



Center for Corporate Ethics and Governance

CHILDREN AND FAMILIES
EDUCATION AND THE ARTS
ENERGY AND ENVIRONMENT
HEALTH AND HEALTH CARE
INFRASTRUCTURE AND
TRANSPORTATION
INTERNATIONAL AFFAIRS
LAW AND BUSINESS
NATIONAL SECURITY
POPULATION AND AGING
PUBLIC SAFETY
SCIENCE AND TECHNOLOGY
TERRORISM AND
HOMELAND SECURITY

The RAND Corporation is a nonprofit institution that helps improve policy and decisionmaking through research and analysis.

This electronic document was made available from www.rand.org as a public service of the RAND Corporation.

Skip all front matter: [Jump to Page 1](#) ▼

Support RAND

[Purchase this document](#)

[Browse Reports & Bookstore](#)

[Make a charitable contribution](#)

For More Information

Visit RAND at www.rand.org

Explore the [RAND Center for Corporate Ethics and Governance](#)

View [document details](#)

Limited Electronic Distribution Rights

This document and trademark(s) contained herein are protected by law as indicated in a notice appearing later in this work. This electronic representation of RAND intellectual property is provided for non-commercial use only. Unauthorized posting of RAND electronic documents to a non-RAND website is prohibited. RAND electronic documents are protected under copyright law. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use. For information on reprint and linking permissions, please see [RAND Permissions](#).

This report is part of the RAND Corporation research report series. RAND reports present research findings and objective analysis that address the challenges facing the public and private sectors. All RAND reports undergo rigorous peer review to ensure high standards for research quality and objectivity.



RAND

Center for Corporate Ethics and Governance

Fair Value Accounting, Historical Cost Accounting, and Systemic Risk

Policy Issues and Options for Strengthening
Valuation and Reducing Risk

Michael D. Greenberg, Eric Helland, Noreen Clancy, James N. Dertouzos

The research described in this report was supported in part by the Goldman Sachs Global Markets Institute, with additional support from the generosity of RAND's donors and by the fees earned on client-funded research, and was conducted in the RAND Center for Corporate Ethics and Governance, a part of the RAND Institute for Civil Justice.

Library of Congress Control Number: 2013950607

ISBN: 978-0-8330-8212-1

The RAND Corporation is a nonprofit institution that helps improve policy and decisionmaking through research and analysis. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors.

Support RAND—make a tax-deductible charitable contribution at www.rand.org/giving/contribute.html

RAND® is a registered trademark.

© Copyright 2013 RAND Corporation

This document and trademark(s) contained herein are protected by law. This representation of RAND intellectual property is provided for noncommercial use only. Unauthorized posting of RAND documents to a non-RAND website is prohibited. RAND documents are protected under copyright law. Permission is given to duplicate this document for personal use only, as long as it is unaltered and complete. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use. For information on reprint and linking permissions, please see the RAND permissions page (www.rand.org/pubs/permissions.html).

RAND OFFICES

SANTA MONICA, CA • WASHINGTON, DC

PITTSBURGH, PA • NEW ORLEANS, LA • JACKSON, MS • BOSTON, MA

DOHA, QA • CAMBRIDGE, UK • BRUSSELS, BE

www.rand.org

Summary

Fair value accounting (FVA) refers to the practice of periodically revaluing an asset, ideally by reference to current prices in a liquid market. FVA is commonly distinguished from the competing method of *historical cost accounting* (HCA), in which the book value of an asset is based on the price that was originally paid for it. In the wake of the 2008 financial crisis, controversy erupted over whether FVA was a major driver of the crisis, allegedly forcing banks and financial institutions to write down the value of assets on their books in a self-perpetuating spiral of devaluation, panic selling, and loss of liquidity. That controversy amplified a much longer-running historical debate about whether FVA or HCA is the better approach to valuing financial assets, and which approach provides the most useful information to key stakeholder groups, including investors and prudential regulators. Particularly for policymakers concerned with the stability of financial institutions and of the financial system as whole, these sorts of debates obscure a more basic set of questions concerning the connections between FVA, HCA, and systemic risk and related avenues for making both the financial system and its underlying accounting information more robust.

