

**Notes on the Financial Crisis and Bail Out of 2008,**  
Moderate Skepticism

R. D. Congleton  
Professor of Economic  
GMU  
Fairfax VA 22030

revised, 2-18-09

(An executive summary appears on the last page.)

**I. Background and History of Government Intervention in Housing Market Finance**

(1) In the “good old days,” mortgages used to be held by the banks that made loans and so if there were any problems with mortgages, they tended to be concentrated in banks in regions with declining housing prices, unemployment, and net out migration.

(2) This changed in 1938, when Roosevelt founded the Fanny Mae (Federal National Mortgage Association, FNMA). It’s purpose was to add liquidity (demand) to the home mortgage market to facilitate housing sales. FNMA purchased mortgage from banks and insured mortgages, which allowed banks to create more mortgages at lower prices.

(3) Between this policy and the rising incomes associated with renewed economic growth after the WWII, home ownership rates increased from around 43% in 1940 to about 61.9% in 1960. (<http://www.hoover.org/research/factsonpolicy/facts/26963064.html>)

(4) Evidently the 62% ownership rate of 1960 was not “enough,” and the federal government took additional steps to encourage further home ownership. In 1970, Freddie Mac (Federal Home Loan Mortgage Corporation, FHLMC) was established to make loans and loan guarantees. Freddie Mac pooled the mortgages that it purchased, and sold “mortgage backed securities” to investors on the open market. Again the purpose was to increase the demand for mortgages, which would encourage banks to make more loans for housing.

(5) In 1968, Fannie was privatized. Essentially a new management company was created to manage the great portfolios of mortgages, mortgage insurance, and mortgage backed securities already assembled by Fannie.

(a) Neither Fannie Mae nor Freddie Mac formally had backing from the US Government, but most investors evidently believed that US taxpayers would back up those now “private” entities if need be. (And, of course, this proved to be correct in September 2008.)

(b) The subsidies to housing or insurance risks, however, were no longer on government balance sheets, although they continued to be regulated as “government sponsored enterprises.” No fees were collected by the federal government to fund the implicit insurance.

(6) The loans purchased and resold by Fanny Mae and Freddie Mac had to meet more or less ordinary standards and had a maximum size. The mortgage-backed securities created by them are “insured,” which “guarantees” to purchasers that both principal and interest will be paid regardless of whether the persons who financed their house purchase continued their mortgage payments or not.

(7) After 1992, Fannie and Freddie were also encouraged to purchase “affordable” mortgages from banks--meaning mortgages that did not pass the usual tests for loans previously demanded by banks who originated the mortgages. US Government encouragement to extend such “sub prime” loans continued until very recently. (<http://www.washingtonpost.com/wp-dyn/content/article/2008/06/09/AR2008060902626.html>).

(8) This together with subsequent pressure from Congress and Presidents Clinton and Bush helped create a new market in “sub-prime” (e.g. sub-standard) mortgages and mortgage-backed securities. Again Fannie and Freddie guaranteed the securities they issued, but insuring these substandard loans required greater reserves than their ordinary (prime) mortgages. (It is clear now, that **insufficient reserves** were actually put aside).

(a) It bears noting that **bundling and insuring mortgages can be highly profitable.**

(b) For example, suppose that a 100% mortgage is issued on a 250K house. Annual payments on a 30 year mortgage at 6% interest are a bit more than \$18K/yr.

(c) The 6% interest rate includes a risk premium of 1-2%, because some borrowers will ultimately default and the house will have to be reclaimed through court proceedings, during which no income is earned on the loan. (In a few cases, the bank’s equity in the houses financed would be below the value of the mortgage. This is far more common today.)

(d) Suppose that a bundler-insurer can lower the risk premium by just 1%. The “discount rate” is now 5% rather than 6%, and the cash flow of the new mortgage-backed security is **worth more than the house**, a bit more than 275K.

(e) The greater is the reduction in risk premium achieved by the “bunder-insurer,” the greater is the “profit” (as long as one does not have to actually pay much out on the insurance provided). For example, if the risk premium falls by 2%, the discount rate becomes 4% and the value of the mortgage’s cash flow becomes a bit more than 310K, **more than 25% greater than the value of the house standing behind the mortgage.**

(f) Because of this risk-premium effect, bundling sub-prime mortgages can be much more profitable than bundling prime mortgages--especially in periods in which default levels are below average and/or risks can be reduced through diversification.

[Here it bears noting that there are only weak incentives for realistic assessments of future default rates to be adopted, since short term profits and bonuses all rise with optimism.]

(g) The implicit backing of the US government made Fannie and Freddie's insurance promises less risky than that of other private competitors, and so allowed greater profits.

Together Fannie and Freddie issued more than 60% of mortgage backed securities in 2002.

[[http://www.economist.com/finance/displaystory.cfm?story\\_id=E1\\_TNPVJRV](http://www.economist.com/finance/displaystory.cfm?story_id=E1_TNPVJRV)]

(10) From 1998 through 2006, there was a great housing boom in much of the United States, indeed much of the world, partly induced by the new sub-prime loans and the Fed's policy of holding interest rates down during most of the period following 9-11.

(a) Existing house prices were bid up as mortgages rates fell.

(b) Rising house values reduced delinquencies, because the increased value of the house allowed mortgages to be refinanced to solve cash flow problems that naturally occur for a subset home buyers (and especially those taking out sub-prime mortgages).

(c) The rapid rise in real estate prices induced speculators to join the market as purchasers of houses, purchasers of sub-prime loans, and a wide variety of mortgage-backed securities.

(d) Because delinquency rates were below average, there were great profits to be made by bundling and insuring sub-prime mortgages--as long as house prices continued rising.

(e) In 2004, home ownership rates peaked at 69.2 percent, and prices began to fall in many parts of the country. (Home ownership fell to 67.8 percent in mid 2008.)

(f) At the same time, the value of mortgage backed securities began to fall, as defaults increased, and there were some modest (at first) reassessments of the risks associated with those assets (even those which were "insured" in one way or another.

(g) The largest issuers of mortgage backed securities were also among the greatest owners of them, with Fannie and Freddie holding **more than a trillion dollars** of them, for example, in 2002.

([http://www.economist.com/finance/displaystory.cfm?story\\_id=E1\\_TNPVJRV](http://www.economist.com/finance/displaystory.cfm?story_id=E1_TNPVJRV))

(11) **Unheeded Warnings:** Several proposals were made in the last decade to tighten and/or depoliticize oversight of Fannie and Freddie, but few were able to secure majorities in Congress, in part because of the lobbying efforts of Fannie and Freddie were successful, and in part because promoting home ownership was still a popular cause among both democrats and republicans.

(a) It was only in 2002 that Fannie and Freddie began filing the same quarterly and annual financial reports as other financial firms. (They had previously been exempt from the 1933 Securities Act).

(b) The new reporting standards allowed the risks associated with the implicit government backing of Fannie and Freddie to be more accurately assessed by outsiders.

(c) In 2004 the *Office of federal Housing Enterprise Oversight* filed a 200 page report in which:

We have determined that Fannie Mae, in developing policies and practices in these critical areas, has misapplied Generally Accepted Accounting Procedures (“GAAP”), specifically Accounting for Nonrefundable Fees and Costs Associated with Originating or Acquiring Loans and Initial Direct Costs of Leases (“SFAS 91”) and Accounting for Derivative Instruments and Hedging Activities (“SFAS 133”).

