

The Subprime and Credit Crisis

Morris Goldstein, Peterson Institute

Paper based on transcript of speech presented at the Global Economic Prospects meeting, Peterson Institute for International Economics

April 3, 2008

© Peterson Institute for International Economics

I. Introduction

My topic today is the ongoing subprime and credit crisis. Since our meeting today will also cover, for the first time, prospects for the Indian economy, I thought I should motivate my presentation with the following proverb from Mahatma Gandhi, “Whatever you do will be insignificant, but it is very important that you do it.”

I plan to divide my remarks into three parts. First, I want to recap briefly what has happened in the crisis since it erupted in August 2007. Second, I want to comment briefly on the strategy for managing the crisis. And third, I want to offer a 10-part reform program for preventing and managing future crises. Needless to say, this will require that I talk fast.

II. Some Key Features of the Crisis

With subprime mortgages representing only about 14 percent of the stock of US mortgages, most observers expected rising delinquencies in this segment to be contained at moderate cost. Testifying in July 2007, Federal Reserve Bank Chairman Bernanke estimated that credit losses associated with subprime mortgages would probably total \$50 billion to \$100 billion. As we now know, what began as a subprime crisis has proved to be wider, deeper, and more damaging than originally thought.

Consider the following snapshot of actual and perspective credit losses, liquidity and credit spreads, recapitalization of financial firms, liquidity injections by central banks, and US home foreclosures.

By now, we are up to over \$200 billion in reported credit losses worldwide just due to subprime exposure. A ballpark estimate is that US banks, brokers, dealers, hedge funds, and government-sponsored enterprises will wind up with at least \$300 billion of credit losses on mortgage securities of all kinds.

If you go beyond mortgages to also include credit card, auto and student loans, commercial real estates, corporate loans, leverage loans, bond defaults, and if you add in insurance and finance companies, mutual and pension funds, and foreign financial institutions, the estimated credit losses rise to the range of, say, \$600 billion to over a trillion.¹

Some analysts have gone further by translating the estimated credit losses at leveraged US financial institutions into estimated declines in their lending and, in turn, into estimated declines in US economic growth. For example, one widely-cited study by Greenlaw and others² estimated that \$200 billion of credit losses at leveraged US financial institutions results in a decline of 125 basis points in US economic growth. Some other analysts, including Macroeconomic Advisors,³ are more sanguine about the real economic effects of the crisis, since financial turbulence and the tightening of lending standards notwithstanding, they don't yet see evidence of a credit crunch for healthy, nonfinancial US firms.

A second characteristic of the crisis involves the behavior of liquidity and credit spreads. Whether you look at the difference between yields on US treasuries and LIBOR or spreads on jumbo mortgages or on agency securities or municipal bonds or indices of yield, then on asset-backed securities or credit default spreads or issuance of commercial paper, and you look at the same things in the eurozone in the UK market, what you see is that over the past seven to eight months, these indicators of liquidity and credit risk have been very volatile and have at times been much higher than anything we've seen over the past decade. Similarly, you've seen a massive flight to quality, with yields on three-month US treasuries at one point going lower than witnessed at any time during the past 50 years.

Just to round out the sketch of what's happened, I add the following. Large financial firms in distress have received something like \$50- billion in recapitalization funds from sovereign wealth funds. So far there have been very few bank failures, five according to the FDIC since February 2007, but apparently 75 more institutions are on the problem list. One of the reasons why the crisis hasn't been more damaging is that most banks, especially large ones, went into the crisis with high bank capital.

A third feature of the ongoing crisis follows from the preceding one. Faced with clear evidence that various parts of the financial markets were not functioning normally and were suffering from shortages of liquidity, central banks in the United States, the eurozone, the United Kingdom, and elsewhere have engaged in unprecedentedly large injections of liquidity, sometimes in a coordinated way. In the US case, the Fed has progressively increased the duration of its liquidity

¹ Subsequent to my presentation, the April 2008 edition of the IMF's Global Financial Stability Report estimated that potential financial sector losses, worldwide, in this crisis could amount to \$945 billion; see also Nouriel Roubini, "The Rising Risk of a Financial Meltdown and the Escalating Losses in the Financial System," Roubini Global Economics, March 10, 2008.

² See David Greenlaw, Jan Hatzius, Anil K Kashyap, and Hyun Song Shin, "Leveraged Losses: Lessons from the Mortgage Market Meltdown," US Monetary Policy Forum Conference, February 29, 2008. See also OECD, "The Subprime Crisis: Size, Deleveraging and Some Policy Options, April 2008.

