do not have annual reports available in English or do not disclose granular data to estimate the required variables, the number of observations decreases. In Panel A, we investigate the impact of the change in the C&M framework on comparability. If the

change in comparability is driven by the C&M framework, we expect this effect to be more pronounced for banks that are mostly affected by the new C&M rules. These are the banks that measure equity instruments, previously classified as AFS, at FVPL post-IFRS 9. AFS equity instruments were measured at FVOCI under IAS 39. However, under IFRS 9, these instruments fail the SPPI test and thus must be measured at FVPL. The only exception is when entities select the option to measure investment in equity instruments at FVOCI.[14] To classify banks as C&M affected, we use information about the amount of AFS equity instruments as of December 31, 2017, and the proportion of these instruments measured at FVPL as of January 1, 2018 (the proportion of instruments for which the option to FVOCI was not elected). We classify banks as C&M affected banks (*Affected_CM=1*) if the proportion of equity instruments measured at FVPL is above sample median as of January 1, 2018. Banks that do not have AFS equity instruments as of December 31, 2017 or banks that use the FVOCI option for equity investments more extensively are considered as not affected banks (*Affected_CM=0*). We then match banks within each category on business model and size. Columns (1)-(2) (columns (3)-(4)) present results for the pairs of banks that are C&M affected (C&M non-affected). The subsample is composed of 96 unique banks, 42 of which have *Affected_CM* =1 and 54 of which have *Affected_CM* =0. The mean and median change in comparability is positive for the group of C&M affected banks, indicating a positive association between C&M affected banks and comparability. For the group of non-C&M affected banks the change in comparability post-IFRS 9 is negative. The mean and median change in comparability between the two groups is positive and statistically significant (columns (5) and (6)), indicating that the increase in comparability is statistically higher for banks that are affected by the new C&M.[15] These results

[14] Entities can make the irrevocable election at initial recognition to measure investment in equity instruments at FVOCI. In this case fair value changes remain in OCI and are not recycled to profit or loss. According to Loew et al. (2019) this option is unlikely to be widely used given the prohibition of recycling.

[15] To assess significance of mean differences between the two groups, we use a t-test. To assess significance of median differences, we use a bootstrapping procedure. Specifically, we construct 1,000 samples and generate an empirical distribution of the differences.

suggest that the C&M framework is not a potential driver of the reduced comparability post-IFRS 9 reported in Table 3.

In Panel B, we examine the impact of the ECL model on comparability. To identify banks more affected by the ECL model, we use information on the transitional change in loan loss allowances. This change reflects the purely accounting impact of moving from the ICL to the ECL model. We classify banks as ECL affected (*Affected_ECL=1*) if they show an above-median change in loan loss allowances as of January 1, 2018. We then match banks within each category (Affected_ECL=1 and *Affected_ECL=0)* on business model and size. Columns (1) – (2) (columns (3) – (4)) provide findings for *Affected_ECL* =1 (*Affected_ECL* =0). This subsample is composed of 109 unique banks, of which 54 have *Affected_ECL*=1 and 55 have *Affected_ECL*=0. The results in Panel B, columns (5) and (6), show that the mean and median decrease in comparability is higher for banks that are more affected by the ECL model. These differences are statistically significant at 1% level. Moreover, the results in column (3) suggest that for non-ECL affected banks (*Affected_ECL=0)*, the mean comparability increased post-IFRS 9. This provides some weak evidence that, for banks that are less affected by a change in impairment model, comparability increases post-IFRS 9. Taken together, these results suggest that the introduction of the ECL model is negatively associated with comparability for banks that are most affected by the changes in the impairment model.

Finally, in Panel C, we investigate whether changes in hedge accounting are associated with a change in comparability. As we explained earlier, although IFRS 9 is effective for annual periods beginning on or after January 1, 2018, an entity may choose to continue applying the hedge accounting requirements of IAS 39. Comparability is not expected to change if a bank continues to apply the IAS 39 hedge accounting rules. Therefore, we classify as hedge accounting affected banks (*Affected_HA=1*) those that adopted hedge accounting under IFRS 9. We then match banks within each category (*Affected_HA*=1 and *Affected_HA*=0) on business

model and size. For affected (non-affected) banks, results are presented in columns (1)-(2) (columns (3)-(4)). The mean and median change in comparability between the two groups is positive and statistically significant (columns 5 and 6), suggesting that the new hedge accounting rules are positively associated with comparability. However, these results should be interpreted with caution, as we only have a small number of unique banks (20) that adopted the IFRS 9 hedge accounting rules.

5.2 Multivariate analysis

Table 5 Panel A presents the regression results from estimating equation (6a), using the sample of all pairs of banks matched based on business model and size, independent of the country of origin (column 1), the sample of cross-country pairs matched based on business model and size (column 2), and the sample of within-country pairs matched based on business model and size (column 3).[16] In other words, column (1) provides results for comparability across all banks (i.e., cross-country and within-country comparability), column (2) for cross-country comparability and column (3) for within-country comparability. We see that the coefficient on *IFRS9* is negative and statistically significant at the 1% level (cross-country and within-country samples) and at the 5% level (across all banks' sample). In the within-country analysis, *Enforc_Pair* is excluded because the banks in each pair are from the same country, making *Enforc_Pair* always equal to one). In economic terms, comparability across all banks is 0.0021 lower in the post-IFRS 9 period compared to the pre-IFRS 9 period. Given that the average pre-IFRS9 *Comp* across all banks is –0.0420, this represents a decrease of around 5.0% (i.e., (0.0021/0.0420)*100). When we look at cross-country comparability, the decrease is of 5.5% (i.e., 0.0026/0.0473)*100), and when we look at within-country comparability, the decrease is of 10.0% (i.e., (0.0041/0.0408)*100). These results are in line with the univariate results and

[16] We calculate variance inflation factors and tolerance for all of our regression models. Untabulated results indicate that there is no multicollinearity problem between our variables.

suggest that comparability across all banks, as well as within and cross-country comparability, decreases after IFRS 9 is adopted.

