



***Addressing the Credit Crisis
and Restructuring the
Financial Regulatory System:
Lessons from Japan***

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Thank you for inviting me to speak with you today. Allow me to begin with an observation: It is rarely good when bankers, and central bankers, are considered especially “newsworthy.” But the financial and economic turmoil of the past year and a half has banking and financial markets at the epicenter of current problems, and very much in the spotlight.

Two years ago, few saw the extent of the problems to come. Bank stock prices were at record highs, earnings forecasts were rosy, and bank capital seemed sufficient. Indeed, a striking aspect of this episode is the fact that many banks went into the current banking problems with unusually high capital ratios. As **Figure 1** shows, aggregate U.S. bank capital had grown significantly over the past two decades, as preparations for the Basel II Capital Accord and advances in banks' own internal modeling led banks, generally speaking, to become better capitalized.

However, in less than two years the banking environment has changed dramatically. Losses have mounted and a number of small and large banks here and abroad have required extensive government support, or were forced to close. Furthermore, banking problems are having macroeconomic consequences, as obtaining financing from banks and securities markets has become a more uncertain proposition for companies and individuals.

Today I want to discuss some lessons I have drawn from the Japanese experience in the 1990s, a topic I explored in depth with fellow researchers. Allow me to share at the outset two overarching questions that I think we must keep in mind. First, *how can we reduce the macroeconomic consequences of procyclical regulatory and accounting policies?* (By "procyclical" policies I mean those that magnify economic fluctuations). And second, *how can we more quickly remove problem assets to get banks and financial markets focused on future possibilities, rather than past problems?* Certainly my remarks today will not resolve these important questions, but they must remain in our sights.

Lessons from Japan's Experience

In the early 1990s, the prices of Japanese real estate and stocks experienced sharp declines. As is usually the case, losses in collateral values had a disproportionate impact on banks. But unlike their counterparts in the United States, many Japanese banks had extensive stock holdings, which compounded their problems as falling share prices coincided with loan losses and resulted in a significant shortage of bank capital.

But as bad as the initial problems were, the failure to quickly restore banks' financial health had serious consequences for the Japanese economy, which as you know experienced growth below potential for over a decade. There are several lessons – admittedly intertwined – that I take from my studies of this experience:

- *First, undercapitalized banks behave differently than well-capitalized banks.*
- *Second, certain bank-regulatory and accounting policies may amplify the business cycle.*
- *Third, troubled assets need to be moved off bank balance sheets as quickly as possible.*

Allow me to discuss each of these lessons in just a bit of detail.

First, empirical research suggests that undercapitalized banks behave differently than well-capitalized banks. Undercapitalized banks shift their attention to short-run capital preservation rather than long-run profit maximization, and this change in goals has several undesirable effects. Perhaps the most undesirable is that undercapitalized banks, finding it difficult to raise additional capital, are forced to improve their capital ratios by shrinking assets¹.

Banks hold capital in part to absorb loan losses that are in excess of loan-loss reserves, and seek to maintain a reasonable ratio of capital to assets. A reduction in the value of capital leads a bank to shrink the asset side of its balance sheet, to maintain the desired capital-to-assets ratio. Thus, since loans are usually the bank's most significant asset, lending becomes more restrictive.

Returning to the case of Japanese banks in the 1990s, they tended to shrink their assets abroad, in some cases pulling out of markets where their prospects were arguably better than their prospects from additional domestic loans². And, because undercapitalized banks seek to shrink without incurring additional losses, the specific form the asset shrinkage took could be perverse. For instance, some banks would support troubled borrowers in an effort to avoid loss recognition, while reducing credit to more creditworthy borrowers with whom the bank could curtail credit without incurring a loss³. In short, as the banks sought to preserve or shore up capital-to-assets ratios, they disposed of assets (indeed, the particularly salable ones) or declined to add new ones.

Additionally, undercapitalized banks have an incentive to postpone reserving for problem loans, to avoid further depleting capital. This is why loan loss provisioning often rises significantly as a result of an exam of an undercapitalized bank⁴.