³ See Chris Varvares, Macroeconomic Advisors, "The US Economic Outlook," Ottawa, Canada, March 2008.

assistance, has expanded the range of collateral it will accept, and has broadened the range of counter parties eligible for that assistance. In its most significant departure to date, on March 16, 2008, the Fed announced a new lending facility called the Primary Dealer Credit Facility that allows primary dealers access to fund liquidity at a discount window rate against the broad range of investment grade debt, including mortgage-backed and asset-backed securities.

On home foreclosures, the rate has risen sharply especially for subprime borrowers with adjustable rate mortgages. Many analysts expect foreclosures to hit about 2 million this year, way up from the annual rate in 2001 to 2005. It has been estimated that if US housing prices fall by an additional 15 percent or so, approximately a third of US homeowners with mortgages will have negative equity in their homes. This negative equity issue is also raising the question of whether willingness to pay will have to be addressed along with ability to pay.

Last but not least, one place where contagion from the crisis has so far been less marked than expected is in emerging markets, which Arvind will talk about more. While the emerging market global bond spread is up about 150 basis points from its pre-crisis level, this is much less than seen in some earlier crisis; so, too, with emerging market equities.

III. The Crisis Management Strategy

Let me move next to the apparent crisis management strategy. It has five elements, four of which have been nicely outlined in the recent speech by New York Federal Reserve Bank President Geithner.⁴

Element 1. Macroeconomic stimulus. We have had 300 basis points of Fed funds reduction, along with a \$160 billion fiscal policy package. Aim: To cushion the real economy and keep it from feeding back negatively on the financial sector.

Element 2. Large-scale liquidity injections (by central banks) that I mentioned earlier. Aim: To minimize panic selling and contagion and to keep liquidity problems from exacerbating solvency problems.

Element 3. Repairing the financial system by attracting capital injections into weak institutions and by increasing transparency and disclosure. Aim: To prevent a contraction of balance sheets in financial institutions and to reduce uncertainties about who is and who is not creditworthy.

Element 4. Targeted assistance to the housing sector. Aim: To reduce the size and scope of the foreclosure problem and, in so doing, reduce downward pressure on housing prices.

Element 5. More recently, the beginning of regulatory forbearance, particularly reducing capital requirements for Fannie and Freddie, and increased lending operations by the Federal Home Loan Banks. Aim: To provide liquidity and support to the weak mortgage market.

⁴ Timothy Geithner, "The Current Financial Challenges: Policy and Regulatory Implications," Speech before the Council on Foreign Relations Corporate Conference," March 6, 2008.

I appreciate the reasons for the regulatory forbearance at Fannie and Freddie, but we should recognize it for what it is. In this connection, I am reminded of the story of the man selling pencils on the street. A potential buyer comes up, looks at the pencils, and says, "These look like very well-made pencils. How much do you charge for them?" The seller says, "Ten cents each." The buyer replies, "That's a good price." The seller says, "You're not kidding, since they cost me 20 cents a piece to make." The buyer asks, "But if you're selling them for ten but they cost twenty, how do you make a profit?" And the seller answers, "Volume." That's what the Fannie and Freddie deal is: volume.

Some argue that the US authorities are now running out of crisis management bullets. I would say "not yet," at least if you believe Secretary Paulson's claim that he will do "whatever it takes" to maintain financial stability. What could they still do?

- They could reduce the Fed funds rate and the discount rate further and faster.
- They could persuade the US Congress to enact the second fiscal stimulus package. They could expand further the scale, the duration, the collateral, and list of counterparties for liquidity assistance.
- They could encourage more shotgun weddings between strong and weak financial institutions.
- They could encourage distressed institutions to reduce dividends and raise more capital from abroad.
- They could reduce regulatory capital requirements for banks and securities houses.
- They could temporarily suspend fair-value accounting.
- They could make wholesale purchases of mortgage-backed securities and try to set a floor on the price of those assets.
- They could provide much larger federal assistance to troubled homeowners.
- And they could nationalize a few large but weak financial institutions à la Northern Rock.

Clearly, a lot of those crisis responses would be unpalatable and some are not likely unless things get much worse. Many of them, of course, also have limits on their effectiveness. For example, while the Fed can control short-term policy interest rates, they don't control risk premiums or interest rates on long-term securities. With high-commodity prices, nontrivial inflation risk, and turbulence in financial markets, long-term interest rates, including mortgage rates, have come down much less than short-term rates. As the Fed reduces short-term rates and signals its willingness to do more, the US dollar falls further and risks getting into a disorderly decline. The mantra that a strong US dollar is in the US national interest is becoming less and less comforting to US trading partners, as the euro and the yen hit highs. Yes, the United States and the G-7 could undertake coordinated intervention to slow the decline in the dollar, but it's hard to see that having much effect other than

a very short-term one, as long as the European Union and Japan don't want to lower interest rates and, even more so, so long as the United States can't raise them. The other crisis management tools are also constrained.

