



The Financial and Economic Crises of 2008: How Did We Get Here, and How Might We Get Out?

Executive Summary

Financial markets are in turmoil, and anger, fear and confusion are running high throughout the country. How did we get into this mess? Who's to blame? Why should the taxpayers foot the bill for a problem they didn't create? Why shouldn't the folks who created the problem and reaped great financial rewards in the process clean up their own mess? How do we know the rescue plan will work?

The list of people and institutions who could be charged with causing or exacerbating the crisis is long: greedy Wall Streeters, lax regulators, foolish legislators, reckless creators of financial derivatives, shady or irresponsible borrowers, complacent lenders etc. Like Agatha Christie's "Murder on the Orient Express," it seems likely to me that all the suspects played a role in the deed. But what fundamental market and economic conditions allowed fallible humans to create the mess we now face, and how can we get out of it?

Ironically, I believe it was this escalating search for safe, secure returns in fixed income that helped create the credit and housing bubbles that put the global financial system in peril as they deflated.

But the most important thing now is to stop the bleeding and start the healing. If my reading of the root cause of the problem is correct, the policy actions taken by the Fed, Treasury and FDIC should help significantly. These actions should improve the capital position of banks and give creditors the higher-quality paper they would have preferred in the first place. This should alleviate the urgent need for new private capital and allow banks to start to lend more confidently. The vicious downward spiral of credit contraction might stop and may even start to reverse. The plan could also help stabilize the housing market.

It might not be a perfect plan, and further action might be required. But I believe it's a step in the right direction.

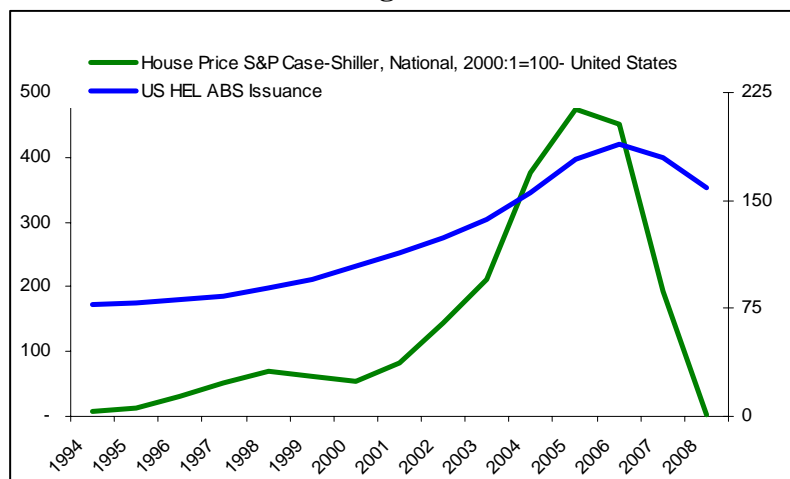
Ed Keon, Managing Director

The financial markets are in turmoil, and anger, fear and confusion are running high throughout the country. How did we get into this mess? Who's to blame? Why should taxpayers foot the bill for a problem that they didn't create? Why shouldn't the folks who created the problem and reaped great profits in the process clean up their own mess? How do we know the rescue plan will work?

Much of the current discussion focuses on what crash investigators would call “human error.” The list of people and institutions charged with those errors is long: greedy Wall Streeters, lax regulators, foolish legislators, incompetent ratings agencies, an easy Fed, a short-sighted administration, reckless creators of financial derivatives, shady or irresponsible borrowers, complacent lenders and others. Like Agatha Christie's “Murder on the Orient Express,” it seems likely to me that all the suspects played a role in the deed. Some went beyond mistakes to commit fraud and other crimes; those who have done so should be identified and punished. But human imperfections have always been and will always be with us. Our institutions will never be perfect. Wall Street has always run on the profit motive, i.e. greed. Was Wall Street less greedy 20 years ago than today? Why did greed bring about this problem now? What fundamental market and economic conditions allowed fallible humans to create the mess we now face, and how can we get out of it?

Let's start with the credit bubble. The first key to understanding the cause of the problem is to recognize that a credit bubble enabled the housing bubble; the craze to buy houses was enabled by easy credit. Figure 1 overlays the Case-Shiller national house price index on the dollars of mortgage-backed securities (MBS) issued from 1994 through early 2008. Note that there were still nearly a half billion dollars of MBS issued in 2006, even after house prices had started to decline in some markets and warnings about a housing bubble had become widespread. If the lust for housing had driven the bubble, we would have expected lenders to tighten standards as house prices rose. Instead, standards got looser at and even past the peak of the housing bubble. This suggests that providers of credit chased debtors more than house buyers chased credit.

