
A Primer on Economic Crises

Part I: Origins of the Crash

George H. Blackford (2008)

Now that the election is over, a new administration is in Washington, and there has been a host of congressional hearings ([Hearings](#)) investigating last fall's financial crisis ([NYT](#)) a consensus is beginning to emerge as to how this crisis came about. The story begins with deregulation of the financial system.¹

The Role of Deregulation

Four legislative acts since 1980 have significantly reduced the power of government to control our financial system:

1. [Depository Institutions Deregulation and Monetary Control Act \(DIDMCA\)](#) in 1980. This act eliminated [Regulation Q](#) that allowed the [Federal Reserve](#) to set maximum interest rates on bank deposits, and it also allowed [thrift institutions](#) to issue checking deposits and expanded the types of loans they could make.
2. [Garn-St. Germain Depository Institutions Act \(GGDIA\)](#) in 1982. This act lowered the capital requirements of depository institutions.
3. [Financial Services Modernization Act \(FSMA\)](#) in 1999, also known as the Gramm-Leach-Bliley Act ([GLBA](#)). This act repealed portions of the [Glass-Steagall Act](#) of 1933 by allowing commercial bank holding companies to become conglomerates that are able to provide both [commercial](#) and [investment](#) banking services along with insurance and brokerage services.

¹ Since this piece was written in the fall of 2008 and updated in 2009 two comprehensive studies have come out that fill in the details of the broad outline presented in this paper of the causes of the financial crisis that reached its climax in September of 2008. The first is [The Financial Crisis Inquiry Report, Authorized Edition: Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States](#) (2011) produced by the [Financial Crisis Inquiry Commission](#). The second is the Majority and Minority Staff Report of the Permanent Subcommittee On Investigations, [WALL STREET AND THE FINANCIAL CRISIS: Anatomy of a Financial Collapse](#) (2011).

4. Commodity Futures Modernization Act (CFMA) in 2000. This act prevented the Commodity Futures Trading Commission (CFTC) and state gambling regulators from regulating the over-the-counter derivatives markets, including the market for credit default swaps (CDSs).

The evidence seems clear from the testimony before congressional hearings in the fall of 2008 (Hearings) by economists, lawyers, regulators, CEOs, and a host of others who are in some way knowledgeable or personally involved in the financial crisis that passage of these acts, and, specifically, the last two (FSMA and CFMA) played a major role in the financial crisis of 2008. (Deregulation)

The tale told in these Hearings is that the passage of the Financial Services Modernization Act (FSMA) and the Commodity Futures Modernization Act (CFMA) combined with five other factors to bring about this crisis:

1. New economic models for evaluating the risk of securitized debt instruments were created in the nineties. This led to an expansion in the markets for Mortgage Backed Securities (MBSs), Collateralized Debt Obligations (CDOs), and other Asset Backed Securities along with the market for Credit Default Swap (CDSs) to insure these assets.
2. There was a virtual explosion in the demand for securitized assets and the concomitant Credit Default Swaps that insured these assets that began after the passage of the Financial Services Modernization Act (FSMA) and the Commodity Futures Modernization Act (CFMA). This increase in demand was fueled by the increasing federal budget and foreign exchange current account deficits that took place after 2000 and was financed by the Federal Reserve through a low interest rate policy that pumped sufficient reserves into the financial system to maintain extraordinarily low interest rates.
3. The increase in demand for securitized assets led to an increase in the demand for the mortgages that were a major component of these assets with a particular emphasis on subprime and alt-A mortgages since these were the most profitable

for the mortgage originators to sell. This led to an extraordinary expansion in the mortgage origination business as mortgage originators expanded their operations to meet this increased demand.

