Routledge
Taylor & Francis Group

Accounting in Europe

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/raie20

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To cite this article: Erlend Kvaal, Edgar Löw, Zoltán Novotny-Farkas, Argyro Panaretou, Annelies Renders & Peter Sampers (07 Sep 2023): Classification and Measurement under IFRS 9: A Commentary and Suggestions for Future Research, Accounting in Europe, DOI: 10.1080/17449480.2023.2253808

To link to this article: https://doi.org/10.1080/17449480.2023.2253808

Published online: 07 Sep 2023.

Accounting in Europe, 2023
https://doi.org/10.1080/17449480.2023.2253808

Classification and Measurement under IFRS 9: A Commentary and Suggestions for Future Research

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(Received: May 2022; accepted: August 2023)

ABSTRACT This paper discusses several issues that were raised by the International Accounting Standards Board (IASB) in their request for information for the post-implementation review (PIR) of the International Financial Reporting Standard (IFRS) 9*: Financial instruments – Classification and Measurement*. In doing so, we first review the related academic literature and present empirical evidence on the post-adoption impact of IFRS 9. We then discuss conceptual issues associated with the business model and cash flow characteristics assessment in IFRS 9, as well as issues associated with the presentation of fair value changes in other comprehensive income (OCI) and modifications to contractual cash flows. Finally, we identify gaps in the literature and provide suggestions for future research that can help inform accounting standard setters.

Keywords: IFRS 9; fair value accounting; business model; cash flow characteristics; future research

1. Introduction

Recently, the IASB requested information from relevant stakeholders for the Post-Implementation Review (PIR) of IFRS 9: *Financial instruments – Classification and Measurement*. This paper takes this opportunity to (1) review the relevant literature, (2) provide empirical evidence on the application of IFRS 9 and (3) discuss conceptual issues regarding the classification and measurement of financial assets under IFRS 9.[1] Further, we discuss a number of other issues on specific areas of the classification and measurement requirements. In doing so, we identify

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Paper accepted by Francesco Mazzi

gaps in the literature and provide suggestions for future research that will help accounting standard setters in assessing the effects of IFRS 9 on financial statement users and preparers.

Effective from January 2018, IFRS 9 replaced IAS 39 *Financial Instruments: Recognition and Measurement*. IFRS 9 introduces a new approach for the classification and measurement of financial assets. Based on the business model of the entity (i.e. the way the entity intends to manage its financial assets) and their contractual cash flow characteristics, financial assets are classified and subsequently measured at amortised cost (AC), fair value through other comprehensive income (FVOCI) or fair value through profit or loss (FVTPL). Empirical evidence indicates that IFRS 9 had, on average, limited impact on the balance sheet structure of both financial and non-financial firms. However, this may conceal significant changes in business decisions.

We identify a number of conceptual issues associated with the IFRS 9 business model approach. These include the challenge to distinguish between business model and management intent, the fungible and exchangeable nature of financial assets that allows changes in management intent to be easily implemented and the trade-off between relevance and comparability of accounting information. Based on the literature, we argue that, at least for financial institutions, a single classification and measurement model based on fair values provides the most useful information about the amount, timing, and uncertainty of future cash flows while it eliminates the conceptual issues associated with the business model approach.

Under full fair value measurement,[2] communicating the business models for financial assets only requires a separate presentation of the related assets in the statement of financial position and a distinction between their realized and unrealized gains and losses in the comprehensive income statement. Such a separate presentation enables financial statement users to understand (1) how management has realized cash flows (thus informing about stewardship) and (2) the cash flows the entity might realize in the future depending on whether management chooses to hold financial assets and collect contractual cash flows or to sell them in the near-term (Leisenring et al., 2012).

Full fair value measurement for all financial instruments would also be simple and eliminate the complexities as well as the conceptual and application issues associated with the current IFRS 9 rules that are raised in the remainder of this paper.[3] Under fair value measurement entities would not have to assess whether newly created financial instruments such as ESG-linked bonds and loans are consistent with the solely payments of principal and interest (SPPI) requirement. Fair value losses on the asset side due to increases in credit risk would (partly or fully) offset fair value gains on liabilities due to the increase in own credit risk, resulting in less counterintuitive own credit risk results. Full fair value measurement would also resolve discussions around the (absence of) recycling of gains and losses on equity investments recognized in other comprehensive income (OCI) and make impairment models obsolete. However, being aware that a full fair value measurement does not have universal support,[4] a classification and measurement model with only two categories, specifically fair value measurement through profit or loss and amortized cost measurement, would be a reasonable compromise.

The remainder of this paper is organised as follows. In Section 2 we survey the literature on the usefulness of fair value and AC information in the context of financial instruments and present quantitative effects on entities' financial statements of applying the IFRS 9 requirements. In Section 3 we discuss conceptual issues related to the business model assessment and whether it can be applied consistently. Section 4 focuses on a number of other areas of the classification and measurement requirement, including the implications of the cash flow characteristics assessment on the measurement of financial assets with sustainability-linked features, the option to present fair value changes on equity instruments in OCI, the requirement to present changes in the fair value of liabilities resulting from changes in own credit risk in OCI and the requirements regarding modification and derecognition of financial assets. Section 5 presents suggestions for future research and Section 6 concludes.

2. Academic Evidence

The accounting literature has extensively examined the usefulness of fair value and AC information in the context of financial instruments. In this section, we present the studies that we regard as most relevant to the issues raised in the paper and provide empirical evidence on the effects of the IFRS 9 classification and measurement model on the balance sheet structure of entities.

2.1. Measurement of Financial Instruments

Studies on the measurement of financial instruments are often motivated by the claims of fair value opponents that fair value measurements would not fairly represent banks' business model. Typical arguments against full fair value measurement include that by creating 'excessive' volatility in comprehensive income, fair value measurement would misrepresent banks' risk management activities and lead investors to overstate their risk assessments (Yen et al., 2007). In addition, changes in fair values would be irrelevant for hold-to-collect business models and unreliable for financial assets that are not actively traded. The IASB rejected the idea of a single fair value model based on similar objections of stakeholders.[5]

We group the academic evidence in this area into three categories: (1) studies documenting the usefulness of fair values independent of the business model, (2) studies supporting the idea that business model matters for the relevance of fair value versus historical cost, and (3) studies documenting that both fair value and AC information are relevant.

2.1.1. Studies supporting the usefulness of fair values independent of the business model

Several studies show that fair values provide the most relevant information about bank risk, even for financial instruments that are held for the collection of cash flows. Hodder et al. (2006) show that the volatility of full-fair-value income is more strongly associated with the economic measures of risk (i.e. market model betas, stock return volatility, and long-term interest rate betas) than is the volatility based on US GAAP income. Their findings suggest that full-fair-value-income volatility reflects elements of risk that are not captured by the volatility of GAAP income.

Bischof et al. (2011) examine a world-wide sample of IFRS banks and provide three pieces of evidence. First, they show that under the intent-based classification of IAS 39 differences in the proportion of fair valued assets across banks cannot be explained by differences in their operating business model, but by firm-specific and country-specific reporting incentives. Second, the operating characteristics (e.g. trading versus banking book business) and the risk exposures of banks are only weakly related. Specifically, some banks with a banking book-related business model have more severe open risk positions than other banks focussing on non-banking book activities (e.g. trading). Finally, they document a significantly positive association between fair-value-based trading book income and stock returns. Importantly, for instruments held in the banking book, i.e. the hold-to-collect portfolio, fair value measures of income are the only income measures associated with stock returns. In contrast, AC measures of the banking book income are not associated with stock returns. Their findings suggest that the risk exposures of banks operating under a hold-to-collect business model can be severe and that such risk exposures are more adequately reflected by fair value than AC accounting.