Study Purpose and Methods

The purpose of this study was broadly to investigate FVA and HCA policy issues and evidence in the wake of the financial crisis, and to explore and explain the relevance of the accounting standards and the recent debate to a nontechnical policy audience. More specifically, we sought to address two basic questions in some depth:

1. What is the relationship between accounting standards (FVA and HCA) and “systemic risk” (i.e., the contagion of financial risk across institutions, with the potential to destabilize the entire financial system)?
2. What kinds of regulatory, governance, and accounting standards options might policymakers consider to respond to related concerns about systemic risk?

To address these questions, we conducted an extensive review of published literature and a series of interviews with a range of stakeholders and experts concerning various facets of FVA, HCA, risk management, risk regulation, and the financial services industry.

Key Findings

Based on our review, we found the following:

1. Both FVA and HCA can be associated with systemic risk to the financial system under some circumstances.
2. Available empirical evidence does not provide strong support for the claim that FVA was a primary driver of the 2008 financial crisis.
3. When implemented poorly, both FVA and HCA can produce misleading information and lead to risk accumulation problems and the potential for market distortion.
4. Improving the quality of both FVA and HCA information in financial statements should be a priority consideration for policymakers.

Avenues for pursuing such improvement could include augmenting current disclosure requirements connected with both FVA and HCA, strengthening valuation processes and management controls within financial firms, and reinforcing the strength of independent audit and regulatory oversight with regard to those processes. Each of these findings is explored in more detail below.

FVA and Systemic Risk

Could FVA pose a systemic risk to the financial sector? Some theoretical accounts (which also underpin FVA's presumed role in spreading risk in the 2008 crisis) point to FVA as a vector for spreading risk-contagion across the financial sector. The basic premise, in theory, is that an initial economic shock could force one institution to sell some of its assets, thereby exposing it to short-run market illiquidity and forcing it to accept a lower price than the assets' fundamental value. When FVA standards apply, other banks that hold similar assets would then be forced to make changes to their own books to reflect the lower price obtained by the first institution. That could then place the other banks under financial pressure and force them to sell assets into the illiquid market to fulfill their own regulatory capital constraints. The theoretical result is the spread of risk across otherwise independent institutions, contributing to an accelerating spiral of devaluation that could culminate in a wave of institutional insolvencies.

The logic behind this view of FVA-induced contagion has been formalized in economic liquidity pricing models, which suggest that this scenario could indeed happen given specific starting assumptions. This being said, some of the key starting assumptions (relating to FVA and regulatory capital constraints) are arguably rigid and not congruent with real-world conditions in 2008, nor do the models appear to provide a simple explanation of the causes or the unfolding of the 2008 economic crisis. Indeed, we reviewed all of the post-2008 empirical studies of the relationship between FVA and the crisis through quantitative data on banks, their assets, their stock values, etc. Based on our reading of the six key studies addressing this point, we conclude that the empirical evidence available to date does not provide compelling support that FVA was the primary driver of the crisis, or of associated bank insolvencies, in 2008.

HCA and Systemic Risk

While recent controversy has focused more on the link between FVA and systemic risk, HCA can also be associated with systemic risk. In particular, when HCA is erroneously applied to

assets without accurate adjustment for permanent reduction in value (known as impairment), the result can be to accumulate and conceal asset risks in a firm's financial statements. And when large numbers of firms hold similar assets and similarly account inaccurately for impairment, the resulting problems can easily become systemic. The historical case studies of the savings and loans (S&L) crisis of the 1980s and the less developed country (LDC) crisis of the 1970s illustrate this point: Both cases involved the accumulation of risky assets by financial institutions, under the cloak of a widespread failure to account accurately for other-than-temporary impairment in those assets. In both instances, U.S. policymakers eventually had to intervene to stabilize and recapitalize vulnerable financial institutions.

One of the important takeaway lessons from these events is simply that HCA, too, has been associated with past systemic risk episodes, and that misleading or unfaithful application of HCA principles (particularly with regard to impairment accounting) poses its own forms of risk. A related lesson is that financial institutions sometimes have the incentive to accumulate financial risk, rather than to disclose it, when confronted with the potential for insolvency—a phenomenon that has been aptly described by others as “gambling for resurrection.”