Figure 1



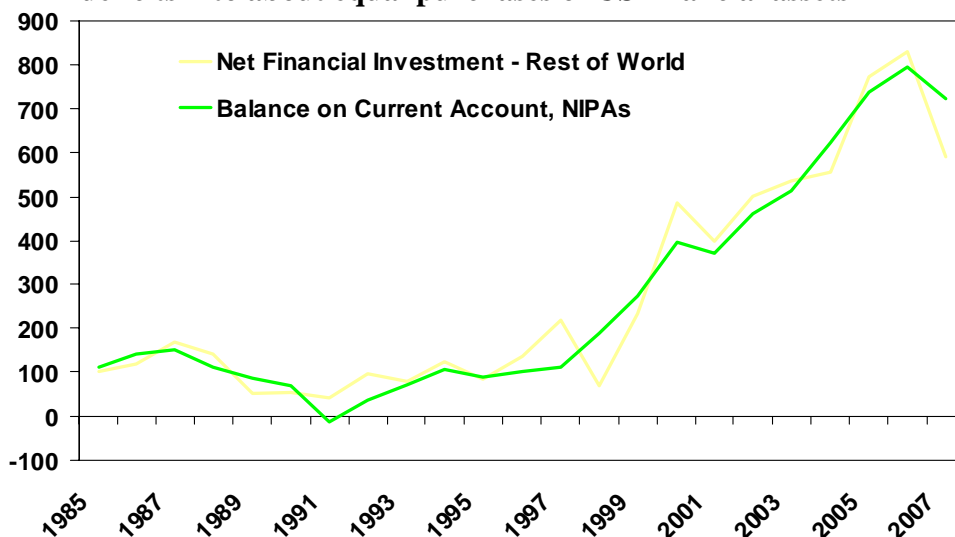
Source: JP Morgan, FactSet Research Systems

Subprime debtors were more “rational” than their lenders. If someone of limited means is offered an opportunity to buy a house with no money down and low monthly payments, the rational thing to do is take it. Worst case: you get shelter for a while at a reasonable cost before you get foreclosed. Best case: house prices rise and you get a nice place to live and a financial windfall. Why would anyone offer such a no-lose proposition and provide such a risky, foolish loan? They would do so only if they could sell that loan to someone else. Why would someone buy a bundle of such silly loans, especially the sophisticated institutions that purchased most mortgage-backed securities? Why wouldn't they allocate the fixed-income parts of their portfolios to safer, saner Treasury securities or high-quality corporate bonds? As I see it, they would have vastly preferred to buy better-quality instruments, but there simply weren't enough to go around, so the price of good stuff was high and yields were low. Investors would

have preferred to buy steak, but most of it was gone and the price was sky high, so they settled for hamburger—rancid, e coli-infected hamburger, as it turned out. How did this happen? How did the demand for fixed income so exceed the supply of quality product? Let's look at the facts.

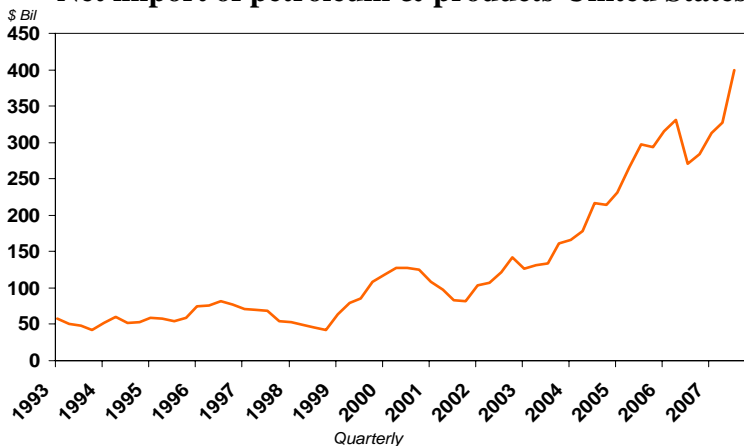
Non-US investors drove fixed-income demand. Over the past several years, one of the biggest sources of increased demand for fixed-income products came from non-US investors. As Figure 2 shows, the US current account deficit with the rest of the world was roughly \$100 billion annually from 1985 until about 1998. Those excess dollars were recycled into US financial assets, especially Treasury securities. Until the recent development of more and bigger sovereign wealth funds, most non-US investors felt they lacked the expertise to analyze and buy US equities. There are also political problems with some equity investments in certain areas, e.g. oil and ports. Typically, 80% or more of the financial assets purchased by non-US buyers have been fixed-income instruments. Starting in 1998, however, the current account gap started to rise; it soared to about \$800 billion in 2007, fully eightfold as high as it was a decade earlier. The major sources of the soaring trade gap are well known: oil (Figure 3) and China (Figure 4). Suddenly, oil suppliers and China had hundreds of billions of extra US dollars each year that they had to recycle.

