Fair Value Measurement in Financial Reporting

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Contents

Abstract

This monograph provides a historically informed discussion of conceptual and procedural issues related to the use of the fair value measurement attribute in financial reporting. Our goal is to provide a structure, based on the conceptual frameworks of the Financial Accounting Standards Board and International Accounting Standards Board, for researchers' evaluations of empirical research studies that investigate the informational properties of all measurement bases, including fair values. We begin by defining, addressing misconceptions about, and providing a brief history of the fair value measurement attribute. We next discuss decision usefulness of fair value and other measurement bases, and describe and evaluate examples of empirical research that documents the decision usefulness of recognized and disclosed fair value information, focusing on predictive ability, value relevance, and risk relevance. We also discuss the role of verifiability in the context of relevant and faithfully represented accounting information; describe three untested, verifiability-related maintained assumptions that arise in discussions of fair-value-measurement research; and discuss research designs for investigating questions related to accounting measurement verifiability. Finally, we discuss claims that use of the fair value measurement attribute causes procyclical behavior among financial institutions and that accounting standards have become increasingly fair-value-oriented during the last two decades.

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Introduction

The purpose of this monograph is to discuss practical and conceptual issues related to fair value measurement in financial reporting and to evaluate certain research design aspects of empirical research that investigates the information properties of fair value measurement, both in an absolute sense and in comparison to other measurement bases. Although our primary focus is on fair value measurement, we believe that our evaluation of existing research and suggestions for future research are germane to researchers interested in examining the information properties of any accounting measurement basis. With regard to our discussions of research, we do not aim to review the extensive body of fair-value-measurement-related research that empirically tests the decision-usefulness of fair value measurements. For that coverage, we refer readers to reviews by Barth et al. [2001], Landsman [2007], and Ryan [2011, specifically, Section 4.4]. Our discussions of individual research studies are intended to illustrate key points about the types of research questions that can and cannot be addressed with specific research designs, and not to provide an overview of research on fair value measurements.

Fair value measurement has been a controversial topic in the United States (U.S.) and elsewhere for more than a century. Advances in finance and accounting research, and much discussion, have not reconciled the conflicting perspectives of supporters and critics of using fair value measurement in financial statements. Indeed, after more than twenty years of research documenting the decision usefulness of disclosures about the fair values of financial instruments, standard setters are contemplating abolishing these disclosures for private companies. The 2008 financial crisis increased public scrutiny and brought accounting measurement to the forefront of policy debate, including debate characterized by polarizing rhetoric. Our intention with this monograph is to focus the discussion on the design and execution of rigorous, inferentially valid empirical research that can inform this debate.

We also present a historical overview of the use of fair value measurement based on the writings of prominent nineteenth and twentieth century accounting scholars. Here too, our aim is to dispel certain misunderstandings about the use of fair value measurement in the financial statements, and describe attributes of high quality research that investigates fair-value-measurement-related issues.

Except in the historical overview, we structure our discussion around the conceptual frameworks developed by the Financial Accounting Standards Board (FASB) and International Accounting Standards Board (IASB). In particular, we analyze fair value measurements in the context of the qualitative characteristics of useful information (e.g., relevance, reliability, representational faithfulness) defined in (the now-superseded) Statement of Financial Accounting Concepts No. 2 (SFAC 2), *Qualitative Characteristics of Accounting Information* [FASB, 1980] and Chapter 3 of SFAC 8, *Qualitative Characteristics of Useful Financial Information* [FASB, 2010].[1] We also use

[1] In 2010, the FASB issued SFAC 8, which superseded SFAC 1, *Objectives of Financial Reporting by Business Enterprises* [FASB, 1978], and SFAC 2. Among numerous other changes, SFAC 8 replaced the SFAC 2 qualitative characteristic, "reliability," with the qualitative characteristic, "representational faithfulness." While it is no longer part of the conceptual framework, we discuss the notion of reliability because much of the empirical research described in this monograph includes pre-2010 sample periods and references to the conceptual framework.

