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# How did Financial Reporting Contribute to the Financial Crisis?

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## Abstract

We scrutinize the role financial reporting for fair values, asset securitizations, derivatives and loan loss provisioning played in the Financial Crisis. Because banks were at the center of the Financial Crisis, we focus our discussion and analysis on the effects of financial reporting by banks. We conclude fair value accounting played little or no role in the Financial Crisis. However, transparency of information associated with asset securitizations and derivatives likely was insufficient for investors to assess properly the values and riskiness of bank assets and liabilities. Although the FASB and IASB have taken laudable steps to improve disclosures relating to asset securitizations, in our view, the approach for accounting for securitizations in the IASB's Exposure Draft that would require banks to recognize whatever assets and liabilities they have after the securitization is executed better reflects the underlying economics of the securitization transaction. Regarding derivatives, we recommend disclosure of more disaggregated information, disclosure of the sensitivity of derivatives' fair values to

changes in market risk variables, and implementing a risk-equivalence approach to enable investors to understand better the leverage inherent in derivatives. We also conclude that because the objectives of bank regulation and financial reporting differ, changes in financial reporting needed to improve transparency of information provided to the capital markets likely will not be identical to changes in bank regulations needed to strengthen the stability of the banking sector. We discuss how loan loss provisioning may have contributed to the Financial Crisis through its effects on procyclicality and on the effectiveness of market discipline. Accounting standard setters and bank regulators should find some common ground. However, it is the responsibility of bank regulators, not accounting standard setters, to ensure the stability of the financial system.

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## Notes

For example, legislation currently being considered by the US Congress would greatly revamp the way in which banks are regulated, including the potential merger of the four existing bank supervisory bodies into one Federal oversight body, and greater regulation of over-the-counter derivatives, which were central to the collapse of Lehman Brothers and near collapse of AIG. Relatedly, regulators and legislators in several jurisdictions, including the USA, UK, EU and Japan, are considering proposals to regulate hedge funds, including imposing leverage restrictions and disclosure requirements.

See US Securities and Exchange Commission ([2008](#)) for a background on the Financial Crisis, and a comprehensive discussion of the potential role of financial reporting in the

Crisis, including a discussion of concerns raised by critics of fair value accounting.

In light of these claims, Section 133 of the Troubled Asset Relief Program required the US Securities and Exchange Commission to conduct a study of mark-to-market, that is, fair value accounting focusing, on financial institutions and to report its findings to Congress by the end of 2008. The report focuses on assessing the role the fair value accounting standard, Statement of Financial Accounting Standards No. 157 Fair Value Measurements, played in causing bank failures; the impact of standards – particularly those relating to fair value – issued by the Financial Accounting Standards Board (FASB) on the quality of financial information available to investors; the process used by the FASB in developing accounting standards; and the advisability and feasibility of modifications to such standards. The study concludes that the crisis was not precipitated by mark-to-market accounting (US Securities and Exchange Commission, 2008) and that the process the FASB uses in developing accounting standards is appropriate. See Section 3 for a discussion of these issues.

See, for example, Ryan ([2008](#)), US Securities and Exchange Commission (2008), Shaffer (2010) and Laux and Leuz ([2010](#)).

It is the responsibility of bank regulators and not accounting standard setters to determine whether the information in the capital markets is sufficient for market discipline to be an effective regulatory tool. For example, if information about risk and leverage of banks engaging in asset securitizations or credit default swap contracts is of poor quality, then the capital markets likely do not have adequate information to provide market discipline on which the regulators rely for prudential supervision.

US GAAP requires that particular investments and derivatives be recognized and measured at fair value. The fair value option in US GAAP also permits other financial instruments to be measured at fair value. Key standards that applied during the Financial Crisis are SFAS 115 Accounting for Certain Investments in Debt and Equity Securities (FASB, [1993](#)), SFAS 133 Accounting for Derivative Instruments and Hedging Activities (FASB, [1998](#)) and SFAS 159 The Fair Value Option for Financial Assets and Liabilities (FASB, [2007](#)). The version of IAS 39 that applied during the Financial Crisis contained similar measurement and recognition requirements for IFRS.

The IASB currently expects to issue a similar standard before the end of 2010.

It is also important to note that criticisms of fair value are often raised by parties who have a stake in the outcome of standard setting decisions. An example outside the context of fair value is the opposition by managers of high-technology firms to the expensing of stock-based compensation. Dechow et al. ([1996](#)) report evidence consistent with the hypothesis that the opposition to the expensing of stock-based compensation arose because of top executives' concerns with public scrutiny of their compensation.

In a bank regulatory context, Barth et al. ([1995](#)) find that regulatory capital violations based on earnings that includes fair value gains and losses for investment securities help predict future historical cost regulatory capital violations incremental to historical cost regulatory capital violations.