The misapplications of GAAP are not limited occurrences, but are pervasive and are reinforced by management. **The matters detailed in this report are serious and raise concerns regarding the validity of previously reported financial results, the adequacy of regulatory capital, the quality of management supervision, and the overall safety and soundness of the Enterprise.** (Bold in the original report, pg. 6; Dikerson, C.H., Chief Compliance Examiner, “Report of Findings to Date, Special Examination of Fannie Mae,” OFHEO, 2004, Washington DC.)

(d) (Similar accounting irregularities that overstated profits are very likely to have been present in other large commercial enterprises as well, who can shop around for pro-management accounting and rating firms, which is the reason for GAAP standards. However, their public accounts were reviewed by the SEC, although the records and holdings of many persons and firms holding mortgage-backed securities remain private information.)

(e) In February of 2005, Fed chairman Alan Greenspan urged Congress to do something to rein in Fannie Mae and Freddie Mac. “We are placing the total financial system of the future at a substantial risk.”

(12) The problems that emerged in 2008, were, thus, **not a complete surprise**, although prior to the meltdown, only a minority took the system-wide financial risks seriously. Congressional hearings had been held and financial columns in newspapers and news magazines had analyzed the risks associated with Fannie and Freddie, and with mortgage backed securities generally, in a long series of articles throughout the past decade.

[[http://www.ft.com/cms/s/0/e3e1d654-5288-11dd-9ba7-000077b07658,dwp\\_uuid=5db90a0e-4e6c-11dd-ba7c-000077b07658.html](http://www.ft.com/cms/s/0/e3e1d654-5288-11dd-9ba7-000077b07658,dwp_uuid=5db90a0e-4e6c-11dd-ba7c-000077b07658.html)]

**II. The end of the housing bubble induced a fall in the price of formerly “safe” mortgage-backed securities, and thereby a “credit crisis” for all institutions who had large holdings of those assets, because those firms now found themselves with far fewer (and shrinking) net worth.**

(1) As long as housing prices rose, the asset values of the houses supporting the sub-prime mortgages were sufficient (indeed more than sufficient) to support those somewhat risky loans, which together with refinancing allowed relatively high profits for mortgage bundler-insurers like Fannie Mae and Freddie Mac.

(a) Unfortunately, the speculative housing “bubble” burst in 2005-6, and housing prices began to fall for the first time in more than a decade.

(b) This was the **first significant US-wide housing price fall since the recession in 1992**, and the fall was much greater and faster than in that recession. (Average US House prices peaked in 2006, and fell by about 18% in the next two years.)

[[http://www2.standardandpoors.com/spf/pdf/index/csnational\\_value\\_082653.xls](http://www2.standardandpoors.com/spf/pdf/index/csnational_value_082653.xls)]

(c) Diversifying across regions of the country could not reduce this risk, as average house values fell throughout the United States. (Indeed a few real estate bubbles also “burst” in other countries as well at about the same time.)

(d) The reduction in house values in much of the U. S. tended to reduce consumer spending, which slowed the economy down somewhat.

(e) Together the reduction in house values and reduced economic growth made all those sub-prime and prime mortgages somewhat riskier, as the asset value of the house supporting the mortgage was in many cases less than the value of the outstanding mortgage, and, thus, refinancing to ease borrower cash flow problems was no longer possible.

(f) Delinquencies increased very substantially, foreclosures rose to unusually high levels, and insurers of mortgage backed securities had to pay their “insurance claims” (make the interest payments that delinquent borrowers were not making).

[Delinquency rates were exacerbated by the almost fraudulent lending practices of many loan originators, house price assessors, and some builders.]

[<http://www.hoover.org/research/factsonpolicy/facts/15077796.html>]

(2) Most mortgages and mortgage backed securities, nonetheless, initially remained relatively “low risk” assets, nonetheless, because most were **insured** by Fannie Mae, Freddie Mac, and a variety of other private mortgage and mortgage-backed security insurers.

(a) About half of all mortgages and (therefore) mortgage-backed securities are insured by Fannie Mae and Freddie Mac. Most others were “insured” by other private organizations.

(b) A variety of new credit instruments and diversification techniques had produced a great assortment of financial “assets,” many of which were ultimately based on mortgage (and credit card) payments.

(c) However, in hard times, the insurance is only as good as the “insurance companies” and “assets” backing the loans.

(d) The various forms of mortgage-backed assets (derivatives) were rated by companies such as Standard and Poors, Moodys, and Fitch.

It turned out that AAA (low risk) ratings could be obtained for nearly every combination of the new financial assets by adding a “safe asset” to the mix--such as mortgages or mortgage-backed securities.

However, the rating firms made little effort to track the performance of the portfolios they had rated, evidently because it was not a source of profits (10-22-08, Congressional testimony by former senior S&P mortgage rater).

Bundling of uninsured mortgages had been used to diversify risks, and the AAA ratings meant that even uninsured mortgage backed securities were considered to be relatively safe, and were purchased at premiums above the value of the houses backing the less than prime mortgages.

(See also <http://online.wsj.com/article/SB118714461352698015.html>)