Blankespoor et al. (2013) assess the extent to which leverage ratios based on (1) fair values versus (2) US GAAP mixed-attribute values versus (3) Tier 1 regulatory capital values are associated with bond yield spreads and future failure for a sample of US banks. They find that leverage measured using fair values of financial instruments explains significantly more variation

in bond yield spreads and bank failure than the other less fair value-based leverage ratios. Notably, they also find that the fair value of loans and deposits are the primary sources of the incremental explanatory power.

Using a global sample of IFRS banks, Fiechter and Novotny-Farkas (2017) find that while fair-valued assets in the held for trading (HfT) and available for sale (AfS) categories are always value relevant, financial assets that are voluntarily measured at FVTPL through the application of the fair value option (FVO) are less value relevant. They attribute these findings to the higher complexity and lower investor understanding of the FVO, consistent with the feedback stakeholders provided during the development of IAS 39.

A few studies examine the predictive ability of fair values. Evans et al. (2014) examine whether fair values of interest-bearing investment securities are associated with future financial performance for a sample of US commercial banks and whether the relative strength of this association is reflected in the relation between reported fair values and banks' share prices. They propose that fair values will have predictive value for an entity's relative levels of future accounting earnings and cash flows because (1) gains and losses may be realized by sale or settlement and (2) even in the absence of sale or settlement, the difference between fair value and AC reflects the present value of opportunity costs and benefits of holding financial assets at their contractual interest rates. They find that fair value holding gains and losses for investment securities have significant, incremental explanatory power for banks' relative interest income and securities-related cash flows and provide evidence that this predictive ability is value relevant. These findings speak to the role that financial statement information plays in the efficient allocation of capital.

Similarly, the studies of Bratten et al. (2016) and Boulland et al. (2019) find that unrealized fair value gains and losses on AfS securities included in OCI predict future bank performance. Bratten et al. (2016) further shows that this is the case even during the 2007–2009 financial crisis, contradicting the criticism that fair value accounting forces banks to record excessive downward adjustments. Finally, using a sample of non-financial firms, Anderson et al. (2023) find that some of the OCI components, including unrealized gains and losses on AfS securities, predict future earnings and that these are incorporated, at least partially, in analysts' forecast.

2.1.2. Studies supporting the idea that business model matters for the relevance of fair value versus historical cost

A few studies provide evidence suggesting that intent- or business-model-based classifications reflect value relevant information. Park et al. (1999) find that fair value differences of banks' AfS securities are more value relevant than those of held to maturity (HtM) securities. However, these findings might be because AfS fair value changes are recognized in the primary financial statements, whereas HtM fair values are only disclosed (Ahmed & Takeda, 1995; Ryan, 1999). Koonce et al. (2011) use an experiment and find that investors judge fair value as relevant when the instrument is expected to be sold or settled soon, but not when held to maturity. However, as discussed earlier, empirical studies find that fair values are relevant and have predictive ability independent of the intent to hold financial assets (Bratten et al., 2016; Evans et al., 2014).

The empirical findings by Cantrell et al. (2014) and McInnis et al. (2018) examining US banks contrast with the previously discussed empirical findings. Cantrell et al. (2014) show that banks' reported AC information for loans is more useful than loan fair values in predicting future net write-offs, non-performing loans, and bank failures over both short and long horizons. However, Hodder et al. (2014) suggest that these results can be driven by fair value changes reflecting both the present value of changes in cash flow expectations (i.e. a valuation nominator effect) and the opportunity costs and benefits due to changes in market yields (i.e. the discounting

or valuation denominator effect). Changes in fair values due to changes in market yields will confound the correlation between fair value changes due to changes in cash flow expectations.

McInnis et al. (2018) find that the combined value relevance of book value of equity and income measured under full fair value is less than that under US GAAP, and that the inclusion of transitory unrealized gains and losses explains the lower value relevance of fair value income. However, the disaggregation of income into transitory and persistent components significantly improves the value relevance of fair value income relative to GAAP income. This latter finding is important, as it is consistent with our previous core claim that a full fair value measurement with separate presentation of realized and unrealized fair value gains and losses provides the most transparent and useful information.

2.1.3. Studies documenting that both fair value and AC information are relevant

Some studies provide evidence that both AC and fair values provide useful information for particular financial assets in particular circumstances. Badertscher et al. (2014) find for a comprehensive sample of US banks that the 'recycling' or reclassification of fair value losses on AfS securities from OCI to net income through other-than-temporary-impairments is incrementally priced by the market.[6] In the authors' view, this incremental pricing suggests that investors perceive other-than-temporary-impairments as signals about the fundamental value of the banks' securities portfolio and/or as signals about the probability of regulatory intervention. Similarly, Dong et al. (2014) find that realization of fair value gains and losses through the sale of AfS securities, i.e. the reclassification of previously unrealized fair value gains and losses from OCI to net income, is incrementally value and return relevant. Their additional analyses indicate that this incremental pricing of the realization of fair value gains and losses is explained by it helping investors to predict future performance.

Finally, examining financial assets measured at Level 3 fair values (i.e. based on unobservable inputs) of US banks, Fiechter et al. (2022) find that the detailed Level 3 rollforward disclosures that segregate total fair value remeasurements into their realized and unrealized components and their recognition location (i.e. OCI versus earnings) are useful to investors. Interestingly, they find that Level 3 remeasurements recorded in OCI are less return relevant than those recorded in earnings, which largely is attributable to the latter (former) being included in (excluded from) regulatory capital. Importantly, they find no differences in the return relevance of realized versus unrealized Level 3 fair value remeasurements in earnings, allaying concerns that investors perceive unrealized Level 3 remeasurements of lesser quality.

Overall, the findings of these three papers suggest that presenting AC information on other-than-temporary-impairments and the realization of fair value gains and losses under a more comprehensive fair value-accounting framework is useful to investors. As such, the papers' results support the FASB's and IASB's earlier efforts to expand fair value accounting, but at the same time reform financial statement presentation requirements. Specifically, both boards have had financial statement presentation projects that would require a special section on the income statement for fair value measurements (Badertscher et al., 2014; IASB, 2008).

Taken together, the academic evidence discussed here suggests that fair values are value relevant, (most) useful in informing about bank risk and future income, and that intent-based classification may impair comparability and understandability in some settings.

2.2. Evidence on the (Transition) Effects of IFRS 9

Only a few studies examine the impact of the IFRS 9 classification and measurement requirements in the transition year, with most of the extant studies focussing on banks (EBA, 2018; Groff & Mörec, 2021; Löw et al., 2019; Löw & Erkelenz, 2022). All studies document

limited transition effects. Löw et al. (2019) provide the most comprehensive study of 78 European Union (EU) banks that are supervised by the European Central Bank (ECB). They find that the balance sheet structure under IFRS 9 on the transition day is broadly similar to the balance sheet structure under IAS 39, with the exception that use of the FVOCI category declined relative to FVTPL.

2.2.1. Post-adoption effect

The transition effects provide interesting, but limited, insights into changes in the balance sheet structure of banks, as fundamental changes might take time to materialize. Therefore, it is worthwhile to study long-term changes in the balance sheet structure around the adoption of IFRS 9. The final version of IFRS 9 standard was issued in July 2014, almost four years before it became effective. It is therefore plausible that banks already started to adapt their balance sheet structure in anticipation of the standard's adoption. In Table 1, we examine changes in the accounting classification of major financial asset categories around the adoption of IFRS 9. To this end, we retrieved data from S&P Global Market Intelligence for a sample of 139 listed IFRS-applying banks from 28 European countries for a sample period stretching from 2014 to 2022.