[Table 5 near here]

Panel B presents regression results from estimating equation (6b). In line with the univariate analysis presented in Table 4, we first match banks on the variable used to proxy changes in each category (*Affected_CM*, *Affected_ECL* or *Affected_HA*) and then match them on business model and size, regardless of their country of origin.[17] As we mention earlier, the number of observations decreases for these tests. Column (1) investigates the impact of the new C&M framework on comparability. *Group1* is proxied by *Affected_CM=1*. While the coefficient on *IFRS9* is negative, the coefficient on *Group1*IFRS9* is positive and of greater magnitude. In terms of economic significance, affected banks exhibit, on average, a 0.0183 higher comparability compared to non-affected banks in the post-IFRS 9 period. Given that the average pre-IFRS9 *Comp* for affected C&M-banks is -0.0545, this represents a mean increase of 34% (i.e., (0.0183/0.0545)*100) in comparability. Moreover, the F-test indicates that the sum of the coefficients on *IFRS9* and *Group1*IFRS9* is significantly different from zero. These results are in line with our univariate analysis, suggesting that changes introduced by IFRS 9 regarding the classification and measurement of equity instruments are positively associated with comparability. However, we cannot rule out that other changes introduced by the C&M framework influence comparability in a different way.

In column (2), we address the impact of the introduction of the ECL model on comparability. In this case, *Group1* is proxied by *Affected_ECL*=1. The coefficient on *IFRS9* is positive, but the coefficient on *Group1*IFRS9* is negative and of greater magnitude, indicating that banks with an above-median change in loan loss allowances at transition

[17] In order to be able to separate the pairs of banks into the groups that are likely more and less affected by each change, we need first to match the banks on the variable used to proxy each change. For that reason, we cannot run a regression in which we include all the three changes simultaneously.

experience a decrease in comparability post-IFRS 9 adoption. In economic terms, affected banks exhibit, on average, a 0.0258 lower comparability compared to non-affected banks in the post-IFRS 9 period. Given that the average pre-IFRS9 *Comp* for affected ECL-banks is -0.0300, this represents a mean decrease of 86% (i.e., (0.0258/0.0300)*100) in comparability. Moreover, the *F-test* indicates that the sum of the coefficients on *IFRS9* and *Group1*IFRS9* is significantly different from zero. These results are in line with our univariate analysis, suggesting that the change in the ECL model is one of the drivers of the decreased comparability post-IFRS 9.

Finally, column (3) investigates the impact of the change in hedge accounting on comparability. *Group1* is proxied by *Affected_HA*=1. The coefficient on *Group1*IFRS9* is positive and statistically significant, indicating that comparability increases for banks that adopt the IFRS 9 hedge accounting rules. In economic terms, affected banks exhibit, on average, a 0.0244 higher comparability compared to non-affected banks in the post-IFRS 9 period. Given that the average pre-IFRS9 *Comp* for HA-affected banks is -0.0598, this represents a mean increase of 41% (i.e., (0.0244/0.0598)*100) in comparability. As mentioned earlier, this result should be interpreted with caution, as it is based on a small sample of banks (20) that adopted the new hedge accounting rules.[18]

Overall the average impact of IFRS 9 on comparability for the banks most affected by each category of IFRS 9 changes ranges from 34% to 86%, suggesting that the impact is economically significant.[19]

[18] The same bank may be affected by both the ECL model and the C&M framework (both the ECL model and the IFRS 9 hedge accounting rules), highlighting the importance of assessing their relative impact on comparability. However, our sample includes only five (one) such banks, limiting the feasibility of conducting a meaningful analysis.

[19] The magnitude of the economic effect is lower than that reported in studies examining the general effect of IFRS adoption on comparability (i.e., Yip and Young (2012)). This is to be expected, as we investigate the effect of a single standard. Investigating the effect of IFRS 11 on comparability, Sarquis et al. (2022) report an average increase in comparability of around 23% (univariate tests).

5.3 Further sensitivity analyses

In order to assess the robustness of our findings, we employ an alternative measure of comparability. The measure is based on the relation between returns, net income (*NI*), and changes in net income (*ΔNI*). We follow Barth et al. (2012) to estimate each entity's function using the following equation:

$$Return_{it} = \beta_0 + \beta_1[NI_{it}/P_{it-1}] + \beta_2[\Delta NI_{it}/P_{it-1}] + \beta_3 LOSS_{it} + \beta_4[NI_{it}/P_{it-1}] \times LOSS_{it} + \beta_5[\Delta NI_{it}/P_{it-1}] \times LOSS_{it} + \varepsilon_{it.} \quad (7)$$

P is the stock price and *LOSS* equals one if net income is negative and zero otherwise. To compute this comparability measure, we follow the same process used for our main measure. As shown in Panel A of Table 6, the transition to the ECL impairment model is associated with a decrease in comparability. Comparability increases for the banks that are mainly affected by the new C&M framework, while we get insignificant results regarding banks that are affected by the new hedge accounting rules. This insignificant result may be driven by the small number of banks in the sample that have adopted the new hedge accounting rules.

[Table 6 near here]

We also test if our results are driven by the use of one-to-many matching procedure by re-running our analysis using one-to-one matching. Table 6 Panel B shows that, although the number of observations decreases, our results are robust, with the exception of the banks affected by the new hedge accounting rules. For these banks, the effect on comparability becomes statistically insignificant.

