

The Department of Economics welcomes students, faculty, and staff to an **emergency session** of “Current Issues”:

# **Current Issues in Economics: The Financial Crisis**

**Friday, Oct. 17**

**11:45 - 12:45**

**Hoel Presentation Room**

The last several weeks have witnessed an unprecedented meltdown in the U.S. financial system. With surprising speed, major investment banks have failed, the credit markets have frozen, and the government has stepped in with bailout after bailout. The crisis continues unabated, with losses spreading to Europe and Asia. What are the implications of Wall Street’s collapse for the “Main Street” economy?

Business Department Professor Joanne Scott and Economics Department Professor John Carvellas will give presentations on the origins of the crisis, the reason banks have failed, the nature of the bailouts, and the likely future path of the economy. Please join us for this special presentation. Light refreshments will be provided.

# 15 Things You Need to Know About the Panic of 2008

By Fred W. Frailey

Kiplingers, September 19, 2008

**1. It all began with cheap money.** To prop up ailing economies early in this decade, central banks in the U.S. and Japan kept interest rates unusually low, which encouraged speculation. In the U.S., the Federal Reserve lowered the federal funds rate -- the rate that banks charge each other for overnight loans and a barometer for the cost of borrowing money on a short-term basis -- from 6.5% in 2000 to 1% by mid 2003. Cheap money quickly ignited a sharp rise in home values in virtually every corner of the country.

**2. Financial magicians made subprime loans golden.** Banks and mortgage companies fed speculation in home prices by offering cheap credit to all comers, including those who would not normally qualify. What to do with these subprime loans? Package them with thousands of high-grade loans to sell to investors. To make the subprime loans attractive, underwriters bought insurance policies guaranteeing that the loans would be repaid. With insurance on the loans, credit-rating agencies stamped such paper as triple-A-rated debt.

**3. The global economy became infected with poisoned debt.** The loans came to investors as collateralized-debt obligations, or CDOs. A CDO is a huge package of loans sold in assorted segments -- known as tranches -- with varying interest rates and levels of risk. Buried inside the least-risky tranches were those subprime mortgages masquerading as triple-A-rated debt because of their insurance policies. Companies that wrote the insurance policies on these mortgages assumed that default levels would be minuscule.

**4. So much for those assumptions. Home prices tipped downward, setting off a chain reaction.** All bubbles eventually burst. The Fed began raising short-term interest rates in 2003, eventually boosting the federal funds rate to 5.25% by the summer of 2006. As a result, adjustable-rate mortgages (particularly the subprime variety) began to reset at far higher interest rates, and in July 2006 the rise in home prices abruptly stopped. In fact, home values began a descent that continues to this day, in many communities averaging a loss of 15% to 30%. As borrowers realized their homes were worth less than the amount they owed on their mortgages, the default rate shot up.

**5. Rating agencies lowered their assessment of those supposedly triple-A subprime loans to junk levels.** The investment and commercial banks, pension funds, and other institutions that had bought the supposedly safe, triple-A-rated CDO tranches woke up to find their investments tainted by those poisonous subprime loans, which began to default at alarming rates. Holders of these CDOs found it all but impossible to know what they were really worth. And when they tried to sell them, there were few buyers -- the beginning of a seize-up of U.S. debt markets.

**6. A wave of write-downs on the value of those loan packages commenced.** Financial accounting standards require banks and investment companies to "mark to market" the value of their assets each day. If it's impossible to value a security because there is no market for it, too bad -- make a smart guess. Starting in 2007, one financial institution after another announced a

series of quarterly write-downs of hard-to-value and unsalable CDOs that turned into a financial tidal wave.

**7. Financial institutions were revealed as vastly undercapitalized.** As the quality of their debt portfolios deteriorated, investment banks wrote off billions of dollars of bad assets each quarter, causing their reserves to shrivel. Commercial banks are leveraged with perhaps ten times as much in assets as capital. But some investment banks leveraged themselves more than 30 to 1, to the point that should anything go seriously wrong with those assets, their businesses could fail. The same held true of Fannie Mae and Freddie Mac, which own or guarantee more than \$5 trillion in mortgage debt.

**8. A cloud of suspicion and distrust enveloped financial markets.** Surprised by these developments, investors large and small realized that stocks of supposedly stable financial institutions were in fact ticking time bombs and began selling their shares. Banks, which routinely lend each other money overnight, curtailed those loans because they began to lose faith in the value of the collateral the borrowing banks were offering.