the description of measurement attributes in SFAC 5, *Recognition and Measurement in Financial Statements of Business Enterprises* [FASB, 1984a].[2] We believe that structuring the discussion in this way has two advantages. First, the structure helps to link research, and our discussion of research, to the practical task of setting accounting standards guided by the conceptual framework. Second, it makes salient some of the difficulties encountered in the design and interpretation of research related to fair value measurement. For example, Sections 3 and 4 illustrate how the concepts of relevance and verifiability are empirically and conceptually intertwined and difficult to analyze individually, even with well-structured tests.

This rest of this monograph is organized as follows. In Section 2, we describe the fair value measurement attribute as it is defined in FASB Accounting Standards Codification (ASC) Topic 820, and distinguish it from "fair value accounting," an ambiguous, indeterminate phrase that appears to mean different things to different accounting researchers. We also provide evidence contrary to the view that financial reporting has increasingly adopted a "balance sheet approach" during the last three decades, including some implications of that view. We then compare fair value to other measurement attributes for the purpose of differentiating them. As we note, multiple measurement attributes may coincidentally have the same value at inception, and different patterns of change in subsequent periods. We next discuss potential decision criteria for choosing among alternative measurement bases in financial reporting, and close the section with a description of the development of the fair value measurement attribute during the twentieth century in the U.S.

[2]The objectives of financial reporting and the qualitative characteristics represent converged portions of the FASB's and IASB's conceptual frameworks. Specifically, Chapters 1 and 3 of SFAC 8 [FASB, 2010] are included in the 2010 update of the IASB's conceptual framework. The measurement attributes included in SFAC 5 [FASB, 1984a] are mostly converged with the measurement attributes included in paragraphs 4.54–4.56 of the IASB's conceptual framework. One exception is that "current market value" is included in SFAC 5, but is not in the IASB conceptual framework. In Subsection 2.3 of this monograph, we discuss the five measurement attributes included in SFAC 5. Interestingly, fair value is not included among the measurement attributes described in the FASB or IASB conceptual frameworks.

In Section 3, we discuss concepts related to the decision usefulness of financial statement elements measured using the fair value attribute. We begin with examples illustrating the decision-useful information conveyed by fair value measures, and the deficiencies in current U.S. generally accepted accounting principles (GAAP) for investment securities and loans. We then describe empirical research that documents the decision usefulness of recognized and disclosed fair value information, focusing on predictive ability, value relevance and risk relevance. We end by describing two practical issues that arise with the use of disclosed (as opposed to recognized) fair value measurements in research assessing the decision usefulness of fair values.

In Section 4, we analyze the enhancing qualitative characteristic verifiability in the context of accounting measurement. We focus on verifiability because some prior research and commentaries claim that fair value is a particularly "unverifiable" measurement attribute. We argue that these analyses do not operationalize verifiability in a manner that is consistent with the conceptual framework, because these studies suggest, or assume, that verifiability is a determinative attribute of accounting measurement, independent of the measurement's relevance or representational faithfulness. Because the conceptual framework is clear that accounting measurement must first maximize the joint qualities of relevance and faithful representation, a high level of verifiability of a measure cannot compensate for that measure's lack of relevance or lack of faithful representation.

We next discuss three verifiability-related maintained assumptions: (1) that historical-cost-based accounting information is inherently more verifiable than fair-value-based accounting information, (2) that differential value relevance of fair value measurements is caused by differential measurement verifiability, and (3) that, compared to fair-value-based financial information, historical-cost-based financial information is inherently superior for contracting and stewardship purposes. We suggest that these assumptions represent testable hypotheses and that failure to validate these assumptions limits inferences in many studies. We end Section 4 with a discussion of research designs for investigation of measurement-reliability issues. In evaluating research designs, we emphasize the importance of a thorough understanding of the relevant accounting standards and concepts as a basis for developing predictions about relevance, representational faithfulness, and verifiability, and for distinguishing the effect of information about firms' holdings of assets and liabilities from the effect of non-accounting-based economic characteristics, and changes in characteristics, of those holdings.