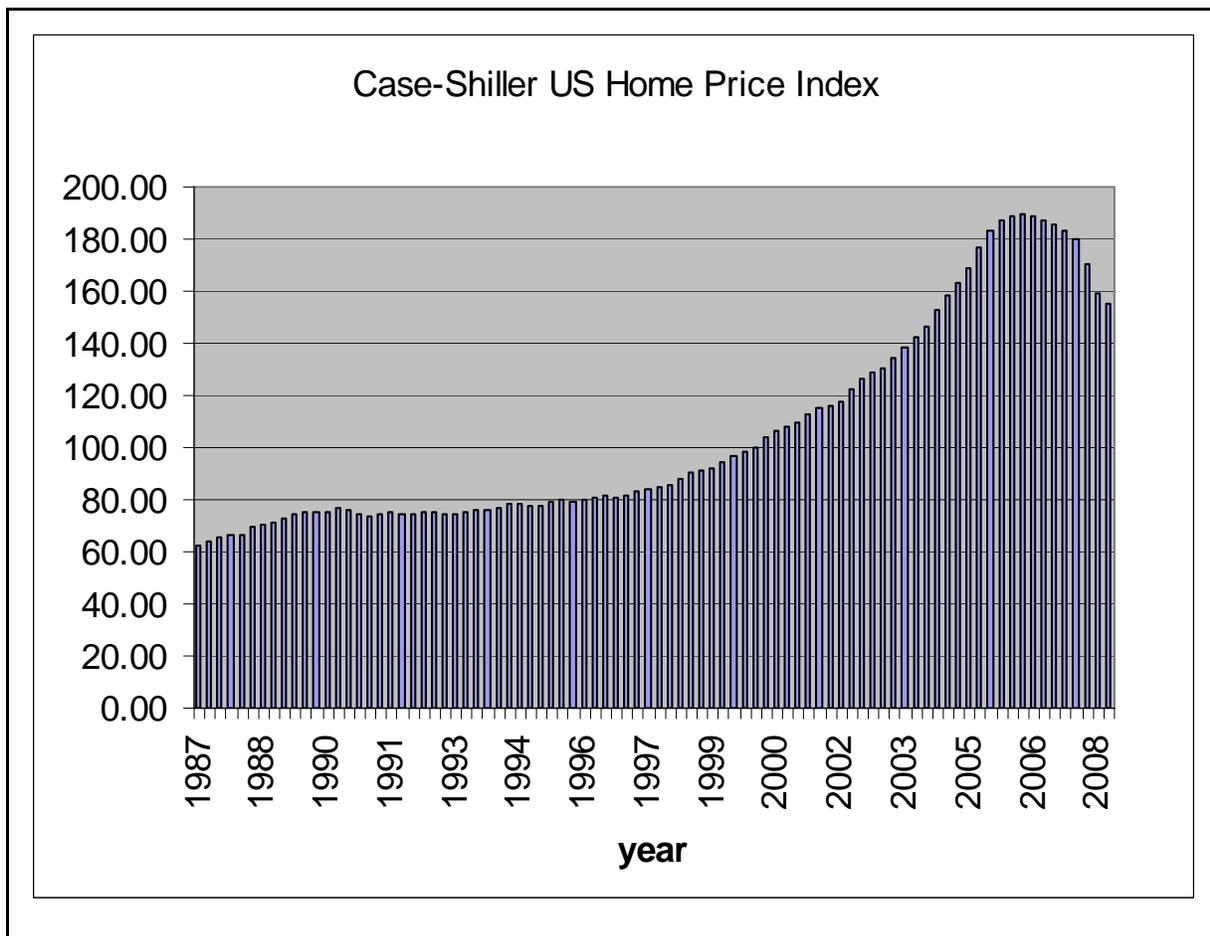
(e) In such cases the rating, in effect, certifies the existence of “insurance” although only in the sense that the **security raters assure investors** that reasonable efforts have been made to financial techniques for hedging (reducing risks). Such assurance were given to a broad array of complex financial assets, such as credit-default swaps, in addition to more conventional principal and interest guarantees.]

(3) **As housing prices began to fall** even more rapidly than they had been rising. As a consequence, economic growth diminished, **delinquencies and foreclosures increased** (especially among sub-prime mortgages), and the **mortgage insurers began to payout far more** than they were taking in fees and interest.

(a) Evidently, the insurers of mortgage backed securities had assumed (or hoped) that housing prices would rise forever (or at least not fall very much), which essentially meant that **they needed only sufficient reserves too carry properties through bankruptcy courts, after which the house would be resold and interest payments would be resumed (from new buyers, whose mortgages were also likely to be purchased).**

(b) Unfortunately, **the reserves that had been more than adequate during the housing boom turned out NOT to be sufficient** during the ensuing unusually rapid decline.

(d) As housing prices fell rapidly in many parts of the country, reselling houses took longer (requiring insurers to make up more missing interest payments) and because the houses sold were less valuable than they had been in the recent past, it reduced the interest payments from the new loans taken out by successive home owners.



(4) The insurers of mortgage-backed securities began to empty their reserves. **This was not simply a cash flow problem** that could be solved with a bit of temporary borrowing.

(a) As insurer losses accumulated, the stock prices of insurers naturally fell, which meant that they could not raise new money to make their “guaranteed payments” to mortgage backed security holders by selling stock.

(b) At the same time, Freddie, Fannie, and other insurers saw their **credit ratings rapidly decline** as the credit-rating agencies revised their estimates of future insurance losses. Insurers could not longer borrow to pay claims in the short run.

(c) Similar financial losses were being borne by owners of other mortgage backed securities that had previously been uninsured or bundled or blended with insured assets, and also of those owning stock in the large (presumably safe) insurance companies backing mortgages and mortgage backed securities.

[A very broad range of the new hugely popular and internationally held AAA diversified debt instruments included both sub prime mortgages and credit card debt.]

(d) **Losses accumulated** as payments to those insured exceeded payment from those holding the mortgages, and several major insurers went bankrupt, as their insurance obligations exceeded their assets (many of which included mortgages or relatively safe mortgage-backed securities, which were falling in value). [Bear Stearns, Fannie Mae, Freddie Mac, etc.]

(4) The (effective) **end of mortgage and mortgage-backed security insurance had two effects.**

(a) First, by increasing the risk premium for mortgage-based assets, all those assets became less valuable.

In the illustration above, the value of insured mortgage-backed securities falls from 310K to 250K, (or less) if risk premium increase by 2% (or more). The greater the increase in the risk premium associated with particular securities, the greater the reduction in asset value, and thus their ability to serve as collateral for loans and for making investments.

This made the balance sheets of all holders of such assets much worse than they had been before their insurers had defaulted, declared bankruptcy, or simply were perceived to be less reliable than in the past.

Very few firms hold twenty percent of their resources in very safe reserves such as treasury bills and cash, so a 20% reduction in the value (or more) in the value of large

blocks of their assets **made a lot of financial institutions insolvent.** (They found themselves with debts greater than their assets.)

**Indeed, in many cases, the mortgage backed securities were supposed to be their safe assets!**

(b) Second, the persons who manage portfolios of various kinds at investment banks, insurance companies, pension funds, etc. all attempt to manage their portfolio's overall risk.

**The insurance that stood behind the majority of prime and sub-prime mortgages evaporated.**

**This made mortgage backed securities, both sub-prime and prime, far more risky assets than their purchasers had imagined when they bought them.**

Many of the asset ratings and firm credit ratings were (finally) revised, **but** the ratings themselves were no longer regarded to be trustworthy.

**In the new (under-uninsured) circumstances, most owners of mortgage backed securities now had far too many risky assets in their portfolios and tried to sell those securities in the usual way.**

(5) **The mortgage-backed securities market is a huge market, so the wealth and risk effects had large consequences for financial firms and financial markets.**

**Indeed, the portfolio effect reinforced the risk premium effect, because essentially everyone was trying to make the same portfolio adjustments at essentially the same time.**

These effects were magnified because holdings of these securities was often financed with debt issues of various kinds. 30+ leverage ratios were very common.

(a) **There were many more sellers than buyers, and prices for mortgage backed securities plummeted** (as predicted by the elementary economics of supply and demand).

(b) For less important assets, this would not be a significant problem, **but U. S. real estate is a major asset in the world-wide wealth portfolio, on the order of 12 trillion dollars. and about 7 trillion of real-estate loans have been securitized as “mortgage backed securities”** and sold worldwide.

[The Bond Market Association reports that the secondary mortgage and mortgage derivative market has been larger than the US Treasury note and bond market since 2000.]

(6) It is because the modern mortgage security market is so large that failure of this market to “clear” represents the “largest financial” problem since the fall of Wall Street at the beginning of the great depression.

Previous real-estate bubbles and leveraging problems were all smaller than this one, because they affected only a subset of mortgages, banks, and regions.

Finance has also become increasingly international in the past two decades (although it has always been somewhat international). Correcting the real estate and mortgage-backed security bubbles of the 90s and 0's, consequently, had far larger worldwide consequences.