Further, to investigate whether our post-IFRS 9 results are driven by the macroeconomic shock of the covid-19 pandemic or rather sustained over time, we run two additional tests. First, we repeat our analysis after we delete the year 2020 from our sample. Untabulated results show that the inference of our results does not change. The transition to the ECL impairment model

is associated with a decrease in comparability, while the C&M model and the new hedge accounting rules are associated with an increase in comparability. Second, we re-run the results substituting IFRS9 with year dummies. If IFRS 9 adoption impacts comparability instead of being a temporary effect, time dummies should be insignificant in the pre-IFRS 9 period and statistically significant in the post-IFRS 9 period. When we look at the whole sample, we do not find significant results. However, when we run the analysis separately for affected and non-affected banks, our results show that year dummies are mostly insignificant in the period pre-IFRS 9, and positive and statistically significant in the period post-IFRS 9 for the samples of C&M- and HA-affected banks. Moreover, for the sample of ECL-affected banks, year dummies are insignificant pre-IFRS 9, while they are negative and statistically significant post-IFRS 9. These findings provide support for the positive effect reported in the paper for C&M- and HA-affected banks and the negative effect reported for ECL-affected banks.

The improved comparability associated with the C&M framework might result from both a change in measurement category and changes in investment behavior, where banks may potentially alter their equity holdings classified as AfS under IAS 39. To investigate this, we identify banks that altered their investments in AfS equity during financial periods preceding the adoption of IFRS 9. IFRS 9 was issued in July 2014 and became effective for annual periods beginning on or after 1st of January 2018. According to previous studies, it is likely that banks began adjusting their balance sheet structures in anticipation of the standard's implementation (Kvaal et al., 2019). We use data from 2015 and 2017, defining a bank as having altered its investment in AfS equity if the change in the ratio of AfS equity to financial assets between these two years is above the sample median. We rerun our analysis considering C&M-affected banks as those that altered their investment in AfS equity. We find no significant change in comparability for these banks post-IFRS9 (untabulated results). These findings provide some

evidence that the increased comparability reported in our main results is driven by the measurement at FVPL rather than by changes in the portfolio of equity instruments.

In our main analyses, we control for differences in enforcement, as these may influence banks' reporting incentives and, consequently comparability of accounting information. To further investigate the effect of enforcement, we repeat our analyses after matching banks on enforcement. Untabulated results show that the inference of our results does not change. While high enforcement has a positive effect on comparability, the incremental effect of enforcement on comparability post-IFRS 9 adoption is statistically insignificant. Finally, untabulated results show that our inferences are also robust to the use of an alternative timeframe for returns, namely the period starting two months before and finishing one month after the quarter end.

6 Conclusions

In an effort to enhance reporting for financial instruments, the IASB introduced significant changes through IFRS 9. These changes include a new approach to categorizing and measuring financial assets, a forward-looking model for recognising credit losses, and new hedge accounting rules designed to better reflect an entity's risk management in its financial statements. This study investigates the impact of IFRS 9 adoption on accounting comparability, focusing on a sample of international banks that report under IFRS. We find that, on average, comparability has decreased following IFRS 9 adoption, both within and across countries. This reduction is primarily driven by the transition to the ECL impairment model. Moreover, we provide some evidence that the new C&M framework and the new hedge accounting rules are associated with an increase in comparability.

Our findings offer useful insights for accounting standard setters. While the ECL model may have enhanced the timeliness of credit loss recognition (Lopéz-Espinosa et al. 2021, Oberson 2021) and improved the informativeness of loan loss provisions about banks' risk (Hashim et al. 2019), our results highlight a potential drawback, namely a reduced

comparability across entities. This suggests that further clarification and guidance on implementation could promote a consistent application and interpretation of IFRS 9 requirements regarding the recognition of ECL. Such efforts could enhance decision-usefulness of accounting numbers, particularly within a global banking context, where comparability is crucial for investors, regulators, and other stakeholders.

Furthermore, our results suggest that the new C&M framework, along with the revised hedge accounting rules, may enhance comparability by allowing financial statements to more accurately reflect the underlying economics of banks. These findings support the changes in the reporting of financial instruments introduced by the IASB. However, the limited adoption of IFRS 9 hedge accounting highlights the need for additional guidance to ensure consistent interpretation and application of the standard. In addition, our finding that the use of FVPL measurement for equity instruments is associated with higher comparability lends support to the view that removing the FVOCI option for such instruments could reduce both conceptual ambiguities and practical complexities under the current standard (Kvaal et al. 2023).

Our findings should be interpreted considering certain limitations. First, our analysis focuses on the short-term effects of IFRS 9 adoption and does not address potential long-term impacts on comparability or the broader informativeness of financial statements. Moreover, as noted by Bischof and Daske (2016), changes in accounting standards can influence investment behaviour, potentially affecting the composition of financial statements in ways not captured by our study. We also acknowledge data limitations, particularly in the analysis of each individual category under IFRS 9. The relatively small number of banks adopting hedge accounting under the new rules, and the limited materiality of equity instruments at FVPL, may affect the strength of the conclusions drawn from these findings. Finally, potential endogeneity concerns related to banks' decisions to use the options available under IFRS 9 may not be fully

addressed. Banks that perceive greater benefits from the new rules may be more likely to adopt them.

Future research could expand on this work in several directions. Studies might examine the long-term effects of IFRS 9 adoption, exploring how comparability evolves as the market becomes more familiar with IFRS 9 and as more entities adopt the new hedge accounting rules. It would also be valuable to examine jurisdictional differences in implementation and enforcement, which may moderate the effects of IFRS 9 on comparability. Further, studies could explore how IFRS 9 affects other industries, particularly those heavily impacted by the hedge accounting rules, such as the Energy and Utilities sectors. Additionally, investigating how IFRS 9 influences capital market outcomes, such as investment decisions and cost of capital, would provide a richer understanding of the economic implications of IFRS 9.