Figure 2 shows that lending patterns in the United States differ depending on the financial condition of the banks. Banks with the lowest supervisory ratings have reduced their lending significantly more than have banks in better health. Empirical research suggests that during previous banking crises this behavior was, to an important degree, explained by differences in the ability to *supply* credit not just differences in the *demand* for credit⁵. Thus the

evidence from Japan and previous problems in the U.S. indicates that allowing poorly capitalized banks to continue operations with insufficient capital is likely to exacerbate problems with credit availability.

My second observation from Japan's experience, and the current banking problems in the U.S., is that certain bank-regulatory and accounting policies may amplify the business cycle – in other words, they are procyclical. During a downturn, assets that are pledged as collateral against bank loans decline in value. Of course, collateral value is only one procyclical driver⁶. Nonetheless, declining collateral values generally result in higher loss rates on non-performing loans. In terms of accounting, higher loss rates result in larger loan charge-offs and increases in loan loss reserves – which depletes capital and leads banks to reduce lending (the asset side of their balance sheet) in order to maintain capital-to-assets ratios.

One step that might make banking problems less procyclical would be to thoughtfully examine, and consider modifying, policies related to loan-loss reserves – specifically, how loan loss reserves are calculated for purposes of determining regulatory capital and for financial statements.

Under current policies, regulatory rules essentially follow U.S. generally-accepted accounting principles (GAAP) in determining an appropriate loan-loss reserve. U.S. GAAP accounting rules provide that a loan-loss reserve should reflect probable and estimable losses that have already been incurred in the loan portfolio, but have not yet been discovered. This is often referred to as the “incurred loss” model. The accounting profession often notes that these accounting rules were written in this way, in part, to inject more transparency into the reserve setting process and to address concerns about financial manipulation.

A criticism of the accountant's view is that as financial conditions deteriorate, loan loss reserves lag the increases in nonperforming loans and expected losses (see **Figure 3**). It can be argued that this is true because management failed to adequately assess changes in current loss estimates, or because reserve models are somewhat backward looking. In either case, it has been observed in previous periods of banking problems that loan-loss reserves were low at the beginning of the banking problems, lagged as problems became apparent, and likely to peak at the very time that we could most use bank capital to be at work financing economic recovery. Solutions to this predicament, which I will not expound on or argue for today, would do well to result in earlier loss recognition, more rapidly addressed problems, and indeed a curtailing of high-risk lending earlier in the cycle.

Again, my goal today is to point out some lessons we would all do well to consider and apply. Proposals to make reserving less procyclical will no doubt take different forms. To an economist's way of thinking, a reserve should not be limited to a view of a current period or snapshot in time, focusing on losses that are currently in the portfolio based on loans made previously – rather, *expected future losses* should also be considered. For example, if one anticipates that unemployment rates were to rise rapidly, a statistical calculation of expected losses looking through the cycle may be very different than the losses that are probable and estimable given current economic conditions⁷. This more comprehensive view of loan losses could lend itself to addressing some of the perceived shortfalls associated with the current accounting model.

Some of you, I am sure, are familiar with a variant from Spain which bears study; whereby “stress” losses are estimated and loan-loss reserves are built up during good times. The

promising aspect is that losses draw down the reserve rather than capital, so capital is much less sensitive to current economic conditions and thus there is less pressure to reduce lending during periods of financial difficulty.

I think there is a compelling argument for some form of action to address procyclicality through policy change. Whether that policy change should be addressed through accounting or regulatory rules is open to debate. Of course, any changes proposed for accounting rules must take pains to avoid inviting so-called “earnings management,” and should respect the needs of investors and other primary users of financial statements. In whatever form policy ultimately takes, both current losses in the portfolio as well as the “stress” losses would need to be disclosed, in a transparent and rules-based manner.

The third lesson I take from the Japanese experience is that troubled assets should be moved off bank balance sheets as quickly as possible. Banks with troubled assets focus on avoiding further losses and further depleting capital. Troubled banks in Japan were often more supportive of problem borrowers than borrowers who had good prospects going forward. Focusing on future growth requires removing the problem assets.