IV. Reform of the Financial System After the Crisis

What can and should be done on crisis prevention and management for the future? In recent weeks, the official sector has begun to provide its answer: from the 220-page US Treasury blueprint for an overhaul of the US regulatory structure released this past Monday (I read it all but it was difficult), to the initial reports of the President's Working Group on Financial Markets, to the initial report of the Financial Stability Forum, to the report of the senior supervisors from the G-5 countries.⁵ Parts of those reports, I think, are thoughtful and helpful, especially as regards to the rationalization of the US regulatory structure, efforts to get less scrupulous US mortgage lenders out of the business, and getting separate credit ratings for structured products.

That said, if you look at these reports as a group, they are a disappointing response to a major regulatory failure. They're too timid. They give too little attention to several key vulnerabilities revealed in the crisis. They rely too heavily on self-regulation by the financial services industry, and they lean too much on principles and not enough on specific benchmarks or rules. Since it takes a proposal to beat a proposal, let me offer my own top ten list. For time reasons, I'll only be able to describe the first few in some detail.

Reform 1. We need a prompt corrective action and orderly closure rule for large investment banks along the lines of what we have for banks in FIDICIA, the Federal Deposit Insurance Corporation Improvement Act of 1991. The assumption used to be that failure of a large bank would be much more costly for the economy than failure of a large nonbank, but that assumption has become less and less defensible.⁶ Nonbanks now provide a larger share of financial intermediation in the United States than banks. Large nonbanks are big players in derivative markets. Like large banks, large and entangled nonbanks are now special, even if they don't have deposit insurance. They still benefit from the official safety net and hence face a lower cost of funding than those with no such access. The US authorities have also shown that they will almost certainly *not* put a troubled large and entangled investment bank into corporate bankruptcy. Without a FIDICIA-like framework for large investment banks, US authorities will find themselves in a tough situation. They will intervene only very late in the day when collapse is imminent, and then they will have two unpleasant options. Option A: Put the investment bank into Chapter 11

⁵ Subsequent to my presentation, the Financial Stability Forum released another more comprehensive reform plan, entitled "Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience," April 7, 2008.

⁶ The expected cost of failure to the economy at large should still be the key criterion for determining which financial firms are regulated and which are not, since this is what drives de facto eligibility for the official safety net, be it deposit insurance, access to the central bank's liquidity assistance, or use of public funds for recapitalization or nationalization. Size, leverage, and the degree of "entanglement" in financial markets should all be important in making the eligibility decision—more so than how firms classify themselves (as banks, nonbanks, etc). I note that Willem Buiter takes a similar view in "Self Regulation Means No Regulation," *Financial Times* blog; April 10, 2008, available at blogs.ft.com/maverecon.

bankruptcy and accept the potential chaos and contagion that is likely to go with it. Or B: Provide large-scale public assistance to take over the bank on terms unlikely to be most favorable to US taxpayers. Think of what would have happened in the Bear Stearns case if JP Morgan Chase was unable or unwilling to step in and do essentially a purchase and assumption. Recall that under FIDICIA there are capital-based triggers for corrective action; the bank is closed when it still has positive net worth; the shareholders are wiped out; management is changed, and when the FDIC becomes the receiver, they have the option to set up a temporary bridge bank to pay off depositors and creditors and sell the assets in an orderly manner. So as long as they resolve the bank at least cost to the deposit insurance fund, the regulators have quite wide latitude in how they manage the process to maintain financial stability. This is not the case with regular corporate bankruptcy, as the United Kingdom found out in the Northern Rock case. The US Treasury apparently plans to treat the Bear Stearns case as a one-off event and doesn't offer an orderly closure rule for nonbanks. Large investment banks need to be under supervision of the "prudential regulator" in the Treasury's blueprint, not under the business conduct and consumer protection regulator.

Reform 2. We need an international agreement on liquidity standards for banks and large investment banks. Much of this crisis has been about liquidity. If you look over the past several decades, you see that large banks in some G-7 countries have reduced significantly the share of narrow liquid assets, like treasuries, in their total assets. This trend has been exacerbated recently by off-balance sheet vehicles; they get their liquidity on the liability side by very short-term borrowing. And brokers and dealers in the United States have long relied much more heavily than banks on repos and short-term borrowing for their funding. So what we increasingly have is "just-in-time" borrowed liquidity for major players instead of an adequate reserve of owned liquidity. This is okay in normal times. It's not good in a crisis when credit lines dry up, when even collateralized borrowing may be in short supply, and when market prices nosedive for what were formerly regarded as liquid assets.