Generally, Table 1 reveals that the long-term changes in banks' accounting classifications of their financial assets pre- to post-IFRS 9 adoption are largely consistent with the evidence from the transition year. Specifically, we observe a slight, but statistically insignificant, increase in the average proportion of financial assets measured at FVPTL from 8.09% under IAS 39 to 8.39% under IFRS 9 (excluding derivative assets). However, for the

Table 1. Classification of financial assets under IAS 39 and IFRS 9 (in percent of total financial assets excl cash).

	Mean	Median	SD	N	Mean	Median	SD	N
IAS39 2014–2017	**IAS39 2014–2017**				**IFRS9 2018–2022**			
Financial assets held at FVTPL								
Loans to Banks & Customers	2.10%	0.00%	6.00%	513	2.37%	0.10%***	6.93%	664
Debt instruments	4.69%	1.67%	6.41%	513	4.83%	1.39%	7.51%	664
Equity instruments	1.22%	0.13%	3.14%	513	1.13%	0.32%***	2.10%	664
Financial assets at FVTPL (excl. Deriv. instr.)	8.09%	3.03%	11.04%	513	8.39%	2.79%*	11.68%	664
Derivative instruments	2.77%	0.35%	6.22%	513	2.02%*	0.18%**	4.56%	664
Financial assets at FVTPL (incl. Deriv. instr.)	10.85%	4.64%	14.09%	513	10.40%	3.95%	13.50%	664
Financial assets in OCI								
Loans to Banks & Customers	0.01%	0.00%	0.05%	513	2.49%***	0.00%***	11.22%	664
Debt instruments	8.55%	6.21%	8.99%	513	6.51%***	3.61%***	8.49%	664
Equity instruments	1.13%	0.31%	1.88%	513	0.94%	0.10%***	2.04%	664
Financial assets in OCI	9.75%	8.59%	8.85%	513	10.02%	6.33%***	12.75%	664
Financial assets held at AC								
Loans to Banks & Customers	75.96%	79.75%	14.44%	513	74.04%*	79.50%***	17.21%	664
Debt instruments	3.40%	0.66%	5.69%	513	5.41%***	2.30%***	8.07%	664
Financial assets held at AC	79.40%	83.05%	14.57%	513	79.49%	84.85%	17.85%	664

Notes: This table presents descriptive statistics for major financial asset categories of 139 banks applying IFRS from 28 European countries (EU 27 excluding Croatia and Luxembourg, but including Norway, Serbia, United Kingdom) for the sample period 2014–2020. The table shows descriptive statistics separately for the IAS 39 (2014–2017) and the IFRS 9 (2018–2022) periods. We retrieve data from S&P Global Market Intelligence. *, ** and *** indicate statistical significance at 10, 5 and 1% levels (two-sided test of equality of means and medians), respectively.

median bank, the proportion of FVTPL financial assets decreased from 3.03% to 2.79% (statistically significant at the 10% level). The average proportion of FVOCI financial assets stayed relatively stable around 10%, while for the median bank this proportion decreased significantly from 8.59% to 6.33%. We observe significant decreases in the proportion of both debt and equity securities held at FVOCI. In the post-IFRS 9 period, the typical (median) European bank holds only 3.61% of debt securities and 0.10% of equity securities in the FVOCI category. Therefore, it appears that the relevance of the FVOCI category is in decline for both debt and equity securities. This is consistent with the findings of Bischof et al. (2022) that banks reduce their equity holdings upon the adoption of IFRS 9 and Löw and Erkelenz (2022) that European banks hold less than 0.25% of equity securities in the FVOCI category. Finally, Table 1 shows that the mean (median) of total financial assets measured at AC remained constant at about 79% (increased insignificantly from 83.05% to 84.85%). Overall, the post-IFRS 9 adoption shifts are minor and largely consistent with the findings from the transition effects.

2.2.2. The effect on non-financial firms

We are aware of only two studies of IFRS 9 classification and measurement effects on non-financial firms. Henkel and Bürger (2020) examine 28 Italian companies listed on the FTSE MIB and 26 German DAX 30 companies. Only 13 (or 46.4%) of the 28 investigated Italian companies versus 25 (or 96.2%) of the investigated German companies disclosed information on the migration of financial assets. In both subsamples, more than 90% of the financial assets did not experience a change in their respective classification and measurement categories. For Italian companies, the authors report some movement from FVTPL to AC, and for German companies, from available for sale (AfS) to FVTPL. Pinto and Morais (2022) investigate the classification of equity instruments in the first year of IFRS 9 adoption for firms included in the FTSE 100 and EURO STOXX 50 indices. The paper finds that around 65% of AfS instruments were classified as FVOCI after the adoption of IFRS 9, with the remaining 35% being classified as FVTPL.

Overall, the evidence suggests that IFRS 9 adoption had, on average, only limited impact on the balance sheet structure of both financial and non-financial firms. However, discussions with practitioners suggest that it triggered substantial knock-on effects not apparent in the reported numbers. Specifically, IFRS 9 classification and measurement led to changes in the product mix and/or contractual terms of existing financial assets (where possible) in order to achieve SPPI-consistency and to avoid fair value measurement. Non-SPPI-consistent debt instruments became less attractive to hold for banks because of the higher volatility caused by fair value measurement. Interestingly, auditors report that the adoption of IFRS 9 led to a reassessment of the IFRS 13 fair value measurement rules (Kudrna, 2019). Kudrna (2019) reports that Austrian banks improved the quality of the fair value measurement of SPPI-inconsistent financial assets that were reclassified from other categories into the FVTPL category. These potential changes must be considered when assessing the overall impact of the IFRS 9 classification and measurement requirements.

3. The Business Model for Managing Financial Assets

We see a number of conceptual issues with the business model approach applied to financial assets under IFRS 9. Our following discussion largely reiterates the main issues raised in Leisenring et al. (2012). First, we fail to see a real difference between business model and management intent, despite several attempts made in IFRS 9 to clarify it. For example, the application guidance describes business model as '*a matter of fact and not merely an assertion*', '*observable*

through the activities' that '*does not depend on management intentions for an individual instrument*' (IFRS 9.B4.1.2 and B4.1.2B). However, at the same time, '*a single entity may have more than one business model for managing its financial assets*' and '*although the objective of an entity's business model may be to hold financial assets in order to collect cash flows, the entity need not hold all of those instruments until maturity*' (IFRS 9.B4.1.2 and B4.1.3). Similar to Leisenring et al. (2012), we interpret this as an indication that management intention is a decisive factor in determining the classification and measurement of financial assets. Moreover, we note that the options to measure financial assets at FVTPL and equity investments at FVOCI are purely intent based. It seems that the only difference is that management intent relates to individual financial assets, while business model relates to groups of financial assets.

Second, as discussed in Leisenring et al. (2012), financial assets, especially debt securities, are often fungible, exchangeable, and easily convertible into cash. Such financial assets are particularly suitable for alternative approaches to realise cash flows and changes in management intent are easy to implement. Their fungible nature differentiates financial assets from other, e.g. long-lived tangible, assets. For example, a real estate firm can classify its properties in three different ways depending on how management intends to use the properties. If management intends to benefit from rentals and/or capital appreciation, it classifies the related property as investment property (with IAS 40 being the applicable standard). If the intention is to use the property to run a hotel business, it would qualify as owner-occupied property and IAS 16 would apply. Finally, management may want to sell the property in the ordinary course of business, in which case the property qualifies as inventory and IAS 2 applies. Management might change its intentions and, e.g. decide to use a property to run an own hotel business instead of renting it to an international hotel group. However, this change in intent is more difficult to implement, as management will need other resources such as hotel staff to be able to run the hotel. In contrast, for many financial assets it is very easy to switch from a buy-and-hold strategy to a sale strategy.