Figure 2
Until 2007, non-US investors have recycled US trade
deficits into about equal purchases of US financial assets



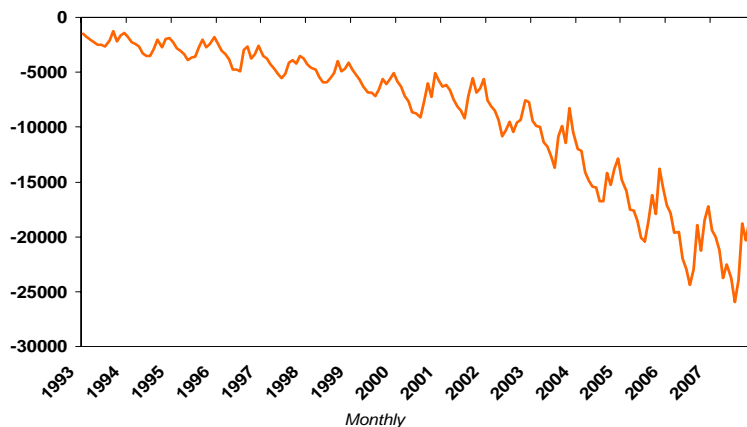
Source: QMA, FactSet Research System, Federal Reserve Flow of Funds March 6, 2008

Figure 3
Net import of petroleum & products-United States



Source: QMA, FactSet Research System

Figure 4
Trade balance with China



The first place to turn was US Treasury securities. From 1985 through 1993, this was no problem, as the US issued plenty of debt and non-US investors were relatively small players, comprising about 20% of the total (Figure 5; Figures 5-10 are derived from the Fed’s Flow of Funds [FoF] report. The numbers to the left in the figures are the line numbers drawn from FoF, and are provided for reference) But then a funny thing had happened: in the 1990s, the US was running a federal government budget surplus and didn’t need to issue more debt. Although the US has dutifully gone back to running budget deficits in this decade—record deficits, in fact—the drought in the 1990s, combined with the large supply of dollars to recycle, meant that non-US investors bought more than 100% of new Treasury issuance from 1994 to 2007. The rest of the world was buying up all the new Treasury debt they could get, but they still had trillions of dollars left.

Figure 5
Non-US investors bought more Treasuries than all the new issues since 1994

| | 1985-1993 | 1994-2007 |
|-----------------------------|-----------|-----------|
| Net Issues (1) | 1949.0 | 1789.5 |
| Purchase Rest of World (11) | 375.0 | 1925.0 |

Source: Federal Reserve Flow of Funds March 6, 2008

The next place to turn was corporate bonds. From 1998 through 2001, the rest of the world’s purchases could be satisfied by bonds issued by non-financial corporations such as IBM or AT&T (Figure 6). But from 2002 through 2007, even buying all the new issues of non-financial bonds was not enough, so purchases of credit instruments of financial institutions (allowing financial firms to increase their debt and their leverage ratios) and asset-backed securities were required. Yet there were still plenty of dollars left over, so they turned to MBS issues by the GSEs and other agencies (Figure 7). Until 2003, non-US investors were relatively small players in these pools, but from 2004 through 2006, as the housing bubble was inflating beyond all reason and reaching its peak, foreign investors flush with dollars in effect bought 100% of agency and GSE securities, pouring money into an already overheated mortgage market.

Figure 6
With Treasuries in short supply, non-US investors became bigger players in corporate

| | 1998-2001 | 2002-2007 |
|-----------------------------|-----------|-----------|
| 2 Non- Financial Corp. | 929.0 | 935.2 |
| 4-7 Financial corps. ex ABS | 511.0 | 1068.0 |
| 7 Asset-Backed Securities | 355.8 | 2465.0 |
| 15 Rest of World Purchases | 612.2 | 1696.6 |

Figure 7
In 2004-06, non-US investors effectively bought almost 100% of new Agency and GSE mortgage-backed securities

| | 1998-2003 | 2004-2006 | 2007 |
|-------------------------|-----------|-----------|-------|
| Net Issues | 3269.0 | 536.0 | 888.0 |
| Mortgage Pools | 1663.0 | 511.0 | 606.0 |
| Other | 1606.0 | 25.0 | 282.0 |
| Rest of World Purchases | 435.5 | 488.0 | 189.0 |