This problem will not be solved by calls for more stress tests and scenarios or by new principles of liquidity management. You need a definition of (narrow) regulatory liquidity and a quantitative benchmark for it. I have some ideas on how such a liquidity standard could be designed so that commercial banks and investment banks have adequate owned liquidity, don't hoard that liquidity, and don't draw unduly on the Fed for liquidity support.⁷ We should seek an international agreement on liquidity standards, but until we get it, we should impose our own national standard.

Reform 3. Basel II will need to be reworked thoroughly, not just tweaked at the margin. Two of the key features of Basel II are that banks can use their own internal models to calculate capital requirements under Pillar 1, and that credit ratings also serve as risk weights in regulatory capital calculations. These internal models typically generate lower capital requirement for (large) US banks. Suffice it to say that all these elements have had their credibility severely damaged by the events of the past eight months. Were UBS and Citigroup using these internal models to guide their asset allocation decisions, including subprime exposure, and were banks using the credit ratings on collateralized debt obligations (CDOs) to make such portfolio decisions? If anything, the crisis shows

⁷ See Morris Goldstein, "A Proposal for Liquidity Risk Management," Financial Times, forthcoming.

we need higher capital requirements, not lower ones (as well as capital requirements that are countercyclical—not procyclical).⁸

One of the reasons why proposals for higher liquidity and higher capital are not popular in the financial services industry is that they would limit leverage and asset growth and probably reduce the average profit rate. But they would also reduce the risk of financial crises and what you and I pay for them.

Reform 4. Reduce conflict of interest at credit rating agencies by separating the rating and consulting business like we did with the accounting industry after Enron.

Reform 5. Improve coordinated action between monetary authorities and regulators during the buildup of asset price bubbles so that both of them don't simultaneously say, "identifying and pricking asset price bubbles is not my job." If one doesn't act, the other must.⁹

Reform 6. Make Wall Street compensation an integral part of risk management by imposing a capital charge on firms that don't implement sensible, deferred compensation plans.¹⁰

Reform 7. Tilt the growth of derivative markets toward organized exchanges where systemic safeguards (the creditworthiness of the clearinghouse, standardization, and marking to market) are stronger and away from the over-the-counter (OTC) market (this too could be done by appropriate use of capital charges or by putting settlement of OTC contracts lower down on the priority list relative to organized exchanges during an insolvency under a FDICIA or FDICIA-like framework). In the wake of the CDO and CDO-squared debacles, why the US Treasury would want to make it easier to issue complex securities escapes me.

⁸ One of the ways in which a countercyclical element could be introduced into regulatory capital requirements is to make required capital a function of the change in assets—not just of the risk-weighted level; see Charles Goodhart and Avinash Persaud, "How to Avoid the Next Crash," *Financial Times*, January 30, 2008. The Basel Committee has recently announced that it will increase capital charges for complex, structured credit products, liquidity facilities to support asset-backed commercial-paper conduits, and credit exposures held in the trading book. While this is welcome, what is needed goes much beyond that; in particular, we need a significant increase in the overall, minimum risk-weighted capital ratios. During the crisis itself, efforts to recapitalize weakened financial institutions are crucial if application of fair value accounting is not to lead to a "financial decelerator" effect.

⁹ Such a criticism of course applies with particular force to the US Federal Reserve since, in addition to their monetary responsibilities, they are also the regulator of US bank holding companies. They need to explain why they were not more forceful and effective in getting banks under their charge to reduce the concentration risk associated with large holdings of both unsecuritized and securitized mortgages and other asset-backed securities.

¹⁰ Reform of Wall Street compensation plans has been discussed for some time, going back well before this crisis. The rub in previous efforts was that firms were reluctant to implement/sustain such plans because of concerns that they would lose key employees to firms with more generous and front-loaded compensation policies. That is why it is crucial to offer complying firms an offsetting incentive in the form of a lower capital charge.

Reform 8. Improve incentives in the originate-and-distribute model by requiring originators to have skin in the game and by eliminating any capital bias in favor of off-balance sheet structures.

Reform 9. Rationalize the US regulatory structure using the objective-based model (that is, a market stability regulator, a prudential regulator, and a business conduct and consumer protection regulator) in the recent US Treasury plan.

Reform 10. Use some version, probably a smaller one, of the Dodd-Frank bill and a “recovery lease program,” to reduce US home foreclosures.

In closing, the US subprime and credit crisis has multiple causes. But large-scale regulatory failure is surely one of them. It requires a comprehensive response. Light touch financial regulation does not increase US competitiveness or US leadership when it contributes to a costly financial crisis like the ongoing one.