STAFF PAPER

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Project	Post-implementation Review of IFRS 9—Classification and Measurement	
Paper topic	Literature review update	
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Structure of this paper

1. The paper is structured as follows:

   (a) background of the literature review;

   (b) key messages;

   (c) summary of the academic evidence on IFRS 9—classification and measurement;

   (d) next step; and

   (e) Appendix—list of academic papers.

Background of the literature review

2. This literature review is based on:

   (a) an updated summary of the academic literature relevant to IFRS 9 *Financial Instruments*—Classification and Measurement conducted in the first phase of the Post-implementation Review (Agenda Paper 3, July 2021, IASB meeting);[1]

   (b) five additional papers:

[1] Agenda Paper 3 in July 2021 meeting can be accessed here.

(i) three papers submitted to the *Australian Accounting Review*'s Special Issue on 'Research on Application and Impact of IFRS 9 *Financial Instruments*';

(ii) one paper presented at the IASB Research Forum 2021; and

(iii) one paper identified through outreach activities; and

(c) a summary review of academic papers that provide US GAAP evidence on available for sale securities and unrealised gains and losses:

Key messages

IFRS evidence

3. In the year of initial application of IFRS 9, most financial instruments of a sample of European banks remained in the same category as they were under IAS 39 *Financial Instruments: Recognition and Measurement* category.

4. The implementation effect of IFRS 9 on the classification and measurement of financial instruments varied by European banks' size, credit rating approach and country of origin.[2]

5. After the implementation of IFRS 9, for a sample of European banks:

(a) the percentage of investments in equity instruments with maturities longer than five years did not decrease;

(b) the volatility of banks' reported profit or loss did not increase; banks' use of the other comprehensive income (OCI) presentation election decreased;

(c) banks' disclosures of choices for presenting equity instruments increased.

6. There is mixed evidence whether the use of the OCI presentation election after the implementation of IFRS 9 is associated with managerial intention to influence the entity's reported profit or loss:

[2] Banks calculate their risk weighted assets using an internal rating based approach, a credit risk standardised approach or a mixture of the two credit rating approaches.

(a) for a sample of FTSE 100 entities, after the year of initial application of IFRS 9 the decision to use the OCI presentation election was influenced by managerial considerations, such as the ratio of their Chief Executive Officer (CEO)'s variable to total compensation.

(b) evidence from Australia showed that entities did not seem to choose their presentation of equity instruments to influence profitability ratios.

7. For a sample of FTSE 100 entities, the value relevance—association with share prices and returns and ability to explain variation in share prices and returns—of earnings decreased and the value relevance of other comprehensive income increased after the implementation of IFRS 9.

8. Evidence based on a sample of Chinese entities showed that entities' rate of disposal of available for sale securities increased and entities incurred higher audit fees after the implementation of IFRS 9.

9. A behavioural experiment shows that investors' information processing of changes in entities' own credit risk is affected by whether entities present the changes in profit or loss or in other comprehensive income.

US evidence

10. For a US sample of insurance entities, earnings volatility increased after the implementation of the Financial Accounting Standards Board (FASB)'s Accounting Standards Update (ASU) 2016-01 but investors did not change their assessment of these entities. The evidence on the effect of ASU 2016-01 implementation is relevant to the PIR of IFRS 9—Classification and Measurement because ASU 2016-01, similar to IFRS 9, requires that equity investments be measured at fair value with changes in fair value recognised in net income. Previously changes in fair value were recognised in other comprehensive income until the gains or losses were realised.

11. On the issue of recycling, the evidence on the value relevance of unrealised gains and losses and investors' reactions to recycled gains and losses is inconsistent—the findings of some academic papers do not support the theoretical prediction that

unrealised gains and losses should be value relevant and that recycled gains and losses should not be value relevant.

Summary of the academic literature

IFRS evidence

12. Three academic papers were accepted for publication in the Special Issue of the *Australian Accounting Review* that focused on academic research related to the application and impact of IFRS 9. [3] The findings from these papers are summarised in paragraphs 13-15 of this paper.

13. Comparing the measurement of financial instruments of a sample of 87 European banks from 18 countries in the three years before the implementation of IFRS 9 and the three years after, it was found that: [4]

    (a) the majority of financial assets reported using IFRS 9 were in the same measurement category as under IAS 39. In the authors' view, the descriptive evidence did not provide support for the possibility that more financial assets being measured at FVPL after the implementation of IFRS 9 could cause higher volatility. For example:

        (i) an average of 17% of financial assets were measured at FVPL in 2014–2017 compared to an average of 16% in 2018–2020.

