

Banking Breakdown?



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Banking Breakdown?

Banks have received a lot of negative press lately. Under heavy scrutiny are growth in derivatives and conflicts of interest involving investment banking. The media has even gone so far as to proclaim a banking breakdown. And many are questioning whether the free market policies of the boom helped set the stage.

Outline

In this presentation, we evaluate the assertion of a breakdown in banking.

Free markets v. regulation

We start by contrasting the free market policies of the 1990s with the re-regulation sentiment that has emerged during the recent recession.

Banks' use of derivatives

We then delve into one of the several areas of controversy currently facing policymakers—rapid growth in banks' use of derivatives. We show how observers/critics have, at times, exaggerated the potential costs of derivatives activities, while downplaying their benefits.

Banking system resilience

Finally, we examine recent bank performance for any sign of the proclaimed banking breakdown. As it turns out, the banking system has proven itself remarkably resilient. The free-market policies of the '90s have contributed to, rather than detracted from, banking system stability.

Free Market Policies of the Boom

After the extended fall in the stock market, it may be difficult even to remember the

boom years. But one aspect of the boom was a policy emphasis on free markets.

Let derivatives develop

Derivatives are contracts whose value is derived from the price of an underlying asset. Interest rate swaps, options, and futures are prominent examples. While these instruments may seem arcane, derivatives in fact influence our lives more than we may think. If you have ever needed a home mortgage loan, for example, you may not have realized that derivatives, in the form of mortgage-backed securities, were at work behind the scenes to improve your terms and options. Large banks dominate the market in over-the-counter derivatives, which are traded directly between companies, without going through a regulated exchange. During the '90s, policymakers debated the idea of applying greater regulation to bank derivatives activities. But the proponents of free markets prevailed, and derivatives trading was allowed to develop and grow.

Repeal Glass-Steagall

Policymakers also began to tear down Glass-Steagall, the regulatory wall that had long separated commercial banking from investment banking activities, such as IPOs. When Congress formally repealed Glass-Steagall in 1999, the wall was all but gone.

Innovation to produce more stable banks

An important driver behind these policies was the belief that free financial markets would result in stronger banks. By promoting innovation, competition was predicted to result in new technologies and practices that would enable banks to manage risk more effectively.

Re-regulation Sentiment of Recession

Contrast that situation with the present one, including the proclaimed breakdown in banking and the associated second guessing of free market policies.

Derivatives out of control?

Banks are under fire for dealing in what some perceive as an alarmingly large volume of hard-to-understand and risky derivatives contracts. Derivatives themselves are under scrutiny because some company managers have taken advantage of their high leverage and complexity to design schemes to hide financial problems from investors.

Investment banking leads to bad loans?

And banking organizations are under fire for allegedly making risky loans to borrowers they wish to lure in as investment banking clients, in effect saying “I will make you a loan, if you let me sell your bonds.”

Innovation destabilizing?

The popular view seems to be that free markets have encouraged innovation all right, like hard-to-detect accounting fraud—the kind of innovation we could all live without. As a result, some are talking about instituting greater government control over derivatives, bringing back Glass-Steagall, and simply re-regulating the banks.

What Re-regulators Aren't Saying About Derivatives

While negativism may be in vogue, there is a lot the re-regulators are not saying, especially about derivatives. The same is true about investment banking, but we will leave that issue for another time.

Activity growing, but exposure exaggerated

With regard to derivatives—yes, activity has grown tremendously. But the resulting risk exposure has been exaggerated.

End-user banks tend to hedge, not speculate

And yes, banks could use derivatives to speculate, but generally they do not. We recently published a study examining the characteristics of smaller-sized banks that use derivatives. We found these end-users tend to be conservative institutions, as indicated by high capital positions. These banks use derivatives to hedge interest rate risk on their balance sheets; that is, derivatives typically are used to fix balance-sheet problems, not hide them.