Source for Figures 6 & 7, Federal Reserve Flow of Funds March 6, 2008

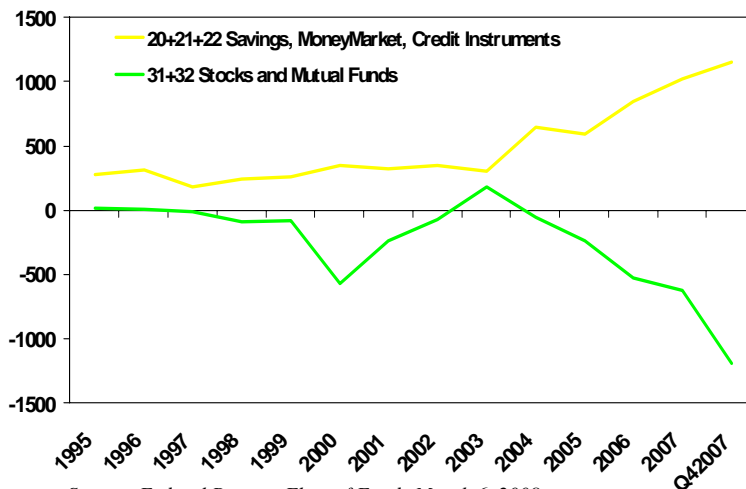
Non-US investors were not the only ones seeking fixed income instruments. Figure 8 shows the flows of households (together with the much smaller non-profit organizations, and mostly calculated as a residual). From 1995 through 2006, households steadily increased their capital expenditures on durable goods, including housing. (It might be useful to think of this line as kitchens and cars.) In 1995, we were able to do so while acquiring more financial assets than debt (line 16). But by 1999, we started taking on more debt to buy kitchens and cars and other stuff than we were offsetting with additional financial assets. Starting in 2000, US households (perhaps encouraged by financial advisors to move assets from stocks to fixed income as clients aged, as well as by the bear market) made dramatic changes in our financial portfolios, selling stocks (somewhat offset by purchases of mutual funds and ETFs) and putting that money into savings accounts and other fixed-income instruments (Figure 8a). Those flows were generally \$250 billion-\$350 billion annually from 1995 through 2003, but in 2004, that amount doubled to \$600 billion—and it topped \$1 trillion in 2007. In effect, as the housing bubble neared its peak, some households competed with foreign investors to lend money, directly and indirectly through financial intermediaries, to other households—many of whom had shaky credit. *Ironically, the search for safe, secure returns in fixed income helped create the credit and housing bubbles that put the global financial system in peril as they deflated.*

Figure 8
Households have been heavy sellers of stocks recently,
while pouring money into cash and credits

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | Q42007 |
|---|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| 12 Capital Expenditures | 861.0 | 924.2 | 986.2 | 1085.7 | 1179.7 | 1245.4 | 1293.0 | 1363.0 | 1459.0 | 1582.0 | 1702.0 | 1708.0 | 1620.0 | 1574.0 |
| 16 Net Financial Investment | 149.0 | 152.6 | 55.4 | 13.7 | -245.1 | -514.5 | -180.4 | -308.1 | -88.0 | -140.0 | -771.0 | -650.0 | -234.0 | -283.0 |
| 17 Total Net Acquisition of Financial Assets | 482.0 | 505.5 | 403.4 | 468.8 | 330.3 | 80.6 | 450.0 | 497.4 | 937.0 | 1023.0 | 386.0 | 613.0 | 685.0 | 600.0 |
| 20+21+22 Savings, MoneyMarket, Credit Instruments | 273.9 | 314.4 | 181.8 | 236.6 | 254.7 | 350.2 | 325.4 | 354.5 | 302.0 | 647.0 | 592.0 | 840.0 | 1020.0 | 1147.0 |
| 31+32 Stocks and Mutual Funds | 22.3 | 6.5 | -12.6 | -91.6 | -85.3 | -571.0 | -239.7 | -75.4 | 188.0 | -53.0 | -240.0 | -525.0 | -621.0 | -1196.0 |
| 35 Pension Reserves | 176.8 | 151.6 | 213.4 | 282.0 | 182.9 | 271.6 | 266.3 | 262.9 | 258.0 | 288.0 | 238.0 | 198.0 | 124.0 | 216.0 |
| 38 Net Increase in Liabilities | 333.0 | 352.9 | 248.0 | 455.1 | 575.4 | 595.1 | 630.4 | 805.5 | 1020.0 | 1163.0 | 1157.0 | 1263.0 | 920.0 | 882.0 |
| 40 Mortgages | 153.8 | 205.5 | 216.1 | 301.7 | 379.3 | 385.5 | 506.6 | 709.2 | 856.0 | 940.0 | 1028.0 | 987.0 | 655.0 | 514.0 |
| 41 Consumer Credit | 147.0 | 150.7 | 70.3 | 97.1 | 112.4 | 176.5 | 150.7 | 107.9 | 104.0 | 115.0 | 95.0 | 104.0 | 132.0 | 102.0 |
| | 528.0 | 571.3 | 738.2 | 630.6 | 604.3 | 650.3 | 662.6 | 557.5 | 439.0 | 419.0 | 545.0 | 445.0 | 700.0 | 692.0 |

Source: Federal Reserve Flow of Funds March 6, 2008

Figure 8A
Households have been heavy sellers of stocks recently,
while pouring money into cash and credits



Source: Federal Reserve Flow of Funds March 6, 2008

Pension plans and mutual funds also stepped up their demands for credits. Over the past several years, pension plans have been trimming equity exposure in favor of fixed income, trying to better match assets with liabilities (Figures 9 and 10), adding to the already huge demand for credits at the height of the housing bubble. Mutual funds, of course, buy the assets appropriate for the funds clients buy; over the past few years, bond funds have been attracting more new assets than domestic equity funds, according to Fed data.

