

# Commentary:

## The Subprime Turmoil: What's Old, What's New and What's Next?

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The Federal Reserve System was founded in 1913. One of its main goals was to deal with the problem of banking crises, which had plagued the National Banking era that followed the Civil War. The crisis of 1907 led to the call for the reform that created the National Monetary Commission in 1908, which in its report in 1912 called for the establishment of a U.S. central bank.

The crisis of 1907-08 was the last of the major banking panics of the National Banking era. It led to the failures of numerous banks and ushered in a serious recession. It was noted for a rescue engineered by J.P. Morgan and ended, as did earlier panics, with the suspension of convertibility of deposits into currency. The fact that the U.S. Treasury was unable to resolve the crisis while J.P. Morgan did better was one of the causes of the popular movement to resolve the long-standing debate over the creation of a U.S. central bank. The crisis of 2007 also had some of the attributes of the current subprime turmoil. The crisis was initially centered on the New York trust companies, a financial innovation of that era. As it turned out, in the face of panic in October 1907, the trust companies were not covered by the safety net of the time—the New York Clearing House—and the panic spread to the commercial banks.

Today's turmoil must be viewed in historical perspective. As Calomiris narrates, many of its attributes have been seen before. Chart 1 provides some background evidence for the U.S. over the past century. The upper panel from 1953 to the present shows the monthly spreads between the Baa corporate bond rate and the ten-year Treasury constant maturity bond rate. The spread, *inter alia*, represents a measure of the financial market's assessment of credit risk and also a measure of financial instability reflecting asymmetric information (Mishkin 1991). Chart 2 takes a longer view and shows the data from 1921 to the present. Also displayed in both figures are National Bureau of Economic Research (NBER) recession dates and major financial market events, including stock market crashes, financial crises, and some major political events that affected financial markets. The lower panels of Charts 1 and 2 show policy interest rates—the federal funds rate since 1953 and the discount rate for the longer 20th century.

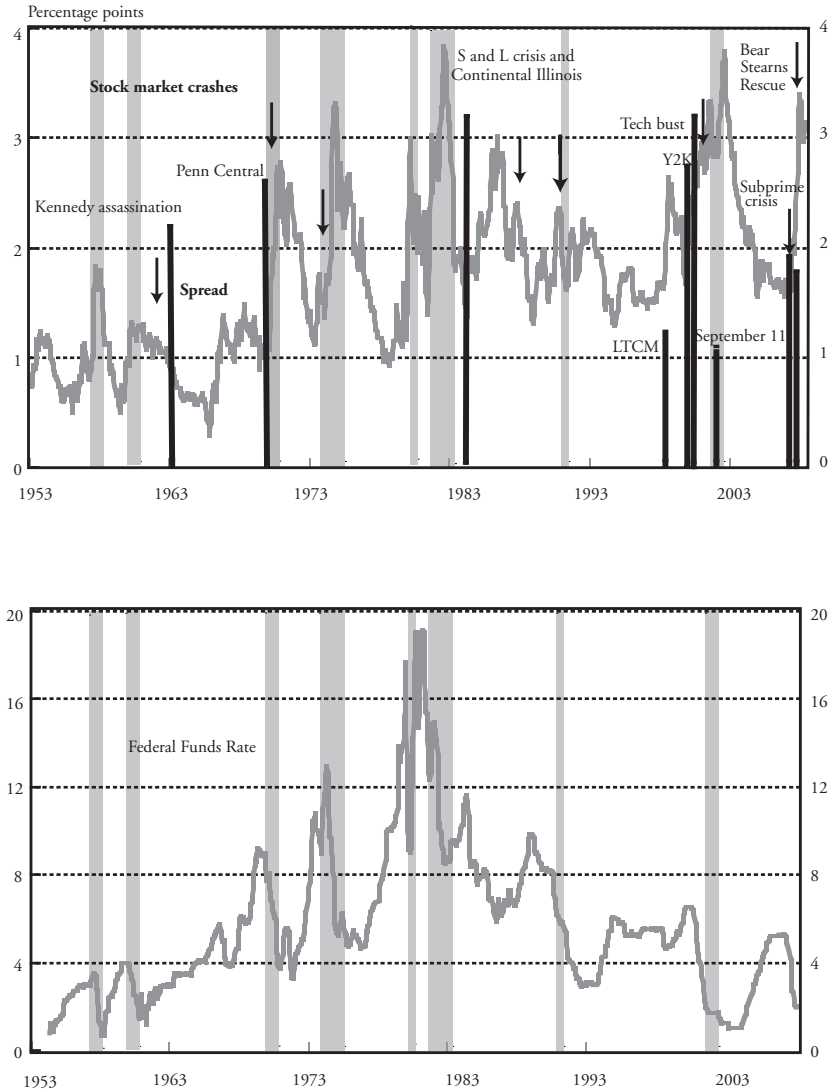
As can be seen, the peaks in the credit cycle (proxied by the spreads) are often lined up with the upper turning points in the NBER reference cycles. Also, many of the events, especially the stock market crashes and the banking crises of the 1930s, occur close to the peaks. Moreover, the lower panel often shows the policy rate peaking very close to or before the peaks of the credit cycle. Its movements roughly reflect the tightening of policy before the bust and loosening in reaction to the oncoming recession afterwards.