In Section 5, we discuss the relation between fair value measurement and macroeconomic effects. Because fair value measurement was asserted to contribute to systemic risk in the liquidity and credit crisis that began in 2007–2008, we focus on this aspect of the macro-economy. However, we believe that much of this discussion is applicable to other economic attributes that might be linked to fair value measurements, for example, information asymmetry. The notion that fair value measurement increases systemic risk is relatively new and is mainly the product of analytical models that use stylized settings and restrictive assumptions, combined with anecdotes included in accounting research papers and commentaries.

With regard to empirical evidence on this issue, and despite some commentators' belief that accounting measurement, specifically measuring certain financial assets at fair value, contributed to the 2008 economic crisis, to date no published empirical research documents a clear causal relation between the fair value measurement attribute and systemic risk. Instead, research suggests that holdings of certain financial instruments, business models, and regulatory practices have a first-order effect on systemic risk. Accounting may have second-order effects, but research suggests that these primarily are the result of delayed loss recognition on financial assets measured at amortized cost subject to impairment and gains trading involving assets measured at amortized cost, for purposes of income recognition. Finally, we address the claim that accounting standards have resulted in financial statements becoming significantly more fair-value-oriented during the twenty years subsequent to issuance of *Statement of Financial Accounting Standards No. 107* (SFAS 107), "Disclosures about Fair Value of Financial Instruments" (FASB, 1991, codified in FASB ASC Topic 825).

References

D. Aboody, M. E. Barth, and R. Kasznik. Revaluations of fixed assets and future firm performance: Evidence from the UK. *Journal of Accounting and Economics*, 26(1–3):149–178, 1999.

Accounting Principles Board. *A Tentative Set of Broad Accounting Principles for Business Enterprises*. American Institute of Certified Public Accountants, Accounting Research Study No. 3. New York, 1962.

Accounting Principles Board. *Basic Concepts and Accounting Principles Underlying Financial Statements of Business Enterprises*. American Institute of Certified Public Accountants, Statement No. 4 New York, 1970a.

Accounting Principles Board. *Business Combinations*. American Institute of Certified Public Accountants, Opinion No. 16. New York, 1970b.

Accounting Principles Board. *Intangible Assets*. American Institute of Certified Public Accountants, Opinion No. 17. New York, 1970c.

T. Adrian and H. Shin. Liquidity and financial cycles. Bank for International Settlements, Working Paper no. 256, 2008.

F. Allen and E. Carletti. The role of liquidity in financial crises. Working Paper presented at the 2008 Jackson Hole Symposium on Maintaining Stability in a Changing Financial System, 2010.

J. Altamuro and H. Zhang. The financial reporting of fair value based on managerial inputs versus market inputs: Evidence from mortgage servicing rights. *Review of Accounting Studies*, 18(3):833–858, 2013.

A. Amel-Zadeh, M. E. Barth, and W. R. Landsman. Does fair value accounting contribute to procyclical leverage? (March 4) Rock Center for Corporate Governance at Stanford University Working Paper No. 147. Available at SSRN: http://ssrn.com/abstract=2300497 or http://dx.doi.org/10.2139/ssrn.2300497, 2014.

American Accounting Association. *A Statement of Basic Accounting Theory*. AAA, Evanston, IL, 1966.

American Institute of Certified Public Accountants. *Auditing Accounting Estimates*. American Institute of Certified Public Accountants, AU Section 342. New York, 1989.

N. Arora, S. Richardson, and I. Tuna. Asset reliability and security prices: evidence from credit markets. *Review of Accounting Studies*, 19(1):363–395, 2014.

Arthur Andersen & Co. *Objectives of Financial Statements for Business Enterprises*. Arthur Andersen & Co, Chicago, 1972.