### **III. How bad is the crisis?**

(1) It bears noting that most mortgage backed securities are still very safe, and even sub-prime mortgages and their derivatives are reasonably secure (in the medium run), because most borrowers (90+ percent) continue to make their mortgage payments and their mortgages are backed by the value of the houses loans were taken against.

(a) House prices have fallen, however, and are often now below those of the loans that they support, but they have on average fallen by 20% rather than 80% of their peak value.

(b) The asset value of the house is the final guarantee of mortgage backed securities without insurance.

Having lost 20-30% in value from the loss of insurance guarantees, further losses were induced because the resale value of the house values fell, and uncertainty about how far prices would eventually fall.

(c) Some newspaper accounts place the total loss of market value of mortgage-backed securities at between 70-80 percent, which if true, implies that something on the order of 5 trillion dollars of financial wealth disappeared from the world's financial system.

**Even if only half of the value has disappeared, the losses would be greater than 3 trillion dollars.**

To put this number in perspective, the US government's outlays in 2008 are approximately 3 trillion dollars.

The total capitalization of all the World's stock markets are on the order of 50 trillion dollars in 2008.

This was a great reduction in wealth and liquidity, which in turn produced a great increase in risk and uncertainty for investors, savers, and borrowers.

(2) As a consequence of the reduced value of mortgages and mortgage-backed securities, the asset side of the ledger of most financial companies fell significantly during the past year.

(a) This was perhaps clearest of firms that became bankrupt, because the value of their assets fell below their liabilities.

(b) But the same sort of problem applies to all firms required to “mark to market,” because the market value of a significant fraction of their assets fell to a fraction of their original cost, greatly reducing their “working capital.”

(c) Several mergers between more or less “safe” banks and riskier ones turned out to be far more costly than anticipated, which, in turn, reduce the net assets of previously “safe” banks, who thought that they had seen profit opportunities at “distressed” banks and investment houses.

(c) The credit market shrank, mostly for the entirely sensible reason that firms had less to loan (the true value of their portfolios was lower than they thought), but this response has been exaggerated because markets for this one kind of asset had failed to clear at long-run equilibrium prices [and also by the gloomy predictions of “credit collapse” by government and business leaders].

(d) There is evidence that potential purchasers of mortgage backed securities are **now over estimating the risks** associated with many such assets.

For example, the *NYT* (Feb 1, 2009) reports that a security that Standards and Poor’s appraised at 87% of its original value at present default rates is valued at only 38% of its original value by potential purchasers in the bond market. Indeed, even if default rates doubled from today’s (early 2009) unusually high levels, Standard and Poor’s suggests that this particular asset (of sub-prime mortgages) would be worth 53% of its original price.

(3) It bears noting, however, that credit in the regulated part of the banking system has not “melted down” and has for the most part increased during 2008.

It is the non-bank sources of finance that have dried up, because it is this part of the banking sector that has experience the greatest contraction in their net assets.

**The more regulated banking part of the credit market has so far continued to function more or less as normal.**

(a) According to federal reserve statistics **essentially all areas of bank credit continued to expand** during 2007 and most of 2008, with only a relatively small decline in the last quarter of 2008.

(b) This includes car loans, mortgages, commercial credit, and credit card debt, although the growth rates of credit have declined somewhat and delinquencies are up for most types of credit.

[The federal reserve numbers for credit are available through January 2009.]

[<http://www.federalreserve.gov/releases/G19/Current/>]

[<http://research.stlouisfed.org/fred2/series/COMPAPER>]

(c) Researchers at the Minnesota Federal Reserve affirmed this lack of “melt down” in a research paper that covers the period through mid October 2008.

(<http://www.minneapolisfed.org/research/WP/WP666.pdf>)

Both credit demand (and supply) outside the financial sector has increased during 2008, and very rapidly so for much of the year, both because of the recession (and associated cash-flow problems), because of reduced funding from the nonbank sector, and because of fears that credit might eventually dry up, given all the nearly hysterical news coverage.

(4) In this respect, the “credit crisis” has, so far, **been greatly exaggerated** by proponents of the 700 billion dollar plan to purchase mortgage backed securities (etc.), and subsequent efforts to expand the regulatory authority of the Treasury, FDIC, and Federal Reserve.

(a) The lack of a major collapse of credit is partly because the Federal Reserve system has provided enormous short term credit to regulated banks and other banks, which allows them to continue servicing credit cards, car loans, small business loans and so forth, even if they hold mortgage-backed securities on their balance sheets.

[<http://research.stlouisfed.org/fred2/series/BASE>]

(b) The credit “meltdown” has also been contained by the temporary nationalization of Fannie Mae and Freddie Mac.

About half of US mortgages are now directly insured, by U. S. taxpayers, which should restore about half of mortgage-backed securities to their former “safe” prices.

(c) The FDIC has also done a good job of minimizing disruptions as banks holding the “wrong mortgages” approached bankruptcy, by encouraging quick sales of entire banks.

(Although in some cases, the quick mergers have actually caused new larger problems as the “stronger” banks have been surprised by the losses from their new “weaker” partners, causing those “stronger” banks to become weakened.

**(d) If a general credit crisis is coming, it will be in the future, as Yogi Berra might have said.**

**(e) However, whether it comes or not, the financial effects of reduced wealth and increased uncertainty are still likely to deepen and lengthen the recession.**

**[It also bears noting that an extreme recession IS NOT underway, at least not yet. Unemployment for the US was 6.1% in September 2008, with state levels varying from 3.3 to 8.7 percent. In most states unemployment has increased by between 1-2% in the past year, although unemployment fell in two states. <http://www.bls.gov/news.release/laus.nr0.htm> )**

(f) As a consequence of preexisting institutions, the illiquidity of mortgage backed securities has not so far affected the real economy very much until the last quarter of 2008, outside the housing and finance markets. And much of the late 2008 decline in output could be in response to the financial horror stories being told to justify the TARP program and passed along by newspapers and talking heads.

It is often sensible to defer to experts who have (or should have) more data than available to the public.

(5) The collapse of the mortgage-backed securities market has **had (i) major effects** on a broad cross section of firms specializing in finance of various kinds, and **(ii) indirect effects** on the stock market (as investors attempt to shed risk, and trade stock for cash and government securities), and thereby on personal portfolios of persons and pension funds world wide.

(a) The gloomy forecasts that dominate the Congressional hearings and newspapers are inducing hedge funds, pension funds, and ordinary persons to flee from the riskier parts of financial markets, placing other firms under stress and further reducing stock values, which further undermines the credit worthiness of both borrowing and loaning institutions.

(b) Loans are also being made more carefully than before, with a greater regard for creditworthiness, which will implies that many folks and firms that want loans will not be able to get them.

(c) **We are nearly all a good deal poorer today** than in January of 2008 (roughly 20% on average), because financial markets are all connected with one another, both domestically and internationally.

(6) There have been several bankruptcies of unusually large financial firms.

It bears noting that the firms that failed are unusually large, because of deregulation in the past decade or two, which allowed a great deal of inter and intra state mergers and consolidation to take place, and because of the internationalization of finance.

(a) In previous times, there would have been many more bankruptcies, but of smaller firms. For example, about 750 saving and loan banks failed during the S&L crisis of the late 1980s, with 400 billion dollars of “book” assets.)