**9. The gathering storm set off a sickening wave of failures.** One of the first banks to fail was California's IndyMac, which was a leader in subprime lending. Countrywide, the biggest mortgage lender, sold itself to Bank of America to avoid insolvency. This spring, Bear Stearns, the most overextended of the investment banks, failed, and the government arranged a forced marriage with JPMorgan Chase. Then in September, to avert a collapse of Fannie Mae and Freddie Mac, the government seized control of them by putting them in a conservatorship that made Uncle Sam the explicit guarantor of mortgages they owned or insured.

**10. Lending of all sorts started to freeze up.** First to coagulate, last winter, was the market for auction-rate securities. These are long-term debt securities whose interest rates are regularly reset, so that they behave more like short-term notes. With no buyers, investors in these notes were stuck. By September, even overnight loans among banks had dried up. And despite hundreds of billions of dollars in cash that central banks around the world pumped into banks' coffers, few banks put that money to work for fear it would be needed to shore up their own finances. Recently, investors began withdrawing tens of billions of dollars from supposedly supersafe money-market funds, which invest in, among other things, short-term corporate debt.

**11. And government could not steady the boat.** Nothing that Washington tried -- lowering interest rates, flooding the economy with gazillions of dollars to keep the financial community afloat, rescuing Fannie Mae and Freddie Mac -- instilled confidence in financial institutions. When Lehman Brothers Holdings declared bankruptcy on September 15, fellow investment bank Merrill Lynch sold itself to Bank of America to avoid being next to topple. That was followed by the government's rushed takeover of American International Group, the world's largest insurer, whose forays into insuring the repayment of billions of dollars in debt had drained its capital. Then the last two independent investment banks, Goldman Sachs and Morgan Stanley, found their own survival cast into doubt by plunging share prices.

**12. Word of a rescue plan to take bad assets off the hands of financial companies is encouraging investors.** The Bush administration's proposal, being crafted with congressional

leaders, would create a federal agency to take hundreds of billions of dollars in "bad assets" off the balance sheets of financial institutions, for a price. Eventually, those assets that recover their value would be sold back into public markets. Conceivably, the ultimate cost to the government of this plan may not be that great. Word of this plan fueled huge rallies in the U.S. stock market on September 18 and 19.

**13. Also helpful: Stable home prices are on the horizon.** Throughout 2008, the year-over-year decline in home sales has been slowing, indicating that activity in the housing market could soon pick up. Meanwhile, the inventory of unsold homes has almost quit growing, and the months' supply of unsold homes is one-third of what it was at the start of the year. This matters, because only when prices stabilize will the wave of foreclosures crest and the extent of bad debt poisoning the balance sheets of financial institutions be known.

**14. But the economy will suffer aftershocks for years.** That's because banks have already lost \$1 trillion to bad debt during this crisis, and some experts expect the losses to end up being twice that amount. Less capital means less money to lend and far stricter limits on credit to borrowers. Years could pass before banks can rebuild their capital to the levels that existed before this crisis. The shocks already felt could cause the economy to fall into recession; it's too soon to tell.

**15. Don't lose hope.** A financial panic causes people to lose their ability to reason. But just because a panic can end in utter economic disaster doesn't mean that it will. Just as banker J. Pierpont Morgan could quell the Panic of 1907 by walking onto the floor of the New York Stock Exchange and buying bank stocks, so too could decisive government action contain the Panic of 2008. You may not know the outcome of this drama for weeks or months to come. Until you do, the best course of action might be ... to do nothing.

## Will The Bailout Work?

Michael Spence

Forbes, 10.06.08,

The U.S. economy, and much of the rest of the developed world, is in the midst of the collapse of an asset bubble fueled, in the main, by excess leverage.

The collapsing asset values have led to damaged balance sheets in major financial institutions, capital adequacy problems and, recently, a drying up of credit. The last is the most serious. The unavailability and cost of credit have led to further collateral damage to assets, an inability (or, in some cases, unwillingness) to raise additional capital, and a widening of the credit problems.

Central banks have been injecting capital, taking on an ever wider and riskier array of assets as collateral. And there has been a sequence of interventions with respect to specific institutions that has been growing in terms of size and frequency.