B. A. Badertscher, J. J. Burks, and P. D. Easton. A convenient scapegoat: Fair value accounting by commercial banks during the financial crisis. *The Accounting Review*, 87(1):59–90, 2012.

M. J. Barclay, D. Gode, and S. P. Kothari. Matching delivered performance. *Journal of Contemporary Accounting and Economics*, 1:1–25, 2005.

B. Barlev and J. R. Haddad. Fair value accounting and the management of the firm. *Critical Perspectives on Accounting*, 14(4):383–415, 2003.

M. E. Barth. Fair value accounting: Evidence from investment securities and the market valuation of banks. *The Accounting Review*, 69(1):1–25, 1994.

M. E. Barth. Including estimates of the future in today's financial statements. *Accounting Horizons*, 20(3):271–285, 2006.

M. E. Barth, W. H. Beaver, and W. R. Landsman. The relevance of the value relevance literature for financial accounting standard setting: Another view. *Journal of Accounting and Economics*, 31(1–3):77–104, 2001.

M. E. Barth, L. D. Hodder, and S. R. Stubben. Fair value accounting for liabilities and own credit risk. *The Accounting Review*, 83(3):629–664, 2008.

A. Beatty and S. Liao. Do delays in expected loss recognition affect banks' willingness to lend? *Journal of Accounting and Economics*, 52:1–20, 2011.

W. H. Beaver. Problems and paradoxes in the financial reporting of future events. *Accounting Horizons*, 5(4):122–134, 1991.

W. H. Beaver and S. G. Ryan. Conditional and unconditional conservatism: Concepts and modeling. *Review of Accounting Studies*, 10(2–3):269–309, 2005.

T. B. Bell and J. B. Griffin. Commentary on auditing high-uncertainty fair value estimates. *AUDITING: A Journal of Practice and Theory*, 31(1): 147–155, 2012.

V. L. Bernard. Discussion of an investigation of revaluations of tangible long-lived assets. *Journal of Accounting Research*, 31(Supplement):39–45, 1993.

A. Bezold. The subject matter of financial reporting: The conflict between cash conversion cycles and fair value in the measurement of income. Occasional Paper, Center for Excellence in Accounting and Security Analysis. Columbia University, 2009.

G. Bhat, R. Frankel, and X. Martin. Panacea, pandora's box, or placebo: Feedback in mortgage-backed security holdings and fair value accounting. *Journal of Accounting and Economics*, 52:153–173, 2011.

E. Blankespoor, T. Linsmeier, K. Petroni, and C. Shakespeare. Fair value accounting for financial instruments: Does it improve the association between bank leverage and credit risk? *The Accounting Review*, 88(4): 1143–1177, 2013.

M. K. Brunnermeier. Deciphering the liquidity and credit crunch 2007–2008. *Journal of Economic Perspectives*, 23:77–100, 2009.

I. C. R. Byatt. Accounting for economic costs and changing prices. A report to HM Treasury, HMSO, 1986.

B. W. Cantrell, J. M. McInnis, and C. G. Yust. Predicting credit losses: Loan fair values versus historical costs. *The Accounting Review*, 89(1):147–176, 2014.

R. J. Chambers. *Accounting, Evaluation and Economic Behavior*. Prentice-Hall, New York, 1966.

M. Chatfield. *A History of Accounting Thought*. The Dryden Press, Hillsdale, IL, 1974.

S. Chee. The information content of commercial banks' fair value disclosures of loans under SFAS no. 107. Working Paper, University of Oregon. Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2158499, 2013.

Committee on Accounting Procedure. *Report of the Committee on Terminology*. American Institute of Accountants, Accounting Research Bulletin No. 9, New York, 1940.

Committee on Accounting Procedure. *Inventory Pricing*. American Institute of Accountants, Accounting Research Bulletin No. 29, New York, 1947.

P. M. Dechow and W. Ge. The persistence of earnings and cash flows and the role of special items: Implications for the accrual anomaly. *Review of Accounting Studies*, 11(2–3):253–296, 2006.