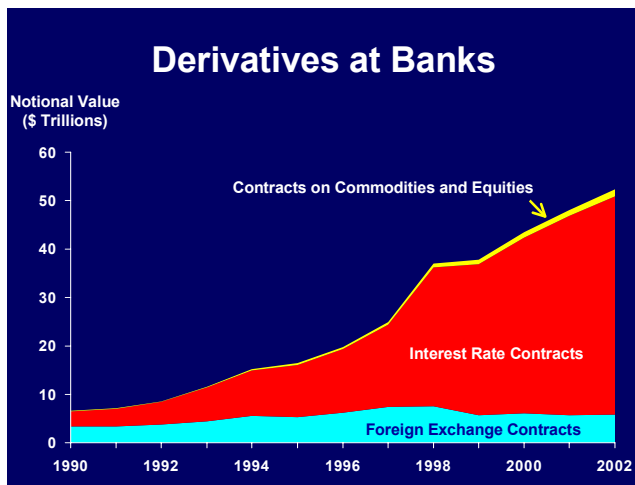
Dealer banks managing positions and maintaining capital

And yes, the largest banks operate as dealers in derivatives and often have considerable risk exposure. But they also have developed advanced methods for monitoring and controlling that exposure. Moreover, supervisors require that they hold capital as a buffer against the risks associated with their derivatives activities.

Derivatives at Banks

Derivatives have in fact grown substantially over the last decade, propelled by advancements in information technology and financial theory. Based on notional value, the measure typically used in the press, U.S. banking organizations now hold about \$52 trillion in derivatives, with interest rate contracts accounting for the vast majority. This amount of \$52 trillion is roughly equal to five times the annual output of our national economy. An amazing figure like \$52 trillion may help sell newspapers, but notional value can be deceiving. For derivatives,

notional value is the amount on which interest and other payments are based. Notional value typically does not change hands. It is simply a quantity used to calculate payments.



Interest Rate Swap

Consider the most prominent type of derivative, an interest rate swap. Suppose a small bank has a portfolio of fixed-rate loans, so that the interest payments remain the same each period. It may want to convert these fixed interest payments to floating, or variable rate, payments, so that they fluctuate with the level of interest rates. That way, if interest rates rise, and the bank has to pay higher rates on its liabilities, the interest payments received on the loan portfolio will also rise, thereby preserving the bank's profit margin.

Variable rate = fixed rate

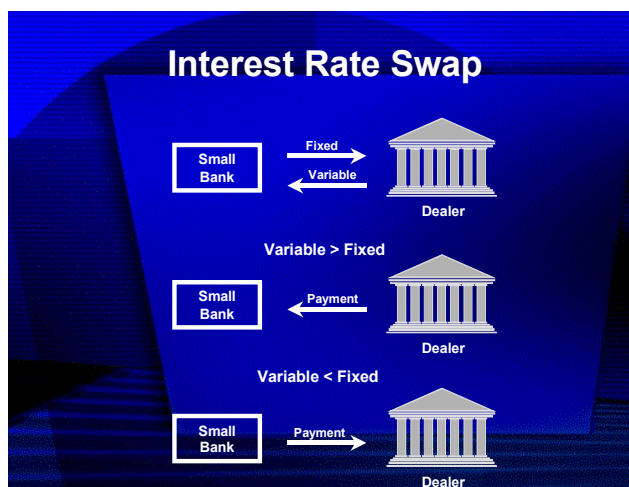
In this case, the small bank, or end-user, can go to a dealer, typically a large bank, to swap the fixed rate on its portfolio for a variable rate; that is, the small bank promises to pay the fixed rate to the dealer, while the dealer promises to pay the variable rate to the small bank. When the variable rate is equal to the fixed rate, no payments have to be traded, because the fixed and variable payments are the same; they simply cancel each other out.

Variable rate > fixed rate

However, if the variable rate rises above the fixed rate, the dealer must pay the small bank the difference, so that the small bank can earn the variable rate.