        (ii) an average of 62% of financial assets were measured at amortised cost compared to an average of 73% in 2018–2020.

    (b) the volatility of banks' profit or loss, measured as the standard deviation of return on assets, did not increase.[5]

[3] *Australian Accounting Review* is an independent peer reviewed academic journal which publishes research relevant to academics and practitioners https://onlinelibrary.wiley.com/journal/18352561.
[4] Löw and Erkelenz (2022).
[5] The authors caution that these findings are based on a limited number of years and do not consider other influences on profitability in the economy.

(c) the percentage of long-term investments in equity instruments (> five years) increased from 38% in 2014 to 43% in 2017, decreased to 37% in 2018 and continued increasing from 2018 to 40% in 2020.

(d) the percentage of equity instruments to which the OCI presentation election is applied in the year of initial application of IFRS 9 (29% in 2018) decreased in the two years after the implementation of IFRS 9 (18% in 2020).

(e) 63% of the banks that used the OCI presentation election disclosed the reasons for choosing the OCI option. These reasons included:

(i) to reduce volatility of consolidated net income (eight percent of disclosing banks);
(ii) to measure equity instruments held by insurance companies (five percent of disclosing banks);
(iii) to measure strategic investments (49 percent of disclosing banks);
(iv) to measure non-consolidated investments (24 percent of disclosing banks). In the authors' view, entities considered some of these investments as strategic equity investments; and
(v) to measure investments in national banks and regulatory capital (14 percent of disclosing banks).

14. Based on 52 of the FTSE 100 entities that had available for sale equity instruments (AFS) in the year before the implementation of IFRS 9, it was found that: [6]

(a) in the year of IFRS 9 initial application:

(i) entities elected to apply the OCI presentation option to 72% of their available for sale equity instruments reported using IAS 39—the remaining available for sale equity instruments were reclassified in other categories such as FVPL;
(ii) entities with higher leverage—ratio of total debt to total assets—were more likely to use the OCI presentation election. In the authors' view, managers opted to recognise changes in fair value in other comprehensive income to reduce earnings volatility.

[6] Pinto and de Carvalho Morais (2022).

(iii) entities where the Chief Executive Officer (CEO) had higher ratio of variable to total compensation were less likely to use the OCI presentation election. In the authors' view, managers chose to present changes in fair value through profit or loss in order to have flexibility to manage earnings and, consequently, the variable component of their compensation.

(b) in the two years following the year of initial application of IFRS 9 the evidence on entities' use of the OCI presentation election to management earnings was mixed.

(c) the implementation of IFRS 9 was associated with a decrease in the value relevance of earnings and an increase in the value relevance of other comprehensive income.[7]

15. Based on a sample of 254 entities listed on the Australian stock exchange (ASX), it was found that:

(a) the number of entities with equity financial instruments and the percentage of these entities that use OCI presentation did not change in the year of initial application compared to the year before IFRS 9 implementation. Only for financial entities, the use of OCI presentation election declined in the year of initial application compared to the year before implementation of IFRS 9.

(b) the use of fair value through profit and loss presentation increased in the year of initial application of IFRS 9 compared to the previous year. The authors attributed this finding to an increase in the number of entities disclosing their presentation election.

(c) entities' profitability ratios—earnings before interest and taxes and return on equity—based on reported amounts, restated amounts as if the OCI presentation election was applied to all equity instruments and restated amounts as if all equity instruments were presented in FVPL did not differ.

[7] In the authors' view, investors rely more on other comprehensive income when changes in fair value are not recycled, thereby reducing the value relevance of earnings.

In the authors' view, entities do not select their presentation choices to influence profitability ratios.

16. Two other academic papers examined the effect of IFRS 9 on the classification and measurement of financial instruments in the year of initial application. Their findings are:

    (a) based on a sample of 78 banks from 19 European countries, that:[8]

        (i) after the implementation of IFRS 9 most financial instruments remained in the same category as under IAS 39. Of the financial instruments that changed their measurement category, most were reclassified from amortised cost to fair value through profit or loss.

        (ii) the implementation effect of IFRS 9 on the classification and measurement of financial instruments varied by banks' size, credit rating approach and country of origin.

    (b) based on a sample of 33 Czech banks, that the implementation of IFRS 9 had an insignificant impact on the classification of financial assets of Czech banks.[9]

17. An academic paper using a sample of publicly traded non-financial Chinese entities examined the implementations costs of Chinese Accounting Standard (CAS) 22—identical to IFRS 9—that became effective in 2018. The findings are:

    (a) entities increased their sales of available for sale securities after the issuance of CAS 22 was announced in 2017. The researchers documented higher rates of disposals of available for sale securities for:

        (i) state owned enterprises; and

        (ii) entities issuing corporate bonds.