P. M. Dechow, W. Ge, C. R. Larson, and R. G. Sloan. Predicting material accounting misstatements. *Contemporary Accounting Research*, 28(1):17–82, 2011.

H. Demsetz. Industry structure, market rivalry and public policy. *Journal of Law and Economics*, 16(1):1–9, 1973.

I. Dichev and V. W. Tang. Matching and the changing properties of accounting earnings over the last 40 years. *The Accounting Review*, 83(6):1425–1460, 2008.

I. D. Dichev. On the balance sheet-based model of financial reporting, Center for Excellence in Accounting and Security Analysis, Occasional Paper Series. Columbia Business School, 2007.

A. L. Dickinson. *Accounting Practice and Procedures*. Ronald Press, New York, 1913.

G. J. Dillon. Corporate asset revaluations: 1925–1934. *The Accounting Historians Journal*, 6(1):1–15, 1979.

D. Duffie and D. Lando. Term structures of credit spreads with incomplete accounting information. *Econometrica*, 69(3):633–664, 2001.

A. Durnev, R. Morck, B. Yeung, and P. Zarowin. Does greater firm-specific return variation mean more or less informed stock pricing? *Journal of Accounting Research*, 41(5):797–836, 2003.

E. Eccher, K. Ramesh, and S. Thiagarajan. Fair value disclosures by bank holding companies. *Journal of Accounting and Economics*, 22(1–3):79–117, 1996.

E. O. Edwards and P. W. Bell. *The Theory and Measurement of Business Income*. University of California Press, Berkeley, 1961.

A. Ellul, C. Jotikasthira, and C. Lundblad. Regulatory pressure and fire sales in the corporate bond market. *Journal of Financial Economics*, 101(3): 596–620, 2011.

A. Ellul, P. Jotikasthira, C. Lundblad, and Y. Wang. Is historical cost accounting a panacea? Market stress, incentive distortions and gains trading. (May 8, 2014) Available at SSRN: http://ssrn.com/abstract=1972027 or http://dx.doi.org/10.2139/ssrn.1972027, 2014.

M. Ettredge, Y. Xu, and H. Yi. Fair value measurements and audit fees: Evidence from the banking industry. *AUDITING: A Journal of Practice and Theory*, 2014. forthcoming. doi: http://dx.doi.org/10.2308/ajpt-50701.

M. Evans, L. D. Hodder, and P. E. Hopkins. The predictive ability of fair values for future financial performance of commercial banks and the relation of predictive ability to banks' share prices. *Contemporary Accounting Research*, 31(1):13–44, 2014.

S. Fabricant. Revaluations of fixed assets: 1925–1934. National Bureau of Economic Research, Bulletin No. 62, New York, 1936.

Financial Accounting Standards Board. Objectives of financial reporting by business enterprises. Statement of Financial Accounting Concepts No. 1, Norwalk, CT: FASB, 1978.

Financial Accounting Standards Board. Financial reporting and changing prices. Statement of Financial Accounting Standards No. 33, Norwalk, CT: FASB, 1979.

Financial Accounting Standards Board. Qualitative characteristics of accounting information. Statement of Financial Accounting Concepts No. 2, Norwalk, CT: FASB, 1980.

Financial Accounting Standards Board. Accounting for certain mortgage banking activities. Statement of Financial Accounting Standards No. 65, Norwalk, CT: FASB, 1982.

Financial Accounting Standards Board. Recognition and measurement in financial statements of business enterprises. Statement of Financial Accounting Concepts No. 5, Norwalk, CT: FASB, 1984a.

Financial Accounting Standards Board. Financial reporting and changing prices: Elimination of certain disclosures — an amendment of FASB statement no. 33. Statement of Financial Accounting Standards No. 82, Norwalk, CT: FASB, 1984b.

