

A Tale of Two Markets

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It is the best of times, it is the worst of times. For those with deep pockets and access to financing in public markets, times are good. Landlords are more than willing to negotiate favorable terms and offer a host of concessions to key tenants. Lenders are jumping over each other to finance properties with \$50 million loans, provided that the loan to value and debt coverage ratios are conservative.

For those not in this enviable position, however, getting mortgages on commercial properties can be an uphill battle. Even if a loan has a low loan to value ratio and a high debt coverage ratio, The lenders might not be in a position to make the loan.

Much of this stems from the decision of the Financial Accounting Standards Board, on April 3, 2009, to give companies additional discretion in deciding whether a particular asset was distressed. [As we reported at the time](#), the result was that companies were not required to use price quotes or professional opinions to determine the fair value of their assets but were instead permitted to rely on unsupported assumptions. Because of this, many banks are having trouble meeting the regulatory requirements for their capital adequacy ratio. In order to demonstrate exactly how this works, we'll have to explain the capital adequacy ratio in some detail.



The capital adequacy ratio is a variation on the more commonly understood equity to total assets ratio, or simply equity ratio. This is a balance sheet ratio that serves as an indication of the amount of leverage that a company has. In order to illustrate it, we begin with the basic components of a balance sheet, as presented in Table 1.

Table 1: Basic Balance Sheet

Assets	Liabilities
	<u>Equity</u>
Total Assets	Total Liabilities & Equity

In order to derive the equity ratio, we simply divide the *Equity* by the *Total Assets*. This gives us an indication of how highly leveraged the company that we are analyzing is. The lower this ratio, the higher the leverage and the more risky an investment in the company would be.

The capital adequacy ratio introduces two twists to this basic ratio and uses different terms to describe certain portions of the balance sheet. In place of equity, the capital adequacy ratio uses the term capital. Capital is also divided into two classes: Tier 1 capital and Tier 2 capital. Tier 1 capital includes common stock, retained earnings, and noncumulative preferred stock. Tier 2 capital includes allowances for loan and lease losses, convertible preferred stock, and various other forms of equity.

The treatment of the assets side of the balance sheet is more complex. All of items are risk-weighted, meaning that less weight is given to assets considered less risky and more weight is given to those considered more risky. There are four risk weight categories: 0%, 20%, 50%, and 100%. The regulator multiplies the assets in each of these categories the appropriate percentages in order to arrive at the risk weighted assets. The balance sheet that results from these modifications is illustrated in Table 2.

Table 2: Bank's Balance Sheet

Assets		Liabilities & Capital
Assets		Liabilities
0% Risk Class Assets (0.00) =	0% Weighted Assets	Capital
20% Risk Class Assets (0.20) =	20% Weighted Assets	Tier 1 Capital
50% Risk Class Assets (0.50) =	50% Weighted Assets	Tier 2 Capital
<u>100% Risk Class Assets (1.00) =</u>	<u>100% Weighted Assets</u>	<u>Total Capital</u>
Total Assets	Total Weighted Assets	Total Liabilities & Capital

We can now compute our capital adequacy ratio, which is *Total Capital* divided by *Total Weighted Assets*. The ratio on tier 1 assets is *Tier 1 Assets* divided by *Total Weighted Assets*. Banks are expected to maintain capital adequacy ratios of at least 8% on total assets and 4% on tier 1 assets. These ratios will increase as the numerator, the amount of capital (which, remember, is their term for equity), increases and will decrease as the denominator, the total weighted assets, increase.

So how does the capital adequacy ratio influence a bank's ability to lend? On the capital side, increases in the stock price or newly issued stock will increase the ability of the bank to lend, while declining stock prices will impede this ability. Increases in loan loss reserves can also increase tier 2 capital, although this is limited to 1.25% of risk-weighted assets. The stock prices of most banks are higher than they were a year ago, so the capital element of the equation doesn't have much influence on the capital adequacy ratio.

