
The Mark-to-Market Controversy and the Valuation of Financial Institutions

Edwin T. Burton

Professor of Economics

University of Virginia

Charlottesville, Virginia

The debate about what the rules should be that determine asset valuations on corporate balance sheets has come to be known as the “mark-to-market” controversy. Some argue that companies should be able to carry assets at whatever values they want so long as they can defend that valuation in some manner. Others argue that companies should be required as a matter of law to carry assets at valuations found in the marketplace. Because marketplace valuations of assets that are intended to be held as long-term investments often arise in a “fire sale” (distress sale), companies argue that they should not have to value their assets at these temporarily depressed levels. The companies argue that they may have no intention or need to sell these assets quickly, so why value the assets as if they did? Who is right, and does it matter? This article is an effort to shed some light on this controversy and to raise some surprising new issues that, so far, have not surfaced in this discussion and that have great importance for the valuation of financial institutions.

Background

A company with a negative net worth can survive and prosper in a modern economy. Indeed, most private companies have negligible or even negative net worth, mostly because of rationally responding to the income tax environment. So, if a company can thrive with negative net worth, why do accounting policies regarding asset valuations—where the object is to ascertain the net worth of the company—matter? The answer is that under normal circumstances, they do not matter all that much. Earnings and the prospects for the future growth of earnings matter more. But when concerns mount about the viability of a company’s business model, then net worth does matter; and it may be all that matters. The financial crisis that surfaced in mid-2007 turned a spotlight on the accounting practices of financial services firms. In September 2007, markets eagerly awaited the third-quarter earnings releases of Lehman Brothers and Goldman Sachs to glean some understanding of the quality of the assets of those two investment banks. With the crash of the subprime lending market and the closing of the asset-backed securities market, investors wanted to know how much exposure the investment banks had to the plunging values of mortgage-related securities. Interestingly, both Lehman’s and Goldman Sachs’ earnings reports had asset write-downs and liability write-downs. Why liability write-downs?

Lehman and Goldman Sachs argued that the liability write-downs, taken in September 2007, reflected the fact that some of their liabilities were hedges against assets. As the assets were written down, the liabilities needed to be written down as well; otherwise, a hedged position would show a loss that really was not a loss. It was not obvious at the time, or even now, that these liability write-downs were appropriate because the assets that offset the liabilities may not have been “good” hedges. The details were not available to make this determination, but the very fact of the liability write-downs raised some important accounting and economic issues. When are liability write-downs appropriate? Obviously, if you no longer owe someone through some fortuitous event, then the write-down is appropriate. But can you write down one of your liabilities because your own financial situation has weakened and there is doubt in the marketplace about whether or not you will honor your liability?

Surprisingly, the answer to this question is not obvious. If you owe me money and I write down the debt on my balance sheet, do you still owe it? If I write my loan to you down by 50 percent, can you do the same on your balance sheet to the liability? What happens to the aggregate balance sheet of the economy (in this case, consisting of just you and me) if you do not? These considerations suggest that the issue of mark-to-market accounting may be more difficult than it seems at first glance.

Some might be thinking: Why does this matter? It turns out to matter a great deal if the answer to the question being asked determines the viability of the financial system as a whole. These are the four conclusions I have drawn:

1. Treating the same asset as having a different value depending on which side of the balance sheet it is placed on (asymmetric write-downs) can lead to a seriously incorrect estimate of the financial health of the financial system as a whole. This I would call the “Roubini effect,” referring to New York University Professor Nouriel Roubini, who (as I will argue later) has erred by overestimating the damage done to the financial services sector by the crisis of 2007–2009.
2. Asymmetric write-downs can create a crisis of confidence in the short-term funding for a financial services company. It could be argued that asymmetric write-downs had much to do with the collapse of Bear Stearns and Lehman Brothers.
3. A correct solution is unlikely to involve more-liberal rules for writing down liabilities. It would be awkward, to say the least, if companies could generate earnings by announcing that they plan to be deadbeats in the future.
4. Whatever the correct solution may be, the principle of full and complete disclosure, although it creates serious problems for management of companies in crisis, should not be abandoned.

The Potential Mischief of Mark-to-Market Accounting

A simple thought experiment should clarify the issues here. Begin by considering the balance sheet for a greatly simplified financial services company, which I will call Company A, shown in Exhibit 1.