Furthermore, governments are not the best managers of bad assets. Removing bad assets and quickly selling to new owners are steps that are likely to get resources allocated to their best economic use. When a bank is closed with FDIC support, this is relatively straightforward. The bad assets are removed from the bank and quickly disposed of by the FDIC, and the good assets are sold to an acquirer. The new acquirer does not spend time focused on the problems of the past, but rather, focuses on maximizing future profitability. This is a reason for moving to resolve, as quickly as possible, banks that are clearly insolvent.

The problem becomes more difficult when the bad assets are in troubled, but not insolvent, banks. In this case, bank management becomes focused on the problem assets, and ways to avoid realizing losses that would threaten the solvency of the bank. The problem is particularly complicated during the current period, because of the intertwining of liquidity and credit problems in securities portfolios.

A good example of the potential *liquidity* problems is provided by securities backed by student loans that are 97 percent guaranteed by the government (see **Figure 4**). Currently there exist about \$250 billion in these securities, many of which are held by banks or bank-affiliated conduits. Despite the 97 percent guarantee, pricing services suggest prices below, and in some cases significantly below, 97 percent of face value. This discount suggests that sales of such assets are taking place by sellers who have no option but to sell – and suggests that given the financing and balance sheet constraints of most buyers, they will only purchase the asset for a price well below the level one would expect considering the government guarantee. Given the government guarantee, most of the discount in these securities seems to be the result of liquidity concerns.

For securities where the problem appears to be liquidity rather than credit concerns, there should be a role for purchasing these assets and reducing the liquidity premium. Consider the aforementioned securities backed by student loans, where liquidity concerns seem to be driving the steep discounts. If the securities were purchased at a more modest haircut relative to the government guarantee – say for 94 percent of face value – it would serve to significantly reduce the liquidity premium, allowing banks to use much higher marks in their investment portfolios, and thus improve their capital position while still purchasing the assets at a price below the

government guarantee. These, of course, are benefits they would realize if they could hold the security to maturity. With their capital position enhanced, the banks could do more to restore credit flows.

A more difficult issue relates to loans and securities that would be deeply discounted primarily because of *credit* concerns. For banks, selling such assets below their net recorded value, thus recognizing a loss, involves further depletion of capital. Incenting banks to remove these problem assets is likely to require more supervisory pressure to appropriately reserve against or write down those assets, and to take actions to quickly dispose of the assets.

Granted, this is not an unusual role for supervisors – frequently, written agreements and cease-and-desist orders require increasing reserves, improving risk and credit management, and expediting the removal of bad assets. In this case, moving more quickly to mandate reserving for and disposing of problem assets will speed recovery from current problems.

Conclusion

In sum, the Japanese experience of the 1990s highlights the fact that forbearance can have significant macroeconomic consequences. Troubled banks are reluctant to expand balance sheets or to address problems with troubled assets. I believe it would be desirable to move quickly to remove problem assets from bank balance sheets, so banks can once again focus on future prospects rather than past mistakes.

In the longer run, we need to explore ways to make banking problems less procyclical. Certainly an area worth further careful investigation is whether current loan-loss-reserving policies can be recast to encourage less procyclical behavior.

As I mentioned at the outset, it is not a good thing when bankers, and central bankers, are central to the news. However, we should use the attention and urgency of this moment to galvanize the hard thinking and hard work needed to remedy the current crisis, and put in place a framework that will help us avoid future crises, going forward.

Thank you.

NOTES:

¹ See the article I wrote with Joe Peek, "The International Transmission of Financial Shocks: The Case of Japan," in the *American Economic Review* vol. 87, no. 4 (September 1997), pages 495-505.

² See the article I wrote with Joe Peek, "Collateral Damage: Effects of the Japanese Bank Crisis on Real Activity in the United States," in the *American Economic Review*, vol. 90, no. 1 (March 2000), pages 30-45.

³ See the article I wrote with Joe Peek, "Unnatural Selection: Perverse Incentives and the Misallocation of Credit in Japan," the *American Economic Review*, vol. 95(4), September 2005, pages 1144-1166.

⁴ See the article I wrote with Joe Peek, "Bank regulation and the credit crunch," in the *Journal of Banking & Finance*, Volume 19, Issues 3-4, June 1995, pages 679-692.