More important is the total weighted assets. Assets are weighted based on their perceived level of risk. U.S. government securities are perceived as having the lowest risk and have a weighting of 0%, whereas commercial real estate loans are considered more risky and carry a weight of 100%. To see how this influences bank lending, we'll take an example of a bank that has \$100,000 in each of the following assets: U.S. government securities (0% weight), U.S. government sponsored agency securities (20% weight), first mortgage loans on single-family residences (50% weight), first mortgage loans on multifamily residential properties (50% weight), and commercial real estate (100% weight). This scenario is illustrated in Table 3.

Table 3: Weighted Assets, Base Case Scenario

	Weight	Assets	Weighted Assets
0% Weight			
U.S. Government Securities	0.0%	\$ 100,000	\$ -
20% Weight			
U.S. Government sponsored agency securities	20.0%	100,000	20,000
50% Weight			
First mortgage loans on single-family residences	50.0%	100,000	50,000
First mortgage loans on multifamily residential properties	50.0%	100,000	50,000
100% Risk			
Commercial real estate	100.0%	<u>100,000</u>	<u>100,000</u>
Total		\$ 500,000	\$ 220,000

If this bank has total tier 1 and tier 2 capital of \$17,600, it has a capital adequacy ratio of $(17,600 \div 220,000 =) 8.0\%$. It can continue to invest in U.S. government securities because these don't carry any weighting in this formula but it can't invest in any other assets. This explains why banks have been investing heavily in government securities recently.

We can now look at what would have happened if the bank had written down its assets to market value using price quotes or professional opinions instead of keeping them at book value based on unsupported assumptions. According to the [Hussman Funds Weekly Market Comment for April 12](#):

To a large degree, the idea that there was "no market" for troubled assets was false even at the time. Last year, Dean Baker of the well-regarded Center for Economic Policy Research (CEPR) testified before Congress, observing "There has been considerable confusion about the nature of the troubled assets held by the banks. While banks do hold some amount of mortgage-backed securities, these securities are in fact a relatively small portion of their troubled assets. The troubled assets on the banks' books are overwhelmingly mortgages, both first and second or other junior liens, not mortgage-backed securities. The FDIC has acquired large quantities of mortgages from its takeover of several dozen failed banks over the last year. It auctions these assets off on an ongoing basis. The results of these auctions are available on the FDIC website. Non-performing mortgages typically sell in these auctions at prices in the vicinity of 30 cents on the dollar."

If, for the sake of simplicity, we assume that all of our example bank's mortgages are non-performing, the resulting total weighted assets would be only \$80,000, as illustrated in Table 4. The resulting capital adequacy ratio is $(\$17,600 \div \$80,000 =) 22.0\%$.

Table 4: Weighted Assets, Distressed Assets Written Down

	Weight	Assets	Weighted Assets
0% Weight			
U.S. Government Securities	0.0%	\$ 100,000	\$ -
20% Weight			
U.S. Government sponsored agency securities	20.0%	100,000	20,000
50% Weight			
First mortgage loans on single-family residences	50.0%	30,000	15,000
First mortgage loans on multifamily residential properties	50.0%	30,000	15,000
100% Risk			
Commercial real estate	100.0%	<u>30,000</u>	<u>30,000</u>
Total		\$ 290,000	\$ 80,000

The bank now has the ability to invest an additional \$140,000 in commercial real estate mortgages or \$700,000 in mortgages on single-family or multifamily residences. These new mortgages would be tailored to serve current market conditions, not the unsustainable conditions that prevailed when the non-performing mortgages were originated.

From this presentation we can see precisely how the government and regulatory organizations have supported old mal-investments at the expense of new, financially feasible investments. You can only patch an old pair of pants so many times before they have to be replaced, and the seat of our economy is wearing thin. The only way that we'll see a sustained long-term economic recovery is if we liquidate old, bad investments and start investing in the future instead of the past.



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