The rise in spreads in the recent episode are comparable to, but no higher than, what occurred in the last recession in 2001 and considerably lower than during the recessions of the 1970s, 1980s or the 1930s.

## **I. The Crisis**

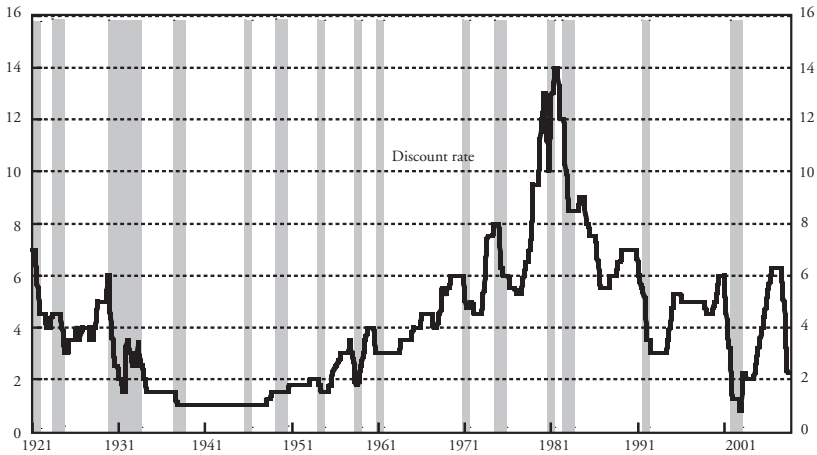
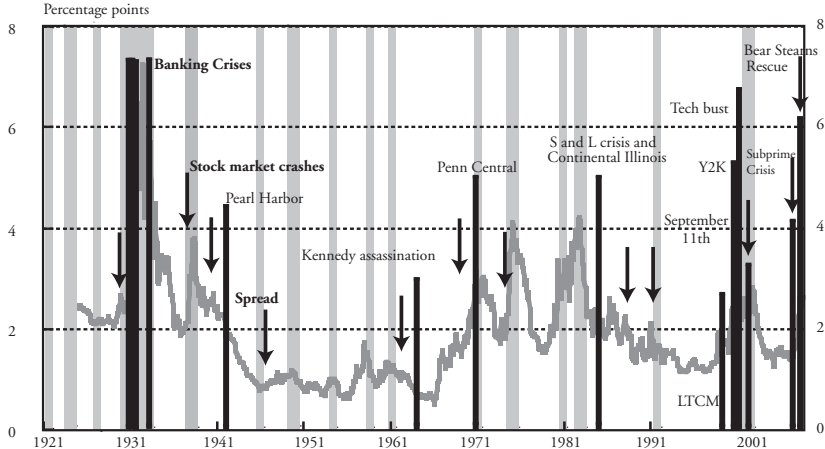
The crisis occurred following two years of rising policy interest rates. Its causes include lax regulatory oversight, a relaxation of normal standards of prudent lending and a period of abnormally low interest rates. The default on a significant fraction of subprime mortgages produced spillover effects around the world via the securitized mortgage derivatives into which these mortgages were bundled, to

### Chart 1 Federal Funds Rate and Baa and 10-Year TCM Spread



Sources: Federal Reserve Board and NBER

### Chart 2 Discount Rate and Baa and Composite Treasury Over 10 Years Spread



Sources: Federal Reserve Board and NBER

the balance sheets of investment banks, hedge funds and conduits (which are bank-owned but off their balance sheets), which intermediate between mortgage and other asset-backed commercial paper and long-term securities. The uncertainty about the value of the securities collateralized by these mortgages spreads uncertainty about the value of commercial paper collateral and uncertainty about the soundness of loans for leveraged buyouts. All of this led to the freezing up of the interbank lending market in August 2007 and substantial liquidity injections subsequently by the Federal Reserve and other central banks.