Exhibit 1. Company A's Balance Sheet

Assets	Liabilities
\$100 million (loan to Company B)	\$100 million (owed to Company B)
\$25 million (loan to business)	\$10 million (commercial paper outstanding)
Net Worth: \$15 million	

Note that Company A's balance sheet indicates that Companies A and B have offsetting \$100 million loans to each other. If one assumes that the interest rate is identical on these two loans, the entire operating earnings of Company A will depend on the income generated by the \$25 million loan to business less the interest expense of the \$10 million in outstanding commercial paper. The actual reported earnings, as distinct from operating earnings, will be affected by how the \$100 million loan to Company B and the \$100 million loan from Company B are valued. At first glance, one might wonder how these two loans could have different values. But, in fact, these loans can, in principle, have different values on the balance sheet that will affect not only reported earnings (after write-downs or asset revaluations) but also reported net worth.

More ominously, there is a potential mismatch in the term structure of assets and liabilities in this simple example that is characteristic of a financial services firm. The \$25 million in loan to business may be a three-, four-, or five-year loan, whereas the commercial paper outstanding may come due after 90 days. Normally, this mismatch is not that big of an issue, although if short-term commercial paper rates increase dramatically, both operating earnings and net worth can be affected negatively. One would expect Company A to be able to either weather this storm through the interest rate swap market if necessary or simply tough it out and absorb losses for a time period until a new loan to business can be put in place that reflect the higher rate environment.

But there is a scarier scenario for Company A as the world discovered in the financial crisis of 2008 with the saga of Bear Stearns, Lehman, Fannie Mae, Freddie Mac, AIG, and others.

Imagine that Company A's auditor has become nervous about the ability of Company B to make the interest payments on the loan that Company A has made to Company B. Perhaps a similar loan has traded somewhere at a price lower than full principal value (which in this case is \$100 million). So, Company A's auditor insists that Company A write down the value of the loan from Company B.

Reducing the value of the loan from Company B to 90 from par (to \$90 million from \$100 million) will reduce net worth by \$10 million, slashing net worth by two-thirds. The commercial paper market will notice this change. As the auditor continues to push Company A to reduce its balance sheet valuation of the loan from Company B, it will not be long before net worth is perilously close to zero or even negative. Reported earnings will be crushed and will turn negative, even though the loan from Company B continues to perform—interest payments continue to arrive on time. Thus, operating earnings are unimpaired, but reported earnings collapse and turn negative.

The nightmare scenario now arises when the commercial paper market closes for Company A. Imagine that buyers of commercial paper refuse to buy any more commercial paper when the current 90-day funding comes due. This situation creates a liquidity crisis for Company A and, absent a bailout, will lead to bankruptcy for Company A. This scenario is essentially a classic “run on the bank,” triggered by a crisis in confidence that is induced by a deteriorating balance sheet. All of this happens even though operating earnings are unaffected. Had the auditor left well enough alone, perhaps Company A would have prospered and the commercial paper market would have provided funding without interruption.

Of course, the idea behind the markdown of assets, insisted upon by the auditor, is that sooner or later the deterioration in the value of the loan from Company B will translate into nonperformance. But in the real world, the nonperformance may never take place. So, ironically, the company’s operating earnings could be doing fine, but reported earnings can collapse and bankruptcy could easily result if there is a funding mismatch.

Consider now the balance sheet of Company B, shown in **Exhibit 2**. Assume that Company B is simply a mirror image of Company A and that the entire financial sector is composed solely of Companies A and B.

Exhibit 2. Company B’s Balance Sheet

Assets	Liabilities
\$100 million (loan to Company A)	\$100 million (owed to Company A)
\$25 million (loan to business)	\$10 million (commercial paper outstanding)
Net Worth: \$15 million	

Imagine that the auditors for these companies, looking at the debt assets, insist that the companies “write down” the asset values from \$100 million to \$80 million because somewhere the price of 80 cents on the dollar has been revealed for debt assets of this type. So, each company then writes down the assets to \$80 million, producing the balance sheets after revision shown in **Exhibit 3**.