A related criticism is the 'anomalous' earnings effect from the recognition of gains arising from decreases in the fair value of a bank's liabilities attributable to an increase in the bank's own credit risk or the price of credit. This criticism is particularly salient during periods of economic downturn, when credit risk increases systemically. As Barth et al. ([2008](#)) show, these gains are not anomalous. Rather, recognizing such effects in earnings simply reflects the economics of debt and equity values. Consistent with this, Barth et al. ([2008](#)) provide evidence that equity returns are less negative when credit risk increases for entities with more debt in the capital structure. Consistent with the observation in Barth ([2004](#)) that the mixed-measurement accounting model induces earnings volatility, Barth et al. ([2008](#)) note that any potential 'anomalous' earnings effects arise from incomplete recognition of asset value changes, not from recognition of debt value changes.

See Plantin et al. ([2008a](#), [2008b](#)) for a theoretical discussion.

See also US Securities and Exchange Commission (2008), Shaffer (2010) and Laux and Leuz ([2010](#)).

Shaffer (2010) reports that as of the first quarter of 2008, the banks held 12% of their total assets in available-for-sale and held-to-maturity assets; only available-for-sale assets are measured at fair value.

In the response to the Financial Crisis, the Basel Committee on Banking Supervision issued a consultative document seeking input on proposed regulatory requirements to strengthen the resilience of the banking sector (BIS, [2009](#)).

To gain a better perspective on the magnitude of the growth in the credit markets during the US housing boom, the ratio of household debt to Gross Domestic Product in the USA, which had been roughly stable at 80% of personal income until 1993, had risen to 120% in 2003 and to nearly 130% by mid-2006 (Reinhart and Rogoff, [2009](#)). Relating to the bust, US household debt declined by \$13.5 trillion in 2009, amounting to \$43,874 per capita, with most of the reduction attributable to mortgage loan defaults ('Americans Pare Down Debt', Mark Whitehouse, Wall Street Journal, 12 March 2010).

Non-transparency of information about assets banks securitized is not the only cause of the housing boom. Although poor quality of information about securitized assets contributed to excessive lending practices that precipitated the housing bubble, there was plenty of blame to go around. Several factors contributed to the housing boom, including the availability of cheap credit arising from monetary policy decisions by the Federal Reserve Bank, Congressional mandates for Fannie Mae and Freddie Mac to expand lending to non-traditional borrowers from low-income groups, and the failure of credit rating agencies to issue credit ratings for banks that reflect appropriately the riskiness of bank loans and other assets transferred to the SPEs (Barth et al., 2009). See Acharya and Richardson ([2009b](#)) for an in-depth discussion of the causes of the housing boom and its relation to banking regulation and asset securitizations.

Requirements for sale accounting in IFRS are broadly similar to those in US GAAP. However, US GAAP bases control on legal isolation, whereas IFRS focuses on risks and rewards. As a result, US GAAP and IFRS can result in quite different derecognition outcomes (Schipper and Yohn, [2007](#)). In addition, application of IFRS generally more frequently results in consolidation than does application of US GAAP.

Similar comments apply to repurchase agreement transactions. The Lehman Brothers bankruptcy examiner's report of March 2010 reveals that Lehman Brothers made extensive use of sale treatment for recognition of many of its repurchase agreements. As a result, many commentators contend that these transactions should have been recognized as secured borrowings. Without knowing the details of each transaction, it is not possible to determine whether recognition as a sale or as a secured borrowing, or recognition of assets and liabilities using the alternative approach would have best reflected the underlying economics of the transactions.

For example, regarding the calculation of regulatory capital, in 2001 US regulators began to require most banks to maintain capital that is equal to the carrying amount of

the retained interest.

US bank regulators require disaggregation of some contracts by whether the bank is a buyer or a seller of the contract. For example, US banks must disclose to regulators the notional amounts for credit default swap contracts they have bought and sold. However, this disaggregation is not required for all derivatives, for example, futures contracts. In addition, even for derivatives for which such disaggregation is provided, as with financial statement disclosures, no information about counterparty risk is provided. Because AIG is not a bank but rather an insurance company, these additional requirements do not apply.

See Barth's summary of the then extant research on risk and financial reporting in Schrand and Elliott ([1998](#)).

As an illustration, in its disclosure relating to its Level 3 fair value estimates in its 2008 annual report, the Royal Bank of Scotland (RBS) discloses that the recognized fair value of its interest rate and commodity derivatives was £2.2 billion, and the increase and decrease in value associated with reasonably possible alternative assumptions were £0.13 billion. RBS also discloses that the recognized fair value of its credit derivatives was £8.0 billion, and the increase and decrease in value associated with reasonably possible alternative assumptions were £1.03 and £1.20 billion.

Systemic loan loss provisioning by banks during a financial downturn amplifies procyclicality if recognition of loan losses requires banks to take actions – particularly sale of assets – to meet regulatory capital requirements. As we note earlier, Shaffer (2010) reports that during the Financial Crisis the decline in Tier 1 capital arising from impairments of loans averaged 15.6% for a sample of large US banks.

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