Financial Accounting Standards Board. Elements of financial statements. Statement of Financial Accounting Concepts No. 6, Norwalk, CT: FASB, 1985.

Financial Accounting Standards Board. Financial reporting and changing prices. Statement of Financial Accounting Standards No. 89, Norwalk, CT: FASB, 1986.

Financial Accounting Standards Board. Disclosures about fair value of financial instruments. Statement of Financial Accounting Standards No. 107, Norwalk, CT: FASB, 1991.

Financial Accounting Standards Board. Fair value measurements. Statement of Financial Accounting Standards No. 157, Norwalk, CT: FASB, 2006.

Financial Accounting Standards Board. Chapter 1, the objective of general purpose financial reporting and Chapter 3, qualitative characteristics of useful financial information. Statement of Financial Accounting Concepts No. 8, Norwalk, CT: FASB, 2010.

J. L. Gadd. Defining value in use. *Valuation*, 34(2):13–19, 1989.

O. Gellein. Primacy: Assets or income? *Research in Accounting Regulation*, 6:198–199, 1992.

General Accounting Office. *Financial statement restatements: Trends, market impacts, regulatory responses and remaining challenges*. Government Printing Office, GAO-03-138. Washington, D.C., 2003.

O. Georgiou and L. Jack. In pursuit of legitimacy: A history behind fair value accounting. *The British Accounting Review*, 43(4):311–323, 2011.

F. Gigler, C. Kanodia, H. Sapra, and R. Venugopalan. Accounting conservatism and the efficiency of debt contracts. *Journal of Accounting Research*, 47(3):767–797, 2009.

F. Gjesdal. Accounting for stewardship. *Journal of Accounting Research*, 19: 208–230, 1981.

J. C. Glover, Y. Ijiri, C. B. Levine, and P. J. Liang. Separating facts from forecasts in financial statements. *Accounting Horizons*, 19(4):267–282, 2005.

I. Goncharov, E. J. Riedl, and T. Sellhorn. Fair value and audit fees. *Review of Accounting Studies*, 19(1):210–241, 2014.

E. A. Gordon and H.-T. Hsu. Long-lived asset impairments and future operating cash flows under U.S. GAAP and IFRS, april 22, 2014. Available at SSRN: http://ssrn.com/abstract=2127868 or http://dx.doi.org/10.2139/ssrn.2127868, 2014.

M. Greenberger. The role of derivatives in the financial crisis–credit default swaps and the economic meltdown. Testimony to the Financial Crisis Inquiry Commission Hearing in Washington D.C, 2010.

H. R. Hatfield. *Accounting: Its Principles and Problems*. D. Appleton and Company, New York, 1927.

F. Heid. The cyclical effects of the BASEL II capital requirements. *Journal of Banking and Finance*, 31:3885–3900, 2007.

B. E. Hendricks and C. Shakespeare. Discussion of "The financial reporting of fair value based on managerial inputs versus market inputs: evidence from mortgage servicing rights". *Review of Accounting Studies*, 18(3):859–867, 2013.

D. E. Hirst and P. E. Hopkins. Comprehensive income reporting and analysts' valuation judgments. *Journal of Accounting Research*, Supplement:47–75, 1998.

D. E. Hirst, K. E. Jackson, and L. Koonce. Improving financial reports by revealing the accuracy of prior estimates. *Contemporary Accounting Research*, 20(1):165–193, 2003.

L. Hodder, P. E. Hopkins, and J. Wahlen. Risk-relevance of fair value income measurement for commercial banks. *The Accounting Review*, 81(2):337–375, 2006.

R. W. Holthausen and R. L. Watts. The relevance of the value-relevance literature for financial accounting standard setting. *Journal of Accounting and Economics*, 31(1–3):3–75, 2001.