Variable rate < fixed rate

Conversely, if the variable rate falls below the fixed rate, the small bank must pay the dealer the difference, so that the small bank still earns only the variable rate. In this way, the small bank always earns the variable rate, thereby holding its profit margin relatively constant.



Notional Value v. Credit Exposure

Now, how is this derivative recorded by the dealer bank? As already noted, one measure is the derivative's notional value, which is simply the principal value of the underlying asset.

Notional value of swap (\$100M)

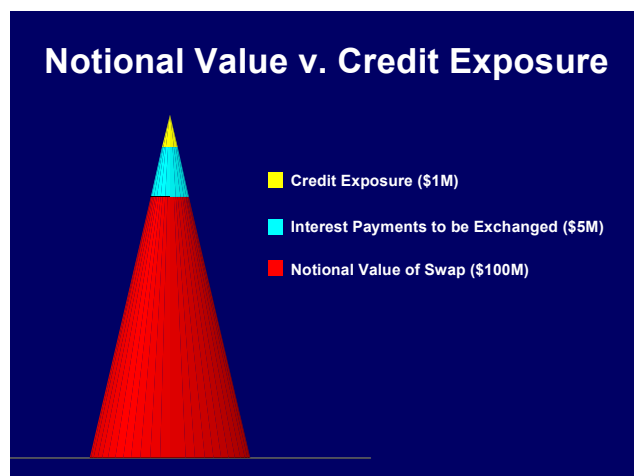
If the small bank originally extended \$100 million in fixed rate loans, then the notional value of the derivative is recorded as \$100 million on the dealer bank's books. But this notional value of \$100 million greatly exaggerates the actual credit exposure of the dealer bank.

Interest payments to be exchanged (\$5M)

Suppose the variable rate and fixed rate are both equal to 5 percent. If we assume there is only one period left in the contract, the interest payments in question are equal to \$5 million. But even this figure exaggerates the credit exposure of the dealer bank. When the variable rate is equal to the fixed rate, the payments cancel each other out. On net, the small bank owes the dealer nothing, and the dealer owes the small bank nothing.

Credit exposure (\$1M)

Of course, the variable rate may often deviate from the fixed rate. Suppose the variable rate drops from 5 percent to 4 percent. In this case, the small bank owes the dealer 1 percent. That amounts to \$1 million. Because the small bank owes \$1 million to the dealer, that is the amount of the dealer's credit exposure. As you can see from this highly simplified example, the credit exposure associated with a derivative is much smaller than the notional value. But it's the notional value that the press latches on to. This example also illustrates one of the many ways banks and other companies use derivatives to manage risk.



Capital Requirements for Derivatives

Supervisors require banks to hold capital against their derivative positions in two ways.

Credit risk

A capital requirement is attached to the type of credit risk exposure we have just discussed; that is, the risk associated with the possibility that the other party to a derivatives contract might not be able to make a required payment.

Market risk

And a separate capital requirement is attached to the market risk associated with derivatives. In our example, suppose that instead of falling from 5 percent to 4 percent, the variable rate were to rise from 5 percent to 6 percent. If that happened, the dealer bank would owe the end-user, rather than the other way around. Dealers use so-called value-at-risk models to gauge this type of market risk, the risk arising from potential changes in market rates. And supervisors require a corresponding capital charge.