(b) The assets of the failed S&Ls were taken over by the US Government agencies, and turned out to be worth about 25% less than their book value. US taxpayers lost about 90 billion dollars in the process of buying and selling those assets.)

[<http://www.gao.gov/archive/1996/ai96123.pdf>]

(7) Several of the largest failures of investment banks were reinforced by changes in rules for capital reserves at the major international banks caused by Basel II and special decisions of the SEC, which reduced required reserves for the largest firms.

These reductions in reserves was rationalized because:

“An array of sophisticated banking products-such as swaps, collateralized debt obligations and other off-balance sheet items-were either not around or in their infancy when Basel I was adopted. And banks' risk measurement and management techniques have improved markedly. Today, most large banks employ sophisticated statistical models to assess risk and the appropriate amount of capital to allocate across exposures.

Recognizing these developments, the Basel committee decided on a new capital framework and in June 2004 endorsed what is known as Basel II. The definition of capital remains the same. What changes is the calculation of capital requirements for individual asset exposures. Banks, with the approval of regulators, will be able to allocate capital based on their own risk assessments.

U.S. regulatory agencies have decided that only large, internationally active banking organizations-those with assets of at least \$250 billion or foreign exposure of at least \$10 billion-will be required to adopt the Basel II framework. Others may do so with regulators' approval. [3]”

quote from the Dallas Federal Reserve Bank, July/August 2006

See <http://www.dallasfed.org/research/swe/2006/swe0604c.html>

Basel II's reduced capital requirements allowed the largest U. S. international investment banks to put aside less capital as reserves, because of their “sophisticated statistical models to assess risk.”

**(8) The effects of the fiscal “crisis” are not entirely within the financial and real estate sectors, although to this point, the largest losses have been concentrated there.**

(a) Reduced wealth reduce expenditures by all investors, but especially for retired persons (with 401K accounts), similar persons thinking about retirement, and relatively wealth persons who live off their stock and bond portfolios.

(b) Both house values and stock values have fall substantially in the past year, at nearly unprecedented levels in the postwar period.

[It bears noting, however, that stock values fell by 48% in 1973-4 and 49% in 2000-02.]

(c) Banks are adopting tougher guidelines for the credit-worthiness of persons that they are willing to make, and fewer loans will be made.

Note only are perceived risks increasing, but there is less competition in the loan market than there was prior to the credit-backed security meltdown.

[Many financial institutions have less working capital to lend and so have to be more careful, at least in the short run.]

(d) These changes affect the real economy by further reducing consumer purchases of goods and services, and investments by firms that use credit rather than self-finance for purchasing new equipment and organizational expansion.

(e) Similarly, increased uncertainty also generates similar real effects for all risk averse consumers and investors. Such real effects have been evident in unemployment numbers throughout 2008, although they did not induce newspaper headlines until the Bush administration brought them to Congress in the summer and fall of 2008.

**(f) The size of the negative wealth effect is enormous this year, but how consumers and investors adjust their spending plans depends on whether they think the change is temporary or not.**

If they think that its permanent or at least likely to continue for many years, spending will tend to move back toward 1998 levels (so far) which is a major reduction--although perhaps not a collapse (a word used all too often these days).

(g) So far, as of January 2009, the effects of reduced wealth and increased uncertainty are (perhaps surprisingly) not larger than normal for a "typical" post-war recession.

**[Alan Melzer, a distinguished monetary economist at Carnegie Mellon believes predictions of a "great depression" to be fear mongering.** Much of the lobbying behind the bailout bill(s), of course, comes from the financial sector.]

[However, as noted above, fear mongering can induce a larger contraction, by further increasing perceived uncertainty and causing more runs on the stocks

of individual companies and more conservative consumption and investment plans.]

#### **IV. The Bailout Bills of Fall 2008** (Does they address the core problems?)

**(1) In September of 2008, treasury Secretary Paulson went before Congress and proposed a 700 billion dollar “TARP” program.**

**TARP (troubled asset relief program) was a proposal to use government money to increase the demand for mortgage backed securities and drive their prices back toward “reasonable” long term equilibrium levels (what ever those might be).**

(a) The original Paulson plan was a simple solution--but it required a very large issue of government debt to serve as a buyer of last resort for “troubled securities.”

(b) If the problem is that no one wants to buy uninsured mortgage-backed securities, then why not have the government (tax payers) buy them and hold them until markets reach “more reasonable” prices?

(c) It was a very large proposal by historical standards. 700 billion dollars is about 10 percent of the (pre-collapse )market for mortgage backed securities.

The US Debt is currently approximately 10 trillion dollars, so this requires about a **7 percent increase in the debt of the United States.**

The deficit last year was about 250 billion dollars (down from >400 billion a few years ago), about 2 percent of GDP.

Borrowing the money to fund Paulson’s program, thus, requires a very large sale of government bonds in a very short period. TARP alone requires selling three-four times the usual annual sale of bonds in late 2008-2009 than associated with debt-financing the Iraq war.

**(2) The House modified the Paulson proposal by including a wide range of other policy tools that could be used and adding some oversight provisions.** (There were no oversight provisions in Paulson’s original 3-page proposal.)

(a) The House also **reduced by half** the initial resources available to the treasury for the first several months, **added a new insurance** program requirement, and increased the FDIC insurance for bank deposits from 100K to 250K.

[The second half of the TARP money was requested on Jan 13, by President Bush at the behest of President-elect Obama, and became available two week later because the Congress did not veto the proposed release.]

(b) The House bill included **provisions for resources to be used to “keep persons in their houses”** where possible.

(c) It also requires sellers of mortgage backed securities (and other assets) to sacrifice somewhat--by possibly providing preferred stock and by reducing the tax deductability of employee salaries above 400k.

[This provisions, surprisingly, turned out to be the main result of the first 350 billion dollars of TARP money. Rather than the purchase of mortgage backed securities or aid to home owners, the money has for the most part been used to purchase preferred shares in banks.]

[The House bill failed on 9/29/08, 205 yes to 228 no]

(d) A further enhanced **Senate bill** passed on 10/1/08 (74y to 24n), which added a variety of bells and whistles to the House bill, including extension of environmental and other tax credits, some minor tax reforms, and an increase in the limit on FDIC insured accounts at ordinary regulated banks from 100K to 250K.

About 2/3 of the 450 pages in the bill had nothing to do with the financial crisis. The part that did was largely based on the House bill.

The Senate bill also included a provision allowing the Federal Reserve to pay interest on excess reserves held at the Federal Reserve (Sec 128).

The House passed the Senate bill on 10/3/08 (263y to 171n).

(e) The House Republican part of the bailout plan provided a new insurance guarantees to replace the ones that had previously provided by private firms and by Fannie and Freddie for most of mortgage-backed securities.

This proposed mortgage-backed security insurance program was to be self-funding, although it **reduces funds available for purchases of mortgage-backed securities**, dollar per dollar of assets insured.

[It may be that TARP was abandoned by Paulson and replaced with preferred share purchases in part because of this requirement.]

**(3) The main financial provisions of the financial part of the Senate bill addressed major problems:**

(a) The TARP portion part of the plan (which was the only part advocated by Treasury Secretary Paulson during the hearings and the part included in his original proposal) would have increased demand for mortgage backed securities, increasing their liquidity, and improving the balance sheets of all firms and pension funds that hold them.