Figure 9
Pension plans have been selling stocks and buying credits since 2005

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|-------|------|------|-------|-------|--------|
| 118/8+119/8+120/2 Credit Market Instruments | -46.6 | 94.0 | 22.2 | 70.3 | 98.7 | 72.5 |
| 118/14+119/15+120/6 Corporate Equities | 31.9 | 28.8 | 22.2 | -17.1 | -44.8 | -122.6 |

Figure 10
Mutual funds have acquired more credit instruments than stocks since 2006

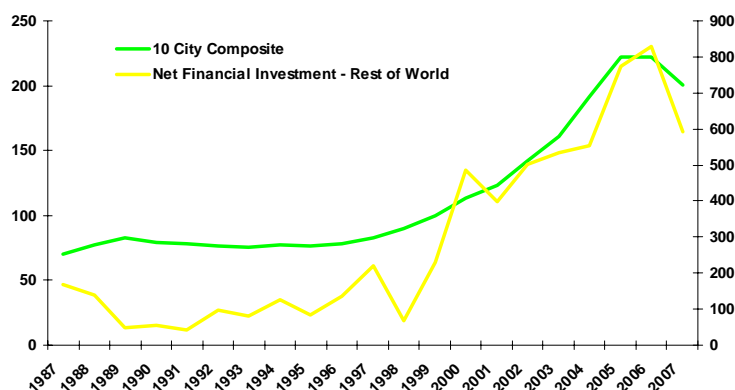
| | 2003 | 2004 | 2005 | 2006 | 2007 |
|-----------------------------|-------|-------|-------|-------|-------|
| 4 Credit Market Instruments | 138.0 | 116.6 | 124.1 | 184.9 | 262.5 |
| 10 Corporate Equities | 136.8 | 158.5 | 129.6 | 131.3 | 91.7 |

Source for Figures 9 & 10, Federal Reserve Flow of Funds March 6, 2008

I believe the housing bubble was driven by the credit bubble. For reasons that seemed perfectly sensible to them, foreign investors, households and US institutions all clamored for fixed-income products over the past several years. Without enough high-quality instruments to go around, lower-quality instruments were created to satisfy the demand. For every transaction, there is an equal and opposite transaction. I can't buy a bond unless some other economic actor goes into debt. In this case, credit was extended to subprime borrowers simply because all other economic actors had already assumed all the debt they needed or wanted—and yet demand for credits was not sated.

Global imbalances will find a way to balance themselves—in this case, dangerously. Figure 11 overlays the Case-Shiller house price data on the US current account deficit; it is striking how closely they track. Although there has long been concern in some quarters about the size of the US trade deficit, no one to my knowledge anticipated that it might lead to a housing bubble. Although we are all aware that imports of energy (which account for about half the increase in the current account deficit) are an important issue, my analysis argues that the housing bubble and its terrible aftermath were directly related to the rise in oil prices and Americans' love affair with SUVs.

Figure 11
The rise in house prices tracked non-US investment acquisition of US financial assets



Source: QMA, FactSet Research System, Federal Reserve Flow of Funds March 6, 2008, S&P Case Shiller

To summarize so far, this analysis is a bit different from the conventional narrative about the current crisis, because it focuses less on the mistakes and misdeeds of individual economic actors and more on the fundamentals of supply and demand. Banks and brokers created poor-quality loans and loan products because they could, and because they had willing buyers for these products. This perspective does not absolve anyone of blame; the institutions and individuals whose behavior was illegal and/or unethical should pay a price. But it does show how a steady increase in global demand, in this case for dollar-denominated fixed-income instruments (in large part driven by the US current account deficit), led to an imbalance between supply and demand that had unexpected and destructive consequences.

So how did excessive demand for credits lead to the current credit crisis? By the summer of 2007, house prices had been falling in much of the US for a year or more. Delinquencies on mortgages had been rising, as had foreclosures, especially on lower-quality subprime loans. Purchasers of MBS had always assumed that some loans would go bad, but actual experience started to look worse than expected, and house prices continued to fall. Investors started questioning the value of these securities; some started aggressively selling them short, betting that prices would fall. As with dot-com stocks in 2000 (and in many other previous manias and crashes, as documented by Kindleberger), the MBS that everyone had loved were suddenly scorned. By early 2008, as house prices continued to fall rapidly—especially in the biggest-bubble cities such as Miami and Las Vegas—holders of MBS could not get bids. An occasional bottom-seeker would buy some portfolios at what looked like bargain prices, but within weeks those “bargain” prices seemed way too high, scaring away potential purchasers.