References

Ali, W., Bens, D. A., and Cassar, G., 2023. Real effects of hedge accounting standards: Evidence from ASU 2017-12. *Working paper, INSEAD, available at SSRN: https://ssrn.com/abstract=4119029*

Armstrong, C. S., Barth, M. E., Jagolinzer, A. D., and Riedl, E. J.,2010. Market reaction to the adoption of IFRS in Europe. *The Accounting Review,* 85(1), 31-61.

Barth, M. E., Landsman, W. R., Lang, M., and Williams, C., 2012. Are IFRS-based and US GAAP-based accounting amounts comparable? *Journal of Accounting and Economics,* 54(1), 68-93.

_____, 2018. Effects on comparability and capital market benefits of voluntary IFRS adoption. *Journal of Financial Reporting,* 3(1), 1-22.

Bischof, J., and Holger, D., 2016. Interpreting the European Union's IFRS Endorsement Criteria: The Case of IFRS 9. *Accounting in Europe,* 13(2), 129-168.

Bischof, J., Daske, H., and Gebhardt, G., 2011. Fair value accounting and the business model of banks. *Working paper, University of Mannheim and Goethe Business School.*

Bischof, J., Haselmann, R., Kohl, F., and Schlueter, O., 2022. Fair value accounting and the business model of banks. Limitations of implementing an expected credit loss model. *Working paper, University of Mannheim, Goethe University Frankfurt and Deutsche Bundesbank.*

Chae, S., Sarama, R., Vojtech, C.M., and Wang, J., 2018. The impact of the current expected credit loss standard (CECL) on the timing and comparability of reserves. *FEDS Working Paper No. 2018-20, Available at SSRN: https://ssrn.com/abstract=3192150*

Choi, J.-H., Choi, S., Myers, L. A., and Ziebart, D., 2019. Financial statement comparability and the informativeness of stock prices about future earnings. *Contemporary Accounting Research,* 36(1), 389-417.

De Fond, M., Hu, X., Hung, M., and Li, S., 2011. The impact of mandatory IFRS adoption on foreign mutual fund ownership: The role of comparability. *Journal of Accounting and Economics,* 51(3), 240-258.

De George, E. T., Li, X., and Shivakumar, L., 2016. A review of the IFRS adoption literature. *Review of Accounting Studies,* 21(3), 898-1004.

De Haan, L., and Van Oordt, M. R. C., 2018. Timing of banks' loan loss provisioning during the crisis. *Journal of Banking and Finance,* 87, 293-303.

De Franco, G., Kothari, S. P., and Verdi, R. S., 2011. The benefits of financial statement comparability. *Journal of Accounting Research,* 49(4), 895-931.

Du, N., Allini, A., and Maffei, M., 2022. How do bank managers forecast the future in the shadow of the past? An examination of expected credit losses under IFRS 9. *Accounting and Business Research*, 1-24.

Ertan, A.. 2021. Expected losses, unexpected costs? Evidence from SME credit access under IFRS 9. *Working paper, London Business School, available at SSRN: https://ssrn.com/abstract=3504708*

European Banking Authority (EBA), 2016. Report on results from EBA impact assessment of IFRS 9, Nov 10 EBA. London, U.K.

____, 2021. IFRS 9 Implementation by EU Institutions, Monitoring Report EBA/Rep/2021/35, Nov 24. Luxembourg.

Financial Accounting Standards Board (FASB), 2010. *Conceptual framework for financial reporting*. Norwalk, CT.

Fontes, J. C., Panaretou, A., and C., Shakespeare, 2025. Accounting choice in measurement and comparability: An examination of the effect of the fair value option. *Review of Accounting Studies,* available online: *https://doi.org/10.1007/s11142-025-09869-5.*

Gaffney, E., and McCann, F., 2019. The cyclicality in SICR: Mortgage modelling under IFRS 9. *ESRB: Working Paper Series No. 2019/92, available at SSRN: https://ssrn.com/abstract=3723448*.

Gomaa, M., Kanagaretnam, K., Mestelman, S., and Shehata, M., 2019. Testing the Efficacy of Replacing the Incurred Credit Loss Model with the Expected Credit Loss Model. *European Accounting Review,* 28(2), 309-334.

Hashim, N., Li, W., and O'Hanlon, J., 2019. Reflections on the development of the FASB's and IASB's expected-loss methods of accounting for credit losses. *Accounting and Business Research,* 49(6), 682-725.

International Accounting Standards Board (IASB), 2008. *International Accounting Standard 39: Financial Instruments: Recognition and Measurement.* .London.

____, 2014a. *International Financial Reporting Standard 9: Financial Instruments*. London.

____, 2014b. *IASB documents published to accompany IFRS 9 Financial Instruments: Basis for conclusions on IFRS 9 Financial instruments*. London.

____, 2018. *Conceptual Framework for Financial Reporting*. London

Kim, J.-B., Li, L., Lu, L. Y., and Yu, Y., 2016. Financial statement comparability and expected crash risk. *Journal of Accounting and Economics,* 61(2), 294-312.

Kvaal, E., Loew, E., Novotny-Farkas, Z., Panaretou, A., Renders, A., and Sampers, P., 2023. Classification and Measurement under IFRS 9: A Commentary and Suggestions for Future Research. *Accounting in Europe,* available online: https://doi.org/10.1080/17449480.2023.2253808.

Leisenring, J., Linsmeier, T., Schipper, K., and Trott, E., 2012. Business-model (intent)-based accounting. *Accounting and Business Research,* 42(3), 329-344.

Lejard, C., Paget-Blanc, E., and Casta, J.F., 2021. The effects of the adoption of IFRS 9 on the comparability and the predictive ability of banks' loan loss allowances. *Working paper Université Paris-Dauphine Research Paper.*

Leuz, C., 2010. Different approaches to corporate reporting regulation: How jurisdictions differ and why. *Accounting and Business Research,* 40(3), 229-256.