TARP has so far (late January 2009) not been implemented by the Treasury, although the Federal Reserve via the New York Fed (using other authority) **has begun purchasing mortgage-backed securities as of January 5, 2009.**

The Treasury announced on October 14 2008 that it would, instead, purchase capital in financial institutions, beginning with 125 billion investment in 9 large banks. (A total of 250 billion of the 350 billion allowed by Congress is allocated for this purpose.)

(b) In addition, the increase in FDIC insurance limits from 100K to 250K will reduce “silent” runs on banks that take place when large depositors shift their funds among banks to avoid risks associated individual bank failures, as evidently occurred at Wachovia.

(c) About two week after the TARP bill was passed by Congress, treasury announced that it would purchase preferred shares in “healthy” banks rather than “troubled assets” with the moneys provided by Congress.

(d) This **new bailout program** involved a partial “nationalization” of the banking industry as the money was used to purchase preferred shares in major banks and in a variety of regional banks.

The purchase of preferred shares provided the banks with cash (a very safe asset) but also with a significant liability--in that they were to buy back the preferred shares within

“The senior preferred shares will pay a cumulative dividend rate of **5 percent per annum** for the first five years and will reset to a rate of **9 percent per annum after year five**. The senior preferred shares will be non-voting, other than class voting rights on matters that could adversely affect the shares. The senior preferred shares will be callable at par after three years.” (Treasury announcement on October 14, 2008)

Being senior to essentially all other stock, this meant that most profits would go to the Treasury rather than to a bank’s other shareholders, which naturally caused share prices at major banks to collapse (and with them prospects for raising capital through stock sales.)

It bears noting that unlike the original program, the preferred stock purchase program only really helps those firms receiving the preferred share purchases at above market prices. The original TARP program (if it had worked) would have helped all persons and firms holding “troubled assets.”

(4) How much this “bailout program” costs taxpayers in the long run depends on the price paid for the preferred stocks and the survival rate of the firms supported through preferred share purchases.

(a) The preferred shares will return a profit to the treasury, IF ALL THE BANKS that participate in the program survive and are able to repurchase the preferred shares within five years.

[However, on Feb 5, 2009, Elizabeth Warren (chairman of the TARP oversight panel) testified that the **Treasury had overpaid by about 50%** for the preferred shares, given their risk of failure. It paid 250 billion dollars for assets worth about 176 billion dollars. The analysis of her panel of experts implies that about 1/3 of the subsidized firms will fail.]

(b) Other parts of the initial 350 billion dollars have been used to support AIG, the purchases of securities houses by banks that had only marginal capital reserves, and as aid for auto companies. Significant losses in these cases are even more likely.

(c) It also bears noting that although cash paid for preferred stock is very useful to the banks in the short run, in the medium and long run, the rise in payouts from 5 to 9% presents serious problems for them, given the rates of return being earned on loans these days.

[Indeed, regulations had to be changed to allow the new government provided cash to count toward their capital reserves.]

(d) Assuming that most of the subsidized firms survive, the **final cost** to tax payers will be less than a year or two of the Iraq war.

[The “bailout” after the S&L crisis in the early 1990s cost approximately 20% of the mortgages and other assets taken over by the government. So **a reasonable first guess is that the net cost of the Fannie Mae, Freddie Mac, and Paulson programs will be 200-250 billion.**]

[<http://www.gao.gov/archive/1996/ai96123.pdf>]

#### **IV. Is the Preferred Share Purchase Plan Likely to Help?**

(1) The main purpose of the original Paulson plan--as discussed in Congressional hearings--was to allow the market for mortgage-backed securities to return to more “normal” prices.

(2) The so called TARP plan, was largely shelved by Treasury.

[However, the Federal Reserve has used its authority to conduct its own TARP-like program.]

(3) The preferred stock purchase plan implemented by Treasury does not really address any of the primary causes of the financial crisis, but rather addresses very short term problems of liquidity at major and minor banks, something normally done through other standing institutions and through bankruptcy proceedings.

(4) The plans most discussed in Congress during September of 2008 **would have more directly addressed** the financial crisis, although it would not have provided liquidity to banks as rapidly.

(a) By increasing the short run market clearing price--e.g. the “market failure”--the original TARP plan would have partially reversed many of the portfolio and credit effects caused by the decline in mortgages and mortgage backed securities, and also reverse somewhat the slide in stock market values, (indirectly) through those effects.

The purchase program (TARP) would have increased the demand for the “troubled assets” which naturally would have increased their price.

(b) The insurance plan added by House Republicans would have extended insurance to uninsured mortgages and mortgage-backed securities, which, by reducing their risks (guaranteeing a minimum price) would have similar effects.

[Indeed the takeover of Fannie and Freddie should already be having such effects on a broad range of mortgages, MSBs, and derivatives built on them.]

(c) Both aspects of the original TARP legislation would have increased the expected return from assets that many want to sell but few want to buy, which by increasing the price of those assets would have improved balance sheets throughout the world.

(d) The positive wealth effect of the program would have reduced, but not eliminated, unemployment and bankruptcies in the next year or two.

(e) And, by speeding up the return to normal markets for those securities, the “bailout plans” (government purchase of mortgage backed securities) might have reduced the depth of the recession and shorten it.

(f) The (temporary) increase in insurance coverage for bank deposits and money funds has reduced shuffling of liquid assets to safer havens such as smaller insured accounts and treasury bills, which have been bid up to historic prices (and low interest rates, indeed below zero in real terms).

(4) Instead of the plan discussed, however, more than a third of the totally authorized bailout money (250 billion dollars) has been devoted to the purchase of preferred shares in banks and other finance firms, but without many conditions beyond their repayment schedules (so far).

Much of this money is going to former investment banks whose leverage helped cause the problems, including Goldman Sachs, the firm formerly headed by Treasury Secretary Paulson (some 10 billion dollars for Goldman Sachs alone).

Half is devoted to providing new capital to the 9 largest banks in the US (125 billion) although not all banks are enthusiastic supporters of the plan, which includes a variety of restrictions on salaries etc., and **bank regulations had to be adjusted to allow the particular type of preferred shares purchased to count as capital.**

In the media, this purchase of preferred shares is referred to as **nationalization** of the banking system, which is **hyperbola**, at this point, because the shares held by the Treasury are non-voting and are a relatively small fraction of the book value of the banks.

To date, Treasury holdings are generally less than 10 percent of the bank's remaining value.

However, it bears noting that the issue of preferred shares **has reduced the value of stock held by other investors, because a bank's profits must pay bond holders and dividends to preferred shareholders before they accrue to owners of common stock.**

**The purchase of preferred shares (some of which seem to have been mandated) also increased the risk that true nationalization** may occur which would wipe out shareholder equity.

(a) The positive effects of this program are less clear.

From the bank's point of view the new preferred stock does not add capital, unless the preferred shares were sold at an above market price. It simply provides banks with a new source of short-term "borrowed" capital, upon which they need to earn more than 5% to earn a profit.

[As noted above, the regulatory rules for calculating a bank's capital had to be changed to allow the money received in exchange for the new preferred shares to count as capital!]