House prices keep falling—and no one knows when and at what level they will bottom. One of the most underappreciated facts of the current crisis is that that vast majority of homeowners are still paying their mortgages on time. That means MBS holders are still getting paid most of what they expected to get paid, if not as much as they had hoped. Let’s say that an MBS had an initial value of \$100 and mortgage interest payments of \$7. Suppose that, due to delinquencies and foreclosures, the payment drops to \$6. What should the security be worth now? You might say that the price would adjust back to the original 7% yield to \$85 ($6/85 = 0.07$). But as long as house prices keep dropping, investors are worried that the \$6 could go lower as well perhaps to \$3 or less. Also, they don’t want risky securities yielding 7%; they want higher yields to compensate them for credit risk. (Warren Buffet received a 10% yield on securities issued recently by Goldman Sachs and GE, which are much better risks than the average subprime borrower.) If a buyer wanted a 12% yield on the securities and assumed an eventual payment stream of \$3, then they would have paid only \$25, even if the current yield based on the \$6 now received is a whopping 24%. Just before agreeing to be acquired by Bank of America, Merrill Lynch sold some MBS to a hedge fund for about 22 cents on the dollar; although full details were not disclosed, my guess is that the transaction probably looked similar to this little example.

This might also help explain why this crisis has continued to build for more than a year. In the first few months of the drop in home prices, payments to holders of MBS came in just modestly below expectations, so write-offs were low. When payments dropped to, for instance, \$6 in the example above, the initial hit might have been 15%. But as the fear of lower payments to come interacted with investors’ higher risk premium demands, the market value of these securities plummeted. Marking prices to market might mean a write-off of 75% or more, taking a huge bite out of capital and threatening solvency.

To appreciate how this crushed the financial system, let’s look at how banks work. To oversimplify, financial firms borrow and lend money. If you deposit \$100,000 in a savings account yielding 2%, you are basically loaning the bank \$100,000. The bank then loans that out to someone buying a house with a 6% mortgage and earns 4% or \$4,000 in the process. But what if you walk in and want your \$100,000 back? You are giving the bank a short-term loan that you can demand back at any time, while the mortgages written by the bank pay off slowly over time. This mismatch in time (or duration) is one of the key risks that financial institutions must manage. The bank is required by law to keep some of its own money available to make sure it can pay you if necessary. Most of the time, people keep money in savings accounts for a long time, so the amount banks need to hold is well less than the

total on deposit; to make it easy, let's assume it's 10%. So a bank with \$1 billion in deposits (a liability for the bank) and \$1 billion in loans outstanding (an asset for the bank) would have \$100 million from the owners and shareholders on the bank available on short notice to pay depositors if needed. The 4% difference between what a bank pays to depositors and charges to lenders means their gross profit is \$40 million. If the bank's expenses to pay employees, rent and so forth are \$25 million, the net profit is \$15 million, earning the owners a 15% return on their \$100 million of capital. Suppose, however, that despite this bank's solid profitability and financial soundness, a false rumor is spread that it is about to fail, as in the classic movie, "It's A Wonderful Life." If depositors demand more than \$100 million back at once, the bank might not have enough cash or capital on hand to pay. This liquidity problem arises from the common practice of borrowing short term (through deposits) and lending long-term mortgages. Nevertheless, if the bank's mortgage loans are still being repaid as before, the bank remains sound; new capital can usually be raised to maintain operations. In time, the panic will subside and the bank will go back to normal.

A solvency problem is tougher to solve than a liquidity problem. Suppose a major employer in the area closes, and 20% of the bank's customers can no longer pay their mortgages. The bank's interest income would fall by 20% to \$48 million, still sufficient to pay the \$20 million in interest owed to depositors and cover overhead of \$25 million. But there is a bigger problem on the balance sheet. If the bank ends up foreclosing and selling the homes of its delinquent borrowers, the results can be tragic for homeowners and financially disastrous for the bank, which might get half the value of the loan back, for a net loss of \$100 million, wiping out its capital. The bank owes depositors as much as its remaining assets are worth; that is, the bank is broke. The regulators would require the owners to put up an additional \$100 million of capital to stay in business. If the owners were unable or unwilling to come up with the cash, they would fail and be taken over by regulators, e.g. the FDIC.

Investment banks and hedge funds might not take in deposits and make mortgages like a traditional savings and loan, but they might borrow money from banks or investors and invest that money in mortgage-backed bonds or other securities yielding more than it cost them to borrow. Because they are not as tightly regulated, they might be able to put up much less than 10% of their own capital, let's say 3%. That means that \$100 million in capital might support \$3 billion of assets and \$3 billion of liabilities. If the company earns a 4% spread, its gross income is \$120 million. That means that there is more money to pay executives and employees while still providing shareholders with an attractive return on capital. As long as nothing goes wrong, the higher the leverage is, the greater the money earned by the firm's employees and owners. Like a subprime borrower, a financial institution that can borrow more cheaply than it lends/invests can easily convince itself to keep borrowing and investing to the maximum allowed by law or by its credit limit. It might also convince itself that it has managed the risk; if there is a problem, the bank could always sell assets to meet its obligations. Those risk models did not anticipate the simultaneous rapid drop in capital, the firm's stock price and market value of its assets, with terrible consequences.