Implementation and Governance Issues Pertaining to Asset Valuation

Beyond investigating the generic ways in which valuation approaches can be associated with systemic risk, an additional focal point of our study involved the observation that both FVA and HCA approaches are capable of generating poor-quality information when implemented poorly. Neither FVA nor HCA operates in a vacuum; both approaches depend on support from corporate controls and outside monitoring (such as independent audit and regulatory oversight) in order to achieve good implementation, and thereby to generate good financial information. In turn, effective implementation of FVA and HCA may be important to effective institutional risk management, such that stronger valuation practices and related governance processes may help to safeguard institutions against risk. Both approaches to valuation notably involve their own implicit weaknesses and assumptions. Even when implementation is strong, neither approach is likely to be perfect in the financial information that it generates.

Implementation and governance issues pertaining to FVA and HCA tie back to the problem of systemic risk in several ways. First, systemic risk frequently originates from, or is triggered by, institutional risk. Thus, it follows that weaknesses in FVA and HCA that contribute to institutional risk have the potential to contribute to or exacerbate systemic risk as well. Second, the informational quality of FVA and HCA financial statements is of great importance to prudential and systemic risk regulators,¹ just as it is to investors. When the quality of information contained in financial statements is poor or distorted, then regulators may also be impaired in assessing risk and in responding to it effectively. Finally, a related point is the basic observation that regardless of which valuation approach is used (FVA or HCA), there may be an important distinction to draw between institutions that pursue that approach well versus those that do so poorly or ineffectively. These distinctions in the fidelity of valuation could also sometimes have systemic implications and impact, such as by undercutting market confidence in the meaningfulness of accounting information and thereby contributing to episodes of liquidity pricing.

¹ For purposes of this report, we distinguish between “prudential regulation,” which focuses on ensuring the institutional solvency of individual banks, and “systemic risk regulation,” which focuses on ensuring the stability of the financial system as a whole. In practice, a single federal agency (e.g., the Federal Reserve) may carry out responsibilities in both of these areas.

Conclusions and Recommendations

We conclude that policymakers concerned with systemic risk in the wake of the 2008 crisis have at times been preoccupied with the wrong set of questions about FVA. In our view, whether FVA caused the 2008 crisis and which of FVA or HCA is the “better” accounting approach are not the most useful questions to focus on. Based on our reading of the available empirical evidence, we conclude that FVA was probably not a primary driver of the 2008 crisis, nor does the history of the crisis comport well with the theory of an FVA-induced, procyclicality spiral of asset sales and markdowns, culminating in widespread bank insolvencies. Meanwhile, the long-running debate over whether FVA or HCA is objectively “better” is also likely a canard for policymakers whose practical concern is strengthening the financial system against systemic risk.

Based on our review, we conclude that both FVA and HCA can produce useful information, that both can be vulnerable to producing misinformation when not applied rigorously, and that both are capable of contributing to systemic risk in some circumstances. In order to generate high-quality financial information, both approaches depend on rigorous implementation, strong support from governance and controls within financial institutions, and on meaningful oversight through independent audit and regulatory processes. When those supports are weak and the quality of accounting information generated is poor, then both of FVA and HCA can contribute to the accumulation of institutional risk and to various channels for contagion and systemic risk across the financial sector.

Given the foregoing, the more important question for policymakers to focus on, with regard to accounting standards and systemic risk, is this:

- How can FVA and HCA, and the financial information that *both* methods generate, be improved to better protect against systemic risk to the banking sector in the future?

In answering the question, it is important to consider what kinds of changes in institutional practice, accounting standards, and prudential oversight might support improved protection against systemic risk. The ultimate challenge is to identify reasonable prospects for reform along these lines, recognizing the implicit trade-off with any increase in costs to the private sector associated with more burdensome accounting or regulatory requirements.

Based on our review and research on these issues, we suggest several related avenues for policymakers to explore, each reflecting a potential direction for reform. We offer these as broad options for policymakers and standard-setters to consider, rather than as formal recommendations. In particular, the costs and benefits associated with any of these options would need to be assessed in detail and would likely depend on fine points of implementation beyond the scope of our current study. Regardless, the options that follow illustrate a range of leverage points that could be tapped in the future, in efforts to strengthen accounting practice and standards under both FVA and HCA while reducing related risks to the financial system.