Since then, the Fed has both extended and expanded its discount window facilities and also has cut the federal funds rate by over 200 basis points. The peak of the crisis was the rescue in March 2008 of the investment bank Bear Stearns by JP Morgan, backstopped by funds from the Federal Reserve and the creation of a number of discount window facilities whereby investment banks could access the window and which broadened the collateral acceptable for discounting. It was followed by a Federal Reserve/Treasury bailout of the GSEs, Fannie Mae and Freddie Mac, in July. The liquidity crisis subsequently turned into a credit crunch with recessionary potential as the drying up of securitization has forced banks to repatriate MBSs and CDOs to their balance sheets, putting pressure on their capital base and restricting their lending.

## **II. The Paper**

Charlie Calomiris has written a masterful paper. He covers virtually all the bases on the subprime turmoil from an historical perspective. I learned a lot from reading the paper and find myself in agreement with most of his analysis and policy conclusions.

According to Calomiris, the turmoil was caused by a number of factors: 1) loose monetary policy and the global savings glut; 2) financial innovation, especially the development and spread of securitization; 3) government regulation that encouraged excessive leverage in the mortgage market; 4) the “plausible deniability” hypothesis, aka an agency problem in asset management.

The last point is the key contribution of this paper. According to the author, the main reason for the ballooning of securitization of subprime mortgages was that both investment managers and the ratings agencies accepted an unusually low estimate of the probability of default on subprime mortgages and of the losses to portfolios in the case of default. This estimate of 6% then allowed the ratings agencies to give AAA ratings to subprime mortgage-backed securities and investment managers to hold them in their portfolios.

The low estimate was based on the default record and the losses incurred in the 2001-2003 housing recession when subprime mortgages were novel. This low estimate was then used to estimate future losses in subsequent years. The 6% estimate is downward biased because it was based on an episode when house prices were rising. This gradually reduced the losses incurred in the foreclosure process. In environments of flat or falling prices, which was the case after 2006, the losses would be much larger. However, everyone in the mortgage business accepted the low estimate of loss because it was in their interest to do so. It generated business for the ratings agencies who gave the high ratings on mortgage-backed securities and collateralized debt obligations and by the investment funds that were required by regulation to hold securities with AAA ratings. This pattern of excessive risk taking was fostered by the regulatory environment.

According to Calomiris, the crisis was propagated, as in historical times, by asymmetric information manifest in rising spreads (flight to quality) and quantity rationing. The Bear Stearns collapse exhibited these characteristics.

He argues that the crisis was managed appropriately by the Federal Reserve's extension of its lender-of-last-resort facilities to encompass a wider range of collateral and the investment banks. He defends both the Bear Stearns rescue and that of the GSEs by saying that they were systemically serious and that they were dealt with in a way to minimize moral hazard.

He argues, by extension of his earlier work on the Penn Central crisis of 1970, that discount window lending is a superior method compared to open market operations to overcome asymmetric

information problems leading to market failures (in the case of Bear Stearns, a collapse of the mortgage derivative markets; in the case of the GSEs, the collapse of mortgage financing). The author, however, is critical of the Fed's cuts in the federal funds rate, which he views as both inflationary and conducive to a collapse of the dollar. Both factors, he posits, put downward pressure on the stock market, making it hard for banks to recapitalize themselves.

Calomiris takes issue with the pessimists who see this crisis as *sine qua non*. His reasonable arguments are that the house price indexes used by the pessimists are severely downward biased and that the effect of the turmoil on bank capital has been greatly mitigated by the fact that the banks were in relatively good shape before the crisis reflecting deregulation and consolidation, and that globalization has enabled banks' capital to be replenished by sovereign wealth funds.

Finally, the author presents a list of policy reforms. He recommends regulatory reform including: the dethroning of the ratings agencies as official arbiters of quality; the use of subordinated debt as a disciplining device for the banks; either nationalizing or privatizing the GSEs; the use of covered bonds as a substitute for securitization; increasing capital requirements and imposing liquidity requirements on banks; and extending the Fed's supervisory reach to include the investment banks that will ultimately become commercial banks.