But with greater leverage comes much greater risk. For a firm levered 30:1, a mere 4% drop in the value of the firm's assets would wipe out its capital, requiring the owners to put up more to prevent insolvency. Under "normal" business conditions, if investors believe that the firm's underlying business and remaining assets are sound, the firm can issue stock or bonds to restore the proper capital ratio. But over the past few months, financial stock prices have fallen with stunning swiftness, making new stock or bond issuance impossible. If a firm can't get new capital quickly, creditors, like depositors, get nervous and demand their money back. Customers who use the bank's services also get nervous and stop doing business with it. When leverage is very high and the environment feels dangerous to investors, even a small drop in the value of assets can quickly lead to failure; in essence, that's what has happened to many of the institutions that have failed so far. Along with excessive leverage, among the mistakes banks made over the past few years, one of the most fundamental was that they came to believe their own baloney, so they had major holdings of the MBS that they had helped create. (At least they ate

their own cooking, even if it ended up poisoning them.) If a firm held just 10% of its assets in MBS and the value of those securities dropped by half, the 5% drop in asset value could consume the capital of a firm leveraged 30:1.

How did the subprime problems and the failures of a few firms create such a big global problem?

Two years ago, it would have been unthinkable that a Lehman Brothers or an AIG could fail. They were big, strong institutions with global franchises. But they did fail, and when they did, other institutions and individuals started looking at the financial institutions and companies they did business with and wondering, could they fail too? Doing business with, and especially loaning money to, a firm that fails can be very painful. Money might be tied up in court for months or years, and a creditor might get back just pennies on the dollar or nothing at all. Because of this anxiety, over the past several weeks, institutions and individuals have become very reluctant to make loans or extend credit, both because they fear their cash might become tied up in a bankruptcy and because they want to hoard cash to ensure they themselves do not fail.

Business runs on credit. When a small business wants to add merchandise to inventory, the supplier will usually give them 30–60 days to pay for it. A hardware store in Minnesota might order 10 snowblowers from a distributor, expecting to sell them in the next few months before the bill is due. But if the supplier demands cash up front, the store will likely carry less inventory, sell less, and hire fewer people, consistent with the lower overall sales. Almost every business has some variability in its cash flows. A car dealer who sells 365 cars a year doesn't sell one a day or seven a week. Some weeks they might sell 25, and sometimes two weeks may go by without them selling any. A steady seven car sales a week allows the dealer to pay employees and suppliers, so in weeks where sales are above seven, the excess cash is deposited in a bank (which might loan it to a restaurant that needed cash that week), and in the lean weeks, money is drawn down or borrowed from the bank. If businesses are reluctant to deposit or lend their excess cash, companies that need cash can find themselves unable to meet payroll and other obligations during even brief downturns in business. Unpaid employees have to cut their spending, and overall business activity can quickly spiral downward.

A credit crisis can therefore affect everyone, even people who never use or do not now need credit themselves. The US and the world have entered into a vicious cycle: the contraction of credit is hurting business activity and draining business and consumer confidence. Credit problems hit the real economy with a lag. The dramatic credit contraction of September and early October is just beginning to hurt businesses and individuals; over the next few months, the economic impact is likely to get significantly worse, in my opinion. Left unchecked, the credit crisis could cause a painful drop in GDP, a huge increase in unemployment and a big increase in human suffering.

The metaphor is overused, but this has been a “perfect storm.” The excess demand for fixed-income product facilitated excess leverage by homeowners and financial firms. The drop in house prices hurt those with the most leverage. Besides increasing human suffering, the increase in delinquencies and foreclosures led to fear of further house price drops and more bad mortgages. This made investors demand much higher interest rates for buying MBS, if they were willing to buy at all. As financial institutions realized, to their horror, that the drop in market value of the mortgages and MBS that they held was disproportionately larger than the actual drop in payments, they realized that they might fall short of required capital ratios and go bankrupt. The actual bankruptcy of Lehman and the failure of many other institutions made that possibility all too real. Fear of their own bankruptcies or the failure of their business partners made people and institutions cut spending and hoard cash. Credit disappeared, and economic activity began to sharply contract. By early October, this threatened a drop in global economic activity not seen since the great Depression.