Exhibit 3. Company A's and Company B's Balance Sheet

Assets	Liabilities
<i>Company A</i>	
\$80 million (loan to Company B)	\$100 million (owed to Company B)
\$25 million (loan to business)	\$10 million (commercial paper outstanding)
Net Worth: -\$5 million	
<i>Company B</i>	
\$80 million (loan to Company A)	\$100 million (owed to Company A)
\$25 million (loan to business)	\$10 million (commercial paper outstanding)
Net Worth: -\$5 million	

The aggregate value of the financial sector is -\$10 million because each firm now has a net worth of -\$5 million. Before the asset write-downs, the net worth of the financial sector was \$30 million. The \$40 million drop in the value of the financial sector is completely the result of the asset write-downs required by the auditors. Note that if Companies A and B merge (or merely agree to cancel their equal and offsetting obligations), the financial sector will have an immediate increase in value of \$40 million, although nothing of substance really has taken place.

If this were the end of it, then the mark to market might still not matter much, but if the commercial paper market closes for both Company A and Company B, then the entire financial system will be bankrupt and both Company A and Company B will fail. This is a strange result but not that far removed in spirit from much of what took place in late 2008 as the financial crisis reached a climax. It is also worth noting that adjusting asset values asymmetrically may lead to problems for debt covenants and debt ratings, which can also snowball into financing problems for companies and lead to a crisis of confidence and a resultant cash crisis.

The financial sector as a whole cannot have a net value less than what would be ascribed to it if all debts internal to the financial sector were cancelled. Worth considering is the simple principle that a debt asset should have the same value to the debtor as it has to the creditor. This simple idea has important implications, and following it would have avoided the paradox of my example. (The paradox is that the disaggregation of the financial services industry into two essentially identical companies, A and B, creates the problem. When the companies are combined, the financial problem vanishes.)

When Roubini, the poster child prophet of doom for the 2007–08 financial crisis, argues that a \$3.7 trillion “hole” exists in the financial sector, he is using an analysis very similar to the one just given: He is writing down debt assets but not the liabilities that correspond to those assets. Doing so will tend to create a misleading valuation of the financial services sector as a whole because a substantial portion of the balance sheet assets of the financial sector are debt assets whose liability side is held somewhere else in the financial system.

The argument can be made that the financial media's focus (and the ensuing widespread public attention) on the asset write-downs in the financial sector without a consideration of the offsetting decreasing liability values created an unrealistically pessimistic view of the underlying strength of the U.S. financial system. This same asymmetric view of debt assets permeated the analyses of other financial systems globally. Things were very likely never as bad as some thought, particularly those who focused only on the asset revaluations on the financial sector balance sheets. If this argument is valid and has empirical significance, something that cannot be decided here, then the heroic policy measures adopted in late 2008, with their attendant costs, may well have been unwarranted. The risk to the financial system, or "systemic" risk, may well have been substantially less than policymakers assumed at the time. That is not to say that bankruptcies would not have occurred in major financial institutions. They would have occurred. But the systemic impact of such bankruptcies would have been far less than most believed then or believe now.

Why Is a Financial Institution Different?

The balance sheet of a financial institution is very different from the balance sheet of a nonfinancial company. The assets of financial institutions are predominantly debt assets, and the liabilities are mostly, by definition, debt assets, actual or implied. It might be argued that *the dominance of debt assets on the balance sheet of financial institutions is one way of defining a financial institution*. For the purposes here, a debt asset is an obligation by one party to pay fixed payments at specific dates to another party. The party that receives payments, usually referred to as the creditor, owns the debt asset. The party that owes the payments is the debtor. Obviously, some assets do not meet this strict definition and yet routinely show up as assets and liabilities of financial institutions. But the bulk of debt assets will fit this definition, and I will use this definition in what follows.

So, what about debt assets? How are debt assets different from other assets, and why does it matter? When is an asset not a debt asset? Imagine you own an oil well. Your asset consists of reserves of oil waiting to be produced and sold. If that asset is suddenly destroyed and you have no insurance, then the asset is now worth zero and your net worth is reduced accordingly. Other than the drop in your assets and net worth, there are no other accounting entries required in the economy to reflect the loss of the oil well. But debt assets are different.

If you own a corporate bond and it is suddenly worthless, then your assets and net worth are suddenly lower by the amount of the loss in value of the corporate bond. But somewhere in the economy there is another accounting adjustment to be made. Someone had a monetary obligation evidenced by the existence of that corporate bond. That obligation was represented by a liability on the part of the issuer of the corporate bond. If the corporate bond is truly worth zero, then that liability is now worth zero. Or is it?