The previous arguments do not necessarily generalize to banks' loan portfolios, although banks' ability and willingness to securitize and sell parts of their loan portfolio is increasing over time (e.g. DeYoung et al., 2013). Nevertheless, academic evidence presented earlier indicates that even for loan portfolios that are held to collect the contractual cash flows, fair values provide useful information to investors.

Third, the business model approach sacrifices comparability for relevance. Specifically, under the business model approach two entities can account differently for similar financial assets if they intend to use those assets differently. This reduces users' ability to compare different entities. In this regard, we note that the need for comparability is one of the reasons why financial reporting standards exist. Comparability helps investors to identify opportunities and risks across the world and to choose among alternative courses of action, thus improving capital allocation. The IASB Conceptual Framework (CF) defines comparability as the '*qualitative characteristic that enables to identify and understand similarities in, and differences among, items*' (CF 2.25). Furthermore, '*permitting alternative accounting methods for the same economic phenomenon diminishes comparability*' (CF 2.29). However, the business model approach essentially allows the use of alternative accounting methods for similar items.

Comparability concerns has been particularly raised around the measurement of debt instruments. Under IFRS 9.4.1 debt instruments held to collect contractual cash flows are recognized at AC (called the 'hold-to-collect' business model), those held both for sale and to collect contractual cash flows are at FVOCI ('hold-to-collect-and–sell'), while all other debt instruments are at FVTPL, the default category. The distinguishing feature between the hold-to-collect and other models is the option to sell debt instruments; when that option is renounced by the holder of the assets, debt instruments truly belong to the hold-to-collect category. Empirical evidence from

supervisors indicates substantial variations in classification practice for debt instruments. A report European Banking Authority (EBA) highlights significant diversity across EU banks in the assessment of levels of sales of financial assets that are deemed consistent with the hold-to-collect model (EBA, 2021).[7] Overall, the report concludes that additional guidance is needed on the business model criteria to improve comparability across entities.

Although empirical evidence on classification of debt instruments mostly concerns the allocation to the hold-to-collect category, the allocation to the hold-to-collect-and-sell category may be even more questionable. While the hold-to-collect business model has one distinguishing feature – the absence of sales – the hold-to-collect-and-sell business model has no such feature, since holding or selling an asset encompass all that a rational owner could do with it. In our view, the present structure of Chapter 4 in IFRS 9 is an invitation to choosing opportunistically between FVOCI and FVTPL for the classification of SPPI-compliant debt instruments.

Further, the Conceptual Framework defines the objective of financial reporting as providing financial information that is useful to users in making decisions about providing resources to the entity. To be decision useful, information must be relevant and representationally faithful. The objective of IFRS 9 is to establish financial reporting principles for financial instruments '*that will present relevant and useful information to users of financial statements for their assessment of the amounts, timing and uncertainty of an entity's future cash flows*' (IFRS 9.1.1). Academic evidence discussed in Section 2 indicates that full fair value measurement always provides (more) relevant information on financial instruments independent of the underlying business model and enhances both relevance and comparability of information on financial assets and liabilities. When applying full fair value measurement, differences in management intentions can be communicated through separate presentations in the statements of financial position and comprehensive income rather than through differences in the classification and measurement. Similarly, Barth (2007, 2014) concludes that fair value measurement meets the concepts and objectives of the Conceptual Framework better than alternative measurement bases.

4. Other Issues on Specific Areas of the Classification and Measurement Requirements

4.1. Contractual Cash Flow Characteristics Assessment and Assets with Sustainability-Linked Features

The contractual cash flow characteristic assessment of IFRS 9 encourages entities to identify and understand the cash flow characteristics and risks of their financial assets. To be measured at AC, financial assets must be exclusively exposed to basic lending risks (such as liquidity and credit risk). Changes in these basic lending risks are reflected through the application of the expected credit loss (ECL) model. Financial assets that are exposed to more than just basic lending risk are measured at fair value, resulting in all risks being reflected in comprehensive income. Overall, the rather stringent classification and measurement requirements in combination with the ECL model under IFRS 9 yield a better reflection of the timing, amount, and uncertainty of cash flows than under IAS 39. In practice, however, distinguishing between basic and non-basic lending risks boils down to assessing whether the cash flows are solely payments of principal and interest (SPPI) on the principal amount outstanding. The application of the SPPI test leads to rules-based, rather than principles-based, accounting and consequently entities try to structure instruments in such a way that they fit with the rules.

An important and rising issue relates to whether the cash flows of ESG-linked loans and bonds are SPPI-consistent. Financial assets with sustainability-linked features are financial assets (e.g. loans or bonds) with contractual terms that relate to environmental, social, or governance (ESG) targets. The interest payments on these loans or bonds are often linked to pre-

determined ESG targets that are specific to the borrower and adjusted periodically to reflect changes in the borrower's performance relative to the specified ESG targets. The issuance of ESG-linked loans and bonds has increased tremendously over the past five years, as evidenced by Kim et al. (2022).

The recent discussion about ESG-linked loans and bonds centers on whether ESG-linked adjustments to interest payments affect the credit risk of the individual financial instrument. According to the IASB, it should be clear from IFRS 9 that the consideration for the credit risk of a financial asset is for the credit risk associated with the principal amount of that financial asset. In addition, under the impairment requirements of IFRS 9, which accompany the AC measurement, expected credit losses should be recognized based on the credit risk assessment for individual financial instruments, rather than the borrower, through their expected life.

Recently, credit rating agencies, such as S&P, Moody's, and Fitch, have started to include ESG criteria in their credit ratings. This indicates that ESG risks are increasingly viewed by these rating agencies as affecting the creditworthiness of entities as a whole. In addition, several US studies investigate the impact of ESG performance on credit risk using tradable debt, such as corporate bonds and credit ratings (Jiraporn et al., 2014), or non-tradable debt, including interest rates on bank loans or cost of capital estimates (Chava, 2014; Goss & Roberts, 2011). In general, these studies find that higher ESG performance is associated with lower credit risk. European evidence by Menz (2010) and Stellner et al. (2015) is more inconclusive. Menz (2010) finds weak evidence of higher ESG performance being associated with higher bond yield spreads, while Stellner et al. (2015) find no association between ESG performance and bond yields. In contrast, Barth et al. (2019) find that better environmental performance seems to be connected to lower CDS spreads for European companies. They do not find significant associations between social or governance ratings and CDS spreads, after controlling for common CDS determinants.

Consequently, ESG-linked loans and bonds are not in conflict with the SPPI test if a link can be demonstrated between the ESG criteria and the credit quality of the instrument. The requirement to demonstrate and document this link will require financial institutions to think carefully about the risks they engage in. However, in case there is no perfect correlation between ESG criteria and credit risk, entities should apply fair value accounting to these ESG-linked loans and bonds. In practice, this probably means that we will see a move towards more fair value accounting, which might result in banks refraining from issuing such instruments. However, to accommodate a principles-based classification and measurement framework that is most closely aligned with full fair value measurement, exceptions made to fair value measurement should be restricted to a minimum and should only be based on exposure to basic lending risks.