4. After the passage of the Financial Services Modernization Act and the Commodity Futures Modernization Act the Federal government lacked a comprehensive framework within which to regulate the newly legitimized conglomerate banks. Nor did they have the legal authority to regulate or the Credit Default Swaps (CDSs) market.
5. An anti-regulation bias within the Federal government led to a situation in which regulatory agencies were underfunded and lacked the staff, resources, expertise, and motivation necessary to effectively regulate the financial sector of the economy. The result was an extraordinary lack of enforcement of existing regulations throughout the financial system.

These five factors along with the passage of the Financial Services Modernization Act and the Commodity Futures Modernization Act led to a financial regulatory system that was totally inadequate. At the same time there was so much money to be made in the subprime, alt-A, and Mortgage Backed Securities (MBS) markets that the temptation for recklessness, corruption, and fraud was irresistible.

Mortgage Origination

The problem started with mortgage origination. Since there were not enough qualified subprime and alt-A borrowers to meet the demands for these kinds of mortgages, predatory mortgage originators (such as Countrywide and CitiFinancial) talked a host of naive people into applying for these mortgages by misrepresenting them to the mortgagor. The most serious misrepresentation was to offer borrowers an adjustable rate, negative amortization mortgage with an unreasonably low initial (teaser) rate without explaining the effect on their monthly payment when the initial rate adjusted to the contract rate. Using this and other ploys (Spitzer), borrowers qualified for modest subprime mortgages at reasonable subprime rates were talked into applying for

exorbitant subprime and alt-A mortgages at rates they could not afford. Even borrowers qualified for modest prime rate mortgages at reasonable prime rates were talked into applying for exorbitant subprime and alt-A mortgages they could not afford. At the same time borrowers not qualified for any kind of mortgage were approved for subprime and alt-A mortgages.

Next, in order to sell these mortgages it was necessary for mortgage originators to obtain appraisals of the underlying properties consistent with the values of the mortgages being originated. To obtain these appraisals mortgage originators shopped around for appraisers who would write consistent appraisals and shunned appraisers who would not. This guaranteed a rising income for appraisers that cooperated with the mortgage originators and a falling income for those that did not. The result was a systematic upward bias in real-estate appraisals and, hence, housing prices.

At this point real-estate speculators got into the act. As housing prices rose, and speculators discovered they could get alt-A mortgages with no money down, a host of disreputable speculators took out alt-A mortgages knowing if the prices of their properties increased they would make out like the bandits they were, and if the prices of their properties went down they could walk away from these mortgages with little or no loss.

Securitization

Firms that securitize mortgages were the next link in the financial food chain that fed off these fraudulent subprime and alt-A mortgages. In order for investment banks and other firms that securitized mortgages to sell their products (the Mortgage Backed Securities they created from the subprime and alt-A mortgages) at the highest possible price they had to receive the highest possible ratings from a bond rating agency. To accomplish this they followed the lead of the mortgage originators to steer their business to bond rating agencies that would give them the highest rating and away from those that would give them a lower rating. In this way the companies that securitized fraudulently obtained mortgages were able to get the three major bond rating agencies (Moody's, Standard and Poor's, and Fitch) to give triple-A ratings to their Mortgage Backed

Securities that contained these mortgages even though these bond rating agencies had no basis on which to evaluate the quality of these securities.

As this process played itself out from 2002 through 2007 literally millions of fraudulent obtained subprime and alt-A mortgages provided the collateral for trillions of dollars of collateralized securities that were spread throughout the financial system of the entire world, and there was a failure of government regulation at every step in the process to keep this from happening.

When state or local authorities complained to the federal government about the [predatory lending](#) practices in their communities, not only did the Federal Reserve, which had the absolute authority to stop these practices ([Natter](#)), do nothing to clamp down on the mortgage market, the Bush Justice Department actually went to court to keep state and local authorities from regulating this market. ([Spitzer](#)) As a result no restraints were placed on mortgage originators.