Transparency and Corporate Accounting

The guiding principle of U.S. securities regulation is the concept of “full disclosure,” which translates into a demand for “transparency” by shareholder advocates. Transparency means, among other things, that accounting values should reflect current market values to the extent possible. After the passage of the Sarbanes–Oxley Act in 2002, the role of public company auditors shifted from service provider to regulator. Auditors began to exercise much more authority over the financial statements of their clients, and the Financial Accounting Standards Board (FASB) was crowned by the U.S. SEC as the rule maker for the auditing industry. The auditors could not defy FASB, and as a practical matter, public companies could not defy their auditors in this new regime.

The post–Sarbanes–Oxley demand for more transparency and the elevation of the role of auditors as the watchdog meant that there would eventually be a struggle over balance sheet asset valuations. Whenever an economic downturn arrived, an argument would be made, sure to be advanced by auditors, that balance sheet assets were not as strong as they had been earlier during more prosperous times.

On the one hand, companies would naturally resist this interpretation because of what happens when a company lowers the value of the assets on its balance sheet. This process of “writing down” assets on the balance sheet does not generally play well in the financial marketplace and can lead to higher borrowing rates or in the extreme, a collapse in available funding for the company. On the other hand, ignoring declining asset values could be seriously misleading to present and future shareholders and a violation of the spirit and letter of the disclosure requirements of securities laws.

If assets are impaired, meaning that earnings have been adversely affected, then it is pretty clear that asset write-downs are appropriate. A different set of considerations arises if there is an expectation, shrouded in uncertainty, that assets *may* become impaired in the future. Should these more “gray-area” valuation considerations lead to write-downs? Suppose an asset is still performing in the sense that current earnings from the asset are unchanged. Should that asset be written down because an apparently similar asset has traded at a price lower than that at which the asset is currently carried on the balance sheet? What if that lower price is a fire-sale price and not the price that a lengthy and serious sales process might produce? What if the apparently similar asset is not all that similar? None of these questions has an easy answer.

And what about the valuation of liabilities? If you have a corporate bond outstanding and it is trading at 50 cents on the dollar, should you be able to write that bond down to 50 and take income into the current quarter from that write-down? If that bond is owned by another company, the other company will be forced to take the write-down through mark to market. Why can't the debtor value the debt the same as the creditor? If a company repurchases outstanding corporate bonds for

50 cents on the dollar, it can, under current accounting rules, take that difference between 50 and par as income. Shouldn't it be able to take that same income without buying back the corporate bond, assuming 50 cents is the true market price? It is difficult to see why you have to actually buy the bond to show the income.

The problem, of course, is that if writing down liabilities creates current income, then companies may well use that expedient as a method of managing earnings in difficult times. Showing improved earnings because the company does not plan to meet future obligations is a bizarre form of transparency. It seems clear that liability write-downs of this type would tend to be more misleading than helpful to present and potential shareholders. So, expanding the use of liability write-downs is probably not the direction that disclosure rules should move in.

But there is still the problem of the Company A/Company B example. Cancelling the debt or merging the companies creates immediate, substantial value for no economic reason. That is not a very comforting result or a ringing endorsement of the current accounting rules.

What Is the Right Way to Mark Assets?

The right answer to this question may depend on the purpose of the inquiry. If a given company chooses to leave assets at values higher than those at which similar assets are currently valued in the marketplace, then, at the very least, the financial statements of the company should be footnoted to show where these assets are valued in the marketplace and the rationale for not reducing their values should be described. Full disclosure should not be a casualty of the mark-to-market controversy resolution.

But the principles that should apply to reporting balance sheet quantities for an individual company might not be appropriate when considering an aggregation of companies. For the analysis of systemic risk, it seems clear that a given asset should be treated as having the same value whether it is an asset or a liability. In practice, this means that such analysts as Roubini would be well advised to adjust the aggregate balance sheet exercises that they perform by decreasing system liabilities to the extent of the asset write-downs where it can be determined that identical debt assets may be involved. That would extend double-entry accounting principles to the problem of systemic risk and allow for more reasonable estimates of the system's fragilities.

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