

The Financial Crises of the 21st Century

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Financial Reporting and Financial Stability

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The financial crisis of 2007-2008 has turned the spotlight on the role of financial reporting for financial stability. In particular, fair-value accounting has been blamed for exacerbating the severity of the crisis. Fair-value accounting in its pure form involves reporting financial assets and liabilities at their market price (marking to market) where changes of the market price are recognized in the income statement. An alternative is to report financial assets and liabilities at their historical or amortized costs unless they are sold or impaired (historical cost accounting). The main allegations against fair-value accounting are that it contributes to excessive leverage in boom periods and leads to excessive write-downs in busts. The write-downs due to falling market prices deplete bank capital and set off a downward spiral, as banks are forced to sell assets at “fire sale” prices. Mark-to-market accounting can then lead to contagion as prices from asset-fire sales of one bank become relevant for other banks. The concerns that fair-value accounting causes contagion and fuels the financial crisis led to a major policy debate involving among others the U.S. Congress, the European Commission as well as banking and accounting regulators around the world.

In the article “The Crisis of Fair-Value Accounting: Making Sense of the Recent Debate,” Christian Leuz of University of Chicago Booth School of Business and I argue that much of the controversy about fair-value accounting results from confusion about what is new and different about fair-value accounting as well as different views about the purpose of accounting. Under both U.S. GAAP and IFRS, there is a mixed attribute model with a multitude of rules stipulating that some items are reported at fair value and others are reported at historical cost. Moreover, unrealized gains and losses of items that are reported at fair value may or may not affect net income, depending on their classification. For example, both trading securities and available-for-sale securities are reported in the balance sheet at fair value. But in the income statement, unrealized gains and losses, i.e., changes in these values, are recognized for trading securities only. In contrast, financial instruments that are held-to-maturity and loans and receivables are reported at amortized costs. Therefore, one has to be careful about the extent to which arguments against fair-value accounting apply to current accounting standards.

Standard setters face tradeoffs like the tradeoff between relevance and reliability, which have been debated for decades. When discussing the potential problems of fair-value accounting, it is important to also consider the alternative. Even if one is sympathetic to the arguments against fair-value accounting, it does not automatically follow that historical cost accounting would be better. Historical cost accounting has a set of problems of its own, which can be as severe, or even worse, than the problems with fair-value accounting. For example, historical cost

accounting can provide incentives to engage in so called “gains trading” and a lack of transparency, which could make matters worse during a crisis.

There are legitimate concerns about marking asset values to market prices in times of a financial crisis once we recognize that there are ties to contracts and regulation. However, it is not obvious that these problems are best addressed with changes to the accounting system. These problems could also (and perhaps more appropriately) be addressed by adjusting contracts and regulation. Such adjustments already exist. For example, the regulatory capital of U.S. bank holding companies is not affected by changes in the fair value of available for sale debt securities, unless they are sold or the impairments are other-than-temporary. Therefore, a shock to available for sale debt securities has the same effect on Tier 1 regulatory capital under fair-value accounting and historical cost accounting for U.S. bank holding companies.

In our paper “Did Fair-Value-Accounting Contribute to the Financial Crisis?” we look at U.S. bank holding companies and find no evidence that fair-value accounting added to the severity of the current financial crisis in a major way. Table 1 provides an overview of the types of financial assets that U.S. financial institutions held prior to the crisis. For U.S. bank holding companies the impact of fair-value changes on net income and regulatory capital (in booms or busts) is much more limited than the public debate suggests. The majority of assets, in particular loans, are not carried at fair value on the balance sheet. But even for assets that are carried at fair value, not all fair value changes enter the computation of the banks’ regulatory capital.