⁵ See the article I wrote with Joe Peek, "Bank regulation and the credit crunch," in the *Journal of Banking & Finance*, Volume 19, Issues 3-4, June 1995, pages 679-692.

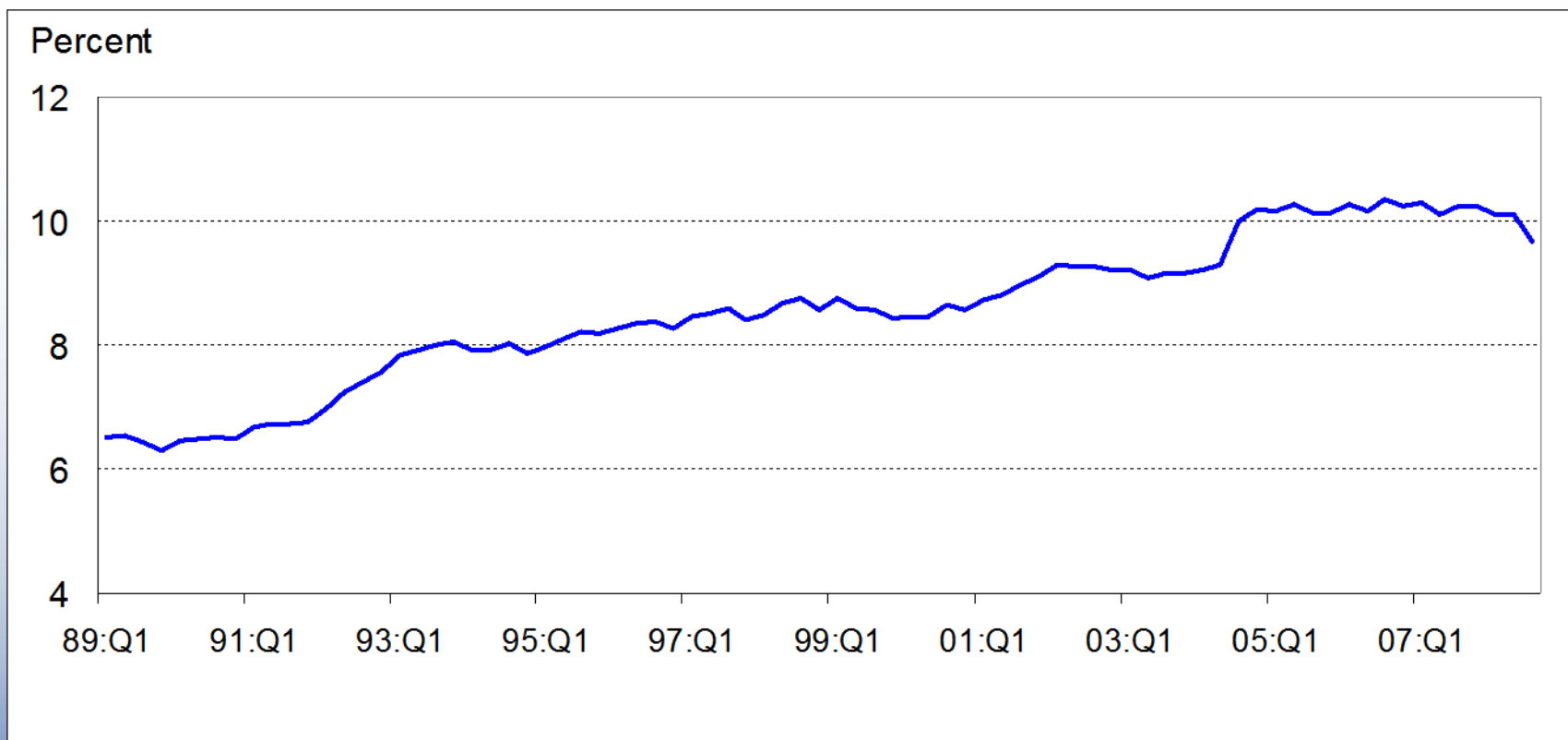
⁶ Joined by things like the increased likelihood, in a downturn, that the borrower will have difficulty repaying; a likely decline in the value of a bank's investment portfolio; and additional challenges in raising capital.