Y. Ijiri. *Theory of Accounting Measurement*. American Accounting Association, Sarasota, FL, 1975.

L. T. Johnson and K. R. Petrone. Is goodwill an asset? *Accounting Horizons*, 12(3):293–303, 1998.

E. J. Kane. Redefining and containing systemic risk. *Atlantic Economic Journal*, 38(3):251–264, 2010.

U. Khan. Does fair value accounting contribute to systemic risk in the banking industry? (November 15) columbia business school research paper. Available at SSRN: http://ssrn.com/abstract=1911895 or http://dx.doi.org/10.2139/ssrn.1911895, 2010.

D. J. Kirk. Looking back on fourteen years at the FASB: The education of a standard setter. *Accounting Horizons*, 2(1):8–17, 1988.

N. Kiyotaki and J. Moore. Credit chains. *Journal of Political Economy*, 99: 220–264, 1997.

K. Kolev. Do investors perceive marking-to-model as marking-to-myth? Early evidence from FAS 157 disclosure (December 31). Available at SSRN: http://ssrn.com/abstract=1336368, 2008.

S. P. Kothari, K. Ramanna, and D. J. Skinner. Implications for GAAP from an analysis of positive research in accounting. *Journal of Accounting and Economics*, 50(2–3):246–286, 2010.

R. Lambert. Discussion of implications for GAAP from an analysis of positive research in accounting. *Journal of Accounting and Economics*, 50(2–3):287–295, 2010.

W. R. Landsman. Is fair value accounting information relevant and reliable? Evidence from capital market research. *Accounting and Business Research*, 37(Special Issue):19–30, 2007.

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

A. J. Leone, J. S. Wu, and J. L. Zimmerman. Asymmetric sensitivity of ceo cash compensation to stock returns. *Journal of Accounting and Economics*, 42(1–2):167–192, 2006.

B. Lev and N. Zhou. Unintended consequence: Fair value accounting informs on liquidity risk. Working Paper, New York University. Available at: http://ssrn.com/abstract=1466009, 2009.

R. J. Lundholm. Reporting on the past: A new approach to improving accounting today. *Accounting Horizons*, 13(4):315–322, 1999.

K. MacNeal. *Truth in Accounting*. University of Pennsylvania Press, Philadelphia, 1939.

R. V. Mattessich. *Accounting and Analytical Methods*. Richard D. Irwin, Homewood, IL, 1964.

P. Milgrom and J. Roberts. Relying on the information of interested parties. *The RAND Journal of Economics*, 17(1):18–32, 1986.

B. A. Minton, R. Stulz, and R. Williamson. How much do banks use credit derivatives to hedge loans? *Journal of Financial Services Research*, 35(1): 1–31, 2009.

R. Morck, B. Yeung, and W. Yu. The information content of stock markets: Why do emerging markets have synchronous stock price movements? *Journal of Financial Economics*, 58(1–2):215–60, 2000.

K. Nelson. Fair value accounting for commercial banks: An empirical analysis of SFAS 107. *The Accounting Review*, 71(2):161–182, 1996.

D. Nissim. Reliability of banks' fair value disclosure for loans. *Review of Quantitative Finance and Accounting*, 20(4):355–384, 2003.

D. Nissim and S. Penman. Principles for the application of fair value accounting. Center for Excellence in Accounting and Security Analysis, White Paper No. 2, Columbia Business School, 2008.

D. Paletta and S. Patterson. Deal near on derivatives. *The Wall Street Journal*, April, 26 2010.

M. S. Park, T. Park, and B. T. Ro. Fair value disclosures for investment securities and bank equity: Evidence from SFAS No. 115. *Journal of Accounting, Auditing and Finance*, 14(3):347–370, 1999.

W. A. Paton. The significance and treatment of appreciation in the accounts. In G. H. Coons, editor, *Michigan Academy of Science, Twentieth Annual Report*. University of Michigan, Ann Arbor, 1918.

W. A. Paton. Depreciation, appreciation and productive capacity. *Journal of Accountancy*, 30(1):1–11, 1920.

W. A. Paton. Statement by William A. Paton. *The Accounting Review*, 55 (4):629–630, 1980.

W. A. Paton and A. C. Littleton. *Monograph No 3: An Introduction to Corporate Accounting Standards*. American Accounting Association, Chicago, 1940.