Top 10 Derivatives Holders

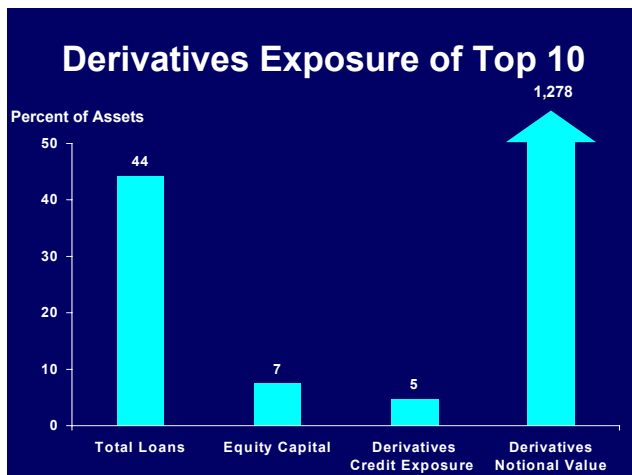
Among U.S. banking organizations, J.P. Morgan Chase is the top derivatives holder, with nearly \$26 trillion of notional value in derivatives. Moreover, the three largest U.S. banking organizations—Citigroup, Bank of America, and J.P. Morgan Chase—account for 87 percent of the derivatives held in the banking system. But the current credit risk exposure associated with these derivatives holdings is much smaller than their notional value. Only J.P. Morgan Chase has a derivatives credit exposure exceeding book-value capital.

Top 10 Derivatives Holders June 30, 2002 (Billions of Dollars)

	Derivatives Notional Value	Derivatives Credit Exposure	Equity Capital
J.P. MORGAN CHASE	25,939	76	43
BANK OF AMERICA	10,382	24	48
CITIGROUP	9,201	51	86
WACHOVIA	2,158	17	30
BANK ONE	1,060	3	22
WELLS FARGO	790	5	30
BANK OF NEW YORK	438	2	7
HSBC NORTH AMERICA	423	3	8
FLEETBOSTON	302	4	17
TAUNUS	274	2	6

Derivatives Exposure of Top 10

For the top 10 derivatives holders, the notional value of derivatives is off the chart, as one would expect. In contrast, derivatives credit exposure is only about 5 percent of total assets. This compares to a 7 percent capital ratio and a loan-to-asset ratio of 44 percent.



Are Banks Less or More Stable?

So, what's the bottom line? Are banks less or more stable? Have free market policies lived up to their promise of promoting innovation and more effective risk management? Or have banks used their new freedom to become even riskier than before?

Operating environment weak

The credit markets have been experiencing substantial turmoil for some time now. With high levels of corporate bond defaults and consumer bankruptcies, banks have faced a weak operating environment.

But bank performance resilient

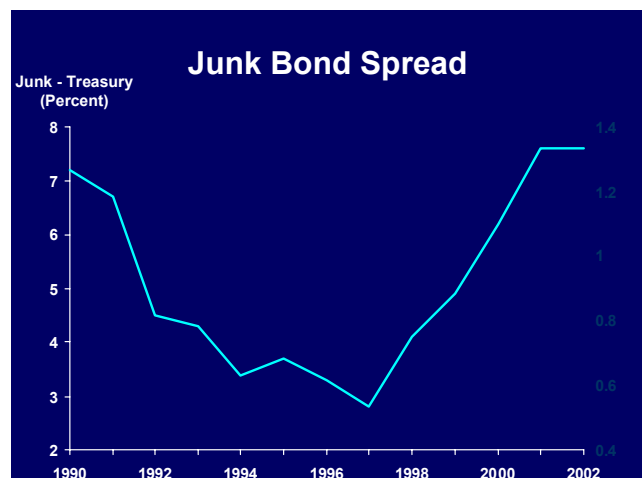
Yet at the same time, banks have remained quite healthy, with profits and capital levels at, or near, historic highs.

Banking system more, not less, stable

All of this suggests the banking system has indeed become more, not less, stable. While many factors have contributed to banking system resilience, perhaps some of the most important have to do with the growing use of risk management tools, such as derivatives, that allow risk to be dispersed to those most willing to bear it.