The IASB recently published an exposure draft with proposed amendments IFRS 9 and IFRS 7 (IASB, 2023). This exposure draft includes clarifications on when contractual terms that change the timing or amount of contractual cash flows of financial instruments with ESG-linked features are SPPI-consistent. More specifically, if the contingent event is specific to the debtor, the SPPI requirement is assumed to be still met.

4.2. The Option to Present Fair Value Changes in Equity Instruments in OCI

IFRS 9 provides reporting entities with the option to present fair value changes of an investment in equity instruments in OCI instead of in profit or loss. This option needs to be selected at initial recognition and is irrevocable. Also, upon derecognition, fair value changes remain in OCI and are not reclassified to profit or loss. The reason given in the BC of IFRS 9 and largely repeated in the PIR is that '*in a narrow set of circumstances, presenting fair value gains and losses from*

equity instruments may not be indicative of the entity's performance'. The set of circumstances are not defined, however, an illustrative example is provided: An entity needs to hold an investment to be permitted to sell its products in a particular country Y. For IFRS 9 to be applicable to this example the investment is not a subsidiary, neither an associate, but rather a non-controlling minority interest in a firm incorporated in country Y.

Why should fair value changes of the shares held in this firm not be indicative of the investor's performance? Assume first that the investee's shares are publicly traded in a liquid market. According to IFRS 13, the fair value of those shares is their exit price, which in this case is the quoted price. The investor could at any time decide to sell the shares in the investee for the quoted price, but then the investor would no longer be permitted to sell its products in country Y. Therefore, the economic interest of the investor in the shares of the investee is the combined effect of the return of the shares and the profit generated by the sale of its products in country Y. Assume, for example, that the product sales are very profitable whereas the share price slides. To showcase the good sales results in profit or loss, while hiding the losses on the investee shares in OCI, cannot be a good representation of performance. The situation could be the opposite, miserable sales combined with a nice appreciation of the shares; we would still argue that the combined effect should go to profit or loss.

We acknowledge that what the Board had in mind when pointing at this example, was not an investee with quoted shares, but rather a private firm whose shares are not traded at all. Compared with the example with a quoted firm, the fair value measurement of the investee shares is now more challenging, but it does not change the fundamental argument that the return on the investment should go to the same location as the sales profits that it preconditions.

The OCI option is there with a substantial cost in the form of less transparent financial statements and a more complex and voluminous standard. The inherent flexibility of options gives rise to earnings management opportunities; in its current form, those opportunities are largely curbed by the prohibition against reclassification and recycling. A number of studies indicate that recycling is indeed used by US banks to manage earnings. For example, Barth et al. (2017) find that realized gains and losses on AfS securities are used to manage earnings and regulatory capital. The study uses a sample of US commercial banks from 1996 to 2011, a period during which unrealized gains and losses on AfS securities were recognized in OCI and recycled to net income when the securities were sold. Dong and Zhang (2018) find that, even though banks have to disclose unrealized holding gains and losses on AfS securities, they engage in earnings management through selective sales.

Despite this academic evidence, the risk of earnings management is not necessarily a strong argument. The FVOCI option is meant for 'strategic investments', which may not be the most likely vehicle for earnings management and is also supported by research that studies the attitudes of corporate decision-makers (Graham et al., 2005).[8] The risk of earnings management must also be weighed against the benefits of recycling. Academic evidence indicates that recycling of realized results is informative (Dong et al., 2014).

In addition, literature suggests that management incentives can be curbed by requiring entities to disclose unrealized fair value gains and losses more prominently in the financial statements. Dong and Zhang (2018) argue that the reason why banks engage in selective sales of AfS securities is because of a lack of clarity in the disclosure of unrealized gains and losses and investors' potential inattentiveness to such information. During their sample period, firms could choose to report unrealized gains and losses in one of three places in their financial reports: (1) below net income in the income statement, (2) in a separate statement of comprehensive income, or (3) in the statement of shareholders' equity. Dong and Zhang (2018) partition the sample firms according to these three formats. They find that firms are more likely to selectively sell AfS securities when unrealized gains and losses are reported in the statement of shareholders' equity. These

findings are consistent with the findings of Hirst and Hopkins (1998) and Hirst et al. (2004) who, using experiments, demonstrate that the disclosure format affects participants' attention to disclosed information. Also, Lee et al. (2006) investigates the comprehensive income-reporting choice of 82 publicly-traded property liability insurers and show that insurers that are more likely to manipulate earnings are more prone to report comprehensive income in the equity statement. Finally, Cao (2022) provides evidence that banks' earnings management using realized gains and losses on AfS securities is curbed when comprehensive income is reported in a performance statement rather than in the equity statement.

The IASB posits that any reintroduction of recycling for equity instruments imposes the need on reporting entities to assess whether these instruments are impaired. In that case, the impairment losses should be recognized timely in profit or loss. The argument for this assertion is that such impairments had to be recognized under IAS 39 for equity instruments in the AfS category. In our view, the asserted link between impairment and recycling is artificial. The need to distinguish impairments, which belong to profit or loss, from other fair value changes, results from the very existence of the OCI option. The IASB should strive for consistency of OCI treatment across standards. Fair value changes in OCI occur for debt instruments classified according to IFRS 9 and for PPE and intangible assets that are measured by the revaluation model of IAS 16 and IAS 38, respectively. For all those assets, the IASB has been able to formulate impairment criteria that permit impairment losses to be recognized in profit or loss. In our view, the problem with formulating impairment criteria for equity instruments held at FVOCI is additional evidence that the option is inappropriate.

4.3. FVO for Liabilities and own Credit Risk Gains and Losses

The classification and measurement of financial liabilities remained largely unchanged under IFRS 9. However, the standard now requires the amount of change in the fair value of liabilities under the FVO attributable to changes in own credit risk (OCR) to be presented in OCI. The subsequent transfer of these amounts to profit or loss is not allowed. Changes in the fair value of liabilities under the FVO attributable to changes in OCR, commonly referred to as OCR gains and losses, were previously recognized in profit or loss. Other changes in the value of a liability (for example changes driven by changes in the risk-free interest rate and maturity) are still recognized in profit or loss.

An entity can use the FVO to measure financial liabilities at FVTPL when this will result in more relevant information because either (1) it eliminates or significantly reduces an accounting mismatch or (2) a group of financial instruments is managed and evaluated on a fair value basis in accordance with the entity's strategy and information about the group is provided internally in a similar way. An entity can also use the FVO for liabilities to designate an entire hybrid contact at fair value when permitted by IFRS 9. The main users of the FVO for liabilities are financial institutions (Lin et al., 2022), and therefore our discussion below mainly pertains to those.

The change in the standard regarding OCR gains and losses mainly reflects concerns raised by some financial statement preparers and users. As the market value of liabilities decreases (increases) when the entity's credit quality deteriorates (improves), a gain (loss) is recognized when a bad (good) economic event occurs. Critics argue that this is counterintuitive to the way in which gains and losses are typically viewed, and difficult to explain to investors (see for example American Bankers Association, 2006; Chasteen & Ransom, 2007; Gaynor et al., 2011; Lipe, 2002; The Clearing House, 2009). Bischof et al. (2014) document that OCR gains and losses is one of the fair value topics that analysts inquire more frequently, with many analysts explicitly stating that they exclude OCR gains and losses from relevant earnings and valuation metrics. This follows an isolated view on the financial liability, where contemporaneous asset

value changes are not considered, and it is usually underlined by the argument that the face value of liability has to be paid back at maturity.