⁷ Current accounting conventions do not capture expected losses in the portfolio considering all available information – which would be the concept used by a statistician, a risk manager, or an economist to calculate expected losses.

Figure 1

Equity Capital to Assets Ratio at Commercial and Savings Banks

1989:Q1 – 2008:Q3

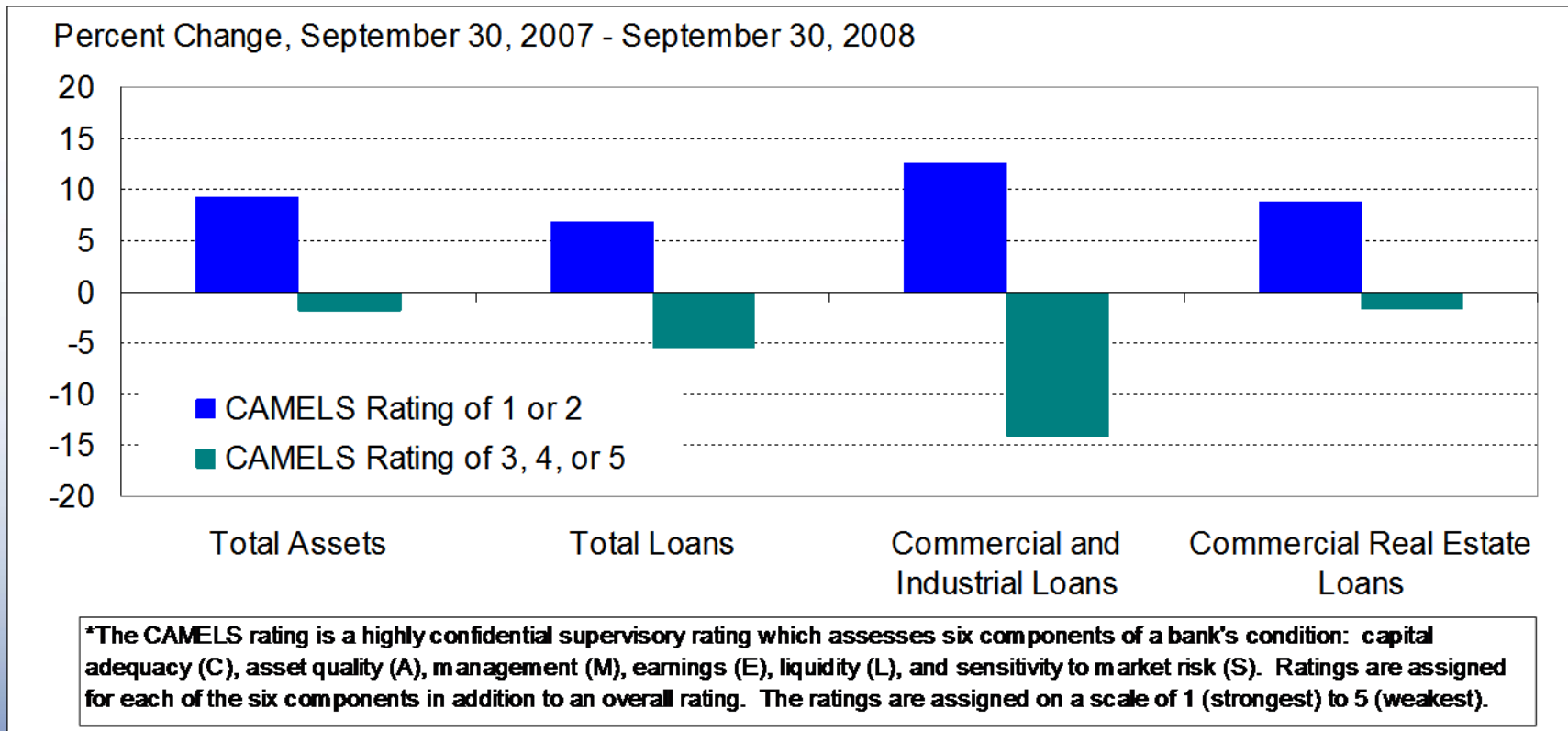


Source: Commercial and Savings Bank Call Reports.