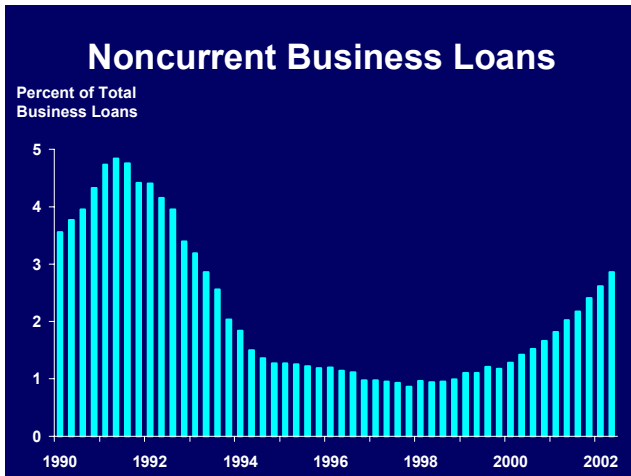
Junk Bond Spread

The risk spreads generated in the corporate bond market have been signaling difficulties for more than four years now. And recently these risk spreads have risen to very high levels, as investors in high-yield corporate bonds—also called junk bonds—have demanded higher and higher premiums over Treasury rates. By all accounts, lenders are facing substantial risks.



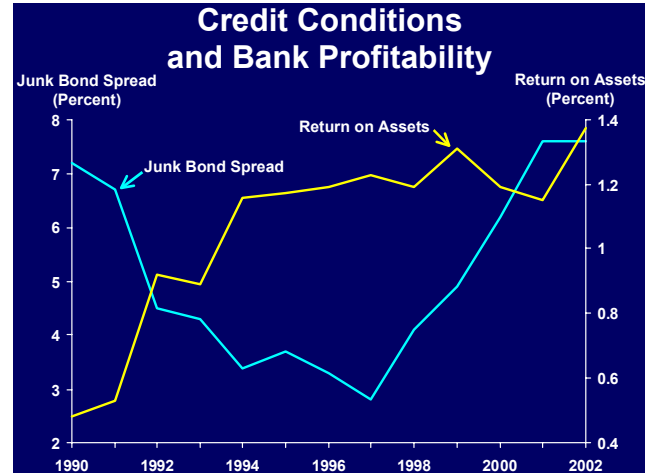
Noncurrent Business Loans

The weak operating environment for lenders has shown up in problem business loans at banks. Problem business credits have been rising for about four years. Nevertheless, so far this adverse trend is limited mostly to large business loans extended by the largest banks.



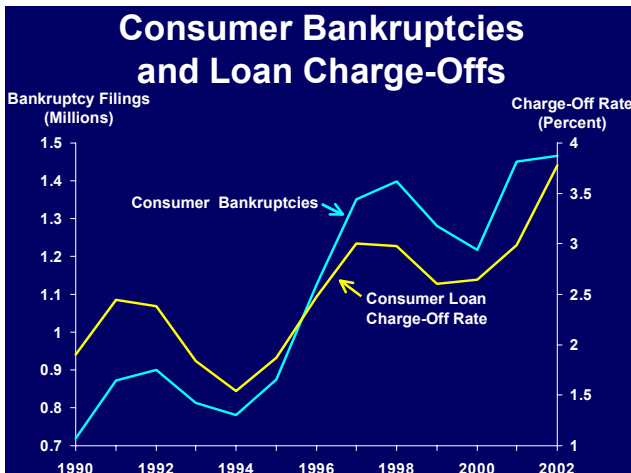
Credit Conditions and Bank Profitability

But despite these substantial credit difficulties, bank profitability has remained strong. Again, the higher the junk bond spread, the greater the credit difficulties. One might expect that such a weak operating environment would translate into loan problems and hits to net income.



Consumer Bankruptcies and Loan Charge-Offs

Similar difficulties have occurred in consumer lending, again reflecting the tough operating environment. The loss rate on banks' consumer loans has risen in step with bankruptcy filings.