Table 1: Key Assets on the Balance Sheets of U.S. Banks

	<i>Large Bank Holding Companies</i>	<i>Smaller Bank Holding Companies</i>	<i>Large Investment Banks</i>	
Trading Assets	12.22%	0.71%	Trading Assets	33.34%
Net Trading Assets	6.71%	0.37%	Net Trading Assets	15.66%
Other Securities	14.69%	20.67%	Collateralized Agreements	39.54%
Available- for-sale	14.56%	17.79%	Receivables	12.15%
Held-to- maturity	0.13%	2.88%	Securities Received as Collateral	2.83%
Loans and Leases	47.28%	61.67%	Securities Segregated for Regulatory and other Purposes	3.99%
Repo Agreements	10.04%	2.41%		
Financial Instruments	87.83%	90.02%	Financial Instruments	97.73%
Total Assets	100%	100%	Total Assets	100%

Note: The table reports (weighted) averages over the year-end amounts from 2004 to 2006 for various bank assets. Within each group and year, observations are weighted by total assets. Commercial bank numbers are from Federal Reserve Bank of Chicago bank holding company data sets. *Large Bank Holding Companies* include banks with total assets greater than \$100 billion. This sample includes on average 27 banks. *Smaller Bank Holding Companies* include banks with assets between \$1 billion and \$100 billion. This sample includes on average 412 banks. *Large Investment Banks* include Goldman Sachs, Morgan Stanley, Merrill Lynch, Lehman Brothers, and Bear Stearns. Their data are taken from 10-K SEC filings. For the bank holding companies, *Repo Agreements* refers to federal funds sold and securities borrowed or purchased under agreements to resell. For the investment banks, *Collateralized Agreements* refers to securities borrowed and securities purchased with agreements to resell. *Receivables* are from brokers, dealers, counterparties, customers and, in a few cases, consumer loans (for example, for Morgan Stanley). Among the investment banks, only Merrill Lynch had securities that were classified as available-for-sale or held-to-maturity (on average 8.30 and 0.09 percent of total assets, respectively).

(Source: Laux and Leuz, Journal of Economic Perspectives, 2010)

There are several circuit breakers that allow reported values to deviate from market prices under important circumstances. For example, instead of using fire sale prices, the fair-value accounting standards allow banks to value assets using fundamental cash flow models and unobservable inputs (Level 3 assets) as markets become illiquid. Thus, the argument that fair-value accounting forces banks to mark to market asset prices even when they are distorted is misleading.

Using U.S. banks' financial statements, we provide evidence that, as the crisis deepened, U.S. banks reclassified many illiquid assets to the Level 3 category, where they were valued using models. In particular, banks with substantial real-estate exposure and large trading portfolios used cash-flow-based models to value their mortgage-related securities by the third or fourth quarter of 2007. The notion that marking to market was widespread among U.S. banks is simply a myth as far as mortgage-related securities are concerned.

There also seems to be little evidence of excessive write-downs, or that fair values reported by banks were systematically too low. We discuss a number of studies that compare banks' reported fair values of assets with the market prices of those assets, to find out whether fair-value accounting forced banks to report figures that were artificially low. Kolev (2009) and Song et al. (2010) find that investors priced a dollar of reported Level 3 assets significantly below a dollar of reported assets valued by quoted prices in active markets (Level 1 assets). The finding suggests that banks reported Level 3 assets at values that, if anything, are too high, rather than too low, compared with investors' valuations.

A main problem in the crisis was that banks were highly levered during the boom and relied heavily on collateralized repurchase agreements. But the amount of debt that can be obtained by collateralized borrowing depends on the market value of the assets used as collateral (not the book value set by accounting rules). Investors were concerned about banks with substantial (subprime) mortgage exposure once the problems in the mortgage market were apparent. Thus, financial institutions that relied heavily on short-term borrowing and had substantial subprime exposures would have faced major difficulties regardless of the accounting rules. In fact, less transparency about losses and exposures could have made matters worse.

The important conclusion that emerges is that, although lenient standards may help to avoid contagion effects in times of crisis, relaxing the rules and giving bank management flexibility in interpreting fair-value accounting standards opens the door for manipulation. It can also have negative effects before a crisis hits. Making banks recognize losses early on forces them to take steps to fix problems quickly and may even encourage them to be more cautious in the first place.

In the paper "Financial Instruments, Financial Reporting, and Financial Stability," I discuss recent papers that provide new evidence on the relation between the role of accounting for

financial instruments and financial stability. There is still no evidence of widespread asset fire sales or contagion due to fair-value accounting during the financial crisis. Instead, distortions in the mortgage market and incurred loan losses combined with complex structured products and asymmetric information were main culprits in the crisis. Problems of decreasing market values of structured products and an unwillingness of investors to provide funding for these products were exacerbated by the reliance on short-term financing, including interbank financing, unsecured wholesale deposits, and collateralized borrowing as well as increases in haircuts and margin-calls.