J. Paul. On the efficiency of stock-based compensation. *Review of Financial Studies*, 5(3):471–502, 1992.

S. Penman. Financial reporting quality: Is fair value a plus or a minus? *Accounting and Business Research*, 37(Special Issue):33–44, 2007.

K. Ramanna. The implications of unverifiable fair-value accounting: Evidence from the political economy of goodwill accounting. *Journal of Accounting and Economics*, 45(2–3):253–281, 2008.

K. Ramanna and R. L. Watts. Evidence on the use of unverifiable estimates in required goodwill impairment. *Review of Accounting Studies*, 17(4):749–780, 2012.

J. Richard. The secret past of fair value: Lessons from history applied to the French case. *Accounting in Europe*, 1(1):95–107, 2004.

E. Riedl and G. Serafeim. Information risk and fair values: An examination of equity betas. *Journal of Accounting Research*, 49(4):1083–1122, 2011.

E. Robak. Fair value of illiquid securities: Are we there yet? *Journal of Alternative Investments*, 11(4):57–66, 2009.

S. G. Ryan. *Financial Instruments and Institutions: Accounting and Disclosure Rules*. John Wiley and Son, Hoboken, NJ, 2007.

S. G. Ryan. Fair value accounting: Policy issues raised by the credit crunch. In M. Richardson and V. Acharya, editors, *Chapter 9, Restoring Financial Stability: How to Repair a Failed System*. John Wiley & Sons, New York, 2009.

S. G. Ryan. Financial reporting for financial instruments. *Foundations and Trends in Accounting*, 6(3–4):187–354, 2011.

Sandilands Committee. Inflation accounting: Report of the inflation accounting committee. F. E. P. Sandilands Esq., CBE, Chairman (London: Her Majesty's Stationery Office, Cmnd 6225), 1974.

K. Schipper. Required disclosures in financial reports. *The Accounting Review*, 82(2):301–326, 2007.

W. Schuetze. What is an asset? *Accounting Horizons*, 7(3):66–70, 1993.

C. Song, W. Thomas, and H. Yi. Value relevance of FAS 157 fair value hierarchy information and the impact of corporate governance mechanisms. *The Accounting Review*, 85(4):1375–1410, 2010.

R. K. Storey and S. Storey. *The Framework of Financial Accounting Concepts and Standards*. FASB, Norwalk, CT, 1998.

R. Stulz. Credit default swaps and the credit crisis. Working Paper, Ohio State University, 2009.

H. W. Sweeny. *Stabilized Accounting*. Harper, New York, 1936.

J. Tschirhart, J. O'Brien, M. Moise, and E. Yang. Bank commercial loan fair value practices. Federal Reserve Board, Washington, DC. Available at http://www.federalreserve.gov/pubs/feds/2007/200729/200729pap.pdf, 2007.

R. L. Watts. Conservatism in accounting, part i: Explanations and implications. *Accounting Horizons*, 17(3):207–221, 2003a.

R. L. Watts. Conservatism in accounting, part ii: Evidence and research opportunities. *Accounting Horizons*, 17(4):287–301, 2003b.

D. Weiss. Examining shareholder value creation over CEO tenure: A new approach to testing effectiveness of executive compensation. *Journal of Management Accounting Research*, 23:29–36, 2011.

G. Whittington. Alternatives to fair value. In P. Walton, editor, *The Routledge Companion to Fair Value and Financial Reporting*. Routledge, Abingdon, United Kingdom, 2007.

S. A. Zeff. The evolution of the conceptual framework for business enterprises in the United States. *Accounting Historians Journal*, 26(2):89–131, 1999.

S. A. Zeff. The SEC rules historical cost accounting: 1934 to the 1970s. *Accounting and Business Research*, 37(Special Issue):49–62, 2007.