Li X., Ng, J., and Saffar, W., 2022. Accounting-driven bank monitoring and firms' debt structure: Evidence from IFRS 9 adoption. *Management Science,* 70(1), 54-77.

Lin, S., Riccardi, W. N., and Wang, C., 2019. Relative effects of IFRS adoption and IFRS convergence on financial statement comparability. *Contemporary Accounting Research,* 36(2), 588-628.

Lin, Y., Xu, W. and Zhang, R. X., 2023. Spillover effects of expected credit losses model implementations. *Working paper NUS Business School and Business School, National University of Singapore, available at SSRN*: *https://ssrn.com/abstract=3971507*

Loew, E., Schmidt, L. E., and Thiel, L. F., 2019. Accounting for financial instruments under IFRS 9 – first-time application effects on European banks' balance sheets. *European Banking Institute Working Paper Series 2019 – no. 48, available at SSRN: https://ssrn.com/abstract=3462299*.

López-Espinosa, G., Ormazabal, G., and Sakasai, Y., 2021. Switching from incurred to expected loan loss provisioning: early evidence. *Journal of Accounting Research,* 59(3), 757-804.

McDonough, R., Panaretou, A., and Shakespeare, C., 2020. Fair value accounting: Current practice and perspectives for future research. *Journal of Business, Finance and Accounting,* 47, 303– 332.

Mueller, V., 2020. Hedge accounting and its consequences on portfolio earnings – A simulation study. *Accounting in Europe,* 17(2), 204-237.

Neel, M., 2017. Accounting comparability and economic outcomes of mandatory IFRS adoption. *Contemporary Accounting Research,* 34(1), 658-690.

Oberson R., 2021. The credit-risk relevance of loan impairments under IFRS 9 for CDS pricing: early evidence. *European Accounting Review*, 30(5), 959-987.

Onali, E., and Ginesti, G., 2014. Pre-adoption market reaction to IFRS 9: A cross-country event-study. *Journal of Accounting and Public Policy,* 33(6), 628-637.

Pinto, I., and Morais, A. I., 2022. Classification of equity instruments under IFRS 9: Determinants and consequences. *Australian Accounting Review,* 32, 411-426.

Sarquis, R. W., dos Santos, A., Lourenco, I., and Braunbeck, G. O., 2022. The impact of the adoption of IFRS 11 on the comparability of accounting information. *Accounting and Business Research,* 52(6), 690-726.

Yip, R. W. Y., and Young, D., 2012. Does mandatory IFRS adoption improve information comparability? *The Accounting Review,* 87(5), 1767-1789.

Appendix A

Variable definitions

Return the cumulative percentage change in the monthly stock price over the quarter, computed using the return index at the end of the quarter divided by the return index at the beginning of the quarter minus one, winsorised at top and bottom 1% (source: Datastream).

Earnings net income deflated by lagged market value of equity, winsorised at top and bottom 1% (source: S&P Capital IQ).

BusModel the ratio of book value of gross loans to total assets, at the end of the quarter. *BusModel* is used as a proxy for the business model (source: S&P Capital IQ).

Size the book value of total assets, at the end of the quarter, in million dollars (source: S&P Capital IQ).

Comp the estimated comparability between a pair of matched banks (greater values represent greater comparability). Section 'Comparability' provides details on how the comparability metric is estimated.

IFRS9 a variable that indicates the post-IFRS 9 period. It takes the value of one for the period after the IFRS 9 adoption in 2018Q1, and zero otherwise.

Affected_CM an indicator variable that equals one for banks with above-median proportion of equity instruments measured at FVPL post-IFRS 9 adoption. This proportion is given by the amount of equity instruments measured at FVPL as of January 1, 2018 divided by the amount of total equity instruments classified as AFS as of December 31, 2017. For banks that have below-median proportion of equity instruments measured at FVPL post-IFRS 9 adoption or did not have equity instruments classified as AFS as of December 31, 2017, this variable is zero (source: hand-collected from annual reports).

Affected_ECL an indicator that equals one for banks with an above-median change in their loan loss allowance because of IFRS 9 adoption, and zero otherwise. The change is calculated as the absolute difference between IFRS 9 loan loss allowances as of January 1, 2018 and IAS 39 loan loss allowances as of December 31, 2017

(transition effect) divided by the latter (source: hand-collected from annual reports).

Affected_HA an indicator variable that takes the value of one if the bank adopts hedge accounting under IFRS 9 as of January 1, 2018, and zero otherwise (source: hand-collected from annual reports).

Group1 captures pairs of banks that are more affected from a specific category of changes introduced by IFRS 9.

Size_Ratio the ratio of the size of the smaller firm in the pair to the size of the larger firm in the pair.

BusModel_Ratio the ratio of the smaller value of *BusModel* to the larger value of *BusModel* of the two banks in the pair.

Leverage_Ratio the ratio of the smaller value of leverage to the larger value of leverage of the two banks in the pair. We measure leverage using the ratio of total liabilities to total assets (source: S&P Capital IQ).

BtoM_Ratio the ratio of the smaller value of book to market ratio to the larger value of book to market ratio of the two banks in the pair. We measure book to market ratio using book value of equity to market value of equity (source: S&P Capital IQ and Datastream).

Enforc_pair an indicator variable that takes the value of one if both banks in the pair are based in high enforcement countries or both in low enforcement countries, and zero otherwise. To classify countries level of enforcement, we follow Barth et al. (2012). We consider a country as a high enforcement one if it has more than 0.5 in the public enforcement index provided in Leuz (2010), and low enforcement country otherwise.