Figure 2

Asset Growth at Commercial and Savings Banks by CAMELS Rating

September 30, 2007 – September 30, 2008



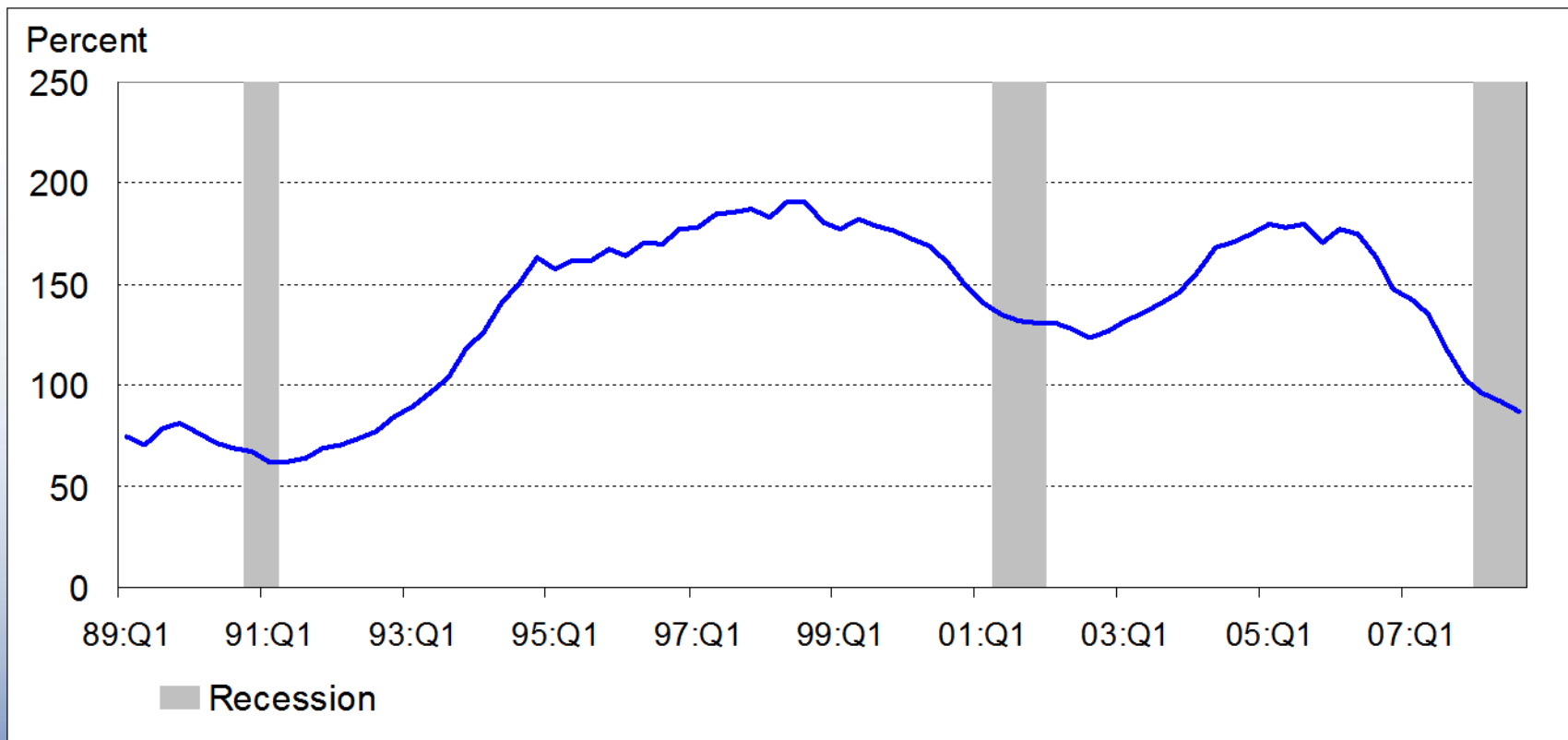
Source: Commercial and Savings Bank Call Reports and author's calculations.

Note: Analysis uses CAMELS ratings as of September 30, 2008. Banks in the analysis are merger-adjusted. De novos are excluded.