(b) The banks have a strong incentive to use the cash provided by these implicit loans as a source of funds for other investments--some but not all of which will tend to be loans to business and consumers.

[Take-overs of other under-capitalized institutions may evidently be accomplished at bargain basement prices.]

[There have been billions of dollars worth of bonuses paid out at the former investment banks.]

(c) How much of the “TARP” money goes out the door as loans and how much (directly or indirectly) as purchases of other banks (and/or bonuses) is not immediately obvious, because no strings were attached to the monies provided by taxpayers and it is impossible to separate TARP money from other money held by these firms.

[Money is fungible.]

[The existence of a new source of capital may discourage bank runs by debt and stock holders that are not addressed by deposit insurance, although the risk of further mandated purchases can also induce such “runs” as shareholders trade their bank stocks for other stocks in industries not likely to be nationalized.]

(d) Overall, it is clear that the “injection of capital” **does not** by address the great reduction in the demand for securitized financial assets, nor increase the likelihood that the many other folks whose “promises” were securitized will be in a better position to make their future payments.

The purchase of preferred shares is simply a new way to provide liquidity to large financial institutions, by increasing the “quality” of assets on their their balance sheets.]

**(5) The purchase of preferred shares program has only addressed very short term problems.**

**(6) The TARP (PPSP?) program, is also likely to create a series of problems for the medium and long run.**

(a) By selling so many bonds in a year or two, the augmented Paulson plan and stimulus plan(s) both encourages flight from US financial assets and may eventually increase interest rates on government debt, both of which would exacerbate rather than help the problem.

[Borrowing a trillion dollars (250 billion deficit + 700 billion bailout) requires the largest one-year issue of government debt ever, and proportionally the largest since WW II.. The previous maximum debt issue was 412 billion in 2004.]

[It also allows investors to more easily flee the stock and bank sectors, which **can actually exacerbate the credit crisis being addressed.**]

[This large sale of treasury debt could, itself, have **interest rate effects** that make borrowing more costly for the private sector, and puts downward pressure on the dollar in world currency markets.]

[This effect will be moderated by investor demands for safe assets to replace their previously “safe” mortgage securities, although again it puts downward pressure on stocks, housing, etc.]

[In principal, the mortgage backed securities could be paid for directly with treasury bills.]

(b) Even if the next 350 billion dollar is used to purchase mortgages or mortgage-backed securities, this is not likely be sufficient to return the market to normalcy, given the new risk assessments for those securities.

[The market value of many mortgage-backed securities that are not purchased by the government will not increase very much, leaving many firms at risk because they continue to find themselves under capitalized. This is evidently why so much money has been shifted from “tainted” asset purchases to preferred shares of major commercial banks, although it has not been stated publicly.]

[The unused insurance provisions may work better in the long run, because it covers all mortgage backed assets rather than, and returns the market to a position similar to that which existed before private insurers had all failed or become risky themselves.]

[It bears noting, however, that the Fed has effectively taken over the “TARP” part of the program through its purchase of mortgage-backed securities, about which very little has been published to date.]

(c) The new debt that finances the bailout programs may not significantly reduce the depth or length of recession, if it increases interest rates or reduces the value of the dollar, or is perceived to increase uncertainty without increasing net assets.

[If Ricardian equivalency is taken seriously, taxpayers will also realize that their future tax obligations will have to increase as a consequence of the debt issue, and will reduce their current consumption to put money aside for their future tax increases. (Barro, 1974)]

[Many macro economists believe that increases in government debt ( e. g. deficits) have no long run effects on economic growth, or a negative one.]

[Note that this is also true of the proposed “stimulus” program recently adopted by Congress. Fiscal stimulus plans have not been very successful in the past. (Christina Romer et. al. 1990, 1999, 2002)

(d) The “injection” of capital into the banking system through purchase of preferred stocks--rather than the usual money supply and FCIC instruments--is transferring direct and indirect control of major firms from private institutions to the central government’s senior bureaucracy.

Although senior bureaucrats are nearly all talented men and women, their expertise differs from that required to run competitive firms in a dynamic market environment, so if too many strategic are made by bureaucrats. (They are, of course, used to making a variety of personnel and day-to-day decisions that are not so different.)

By providing a precedent for vast new regulations of the private sector (through loans and preferred stock purchase) without explicit Congressional authority, the power of federal regulators has been expanded in an unprecedented manner.

This (largely unvetted) expansion of regulatory authority, and the very large number of dramatic shifts in policy, creates additional uncertainty for firms in those regulated markets and also creates new opportunities for corruption and error.

That these steps are taken quickly in a crisis, imply that errors are very likely to have been made--some of which may be long term (Congleton, 2005) .

(7) It is important to **keep magnitude of both the problem and “bail out” plan in perspective.**

(a) **First**, it is important to remember that the “bail out” plan **is not the only thing being done**, as noted above, but rarely in the leading newspapers and news shows. Neither “TARP” nor the stimulus bill are in any obvious way going to “save” the financial system or end the recession that we have evidently been in for the past year.

(b) The efforts of Fed and other central banks to keep **banks liquid** should be enough to keep the present problem from causing a “great depression-like” meltdown of the entire financial system. These are attracting far less news attention than they should be. See, for example, <http://www.stlouisfed.org/timeline/timeline.cfm>

[On Nov 25, the Treasury announced that it would use earlier authority provided by Congress regarding Fannie Mae and Freddie Mac to conduct a TARP-like purchase of financial assets.]

[At the same time, the Fed announced plans to purchase asset backed securities from eligible financial institutions, including ones backed by credit card payments, student loans, and car loans.]

[See <http://www.nytimes.com/2008/11/26/us/politics/26paulson.html?hp> ]

(c) **About half** of the market in mortgage backed securities is already reinsured through Fannie Mae and Freddie Mac, so risks are minimal for persons holding securities issued by those two entities, although **tax payers are likely to have to make net payouts**, because neither of these “firms” had adequate reserves to support their insurance obligations.

(d) The FDIC and Fed have worked well to insulate the regulated banking system from most of the credit crunch in the less regulated “non-bank” parts of the financial system.

(e) **Second**, the great depression talk and “fear” mongering being used by proponents of quick action are also helping to make markets more volatile, **as new gloomy forecasts by well-informed senior government officials will be “news” to many investors**, who may consequently want to adjust their portfolios and investment plans.

(4) Is the augmented “TARP” program the best of all possible programs?

(a) Clearly not, but it might have helped reduce panic to the extent that it is allowing a more orderly series of bankruptcy like adjustments to take place.

What has been implemented are various new methods designed to prevent short term bankruptcies, which may well be more important in today’s environment than in normal times, because so many highly leveraged companies hold one another’s assets.

On the other hand, by delaying bankruptcy of the worst cases, it slows up the process of shifting resources from losers (highly leveraged speculative firms) to winners (less leveraged more risk averse firms).

(b) The original tarp program, however, might have helped reduce the underlying financial problems (an excess supply of mortgage-backed securities), which is itself partly a matter of past regulatory mistakes, poor appraisals of risk, excessive historical support for house purchases, easy money, and overly optimistic expectations (irrational exuberance).