Tables

TABLE 1
The sample

Panel A: Sample used for matching purposes	**unique banks**
Active BHC in the period 2014Q1-2021Q4 **that use IFRS**	**267**
Less BHC	
- without ISIN	-2
- with fiscal year-end different from December	-16
- with reporting frequency different from quarter data	-38
- in countries where IFRS9 adoption was later than 20181	-34
- without accounting and market data available	-8
- without early adopters	-4
- without threshold of min (max) 4 (16) quarters before and after IFRS9	-24
Sample used for matching	**141**

Panel B: Matched samples based on business model and size

	across all banks	**cross-country**	**within-country**
N	**12,758**	**10,806**	**5,301**
Pre-IFRS9	6,014	5,012	2,579
Post-IFRS9	6,744	5,794	2,722

Panel C: Matched sample (across all banks) by country

	N (%)	**unique banks (%)**
Austria	521 (4%)	5 (4%)
Bahrain	164 (1%)	3 (2%)
Belgium	104 (1%)	1 (1%)
Bulgaria	256 (2%)	3 (2%)
Cyprus	95 (1%)	1 (1%)
Czechia	194 (2%)	2 (1%)
Denmark	1,135 (9%)	14 (10%)
Finland	320 (3%)	3 (2%)
France	567 (4%)	9 (6%)
Germany	260 (2%)	3 (2%)
Greece	512 (4%)	4 (3%)
Hungary	114 (1%)	1 (1%)
Italy	721 (6%)	10 (7%)
Jordan	212 (2%)	2 (1%)
Kuwait	478 (4%)	9 (6%)
Lithuania	91 (1%)	1 (1%)
Netherlands	72 (1%)	1 (1%)
Nigeria	543 (4%)	6 (4%)
Norway	2,432 (19%)	21 (15%)

Oman	88 (1%)	1 (1%)
Poland	1,219 (10%)	11 (8%)
Portugal	111 (1%)	1 (1%)
Romania	57 (0%)	1 (1%)
Russia	255 (2%)	3 (2%)
Spain	429 (3%)	5 (4%)
Sweden	358 (3%)	3 (2%)
Turkey	1,157 (9%)	11 (8%)
United Kingdom	293 (2%)	4 (3%)
	12,758 (100%)	**139 (100%)**

The table presents data on sample selection. Panel A provides information on the sample used for matching. Active bank holding companies (BHC) include all listed BHC available on SNL (S&P Cap IQ) that report under IFRS and that have price per share greater than zero in any of the fiscal year ends of the period 2014 to 2021. We follow Lopez-Espinosa et al. (2021) to identify the year in which each country implemented IFRS 9. Panel B presents the samples matched on business model and size. We do one-to-many matching and for each bank, with replacement, and we use the four (or three in case there are only three available) matched banks with the closest distance in size. Panel C provides the distribution of the matched sample, across all banks, by country.

TABLE 2

Descriptive statistics

Panel A: Variables used to test comparability across all banks, cross-country and within-country

	across all banks			cross-country			within-country		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD
Comp	-0.044	-0.025	0.050	-0.049	-0.029	0.054	-0.043	-0.024	0.048
IFRS9	0.529	1.000	0.499	0.536	1.000	0.499	0.513	1.000	0.500
Size_Ratio	0.807	0.834	0.145	0.798	0.827	0.152	0.756	0.766	0.148
BusModel_Ratio	0.867	0.906	0.133	0.854	0.889	0.136	0.931	0.950	0.075
Leverage_Ratio	0.931	0.953	0.075	0.921	0.945	0.079	0.955	0.968	0.050
BtoM_Ratio	0.586	0.620	0.266	0.522	0.517	0.267	0.716	0.758	0.205
Enforc_pair	0.679	1.000	0.467	0.578	1.000	0.494			

Panel B: Variables used to test comparability across all banks, controlling for changes in each IFRS 9 category

	Change in C&M			ECL model			Change in Hedge accounting		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD
Comp	-0.050	-0.031	0.052	-0.046	-0.027	0.050	-0.046	-0.026	0.054
IFRS9	0.494	0.000	0.500	0.523	1.000	0.500	0.534	1.000	0.499
Size_Ratio	0.756	0.777	0.158	0.763	0.784	0.154	0.786	0.810	0.151
BusModel_Ratio	0.877	0.918	0.130	0.882	0.919	0.124	0.864	0.906	0.140
Leverage_Ratio	0.939	0.957	0.064	0.924	0.949	0.082	0.932	0.953	0.072
BtoM_Ratio	0.574	0.624	0.284	0.567	0.600	0.266	0.571	0.602	0.266
Enforc_pair	0.800	1.000	0.400	0.672	1.000	0.469	0.710	1.000	0.454

Group1	0.460	0.000	0.498	0.492	0.000	0.500	0.129	0.000	0.336

The table provides descriptive statistics for the variables used in the multivariate analysis. Panel A provides descriptive statistics for the variables used to test comparability across all banks, cross-country and within-country. Columns (1)-(3) use the pairs of banks matched based on business model and size, independent of the country of origin, used to test cross-country and within-comparability together; columns(4)-(6) use the pairs of banks from different countries matched based on business model and size, used to test cross-country comparability; and columns (7)-(9) use the pairs of banks from the same country matched based on business model and size, used to test within-country comparability. Panel B provides descriptive statistics for the variables used to test comparability across all banks, controlling for changes in each IFRS 9 category. All variables are defined in Appendix A.