Governance

- *Policymakers should consider new steps to strengthen institutional governance and control mechanisms that in turn support higher-quality FVA and HCA practices within financial firms.* The fidelity of accounting information is unlikely to exceed the quality of whatever

institutional process generates it. Stronger regulatory guidance and oversight protecting the integrity of the valuation process, and of the management and corporate governance framework that supports it, could help to improve the quality of both FVA and HCA information, and thereby safeguard against risk accumulation and contagion among financial firms.

- *Policymakers could strengthen FVA and HCA approaches to valuation by improving audit oversight in connection with both approaches.* To the extent that auditors face significant challenges in providing rigorous oversight for mark-to-model valuations under FVA, and for the evaluation of other-than-temporary impairments under HCA, policymakers ought to consider ways to strengthen and better support auditors in performing that oversight.

Standard Setting

- *Policymakers should consider tightening generally accepted accounting principles (GAAP) standards in connection with both FVA and HCA, to improve the quality of information provided about the impact of liquidity pricing on each valuation approach.* Given that problems with the two approaches tend to arise in the context of liquidity pricing and in accounting for other-than-temporary impairment, it follows that more explicit guidelines for dealing with these problems under the standards might be helpful in producing more consistent financial disclosures.
- *Policymakers should clarify whether financial statements truly are required to disclose sufficient detail about FVA mechanics to allow users of financial statements to reconstruct and assess the details of valuation models for themselves.* Current GAAP standards under ASC 820² do seem to require this level of disclosure in connection with mark-to-model valuations and level 3 inputs,³ but a cursory review of actual fair value disclosures in bank financial statements makes it far less clear what's actually required in practice here.
- *Policymakers should consider developing or adding metrics of valuation robustness to augment standard financial disclosures under GAAP.* One way to build on existing FVA and HCA disclosures in financial statements would be to develop better metrics to rate the quality of valuation processes and the data that flow from them. Existing value-at-risk (VaR) based calculations offer one possible avenue for such metrics, by seeking to quantify the magnitude of observable variation around a point estimate of fair value for an asset portfolio. Complementary metrics might be developed to focus on the quality of the institutional controls and governance that support the valuation process, or on the quality and recency of any reference market prices used in FVA.
- *Policymakers and standard-setters should consider adding disclosure requirements to address situations in which market power and other forms of price endogeneity are likely to influence FVA observed market values.* In particular, when the holder of an asset has concentrated ownership and faces a thin market for selling it, then the holder's own choices about

² ASC 820 refers to a May 2011 update of the Financial Accounting Standards Board's Accounting Standards Codification titled "Fair Value Measurement" (FASB, 2011).

³ "Level 3 inputs" are unobservable inputs that correspond to assumptions made by a reporting institution, concerning the assumptions that market participants would use in pricing an asset. See discussion in appendix on the hierarchy of inputs to fair value measurement, as specified in GAAP per ASC 820.

whether or not to sell may substantially affect both the supply and market price of the asset.

Prudential Regulation

- *Regulators should consider, when strengthening regulatory capital requirements, the potential for perverse asset valuation and institutional governance effects.* The aim in strengthening institutional capital requirements (as under Basel III⁴) is typically to help make banks stronger and more resilient to shocks. For that aim to be met, however, banks actually need to fulfill the more rigorous requirements. To the extent that asset valuation practices are unreliable, opaque, and/or subject to distortion, then it may be difficult for outsiders to know how well the strengthened requirements are truly being met.
- *Regulators should evaluate whether asset risk-weighting in bank capital requirements has the potential to contribute to perverse risk effects and contagion, in connection with FVA.* One area for concern in systemic oversight is the possibility that risk-weighting of assets might sometimes create an incentive for banks to preferentially liquidate an asset valued with FVA over alternative categories of non-FVA assets, at a time when doing so magnifies the likelihood of procyclicality, erosion in asset value, and spreading weakness to the regulatory capital of other institutions.
- *Prudential regulators should consider playing a more prominent role in vetting asset valuation practice at large institutions.* The prudential regulators are a key stakeholder group in using FVA and HCA information for risk oversight, and they also occupy a unique position in having influence over, and visibility into, multiple financial institutions at the same time. As illustrated by the 2009 Supervisory Capital Assessment Program, regulatory oversight can be used to investigate and help buttress the fidelity of valuation across institutions, while imposing some common baseline assumptions on related practice.

⁴ Basel III is a global, voluntary regulatory standard on bank capital adequacy. See Basel Committee on Banking Supervision (2010).