Geithner’s outline for a new TARP II included a massive new “bad bank plan” although it is not clear how much of the plan was simply taking account of steps already undertaken by the Federal Reserve Bank of New York.

(c) In addition, the self-financed insurance program added to the bill by House Republicans would also have more directly addressed some of the root problem associated with the collapse of the private insurance market for mortgage-backed securities.

[The fundamental problem that triggered the crisis was **increased risk**, not really insufficient demand for securities or good and services, per se. It has been exacerbated by “panic,” partly caused by the great depression talk by senior government officials and economic columnists, who are presumed by many readers to be well informed. ]

[Much of what has already done at the Fed and with the takeover of Fannie and Freddie, has reinsured most of the market--although exactly which parts are insured is evidently taking time for investors to determine because many

mortgage pools and evidently a wide range of MBSs and their derivatives include very large numbers of both insured and uninsured mortgages.]

[Much of the original MBS problem should be resolved as the partial insurance is properly capitalized in the value of assets--although most highly leveraged firms will remain bankrupt even after that is done.]

**(5) Other policies also have to be adjusted if we are to put this problem behind us in the long run.**

(a) Some thought about **more prudent ways of encouraging home ownership** should be undertaken. Clearly sub-prime mortgages are not the best vehicle for this social policy.

This indirect manner of subsidizing house purchases, evidently only temporarily takes it off the government's balance sheet, and may well prove to be more expensive than direct subsidies for marginal home buyers.

[If taxpayers spend "only" 210 billion dollars net on the Paulson plan and reinsuring the Fannie Mae and Freddie Mac securities, they could have purchased 1.4 million 150K town houses and condos, or provided a 20% subsidy for 7 million townhouse and condo purchases.]

(b) **New regulatory regimes** should take greater account of the internationalization of financial markets, and its greater speed and interconnectness.

At a minimum, such regulations should produce greater transparency about the nature of the assets in various derivatives, about the size of these markets, and their capitalization. Markets cannot do their magic, unless, at least some good information is available about risks and returns for all the assets in the market.

(c) Even honest "insiders cannot do it all. "Trust" and theories of asset pricing can take world financial markets only so far.

Many investment firms also evidently need better internal regulation and incentive structures. A few bad apples or decisions can ruin great financial firms.

This was true at so many levels of the problem that it is nearly unbelievable, beginning with mortgage originators, extending to the risk-assessing companies, and to the bonuses of senior managers and salesmen at the companies selling so much overpriced paper. Numerous regulators also

seemed to be asleep at the switch and Congress was unwilling to listen to warnings until it was too late for simple solutions.

(f) There are a variety of good reasons to try to temporarily establish a floor on the value of single-family homes. This floor might be tailored market by market, but could for example guarantee (temporarily) that housing prices will not fall below their 2000 levels.

There seems to be much confusion about how much this would cost.

In principal there are 12-14 trillion dollars of mortgages, but only 3-4 percent of these are in default. In most case, a government buy out of 10-20% of those mortgages, together with refinancing in the case of sub-prime mortgages would be sufficient to restore the promised flow of mortgage payments. This would cost something on the order of 150 billion dollars. The government's interest in the house would be paid off when the house is sold.

Note that having the government take a stake in the house equal to the fraction of the mortgage paid gives most home owners an incentive to stay out of the program, but adds liquidity to the mortgage market and to household budgets for those who participate.

Note that this back of the envelop calculation implies a cost far lower than TARP and although it does create moral hazard problems they appear to be much smaller than those created by the previous program.

[It however does not directly subsidize the great banking houses, and so would not garner as much support as the present bailout programs tend to from folks who make lots of contributions to Congressional campaigns]

(g) There are also a variety of associated regulatory problems in finance that need to be addressed.

The great expansion of sub-prime and prime mortgage securities provided a **new real-estate base of credit**, which has out-stripped the money-based system for the past ten or twenty years.

The result is that the great melt down in real estate here and in several other places around the world, **has reduced the real-estate equivalent of the monetary base**, and induced a great reduction in the supply of credit anchored on real estate.

The derivatives market functioned as a "money multiplier" in a manner not so different from that of a fractional reserve banking system.

The Fed can effectively deal with the money-based pool of credit--which it has been expanding enormously.

Whether it can do so enough to offset the multiplier effects in the real-estate based credit pool is far from obvious. (The lower capital requirements in the less regulated sector that relies on those instruments implies a larger multiplier effect.)

[It is for this reason that intervening to establish a floor on housing prices is more likely to cost-effectively reverse the financial meltdown than many of the current monetary, fiscal, and financial policies.]

(h) Some more **aggressive application of anti-trust law** in the financial sector is evidently also called for after the crisis is put behind us.

When a few firms with poor management or mistaken theories can cause the world's entire financial system to become dysfunctional, perhaps **it is time to diversify "our" portfolio of managers** by shrinking the average size and increasing the number of financial firms.

When a firm is too large to fail, it should be broken up into smaller pieces that can be allowed to fail--especially in the financial sector.

**Executive Summary**, so far the credit problem is concentrated in two large classes of assets, and has had relatively small effects on the real economy (the part that produces goods and services and hires most people). For many firms holding mortgage backed securities, this is not a life and death matter, although reductions in the value of those securities weakens their balance sheet and hence ability to make future investments.

(1) The true “crisis” is concentrated in real estate and in the firms that hold large portfolios mortgages and mortgage-backed securities. This is especially true of highly leverage firms that count on routinely “rolling over” loans for their business.

(b) Banks holding mortgages in areas of the country where the housing bubble was most extreme have been at greatest risk--more or less as usual after a real estate bubbles and during recession in which many people (predictably) fall behind on their debt payments.

[“a” was true of essentially all the major Investment Banks, Bear Stearns, Lehman Bros, Merrill Lynch, Goldman and Sachs, Morgan Stanley, etc.. Their businesses relied on easy access to credit, and when one of their main “assets” (mortgage backed securities) became less safe, they could no longer borrow. They unexpectedly had *less valuable* assets to secure their own loans, and without sufficient assets they became essentially bankrupt. “b” was true of the large bank Washington Mutual and partially for Wachovia. **They became less solvent, rather than less liquid.**]

(c) Bankruptcies always increase with recessions and as housing bubbles burst, so there is nothing particularly extraordinary here

(2) What is extraordinary, is that the “suddenly” risky assets are so **widely held** and that “everyone” wants to sell them at the same time--causing their price to fall to “unreasonable” levels, that only the most desperate sellers will accept.

(a) The size of the excess holdings of the mortgage backed securities is so large, that it will take markets quite a while to work through this problem--longer than it would for smaller narrowly held assets.

(b) It bears noting that the **problems facing highly leveraged firms are different** from those facing firms that simply hold more mortgage-backed securities than they currently believe to be prudent. Firms that rely on continuous borrowing to finance speculative gains have a much tougher time dealing with reductions in their “base” than other firms. The problems of such very highly leveraged firms is fairly common in the financial sector.

(3) **Paulson’s “capital injection” plan of late 2008 is less directed at the fundamental financial problems than at short run liquidity problems produced by “non bank” activities. The treasury has not, so far, addressed the real problems that produced the fiscal crisis, although the Federal Reserve has taken many such steps.**