TABLE 3
Univariate analysis

Panel A: Comparability across all banks

	N	Mean effect	Median effect
Pre-IFRS9	6,014	-0.0420	-0.0228
Post-IFRS9	6,744	-0.0456	-0.0279
Post-Pre		*-0.0036****	*-0.0051****

Panel B: Cross-country comparability

	N	Mean effect	Median effect
Pre-IFRS9	5,012	-0.0473	-0.0260
Post-IFRS9	5,794	-0.0512	-0.0329
Post-Pre		*-0.0038*	*-0.0069****

Panel C: Within-country comparability

	N	Mean effect	Median effect
Pre-IFRS9	2,579	-0.0408	-0.0236
Post-IFRS9	2,722	-0.0445	-0.0250
Post-Pre		*-0.0037****	*-0.0014*

This table presents the results from the univariate tests. Post-IFRS 9 (Pre-IFRS 9) corresponds to the period after (before) IFRS9 becomes effective in 2018Q1. A positive (negative) difference between post and pre-adoption indicates an increase (decrease) in comparability after IFRS 9 becomes effective. Panel A presents the results for the pairs of banks matched based on business model and size, independent of the country of origin. Panel B presents the results for the pairs of banks from different countries matched based on business model and size. Panel C presents the results for the pairs of banks from the same country matched based on business model and size. All variables are defined in Appendix A.*, ** and *** indicate statistical significance at 10%, 5% and 1% levels, respectively, two sided.

TABLE 4

The effect of each category of change introduced by IFRS 9 on comparability (across all banks)

	(1)	(2)		(3)	(4)	(5)	(6)
Panel A: Change in C&M							
	Affected_CM=1 (unique banks = 42)			**Affected_CM=0 (unique banks = 54)**		**Affected_CM=1 - Affected_CM=0**	
	N	**Mean effect**	**Median effect**	**N**	**Mean effect**	**Median effect**	**Mean effect**	**Median effect**
Pre-IFRS9	1,457	-0.0545	-0.0373	1,934	-0.0445	-0.0286		
Post-IFRS9	1,625	-0.0469	-0.0328	1,680	-0.0538	-0.0337		
Post-Pre		**0.0076*** **	**0.0045** **		**-0.0094*** **	**-0.0051** **		
Dif in Dif							**0.0169*** **	**0.0085*** **
Panel B: ECL model								
	Affected_ECL = 1 (unique banks = 54)			**Affected_ECL = 0 (unique banks = 55)**		**Affected_ECL = 1 - Affected_ECL = 0**	
	N	**Mean effect**	**Median effect**	**N**	**Mean effect**	**Median effect**	**Mean effect**	**Median effect**
Pre-IFRS9	2,241	-0.03	-0.02	2,336	-0.0536	-0.0272		
Post-IFRS9	2,478	-0.05	-0.03	2,532	-0.0459	-0.0287		
Post-Pre		**-0.0195*** **	**-0.0124*** **		**0.0076*** **	**-0.0016**		
Dif in Dif							**-0.0271*** **	**-0.0113*** **
Panel C: Change in Hedge accounting								
	Affected_HA = 1 (unique banks = 20)			**Affected_HA = 0 (unique banks = 102)**		**Affected_HA = 1 - Affected_HA = 0**	

	N	Mean effect	Median effect	N	Mean effect	Median effect	Mean effect	Median effect
Pre-IFRS9	506	-0.0598	-0.0227	4,133	-0.0425	-0.0224		
Post-IFRS9	782	-0.0451	-0.0201	4,538	-0.0484	-0.0302		
Post-Pre		**0.0146*** **	**0.0027*** **		**-0.0059*** **	**-0.0078*** **		
Dif in Dif							**0.0205*** **	**0.0104*** **

This table presents the results on the effect of changes in IFRS9 on comparability from the univariate tests. The results are presented separately for each of the three categories of changes introduced by IFRS 9. Panel A presents the results for the changes introduced by the C&M framework, Panel B for the changes introduced by the ECL model and Panel C for the changes introduced by the hedge accounting. Columns 1 and 2 (3 and 4) present the mean and median effect for the banks affected (not affected) by each change respectively, and columns 5 and 6 presents the results for the difference between affected and non-affected banks. A positive (negative) difference between post and pre-adoption indicates an increase (decrease) in comparability after IFRS 9 becomes effective. To assess significance of mean differences between affected and non affected banks, we use a t-test. To assess significance of median differences, we use a bootstrapping procedure. Specifically, we construct 1,000 samples and generate an empirical distribution of the differences. All variables are defined in Appendix A.*, ** and *** indicate statistical significance at 10%, 5% and 1% levels, respectively, two sided.

TABLE 5
Multivariate analysis

Panel A: Comparability

	across all banks	**cross-country**	**within-country**
	(1)	**(2)**	**(3)**
Intercept	-0.0813***	-0.0641***	-0.0843***
	(<.0001)	(<.0001)	(<.0001)
IFRS9	-0.0021**	-0.0026***	-0.0041***
	(0.0117)	(0.0094)	(0.0014)
TAratio	0.0006	-0.009***	0.0404***
	(0.8311)	(0.0058)	(<.0001)
BusModelratio	-0.0363***	-0.0469***	-0.0161*
	(<.0001)	(<.0001)	(0.0583)
Leverageratio	0.038***	0.0318***	-0.0055
	(<.0001)	(<.0001)	(0.6670)
BtoMratio	0.0611***	0.0672***	0.0467***
	(<.0001)	(<.0001)	(<.0001)
Enforc_pair	-0.0025***	-0.002*	
	(0.0075)	(0.0532)	
Adj R - sq.	11.45%	12.37%	5.89%
N	12,758	10,806	5,301