From an economic theory perspective, risky debt is equivalent to riskless debt minus a put option, held by the equity holders, with an exercise price equal to the face value of the debt (Merton, 1974). The value of the put is an increasing function of the volatility (risk) of the business and how leveraged it is, and a decreasing function of the value of the assets. Proponents of the OCR gains and losses recognition argue that these are consistent with debtholders partially absorbing shocks to the firm's value, and that including them in the accounting income enables the faithful representation of the firm's economic performance (Barth et al., 2008). We generally agree with this view, and we think that measurement requirements for liabilities should be considered at the same time as the measurement requirements for assets.

Conceptually, when the FVO for liabilities is adopted to reduce an accounting mismatch that arises from the measurement of assets at fair value, we believe that the total change in the value of liability, including OCR gains/losses must be recorded at the same location as the change in the value of the assets. For simplicity, assume that a firm measures all its assets at FVPTL. For equity holders to understand the effect of changes in the value of assets on the value of equity, they need to determine what part of gains/losses on assets will be borne by debt holders. Reporting OCR gains/losses in profit or loss provides investors with a clear indication of how the gains and losses on assets are shared. Therefore, including OCR gains/losses in OCI instead of profit or loss decreases the informativeness of the income statement. Note that the standard allows OCR gains and losses to be presented in profit or loss, if presenting them in OCI creates or enlarges an accounting mismatch in profit or loss. However, we currently have no academic evidence on the extent to which this provision is used by companies.

Academic evidence generally supports that recognition of OCR gains and losses in profit or loss improves the informativeness of accounting numbers. Using a sample of 117 IFRS banks from 24 European countries, Schneider and Tran (2015) provide evidence that OCR gains and losses recognition reduces information asymmetry. Fontes et al. (2018) find that the fair value measurement of assets is associated with noticeably lower information asymmetry and that this reduction is larger when banks also recognize OCR gains and losses. This finding is consistent with the OCR component providing investors with important information on how gains and losses are shared between equity holders and debtholders. The study uses a sample of 104 IFRS banks from 23 European countries, from 2005 to 2014. Interestingly, while IFRS 9 permitted early adoption of the requirement to present OCR gains and losses in OCI, the study reports that all banks in their sample present OCR gains and losses in profit or loss.

Studies based on US data also provide similar evidence.[9] Chung et al. (2017) find a positive relation between OCR gains and losses and stock returns, indicating that OCR gains and losses contain value relevant information. Cedergren et al. (2019) also reports a positive relation between OCR gains and losses and stock returns, but only when the level of unrecognized intangibles assets is low. Lin et al. (2022) find that OCR gains and losses can explain future changes in credit risk when the fair value of liabilities is based on managerial inputs (Level 3), suggesting that OCR gains and losses convey private information to the market.

Whether recording OCR gains and losses in OCI affects the informativeness of financial statements is an interesting question. To the best of our knowledge, there is no academic evidence on this, mainly because of limited data. In theory, whether the same item appears in profit or loss or OCI should make no difference in terms of valuation (Biddle & Choi, 2006; Chambers et al., 2007). However, as discussed in subsection 4.2, some academic studies indicate that reporting location and/or format matters. Therefore, this requirement may lead to changes in the behavior of managers and/or investors with respect to OCR gains and losses. For example, to the extent that managers view profit or loss as the earnings management target, the incentives to use OCR

gains and losses for earnings management will be lower when they are reported in OCI. To the extent that managers believe reporting location affects financial statement users' attention to information, the incentives to use OCR gains and losses to provide inside information about the credit quality of the entity can be also different.

4.3.1. Evidence on the election of the FVO for liabilities

Any effects associated with OCR gains and losses presentation in OCI are likely to be more pronounced in the financial industry, as financial firms are the main users of financial instruments for which the FVO is applicable.[10] Table 2 provides descriptive statistics on the election of the FVO

Table 2. Fair value option for liabilities (FVOL) election by European and US banks

Panel A: European banks (2014–2017)

	N	Mean	Median	SD	P1	P99
All banks						
FVOL/TA	536	0.0139	0.0000	0.0312	0.0000	0.1665
FVOL/TL	536	0.0150	0.0000	0.0334	0.0000	0.1746
FVOL (m$)	536	6041.37	0.00	21,449.90	0.0000	104,003.21
Only FVOL users						
FVOL/TA	237	0.0315	0.0156	0.0407	0.0000	0.2105
FVOL/TL	237	0.0340	0.0171	0.0434	0.0000	0.2211
FVOL (m$)	237	13,663.18	948.80	30,633.97	0.0138	123,039.76

Panel B: US bank holding companies (2014–2022)

	N	Mean	Median	SD	P1	P99
All banks						
FVOL/TA	3,003	0.0028	0.0000	0.0385	0.0000	0.0531
FVOL/TL	3,003	0.0032	0.0000	0.0447	0.0000	0.0590
FVOL (m$)	3,003	1,841.25	0.00	17,343.14	0.0000	68,557.00
Only FVOL users						
FVOL/TA	134	0.0624	0.0091	0.1724	0.0000	0.9020
FVOL/TL	134	0.0710	0.0102	0.2008	0.0000	1.0255
FVOL (m$)	134	41,263.19	134.62	71,765.08	0.0370	268,698.00

Panel C: FVOL by year (only FVOL users)

	European banks			US bank holding companies		
	N	FVOL/TA	FVOL/TL	N	FVOL/TA	FVOL/TL
2014	59	0.0311	0.0334	17	0.0769	0.0860
2015	59	0.0316	0.0341	19	0.0672	0.0841
2016	62	0.0316	0.0342	18	0.0700	0.0798
2017	57	0.0315	0.0343	19	0.1162	0.1305
2018	NA	NA	NA	15	0.0279	0.0311
2019	NA	NA	NA	12	0.0376	0.0416
2020	NA	NA	NA	12	0.0418	0.0458
2021	NA	NA	NA	10	0.0473	0.0515
2022	NA	NA	NA	12	0.0391	0.0427

Notes: The table provides descriptive statistics on the fair value option (FVO) for liabilities election. Panel A (Panel B) presents information for a sample of listed European banks (listed US bank holding companies) for which we have data on FVO for liabilities in the period 2014–2017 (2014–2022). FVOL/TA (FVOL/TL) is the ratio of liabilities under the FVO to total assets (total liabilities). FVOL are the liabilities under the FVO. TA (TL) are total assets (liabilities). Panel C provides information on the mean FVOL/TA and FVOL/TL by year for FVOL users. We define a bank as a FVOL user if it elects the FVO for liabilities (FVOL > 0).

for liabilities. We focus on European publicly traded banks, as for those we have data on liabilities under the FVO available in S&P Global Market Intelligence database. This data is not available after 2017, as the database does not provide separate information on assets and liabilities under the FVO after the change in the classification of financial instruments introduced by IFRS 9. To investigate whether the requirement to report OCR gains and losses in OCI has an effect on the use of FVO, we provide information for listed US bank holding companies. The US sample spans the period 2014–2022. This includes four years that OCR gains and losses are reported in profit or loss (2014–2017), and five years that OCR gains and losses are reported in OCI (2018–2022) under SFAS 159.