Yet it became clear to the Fed and the Treasury--as panic developed and short-term credit dried up--that the case-by-case approach would be unlikely to solve the problem, or at least was a much riskier path than a more comprehensive approach. It was as if we had a very good and alert fire department, but too many actual and potential fires to make the fire-fighting mode by itself an effective resolution of the problem.

As the sequence of distressed or at-risk financial institutions extended, and the frequency of emergencies increased, investors panicked and credit markets locked up. Banks stopped lending to each other. The transparency fog surrounding derivative securities did not help. The locking up of credit markets dramatically increased the likelihood that the fear that every institution was at risk would become a reality--a case of self-confirming expectations. This led the Fed and the Treasury to conclude that dealing with emergencies case by case was, while necessary, far from sufficient. In this judgment, and in the need for action and speed over design fine-tuning, they were surely right. There is a real risk that the European economy is entering into a similar dynamic.

The pressing issue is the restoration of credit at a reasonable cost, so that the financial sector, the business sector and the housing markets can function. A failure in this regard would produce much wider and deeper damage than just the resetting of the values of assets and liabilities, the concomitant de-leveraging and the failure of a few financial institutions.

One should ask why a housing bubble caused by low interest rates and the inappropriate and excessive extension of credit has caused such a widespread financial crisis.

The short answer is balance sheets. Through securitization, the packaging and repackaging of mortgages (and securities backed by mortgages), the holding of the highly levered and now damaged securities was widespread--including in all the principal financial institutions that supply credit to the economy.

Insurance also played a role. Securities that looked risky were nevertheless rated highly and purchased in part because of the addition of credit insurance. But insurance only works when individual risks are substantially uncorrelated in the pool that is being insured. No one would undertake to provide hurricane insurance for a single town on the Gulf Coast. The problem is that when risk is as systematic as it has become in the financial sector, you can't provide insurance without an enormous capital underpinning. That was not there.

The profitable business of providing insurance until the risk materialized morphed into financial distress, and the insurance vanished, further damaging credit ratings and balance sheets. This is not to say that derivative products are not useful in moving risk around. They are. But major revisions in the way risk is assessed will be an important part of the aftermath of the crisis, and it will include considerations of appropriate capital requirements and regulations.

To deal with the credit lockup, capital has to be injected into these institutions and, if possible, a value established for some of the assets that they already hold. An important feature of the current situation is that pretty much all of the institutions that are the normal channels for providing credit have been damaged and have capital adequacy problems. Private and Sovereign Wealth Fund capital, which was injected earlier has not fared well, and, as a result has dried up. It is widely accepted that at this stage the only viable source of capital is the government.

The challenge, then, is to inject capital into the only channels we have for providing credit--to wit, existing institutions such as the major banks--without bailing out the existing investors. If by bailing out one means adding value--with the starting point being the current very depressed prices for equity and preferred stock in the financial sector--it probably isn't possible to inject capital and avoid bailing out unless the government takes ownership of a substantial fraction of the sector at least for a period of time.

The bailout legislation just passed would inject capital by allocating \$700 billion to buy mortgage-related assets. Other provisions include limits on executive compensation, the ability to have equity in the form of warrants or options for institutions that sell assets to the Treasury, and a commitment to aggressively

reset mortgage terms to limit foreclosures and to help households with debt service they cannot afford. In addition, deposit insurance in banks is expanded, and there are tax adjustments that have been added for political reasons in the second round. The additions, plus the huge market reaction to the first round rejection, were sufficient to get the altered plan passed.

One goal is clearly to help households whose mortgages are either under the current value of the house or who cannot pay the interest and principal on the mortgage. This is important politically, and can be accomplished through the purchase of bundles of mortgages, resetting the terms of the mortgages and avoiding foreclosure.

A second is to initiate a process in which something like market values are established for assets whose value is currently highly uncertain, or discounted dramatically, because of counterparty solvency, visibility and transparency issues.

The third is to inject capital into the existing system, by replacing highly discounted or under-priced assets with cash. There is a debate going on about what the "right" price is for these purchases. The argument is something like this: If the purchases are at current extreme distressed prices, not much capital will enter the system; and if they are at higher prices, the institutions are being bailed out and the taxpayer is footing the bill, or there is compensating warrant dilution.