    (b) entities were subject to higher audit fees after CAS 22 was implemented. Most affected were:

        (i) non-state owned enterprises;

[8] Löw, Schmidt and Thiel (2019).
[9] Lukeš and Procházka (2019).

(ii) entities audited by the Big Four Firms; and

(c) entities with higher amount of available for sale securities.

(d) that in the authors' view, the implementation of CAS 22 is costly for non-financial entities.

18. An academic paper using a behavioural experiment examined whether presenting changes in entities' own credit risk in profit or loss or other comprehensive income affected investors' information processing. The findings are that participants: [10]

(a) were less likely to acquire information about a change in credit risk when credit risk changes were included in profit or loss.

(b) placed similar weight to credit risk changes in evaluating entity performance regardless of where these changes were presented.

(c) were less likely to make biased estimates of entities' performance if credit risk changes were included in OCI.

(d) were influenced in their processing of information about credit risk changes by entities' profitability—when entities reported a loss for the period and a credit risk gain, the influence of the presentation format on participants' information processing was reduced.

19. An academic literature review, commissioned by the European Financial Reporting Advisory Group (EFRAG) on the interaction of IFRS 9 and long-term investment decisions reported the following evidence:[11]

(a) investors found information reported in profit or loss easier to process and review than information in other comprehensive income.

(b) there is inconclusive empirical evidence on the value relevance of other comprehensive income and its components.

(c) the empirical evidence on recycling is scarce.

(d) recycled gains and losses are value relevant.

(e) entities may use recycling to manage their earnings.

[10] Lachmann and Wohrmann (2015).
[11] Barone and Gullkvist (2018).

20. An academic paper—an interpretative analysis of the European Union (EU)'s IFRS endorsement criteria in the context of IFRS 9—found that:[12]

    (a) IFRS 9 reflects a balanced 'mixed measurement' approach that incorporates the different views of the participants in the debate.

    (b) given divergent and often incompatible views of the participants in the due process, the implementation of IFRS 9 is likely to result in significant costs for some parties (and in benefits for other parties) and that it is ultimately a political decision to weigh these costs and benefits against each other.

    (c) the researchers' assessment of IFRS 9 indicates that the Standard does not violate any of the EU's endorsement criteria.

US evidence

21. Based on a sample of 46 US insurance entities in the period 2016-2019, researchers examined the implementation of ASU 2016-01.[13] The findings were that:

    (a) insurance entities with comparatively large amounts of equity holdings measured at fair value did not alter their investment portfolios;

    (d) the informativeness of earnings, measured as the association between three-day market-adjusted share returns around the day of the earnings announcement and unexpected earnings, declined. The authors attributed this decline to an increase in earnings volatility; [14]

    (e) investors' assessment of entity risk, measured as bid-ask spreads, share return volatility and other market-based metrics, did not change;

    (f) the accuracy of analyst earnings' forecasts did not change; and

    (g) in the authors' view, the implementation of ASU 2016-01 led to higher earnings volatility but did not change investors' assessment of entities' risk.

[12] Bischof. and Daske (2016).
[13] Campbell, Carson, Eastman and Yang (2022)
[14] The authors measured unexpected earnings as the difference between the quarterly earnings per share (EPS) and the most recent median analyst forecast; and earnings persistence as the association between current period earnings-per-share (EPS) and EPS from the previous period using five years of historical data.

22. Some academic papers examined the value relevance of available for sale securities and the issue of recycling before ASU 2016-01 were implemented. A summary of this evidence, based on seven academic papers, is included in this literature review because their findings could be relevant for the PIR of IFRS 9—Classification and Measurement.[15]

23. The findings from these academic papers are that investors do not react to unrealised gains and losses consistently nor do they react as predicted. Specifically, the papers find that:

    (a) investors are myopic—do not pay adequate attention to the amount or change in unrealised gains or losses that are reported in other comprehensive income and treat the recycled gains or losses as news;

    (b) investors do not react to changes in unrealised gains or losses;

    (c) investors react to changes in unrealised gains or losses only partially or with a lag;

    (d) investors react more strongly to recycled gains and losses than to changes in unrealised gains and losses;

    (e) recycled gains and losses are used to smooth earnings;

    (f) investors react to recycled gains and losses because:

        (i) investors are myopic;[16]

        (ii) recycling allows an entity to meet capital requirements or manage its taxes more efficiently;

        (iii) unrealised gains and losses are measured with error and this uncertainty is resolved at realization;

        (iv) recycled gains and losses are used to smooth earnings by offsetting temporary elements of earnings.