Panel A (Panel B) provides information for all European banks (US bank holding companies) for which we have data available on liabilities under the FVO. We first provide information for all banks, and then only for FVO for liabilities (FVOL) users. We define a bank as a FVOL user if it has a non-zero amount of liabilities under the FVO. For European banks, we identify the use of FVOL in 237 out of the 536 bank-years. For these banks, the average ratio of liabilities under the FVO to total liabilities (FVOL/TL) is 3.4%. The percentage of FVOL users is much lower in the US, we only identify the use of the FVOL in 134 out of the 3003 bank-years. Panel C provides information for FVOL users by year. For US bank holding companies where we have data after 2017, we can see that the number of FVOL users drops after OCR gains and losses are reported in OCI. We can also see that there is a decrease in the ratio of liabilities under the FVO to total assets (FVOL/TA) and FVOL/TL post-2017. While we cannot draw strong conclusions due to the limited number of observations, the descriptive statistics suggest that the FVO for liabilities is used less by US bank holding companies after OCR gains and losses are reported in OCI. This can be driven by FVO users considering profit or loss a better reporting location for OCR gains and losses.

Finally, a practical concern that has been largely overlooked in the standard is related to the reliability of OCR gains and losses estimates. Active markets for financial liabilities are often absent and structural models of credit risk are widely used to value these liabilities. Literature suggests that the performance of those models in pricing corporate debt is poor (Eom et al., 2004; Schaefer & Strebulaev, 2008). Therefore, estimated OCR gains and losses may lack reliability, even if the incentives for earnings management decrease with the requirement to be presented in OCI.

4.4. Modification to Contractual Cash Flows

The IFRS 9 requirements regarding the modification of contracts are very similar to those of IAS 39. According to IFRS 9, the renegotiation or modification of contractual cash flows of a financial asset can lead to its derecognition. However, the circumstances under which a financial asset should be derecognized following a modification of cash flows are not clear.

The standard provides more guidance on the derecognition for financial liabilities. IFRS 9.3.3.2 requires derecognition of a financial liability and recognition of a new liability in the cases of (1) an exchange between an existing borrower and lender of a debt instrument with substantially different terms and (2) a substantial modification of the terms of an existing financial liability or part of it. The terms of a contract are substantially different if the discounted present value of the cash flows under the new terms is at least 10 per cent different from those of the original financial liability, using the original effective interest rate as a discount factor. In the following, we refer to this guidance as 'the 10 per cent test'.

As the standard lacks criteria to assess whether cash flow modifications of financial assets lead to derecognition, entities are required to apply IFRS requirements that deal with similar and related issues (e.g. IAS 8). On this basis, it can be argued that the criteria for financial liabilities,

including the 10 per cent test, also apply to financial assets (Deloitte, 2019; KPMG, 2017/2018). However, we would prefer IFRS 9 to provide specific guidance to financial assets, including clear criteria as to what constitutes a substantial modification.

Modifications of contractual cash flows can be a result of the renegotiation of an existing contract. The renegotiation can be driven by changes in market conditions (e.g. changes in interest rates) and/or by changes in the assessment of the borrower's credit risk. Under IFRS 9, the treatment of a modification does not depend on the reasons for the contractual changes. In practice, renegotiations are predominantly driven by credit risk assessment changes, and they frequently give the borrower the opportunity to fulfil repayment obligations partially or at a later point in time (i.e. full or partial waiver). According to the standard, significant financial difficulty of the issuer or borrower is objective evidence of a credit-impaired asset. Another example of a credit-impaired asset is a breach of a contract, such as a default or a past due event. Therefore, before the lender modifies the contract and accepts changes in the contractual cash flows, the instrument involved should already be in impairment stage 2, or even stage 3. A modification that takes place after the recognition of an impairment loss might in some cases not be substantial (anymore), namely when the modification just copies the impairment. In this case, there would be no net effect in profit or loss, but different line items would be affected. As there is divergence in practice, the standard should clarify the correct order of the assessment: Impairment first and test of substantial different terms afterwards.

According to IFRS 9.B5.5.26, the financial asset that is derecognized and subsequently re-recognized following a cash flow modification, will typically be categorized in impairment stage 1 at the date of modification. However, we question if a modification due to a deterioration in credit quality typically should lead to impairment stage 1 of the new asset and to an originated credit-impaired asset only as an exception. In our view, for stage 1 categorization the standard should require a period of good payment behavior to prove that the asset is recovered. This clarification would be in line with bank regulatory rules and the requirements in IFRS 9 for financial assets that are not derecognized.

Professional literature often argues that not only quantitative changes in a contract can lead to substantially different terms (Deloitte, 2019). Qualitative changes, as for example, a change of the borrower (e.g. from subsidiary to parent), changes in the currency denomination of contractual cash flows, changes that would not qualify for a classification as AC (like an equity kicker or the implementation of a right of conversion) can lead to substantially different terms. Other factors that may lead to substantially different terms might be changes of the original maturity (e.g. deferments or prolongations of payments), changes in the order of priority or other contractual modifications like changes in collaterals, additional options of early repayments or other options. The inclusion of bail-in arrangements into a contract, which predetermine a cut of a liability in case of a loss, could potentially also be a substantial change of the original terms. We believe that the standard should clarify that qualitative changes can also lead to substantially different terms.

4.4.1. Empirical evidence on modifications of debt instruments

Modifications of contracts were highly relevant already before Covid-19 but gained importance during the pandemic. In response to Covid-19, governments introduced containment measures, including moratoria. The EBA provides evidence on the use of moratoria for a sample of 132 EU banks (EBA, 2020c). They find that, as of June 2020, about 6% of banks' total loans were granted EBA-compliant moratoria (a volume of 871 billion Euro). Some banks reported that more than 40% of their total loans to private households and non-financial corporations were subject to moratoria. In addition, banks used non-EBA-compliant payment moratoria, contractual modifications or refinancing which in total amounted to around 60 billion Euro.

Although the EBA guidelines clarify that payment delays due to moratoria do not lead to an automatic classification of exposures as '*defaulted, forborne or unlikely to pay*', the EBA sees a clear connection between moratoria and impairments (EBA, 2020a, 2020b). Around 20 billion Euro of loans under EBA-conform moratoria were classified as non-performing, while the percentage of loans under moratoria to total loans is economically significant in some countries. For example, in Greece, loans under moratoria reached an amount of more than 4 billion Euro representing more than 50% of total loans (EBA, 2020c).

The EBA's Monitoring Report on the implementation of IFRS 9 (EBA, 2021) highlights the diversity in practice regarding the assessment criteria used to determine whether modifications lead to derecognition. Using data from 47 institutions from 20 EU countries (representing 60% of the total assets of EU banking groups), they find that more than 50% of the banks apply the modification criteria for financial liabilities to financial assets, in particular the 10 per cent test. Banks apply additional quantitative and qualitative criteria, with around 77% of the banks using qualitative criteria. Qualitative criteria include a change of the borrower, a change in the currency and substantial changes in the contract terms. Of the banks that use additional quantitative criteria to the 10 per cent test, most use criteria linked to changes in the due date or loan amount.

Investigating the disclosure quality of European Banks on Covid-19, Löw and Schröder (2021) find that the majority of banks provide information on how moratoria influence the bank's credit risk assessment for a borrower. However, less than 70% of the banks include details on their modification policies in their annual report. This percentage is even lower for half-year reports. These findings confirm the need for additional guidelines on qualitative and quantitative modification criteria to be included in IFRS 9.

5. Suggestions for Future Research

In reviewing the recent literature on the classification and measurement of financial instruments, we are left with several questions. We need to explore the impact of the IFRS 9 classification and measurement framework on business decisions and understand how the business model approach affects the classification of financial assets and comparability of financial statements. The limited impact of IFRS 9 on the statement of financial position of firms may conceal changes in the use of financial assets, especially in the use of those that may fail the SPPI test. Further investigation is needed to examine the discretion exercised by firms in categorizing financial assets, the influence of managerial incentives, and whether the categorization process impacts investment decisions. Additionally, it would be interesting to examine if unforeseeable events, like Covid-19 or the Russian invasion in Ukraine, lead to changes in business models.