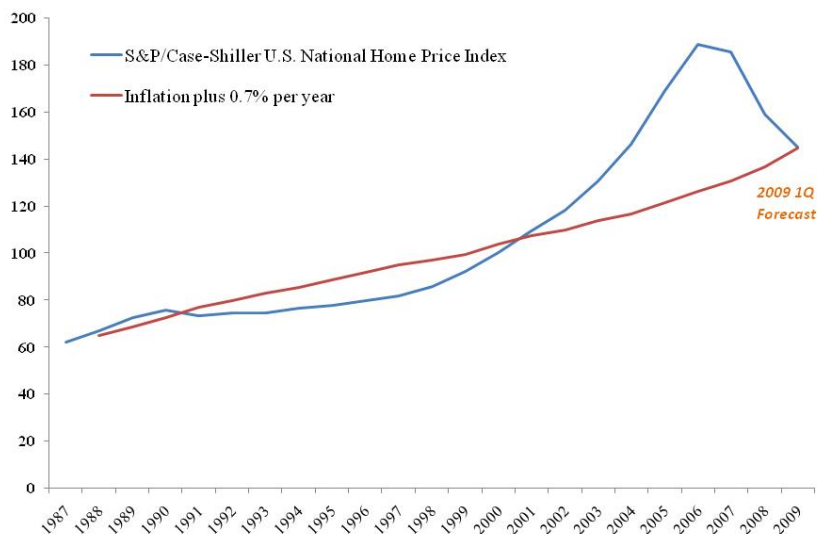
So how might we get out of this mess? If my reading of the sources of the current situation is correct, then the Treasury's financial rescue plan has a good chance of success. It addresses both the solvency and liquidity issues. The direct injection of capital into banks is designed to address solvency, the more immediate problem, first. Banks will get new capital to improve capital ratios and the threat of failure should recede. In a few weeks, TARP will, in essence, allow companies to trade the low-quality securities issued during the height of the credit bubble for Treasuries. This will give creditors the higher-quality paper they would have preferred in the first place, and it will immediately improve the liquidity position of any financial institution who takes advantage of it. There is a subtle reason, I think, why the Treasury quickly changed gears and injected capital first while working on the rest of the details of TARP. If a firm had marked to market the \$100 MBS with current payments of \$6 described above to \$60 and then sold it to the government for \$50, the firm would have to take a \$10 write-off, hurting its capital position even if it improved liquidity. By receiving injections of public capital first, banks will be in a better position to sell assets under TARP below their current marks without worrying about solvency. This should alleviate the need for new private capital and allow banks to start to lend more confidently. The vicious downward spiral of credit contraction might stop and may even start to reverse.

What about the taxpayers? The Treasury plan is not to give Wall Street money for nothing, as some seem to believe, but to buy equity positions, MBS and other paper for what it believes is a fair price, likely well below the original price in many cases but well above the fire sale price. Using the example above of an MBS security originally worth \$100 with a \$7 yield now yielding \$6, the government might pay \$40–\$50. True, exact prices and how they will be determined have not been explained in detail, and that has contributed to considerable wariness over the plan. But despite the fact that this would be above the \$25 desperation price, it would provide taxpayers with a 12–15% current yield. If the payments ultimately fell to \$3, as investors now fear, it's probably not a good deal for taxpayers. But if the government's action helps support housing prices, then the downward move in prices and the levels of delinquencies and foreclosures should start to stabilize. If payments fell to \$5 and stabilized there, the yield to taxpayers would be 10–12%. Fortunately, terrified investors around the world still seek the safety of US Treasury bonds, so rates remain low, i.e. the Treasury's cost of borrowing is under 4%.

The Treasury department is, in effect, becoming the hedge fund of last resort, using cheap money to lend at higher rates, profiting on the spread, lending where others now fear to tread. Taxpayers should benefit from a positive cash flow to the government, and with luck, the Treasury will eventually be able to sell the securities back to private parties when confidence returns. Of course, this scenario could still go wrong, especially if house prices fall a lot further. So it's worth examining where we are in the housing cycle.

House prices are almost back to the long-term trend established by Robert Shiller. Professor Shiller found that US home prices have increased at an annual rate 0.7% above inflation since World War II. During the bubble, prices rose at more than double that rate. But with the drop over the past 2 years, the Case-Shiller National price index is within about 6% or so from falling back to the trend line, using 1987 (the first year of the index) as a base (Figure 12). Of course, there is no guarantee that prices will stop falling when they hit the trend line. But at least it suggests to me that the Treasury's timing might be good. If house prices are close to "fair," then intervening now might work well. Jumping in a year ago when prices were more than 20% over trend might have been throwing good money after bad.

Figure 12
I think national house prices might bottom in the first half of 2009



Source: S&P/Case-Shiller, OMA.

The US economic outlook is the most precarious it has been since the Great Depression. Many people and institutions contributed to this mess; some probably did so deliberately and unlawfully; they should be identified and punished. But the most important thing now is to stop the bleeding and start the healing. Time is of the essence. Policy makers worldwide now seem to understand the gravity of the situation, evidenced by the extraordinary coordinated policy actions taken by the Fed, Treasury and economic officials worldwide in the past several days. If my reading of the root cause of the problem is correct, the Treasury's plan to inject capital, in conjunction with the other provisions of the TARP plan, should help significantly. It will swap illiquid and unwanted but still cash-generating assets for the object of investors' desire, US Treasuries. The plans to guarantee deposits and certain loans should boost confidence and help thaw credit markets. The policy actions taken so far might not be perfect, and further action might be required. Plans need to be formalized and executed as quickly as humanly possible. The US and global economy will probably weaken further for the next several months despite the heroic efforts by policy makers. But with a little luck, these actions should stabilize credit markets and set the stage for the start of recovery in 2009.

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Disclosure

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