Figure 3

Coverage Ratio: Loan Loss Reserves Relative to Nonperforming Loans

1989:Q1 - 2008:Q3

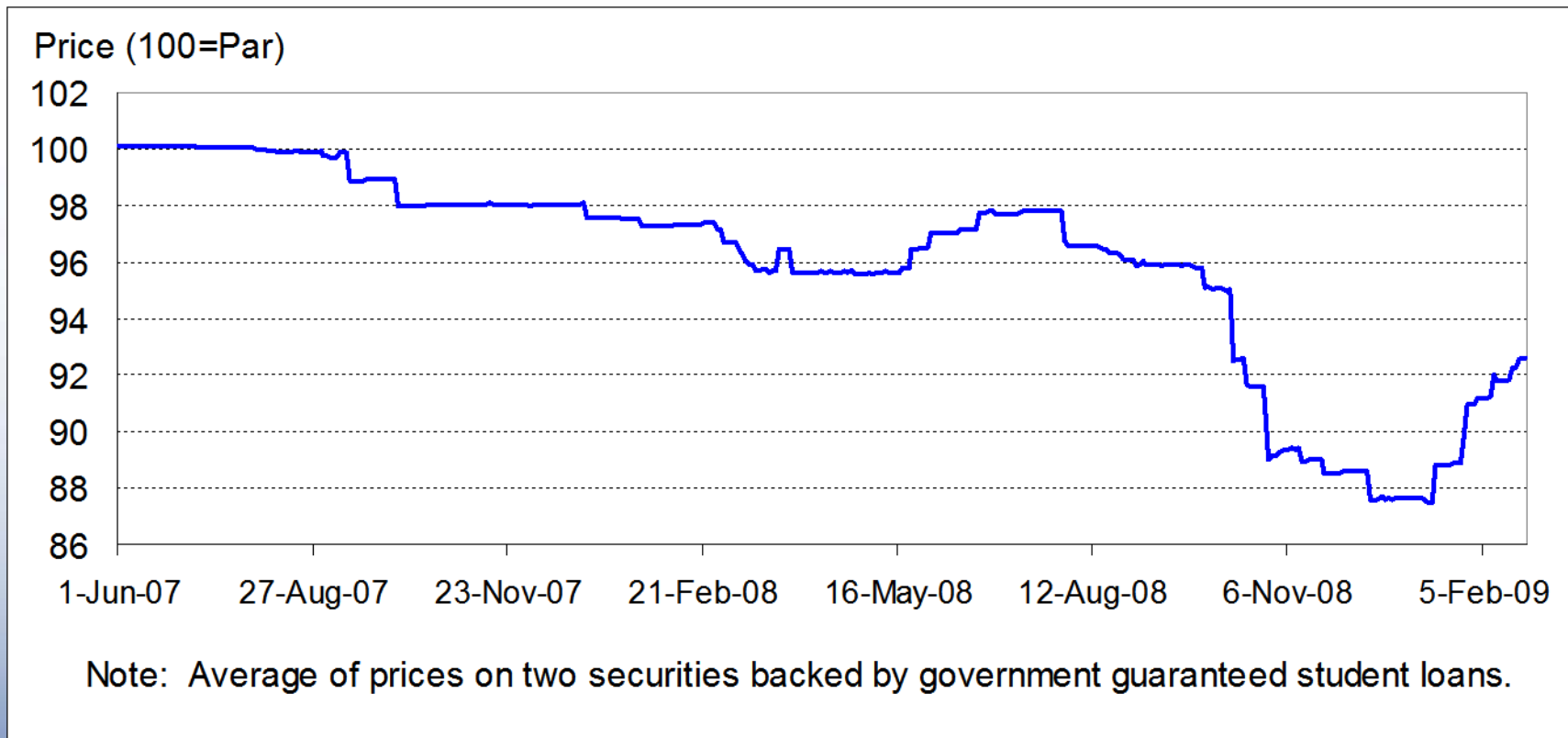


Source: Commercial and Savings Bank Call Reports.

Figure 4

Price on Securities Backed by Government Guaranteed Student Loans

June 1, 2007 - February 25, 2009



Source: Bloomberg.