The introduction of IFRS 9 may affect the use of instruments that fail the SPPI test, as often users do not welcome income statement volatility arising from fair value measurement. This can particularly influence the development of the market for ESG-linked instruments. Future research could explore if banks refrain from issuing such instruments or reduce interest rate sensitivity to ESG-targets to keep the ESG component *de-minimis* and therefore, avoid fair value measurement. Additionally, future research on ESG-linked instruments could investigate whether potential volatility from fair value measurement of these instruments leads to an increase in the cost of capital for banks or to a higher likelihood of regulatory capital requirements violations.

The classification and measurement of financial liabilities remained largely unchanged under IFRS 9. AC measurement is used for all non-derivative financial liabilities, except for those held for trading, eligible for hedge accounting treatment, or measured under the FVO. We currently know very little about why regulators and investors may view fair value measurement for

liabilities as less useful than fair value measurement for assets. Further research can enhance our understanding of the informativeness of different measurement bases for liabilities. Furthermore, we still have no evidence of the effect of OCR gains and losses recognition in OCI on the informativeness of accounting numbers and we know little about how OCR changes are estimated. Future research could also investigate whether the change in reporting location of OCR gains and losses influences the adoption of the FVO and the incentives to use it for earnings management.

Next, more research is needed to understand how entities distinguish between substantial and non-substantial modifications of contracts for financial assets under IFRS 9. This includes examining the criteria used and the consideration of qualitative indicators. There is also a need to investigate whether the reporting location of credit losses affects financial statement users' interpretation of the reported amounts.

The bifurcation of fair value gains and losses into profit or loss and OCI under IFRS 9 also needs further exploration. We have limited knowledge about the managerial incentives for choosing OCI classification and its overall impact on the informational value of financial reporting. Understanding the preferences of different industries, such as insurance firms that are likely influenced by other features of insurance accounting, is also crucial. Research should also assess whether the profit or loss/OCI split is optimal for financial statement users or if all gains and losses should be reported in profit or loss.

Finally, future research can explore whether fair value and AC measurements are substitutes or complements, and if this relationship varies by industry or institutional environment. It is important to examine if information is lost when fair value is used, and if this depends on the level of fair value measurement. Additionally, understanding the role of associated disclosures, the implications of changes in disclosure processing technology, and the extent to which fair value disclosures in the notes mitigate the limitations of AC measurements is crucial. The recent collapse of Silicon Valley Bank highlights the importance of investigating how investors and depositors react to fair value disclosures in cases where there are discrepancies with reported AC values.[11]

6. Conclusion

This paper discusses several issues that were raised by the International Accounting Standards Board (IASB) in their post-implementation review (PIR) of the International Financial Reporting Standard (IFRS) 9*: Financial instruments – Classification and Measurement*. Overall, we recognise that the classification and measurement rules in IFRS 9, in combination with the expected credit loss model yield a better reflection of the timing, amount, and uncertainty of cash flows than IAS 39. However, based on the empirical evidence presented in this paper, we believe that, at least for financial institutions, a single classification and measurement model based on fair values would provide the most relevant information to financial statement users. Such a model would be conceptually sound and simplify the complexities and applications issues associated with the current standard. Being aware that full fair value measurement does not have universal support, we identify several areas in which the standard should provide clarifications and additional guidance, as well as areas where additional academic evidence is required in order to draw conclusions.

Notes

[1]This paper is based on the comment letter that the authors composed and submitted in reponse to the IASB's Request for Information on the PIR of IFRS 9 on behalf of the European Accounting Association (see Kvaal et al., 2022).

[2]Under full fair value measurement all fair value gains and losses are reported in profit or loss.

[3]In a 2008 discussion paper, the IASB argued precisely that a single fair value measurement basis for financial instruments would reduce complexity in accounting for them (IASB, 2008). That suggestion was duly shot down by a broad range of constituents. In particular, the banking industry argued forcefully for a mixed measurement model (International Banking Federation, 2008; European Banking Federation, 2008).

[4]The 2008 financial crisis has turned the spotlight on fair value accounting, with critics arguing that fair value accounting has exacerbated its severity for financial institutions (American Bankers Association, 2008; Laux & Leuz, 2009, 2010). This led to a policy debate involving banks, accounting regulators and some governments around the world), putting strong pressure on both FASB and IASB to relax fair value accounting requirements (for a detailed discussion on this see Andre et al. (2009)).

[5]Specifically, the IFRS 9 Basis for Conclusions (BC) indicates that many stakeholders '*do not support the recognition in the statement of comprehensive income of changes in fair value of financial assets that are not held for trading or are not managed on a fair value basis*' (BC4.3). Some users also indicated that '*in some circumstances cost-based information provides relevant information that can be used to predict likely actual cash flows*' (BC4.3). In addition, concerns were raised '*about the use of fair value when fair value cannot be determined within a narrow range*' (BC4.3).

[6]Under US GAAP, when the fair value of an investment security (classified as AfS or HtM) falls below AC and there is significant doubt that the firm can hold the security until the fair value recovers, entities recognize an other-than-temporary-impairment. Before the issuance of Financial Staff Positions (FSP) FAS 115–2 and FAS 124–2 in April 2009, other-than-temporary-impairment were recognized in profit or loss. Since the issuance of FSP FAS 115–2 and FAS 124–2 the credit-related portion of other-than-temporary-impairments (i.e., due to the revisions of expected future cash flows) are recognized in profit or loss. In contrast, the non-credit-related portion of other-than-temporary-impairments (e.g., due to illiquidity) are recognized in OCI.

[7]For example, banks use different thresholds to determine whether a sale is 'insignificant in value' for the assessment of the business model, different practices to assess the 'frequency of sales', and diverse approaches to determine what is defined as 'close-to-maturity'.

[8]In a survey, Graham et al. (2005) asked 401 financial executives the following question: 'Near the end of the quarter, it looks like your company might come in below the desired earnings target. Within what is permitted by GAAP, which of the following choices might your company make?' Only 20% answered yes to the following alternative: 'Sell investments or assets to recognize gains this quarter.'

[9]The FVO was introduced by the FASB in 2007 through SFAS 159, and until 2017 OCR gains and losses were reported in profit or loss. For fiscal years beginning after 15 December 2017, OCR gains and losses are presented in OCI (ASC 825-10-45-5).

[10]The election of the FVO for liabilities by entities in other industries is much less frequent. Lin et al. (2022) report that out of the 4,338 non-financial firms in Compustat that have available 10K documents in EDGAR in 2009, only 11 elect the FVO for liabilities. Of those 11 firms that elected the FVO for liabilities, none reports OCR gains/losses.

[11]The bank's largest asset item was a HtM bond portfolio held at AC, for which it reported the FV in a note. At the end of 2022, the disclosed FV was 16% below the reported AC value.

Acknowledgments

This paper was written by a sub-committee from the Financial Reporting Standards Committee of the EAA responsible for writing a comment letter for the PIR IFRS 9. The sub-committee consisted of all the authors mentioned above. This article draws from the arguments raised in the comment letter but adds several sections. We thank Ann Jorissen, chair of the FRSC, for giving us the opportunity to write the comment letter.

Disclosure Statement

No potential conflict of interest was reported by the author(s).

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