Panel B: Comparability across all banks

	Change in C&M (*Group1: Affected_CM*=1)	**ECL model (*Group1: Affected_ECL=1*)**	**Change in Hedge accounting (*Group1: Affected_HA=1*)**
	(1)	**(2)**	**(3)**
Intercept	-0.0504**	-0.1005***	-0.0591**
	(0.0479)	(<.0001)	(0.0299)
IFRS9	-0.009	0.0088**	-0.0051*
	(0.1172)	(0.0203)	(0.0813)
Group1	-0.01	0.0244***	-0.0224*
	(0.1784)	(<.0001)	(0.0685)
Group1*IFRS9	**0.0183****	**-0.0258*****	**0.0244*****
	(0.0196)	**(<.0001)**	**(<.0001)**
Size_Ratio	-0.0047	-0.0028	-0.0108
	(0.7361)	(0.8298)	(0.3929)
BusModel_Ratio	-0.0297*	-0.016	-0.0405***
	(0.0553)	(0.122)	(0.0002)
Leverage_Ratio	-0.0034	0.0215	0.0226
	(0.8569)	(0.3164)	(0.4457)
BtoM_Ratio	0.0498***	0.0656***	0.0685***
	(<.0001)	(<.0001)	(<.0001)
Enforc_pair	0.0119	0.0059	-0.0001

	(0.112)	(0.3272)	(0.9844)
Adj. R-sq.	10.08%	16.00%	12.21%
N	6,696	9,587	9,959
Coefficient comparison: IFRS9 + Group1*IFRS9			
F test	27.2***	160.8***	43.88***

This table reports regression results on the effect of changes in IFRS9 on comparability. Panel A presents the results for the different samples. Column (1) includes the pairs of banks matched based on business model and size, independent of the country of origin; column (2) includes the pairs of banks from different countries matched based on business model and size; and column (3) includes the pairs of banks from the same country matched based on business model and size. For within-country analyses, *Enforc_Pair* is excluded from the model because all observations equal 1. Enforc_pair that takes the value of 1 if both banks in the pair are based in high enforcement countries or both in low enforcement countries, and zero otherwise. Panel B presents the results for the sample of all banks, separately for each category of IFRS 9 change. *Group1* changes for each column. Column (1) provides the results controlling for changes introduced by the C&M. Column (2) provides the results controlling for changes introduced by the ECL model. Column (3) provides the results controlling for changes introduced by the hedge accounting. Standard errors are clustered at the bank-level. F-statistics are provided for the sum of the coefficients of *IFRS9* and *Group1*IFRS9*. All variables are defined in Appendix A.*, ** and *** indicate statistical significance at 10%, 5% and1% levels, respectively, two sided.

TABLE 6

Comparability across all banks

Panel A: Alternative measure of comparability

	Change in C&M *(Group1: Affected_CM=1)*	**ECL model (*Group1: Affected_ECL=1*)**	**Change in Hedge accounting (*Group1: Affected_HA=1*)**
	(1)	**(2)**	**(3)**
Intercept	-0.3221	-2.5338***	-1.1894**
	(0.1477)	(0.0005)	(0.0229)
IFRS9	0.0103	0.1547***	0.0585
	(0.8603)	(0.0009)	(0.1321)
Group1	-0.1348	0.1028	-0.2043**
	(0.1087)	(0.1037)	(0.0228)
Group1*IFRS9	**0.2043****	**-0.2543*****	**0.0256**
	(0.0239)	**(0.0009)**	**(0.7530)**
Size_Ratio	-0.1811	-0.0806	-0.1452
	(0.2922)	(0.5499)	(0.1846)
BusModel_Ratio	-0.0619	1.1592*	0.2686
	(0.6672)	(0.0870)	(0.4490)
Leverage_Ratio	0.1995*	0.9899***	0.616*
	(0.0769)	(0.0014)	(0.0966)
BtoM_Ratio	0.1745**	0.4717***	0.3324***
	(0.0379)	(0.0013)	(0.0017)
Enforc_pair	-0.0507	-0.0164	-0.0353
	(0.2043)	(0.8129)	(0.4351)
Adj. R-sq.	3.75%	13.20%	4.40%
N	6,126	9,477	9,651
Coefficient comparison: IFRS9 + Group1*IFRS9			
F test	140.18***	32.57***	5.84**

Panel B: One-to-one matching

	Change in C&M *(Group1: Affected_CM=1)*	**ECL model (*Group1: Affected_ECL=1*)**	**Change in Hedge accounting (*Group1: Affected_HA=1*)**
	(1)	**(2)**	**(3)**
Intercept	-0.0459	-0.1069***	-0.0937**
	(0.1081)	(0.0005)	(0.0222)
IFRS9	-0.0165**	0.0077	-0.0033
	(0.0411)	(0.1102)	(0.4363)
Group1	-0.003	0.0299***	0.0054
	(0.7246)	(<.0001)	(0.6995)
Group1*IFRS9	**0.025****	**-0.0176*****	**0.0125**
	(0.0162)	**(0.0047)**	**(0.2025)**

Size_Ratio	0.0046	0.0174	0.0112
	(0.7997)	(0.3154)	(0.5367)
BusModel_Ratio	-0.0365**	-0.0393**	-0.0303*
	(0.0359)	(0.0122)	(0.0892)
Leverage_Ratio	0.0055	0.0358	0.0335
	(0.8219)	(0.2249)	(0.3987)
BtoM_Ratio	0.0530***	0.056***	0.0516***
	(<.0001)	(<.0001)	(0.0002)
Enforc_pair	-0.0018	0.0081	0.002
	(0.7860)	(0.2494)	(0.8261)
Adj. R-sq.	12.44%	20.42%	8.52%
N	2,057	2,880	2,805
Coefficient comparison: IFRS9 + Group1*IFRS9			
F test	8.04***	19.83***	3.42*

This table reports regression results on the effect of each category of IFRS 9 change on comparability. Panel A uses alternative measure of comparability and Panel B samples are matched using a one-to-one matching procedure. Standard errors are clustered at the bank-level. F-statistics are provided for the sum of the coefficients of *IFRS9* and *Group1*IFRS9*. All variables are defined in Appendix A.*, ** and *** indicate statistical significance at 10%, 5% and 1% levels, respectively, two sided.