

## Chapter 22\*

### Market Illiquidity and Fair Value Measurement

#### Background

In terms of the measurement basis for banks' financial instruments, we believe that fair value is preferable to amortized cost, even when the relevant markets are illiquid and systemic risk is a concern.<sup>†</sup> Amortized cost accounting suppresses the timely reporting of some or all unrealized gains and losses. It thereby reduces firms' need and/or incentives for voluntary disclosure, for the simple reason that there is little or nothing for firms to explain about amortized costs. This suppression of information prolongs price and resource-allocation adjustment processes; the efficiency of these processes is always important, but it is absolutely critical in working through economic crises. We also argue that market illiquidity raises practical problems for estimating fair values that those who set accounting standard should address through expanded disclosures about firms' use of internal models and unobservable inputs to estimate fair value, and about the portion of unrealized fair value gains and losses that result from market illiquidity. In April 2009, the Financial Accounting Standards Board (FASB) required some additional disclosures along these lines.

Financial Accounting Standards (FAS) 157 defines fair value as exit value -- the value a firm would receive from selling an asset or would pay to retire a liability in an orderly transaction at the measurement date. FASB Staff Position (FSP) FAS 157-3 requires the measurement of exit value for an illiquid financial instrument to incorporate a discount rate premium for illiquidity to the limited extent that the terms of trade of hypothetical orderly transactions in the instruments would incorporate such a premium. Intuitively, exit value incorporates discount rate premia for illiquidity only to the extent that market illiquidity enables willing buyers to demand and receive better terms from willing sellers.

As a consequence of this limited incorporation of discount rate premia, the exit value of an illiquid financial asset occupies a hypothetical middle ground between what a firm will receive if it must or chooses to sell the asset (i.e., a fire-sale value) and the value a firm will receive if it holds the asset through the recovery of market illiquidity or maturity, whichever comes first. (We refer to this value as "fulfillment value" and to this holding period as the "liquidity horizon".) This hypothetical middle ground does not correspond either to the transactions that actually occur in currently illiquid financial instruments, whether through immediate fire sales or through orderly transactions at the liquidity horizon. It also does not capture the fact that transactions will not occur when the relevant markets are so illiquid that buyers and sellers cannot agree upon terms of trade.

Many parties have criticized exit value accounting as requiring firms to mark illiquid assets down to fire-sale prices. This criticism reflects an incorrect interpretation of FAS 157 and FSP

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\* Working group: Stephen Ryan, Joshua Ronen

<sup>†</sup> "Fair Value Accounting: Policy Issues Raised by the Credit Crunch," Stephen Ryan, Chapter 9 of *Restoring Financial Stability: How to Repair a Failed System*, Viral V. Acharya and Matthew Richardson editors, John Wiley & Sons, Hoboken, N.J., 2009. The executive summary of this Stern White Paper is available online at <http://whitepapers.stern.nyu.edu/summaries/ch09.html>

FAS 157-3, as already noted. This criticism may accurately reflect auditors' incentives to pressure reporting firms to rely on observable transaction prices, even when those transactions are partly or wholly forced, however.

Some have correctly criticized exit value accounting as requiring firms to mark illiquid financial instruments to a value below fulfillment value, even when they have the ability and intent to hold the instruments through the liquidity horizon. These parties typically suggest that firms with this ability and intent should record the financial instruments at fulfillment value or, more reasonably, at a weighted-average of fulfillment value and fire-sale value, with the weights reflecting the probability that the firm holds the instruments through the liquidity horizon versus sells them before then. We refer to this weighted-average valuation as discounted cash flows.

## **The Issues**

There are two key issues: determining the preferable measurement basis for illiquid financial instruments for the purpose of accounting recognition – exit value or discounted cash flows; and whether firms should be required to disclose the differences between exit value and discounted cash flows for their illiquid financial instruments.

Resolving the first issue requires accounting standard setters to make trade-offs, because the two alternative measurement bases for financial instruments exhibit different strengths and weaknesses when the relevant markets are illiquid. These trade-offs exist because illiquidity risk pertains to breakdowns in market functioning. Unlike the realizations of other (e.g., interest rate, prepayment and credit) risks in liquid markets, the realization of market illiquidity makes a firm's intent and ability to hold a financial instrument through the liquidity horizon economically significant, because the firm cannot sell a financial instrument and acquire an identical instrument without sizable cost. In other words, the opportunity cost to a firm of holding a financial instrument through a realization of market illiquidity depends on whether the firm is willing and able to hold the instrument through the liquidity horizon.

Exit value has three related main strengths compared with the discounted cash flows measurement. First, in principle at least, the use of exit value yields identical valuations for identical financial instruments held by different firms; that is, it is more a market-specific and less a firm-specific measure than is discounted cash flows. Second, exit value does not incorporate firms' unobservable and changeable abilities and intents, and so it is a more verifiable measure. Third, by incorporating some discount rate premium for illiquid financial instruments, exit value diminishes banks' incentive to acquire illiquid instruments instead of otherwise similar liquid instruments compared with a discounted cash flow measure that incorporates a sufficiently high probability of holding the instrument through the liquidity horizon. The main weakness of exit value is that it does not reflect the economic significance of the firm's intent and ability to hold a financial instrument through the liquidity horizon. Discounted cash flows has the opposite strengths and weaknesses of exit value.

Valid arguments can be made on both sides as to whether exit value is preferable to discounted cash flows for the purposes of accounting recognition for illiquid financial instruments. Some favor exit value because of its superior comparability across firms, verifiability, and incentive properties regarding the acquisition of illiquid financial instruments. Others prefer discounted cash flows because of its greater relevance for firms with the ability and

intent to hold financial instruments through the liquidity horizon and because it provides management with the flexibility to signal that intent and possibly other private information. In either case, both measurements are preferable to amortized cost.

The difference between exit value and discounted cash flows is critical information that should be disclosed, regardless of whether the exit value or discounted cash flows method is used. This difference would be of particular relevance to bank regulators in evaluating whether a bank holding illiquid financial instruments likely will be solvent as of the cessation of market illiquidity.

### **Recommendation**

Although reasonable arguments can be made to support the use of either exit value or discounted cash flows, both measurements are superior to amortized cost, which suppresses the timely reporting of some or all unrealized gains and losses. Accounting standards setters will need to make trade-offs, as the two alternative measurement bases offer different strengths and weaknesses when the relevant markets are illiquid. Moreover, firms should be required to provide full disclosure of the difference between exit value and discounted cash flows for their illiquid financial instruments, as this information is relevant to bank regulators.

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<sup>i</sup> Braunstein and Welch (2002), Federal Reserve Bulletin, 2002.

<sup>ii</sup> Senate Committee on Banking, Housing, and Urban Affairs, Chairman Christopher Dodd (D-CT), “Summary: Restoring American Financial Stability – Discussion Draft,” November 10, 2009.

<sup>iii</sup> <http://www.ftc.gov/bcp/bcpfp.shtm>, December 3, 2009.