The evidence suggests that accounting and regulation might have contributed to the crisis by allowing banks to delay actions rather than forcing them to act early. The problem arises because losses of available-for-sale debt securities do not affect earnings and, in many countries, regulatory capital, unless the security is sold or other-than-temporarily impaired. Banks were able to avoid other-than-temporary impairments until the middle of 2008, but even then many securities were still outstanding with very high unrealized losses. Badertscher et al. (2012) examine 100 U.S. bank holding companies with the highest fraction of available-for-sale and held-to-maturity securities and find that instead of selling non-agency mortgage-backed securities, the average holdings of these assets during the crisis increased, and the strongest increase can be observed for the weakest banks in the sample.

The viability of a business model and the ability to hold on to assets for the collection of cash flows depends on how the bank finances its assets. A bank that strongly relies on short-term financing, such as interbank lending, repurchase agreements, and wholesale deposits that the government does not guarantee, has to refinance its assets. Uncertainty and illiquidity in the market as reflected in fair values affect a bank's refinancing and, ultimately, whether the bank can hold the securities until maturity. Thus, fair values can be very relevant for loans and securities that a bank intends to hold until maturity for the collection of cash flows. Even if a bank has no intention of selling securities individually, it still has to "sell them" to the bank's investors when raising new capital or trying to convince investors not to withdraw funds.

Fair values are no panacea for more transparency or better information. Fair values and impairments that are based on models and management judgment can be distorted. Disclosures about model assumptions and the sensitivity of fair values to these assumptions should ideally allow investors to judge the validity of the reported fair values or impairments and assess a bank's exposure. Reporting historical costs and distinguishing between realized and unrealized gains and losses can provide investors with incrementally valuable information.

Transparency and regulatory capital requirements are of prime importance for financial stability. In this respect two observations are important. First, the difference between disclosure and recognition might not always be central to informing investors, provided that investors obtain the relevant information. However, it is often argued that recognition increases the reliability of information and that users of accounting information focus on certain accounting numbers such as, for example, earnings. I address some of these arguments in the paper. Second, it is not necessary to regulate the effect of unrealized gains and losses on banks' regulatory capital through the recognition of unrealized gains and losses (either in the income statement or in other comprehensive income). Even though regulatory capital requirements are generally based on annual reports, regulators can and do adjust the rules used for financial reporting. Thereby it might be possible to reconcile potentially different objectives of standard setters and regulators.

References

Badertscher, B., Burks, J. and Easton, P.: “A Convenient Scapegoat: Fair Value Accounting by Commercial Banks During the Financial Crises,” *The Accounting Review*, 2012. (Available at SSRN: <http://ssrn.com/abstract=1569673>)

Laux, C., and Leuz, C.: “The Crisis of Fair-Value Accounting: Making Sense of the Recent Debate,” *Accounting, Organizations, and Society*, 2009. (Available at SSRN: <http://ssrn.com/abstract=1392645>)

Laux, C., and Leuz, C.: “Did Fair-Value-Accounting Contribute to the Financial Crisis?,” *Journal of Economic Perspectives*, 2010. (Available at SSRN: <http://ssrn.com/abstract=1487905>)

Laux, C.: “Financial Instruments, Financial Reporting, and Financial Stability,” *Accounting and Business Research*, 2012. (Available at SSRN: <http://ssrn.com/abstract=1991825>)

Koley, K.: “Do Investors Perceive Marking-to-Model as Marking-to-Myth? Early Evidence from FAS 157 Disclosure,” SSRN Working Paper, 2009. (Available at SSRN: <http://ssrn.com/abstract=1336368>)

Song, C., Thomas, W. and Yi, H.: “Value Relevance of FAS No. 157 Fair Value Hierarchy Information and the Impact of Corporate Governance Mechanisms,” *The Accounting Review*, 2010. (Available at SSRN: <http://ssrn.com/abstract=1198142>)