### **III. Comments**

Although I agree with much of the story, I have some reservations.

First, I am not convinced by the case that Calomiris makes for providing liquidity through expanding access to the discount window rather than operating by open market purchases. He states that the discount window remains "an important component of the Fed's toolkit" (pg.70). In fact, since the 1950s, use of the discount window has been minimal. A major change occurred in August 2007, leading with a cut in the discount rate. The change affected provision of credit directly to financial firms that the Fed deemed most in need of liquidity, in contrast to delivering liquidity to the market by open

market purchases of Treasury securities and leaving the distribution of liquidity to individual firms to the market.

Previously in 2003, the Fed set the discount rate to move just as did the fed funds rate. The choice of targeted lending instead of imperial liquidity provision by the market exposed the Fed to the temptation to politicize its selection of recipients of its credit.

The Fed has created new programs for access to the discount window, including the Term Auction Facility (TAF), the Term Security Lending Facility (TSLF), and the Primary Dealer Credit Facility (PDCP). The oddest part of the creation of these new discount window loans is that they are sterilized. Nevertheless, net Fed assets have expanded 2-3% per year until recent weeks. Now they are up to 4-5% per year, which may account for the current 5% measured inflation rate.

One question that arises is why this complicated method of providing liquidity has been introduced when the uncomplicated system of open market operations is available, and what has been achieved by the new facilities? A second question is why has the Fed reduced its holdings of government securities? How will the Fed be able to tighten monetary policy when it finally decides to combat the rise in the inflation rate? The only way to tighten is to sell government securities. The mortgage-backed securities now on the Fed's balance sheet are not marketable.

A second comment concerns the Bear Stearns rescue that Charlie approves of. Had Bear Stearns simply been closed and liquidated, it is unlikely that more demand for Fed credit would have come forward than that that actually occurred. The fact that general creditors and derivative counter parties of Bear Stearns were fully protected by the merger of the firm with JP Morgan Chase had greater spillover effects on the financial services industry than would have been the case had the Fed appointed a receiver and frozen old accounts and payments as of the date of the appointment. Fewer public funds would have been subjected to risk. When Drexel Burnham Lambert was shut down in 1990, there were no spillover effects.



A third comment is that Calomiris has not discussed the difficulty of pricing securities backed by a pool of assets, whether mortgage loans, student loans, commercial paper issues, or credit card receivables. Pricing securities based on a pool of assets is difficult because the quality of individual components of the pool varies, and unless each component is individually examined and evaluated, no accurate price of the security can be determined.

As a result, the credit market—confronted by financial firms whose portfolios are filled with securities of uncertain value, derivatives that are so complex the art of pricing them has not been mastered—is plagued by the inability to determine which firms are solvent and which are not. Lenders are unwilling to extend loans when they cannot be sure that a borrower is creditworthy. This is a serious shortcoming of the securitization process that is responsible for paralysis of the credit market.

Furthermore, the Fed has not recognized the solvency problem. It has emphasized providing liquidity to the market when that is not the answer to the problem of the market's uncertainty about the solvency of individual or sectoral financial firms. No financial market can function normally when basic information about the solvency of market participants is lacking. The securities that are the product of securitization are the root of the turmoil in financial markets that began long before the housing market burst.

Fourth, Calomiris is critical of the Fed's cut in the federal funds rate by over 200 basis points since last August. However, given the Fed's dual mandate to provide both price stability and high growth (full employment), the risk of recession consequent upon the credit crunch seems to be a reasonable rationale for a temporary easing of monetary policy. As the author does argue however, once inflationary expectations pick up, it behooves the Fed to return to its (implicit) inflation target.

Finally, Charlie is critical of the Fed for allowing the dollar to weaken. In a freely floating exchange rate regime, the dollar should be at whatever level market forces dictate. The depreciation in the dollar until very recently, which reflected the cuts in U.S. policy rates with

no similar changes abroad as well as greater recessionary pressure than abroad, has served to offset the recessionary pressures of the credit crunch and to reduce the feared current account deficit. Nevertheless, as he correctly points out, to the extent the weak dollar is reflecting inflationary expectations, that is a signal for policy tightening.