The theory of the case, as outlined by experts like Bill Gross and Warren Buffett, is that the assets, when properly managed with ample capital backing, have intrinsic value that can be estimated with hard work and due diligence. Further, these assets can be purchased at well below these intrinsic values because the holders and other potential buyers do not have adequate capital.

The assets should be purchased at a discount to intrinsic value so as to yield a reasonable return (7%) on the taxpayers' investment, but above the current market value (if there is one) of the assets. The sellers gain because they add capital and reduce distressed assets; and because markets that are currently closed for these mortgage-related assets begin to open, and prices are established, restoring both value and visibility to parts of the balance sheets.

This does not mean that solvency will return to all institutions, but a more realistic assessment of their value will emerge, and it will be easier in some cases to raise private capital. In other cases the institutions will be insolvent even with more realistic valuations for the assets and go into Chapter 11 and be dismantled.

The quality of the due diligence to sort through the wide spectrum of quality in the asset pool is crucial to the success of the program. Without it, the government could end up purchasing assets at the bottom of the quality spectrum, knowing less about the underlying quality than the sellers.

The government, with patient capital, then holds the mortgages, resets terms and waits for private capital to enter the system. If the due diligence was done well, market prices (including housing prices) will, over time, return to something like the intrinsic values, at which point the government will be inclined to sell the assets/mortgages at a measured pace. Will this work? It could. No one knows for sure. But \$700 billion is not enough additional capital. The bailout will, therefore, stand or fall on whether it succeeds in causing private capital to return to the sector. It is even possible that if the strategy works, large external holders of treasuries will find the risk-return mix attractive.

*Michael Spence, chairman of the [Commission on Growth and Development](#), is a 2001 Nobel laureate for economics and a senior fellow at Stanford's Hoover Institution.*

## **Other sources of info on the Panic of 2008:**

### ***Overviews of the current situation:***

Economist Barry Eichengreen, “Anatomy of a Crisis”

[http://www.realclearmarkets.com/articles/2008/09/anatomy\\_of\\_an\\_economic\\_crisis](http://www.realclearmarkets.com/articles/2008/09/anatomy_of_an_economic_crisis)

New York Times analyst David Leonhard (excellent summary):

<http://www.nytimes.com/2008/10/01/business/economy/01leonhardt.html?hp>

Economist Brad DeLong, “What Are We Doing? Plans A through G”

<http://www.scribd.com/doc/6839568/null>

Economist Roger Congleton’s notes on crisis:

[http://rdc1.net/Fiscal%20Crisis%20of%202008%20\(notes\).pdf](http://rdc1.net/Fiscal%20Crisis%20of%202008%20(notes).pdf)

New York Times “The Reckoning” Series

[http://topics.nytimes.com/top/news/business/series/the\\_reckoning/index.html](http://topics.nytimes.com/top/news/business/series/the_reckoning/index.html)

### ***Analysis of the current situation and the government response:***

Economists Douglas W. Diamond and Anil K. Kashyap, FAQs of the financial crisis:

<http://freakonomics.blogs.nytimes.com/2008/09/18/diamond-and-kashyap-on-the-recent-financial-upheavals/>

Economist Martin Feldstein, “America’s Problems Run Deeper than Wall Street”

<http://www.project-syndicate.org/commentary/feldstein4/English>

Economist Paul Krugman on the latest plan:

[http://www.nytimes.com/2008/10/13/opinion/13krugman.html?\\_r=1&em&oref=slogin](http://www.nytimes.com/2008/10/13/opinion/13krugman.html?_r=1&em&oref=slogin)

Princeton University panel on financial crisis (start watching at around 22 minutes in)

[http://www.youtube.com/watch?v=Wj\\_JNwNbETA](http://www.youtube.com/watch?v=Wj_JNwNbETA)

Sebastian Mallaby on bailout:

<http://www.washingtonpost.com/wp-dyn/content/article/2008/09/25/AR2008092503070.html>

### ***Prospects for the future:***

Economists Larry Kotlikoff and Perry Merhling:

[http://www.washingtonpost.com/wp-dyn/content/article/2008/10/08/AR2008100802931\\_pf.html](http://www.washingtonpost.com/wp-dyn/content/article/2008/10/08/AR2008100802931_pf.html)

Financial Times “Big Freeze” Series, Part 4:

<http://www.ft.com/cms/s/0/794801a8-63e8-11dd-844f-0000779fd18c.html>