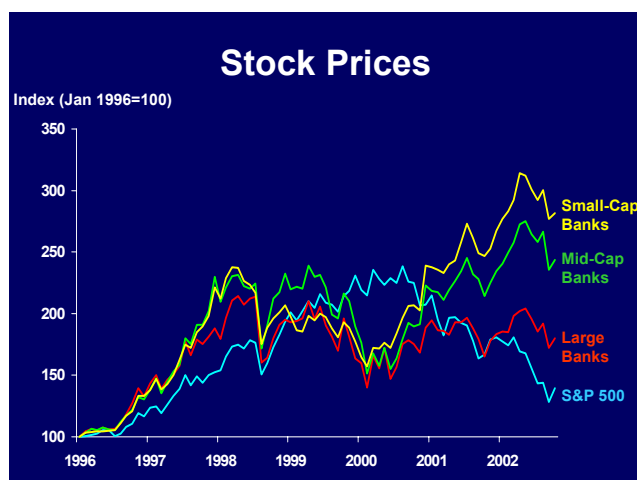


However, while some loan problems have occurred, the banking system's return on assets has not only held its own, it has actually increased. Back in 1990 and 1991, during the previous recession, credit market difficulties were associated with low bank profits. In contrast, banking profits have been more resilient during the current round of credit difficulties.

Bank Stock Prices

The banking system's resilience is also evident in bank stock prices. Since the market began falling some two years ago, small-cap banks, mid-cap banks, and large banks have all outperformed the S&P 500. The very strong performance of small- and mid-cap banks partly reflects the absence of widespread asset quality problems. And even the large banks have managed to hold their own in terms of valuations, despite the deterioration that has occurred in their business loan portfolio. Falling interest

rates have boosted net interest margins and helped banks maintain profits and market valuations, despite the challenging credit market. In addition, advancements in information technology and financial theory, the very forces underlying growth in bank derivatives activities, have also worked to broaden the financial markets overall, so that some of the risk once taken on by banks is now carried by other financial players. Nevertheless, the banking system's demonstrated resilience also reflects banks' enhanced ability to manage the substantial risks they do still take.



Innovation and Banking System Resilience

As Chairman Greenspan has emphasized, innovation and banking system resilience go hand-in-hand.

Segmenting and dispersing risk

Many financial innovations open new doors for segmenting and dispersing risk. As shown in our interest rate swap example, the end-user bank was able to convert fixed rate payments into variable rate payments. The dealer bank, in turn, typically would be able to locate another party with the opposite desire—to convert a variable payment to a fixed one. Asset securitization and derivatives in the form of credit default swaps are additional examples of innovations used to segment and disperse risk.

Leads to stronger banks

As a result, banks can better manage risk by dispersing it to those most willing, and presumably best able, to bear it. In the current environment, banks have been able to shift some risk to other parties. Organizations relatively free from a reliance on short-term liabilities, such as insurance companies and pension funds, often have found it beneficial to obtain and hold some of the risk segmented and dispersed through derivatives.

And a stronger economy

When risk can be divided up and reshaped, so that it comes to the purchaser custom made, all financial market participants enjoy greater flexibility and efficiency. And a stronger financial system leads to a stronger economy.

Conclusion

Free market policies help, not hurt

The recent performance of the banking system suggests free market policies have lived up to their promise of promoting innovation and more effective risk management.

Banking system proves resilient

Banks have proven themselves remarkably resilient in the face of several threats. Of course, given a sufficiently adverse operating environment, almost any banking system would find itself in grave difficulty. But with the recent recession, the aftermath of the September 11th terrorist attacks, corporate governance and accounting scandals, and a declining stock market, our banks have so far withstood a pretty severe test.

Regulating derivatives is a bad idea

Along with innovation come both greater financial complexity and perhaps a greater

supervisory challenge. Supervisors are responding with better disclosure requirements and enhanced capital standards. Beyond that, instituting greater government control over derivatives is a bad idea. In fact, those who feel banking has broken down should perhaps look again.