[15] The evidence is based on Barth (1994), Ahmed and Takeda (1995), Dong, Ryan and Zhang (2014), Boulland, Lobo and Paugam (2019), Badertscher, Burks and Easton (2014), Barth, Gomez-Biscarri, Kasznik and Lopez-Espinosa (2017), Easton and Zhang (2017).

[16] Conceptually, if unrealised gains and losses are measured correctly, and past changes in unrealised gains and losses cannot be used to predict future changes in unrealised gains and losses, recycled gains and losses should not be associated with share prices and returns because they have already been reported in other comprehensive income.

Next step

24. The staff has taken into consideration the evidence of the academic literature in analysing the feedback to the *Request for Information Post-implementation Review of IFRS 9—Classification and Measurement*.

Appendix—List of academic papers

1. Ahmed, A. S. and Takeda, C. (1995). 'Stock market valuation of gains and losses on commercial banks' investment securities: An empirical analysis,*' Journal of Accounting and Economics*, 20(2), 207-225.

2. Badertscher, B. A., Burks, J. J., and Easton, P. D. (2014). 'The market pricing of other-than-temporary impairments.' *The Accounting Review*, *89*(3), 811-838.

3. Barone, E. and Gullkvist, B. (2018). 'Academic Literature Review Interaction of IFRS 9 and Long-term Investment Decisions', European Financial Reporting Advisory Group.

4. Barth, M.E. (1994). 'Fair Value Accounting: Evidence from Investment Securities and the Market Valuation of Banks', *The Accounting Review*, 69, 1-25.

5. Barth, M.E., Gomez-Biscarri, J., Kasznik, R. and Lopez-Espinosa, G. (2017). 'Bank earnings and regulatory capital management using available for sale securities.' *Review of Accounting Studies* 22, 1761–1792.

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

7. Boulland, R., Gerald J. Lobo and Paugam, L. (2019). 'Do Investors Pay Sufficient Attention to Banks' Unrealised Gains and Losses on Available-for-sale Securities?', *European Accounting Review*, 28 (5), 819-848.

8. Campbell, J., Carson, J., Eastman, E., and D. Yang. (2022). 'The capital market consequences associated with classifying unrealised gains and losses on available-for-sale (AFS) equity securities in GAAP net income'. Working paper, University of Georgia.

9. Dong, M., Ryan, S. and Zhang, XJ. (2014). 'Preserving amortized costs within a fair-value-accounting framework: reclassification of gains and losses on available-for-sale securities upon realization.' *Review of Accounting Studies* 19**,** 242–280.

10. Easton, P., Zhang, XJ. (2017). 'Mixing fair-value and historical-cost accounting: predictable other-comprehensive-income and mispricing of bank stocks.' *Review of Accounting Studies* 22**,** 1732–1760.

11. Fang, X., Guo, Y., and Mei, B. (2021). 'Implementation costs of IFRS 9 for non-financial firms: Evidence from China', Working paper, Shanghai University of Finance and Economics.

12. Lachmann, M. and Wohrmann, S. A. (2015). 'Fair Value Accounting for Liabilities: Presentation Format of Credit Risk Changes and Individual Information Processing'.

Accounting, Organizations and Society, 41, 21–38. The researchers used 93 auditors as a proxy for knowledgeable non-professional investors.

13. Löw, E. Schmidt, L. and Thiel, L. F. (2019). 'Accounting for Financial Instruments under IFRS 9 – First-Time Application Effects on European Banks' Balance Sheets', Working paper, Frankfurt University.

14. Lukeš, J. and Procházka, D. (2019). Analýza dopadů IFRS 9 na bankovní sektor v České republice". *Český finanční a účetní časopis*, 3, 17–31. (in Czech).

15. Löw, E., and Erkelenz, M. (2022). 'Long and short-term investments by European banks – trends since the IASB published IFRS 9', Working paper, Frankfurt School of Finance and Management.

16. Pinto, I., and de Carvalho Morais, A., (2022). 'Equity instruments classification under IFRS 9: Determinants and consequences', Working paper, Lisbon School of Economics and Management.

17. Zang, Z., Scott, T. and H. Kabir. (2022).' Does OCI presentation election for equity financial assets matter?, Working paper, Auckland University of Technology.