When the conglomerate banks created after the passage of the Financial Services Modernization Act ([FSMA](#)) came into existence in the absence of a comprehensive framework within which to regulate them. This combined with the anti-regulation attitude of the government made it possible for these banks to increase their [leverage](#) (i.e., the ratio of their debt to their equity) without effective oversight or control. As a result, leverage grew in these institutions beyond all reason. At the same time, no one paid any attention to the bond rating agencies as they gave meaningless triple-A ratings to securities for which they had no basis to justify these ratings. As a result, unsuspecting investors purchased these securities without any idea how dangerously risky they were.

The CDS Market and Leverage

The most insidious failure of the regulatory system, however, was the failure to regulate the markets for Asset Backed Securities ([ABSs](#)) and Credit Default Swaps ([CDSs](#)) while at the same time allowing the newly legalized conglomerate entities to take the Mortgage Backed Securities ([MBSs](#)) and other kinds of Asset Backed Securities ([ABSs](#)) they were creating [off their balance sheets](#).

The importance of this last point must be emphasized. To avoid the kind of financial crisis we are experiencing today the amount of leverage a financial institution is allowed to have must be inversely related to the riskiness of the assets held—the riskier the asset the lower the leverage. The total leverage (hence, the resulting risk implicit in this leverage) in the system as a whole must be kept at a level commensurate with the riskiness of the assets in the system.

When a financial institution purchases financial assets, bundles them together, and sells Asset Backed Securities to other financial institutions it creates a huge liability on its balance sheet since it is responsible for the Asset Backed Securities it sold that are backed by the financial assets it bundled. When it purchases Credit Default Swaps to insure the assets that backed the securities it sold it, in effect, ‘swapped’ the huge liability for the promises of the CDS sellers of the Credit Default Swaps to assume (insure against loss) this huge liability for the financial institution. This eliminates the financial institution’s liability, *but only to the extent the CDS sellers of the CDSs are, in fact, able to perform on their promises.*

It may make sense, in theory, to allow an individual institution to take its insured assets and corresponding liabilities off its balance sheet (though this is highly dubious given the experience with Enron taking its obligations off its balance sheet) as it purchases Credit Default Swaps to shed the risk associated with the securities it created, but *only if the market for Credit Default Swaps is regulated.* If there are no regulations on the institutions that sell Credit Default Swaps there is no way to control the total amount of leverage in the system as a whole since *there is nothing to keep an unregulated institution that sells CDSs from leveraging its equity at a 75 or 100 or higher to 1 ratio.*

When this was allowed, financial institutions that held assets which require something like a 12 to 1 leverage ratio for the system to be safe shifted the risk associated with these assets to financial institutions that leverage their equity at a 30 or 70 or whatever they wanted to 1 ratio. *This increases the leverage in the system as a whole from the 12 to 1 ratio to whatever the leverage was in the institutions that sold the assets and thereby assumed the risk associated with the assets.*

Allowing financial institutions to take their insured assets and corresponding liabilities off their balance sheets when the institutions that insured these assets were unregulated and the Credit Default Swaps that insured their assets were traded in unregulated markets made it impossible for regulators to even know what the total amount of leverage (hence, the resulting risk implicit in this leverage) in the system was, let alone keep this leverage at a level commensurate with the riskiness of the assets in the system. The result was an explosive increase in leverage in the system as a whole and, hence, an explosive increase in the risk to the system as a whole.

This situation was further compounded by the fact that investors were able to buy Credit Default Swaps for Asset Backed Securities even though the investors had no connection to these securities. Combined with the failure to control the leverage in the rest of the financial system, the result was an explosion in the value of CDSs that grew to five or ten times the total value of the Asset Backed Securities they insured as well as the explosion in the leverage created in the financial system as a whole.

The failure to regulate the CDS market made this situation untenable because in the absence of regulation there was no way to know the financial situations of the institutions that sold Credit Default Swaps and how much leverage they contributed to the system. In addition, there was no way to know the financial situation of the entire CDS market—to know which of the sellers in this market were sound and which were not. Hence, there was no way to know which Asset Backed Securities were actually insured and which Asset Backed Securities were, in fact, not insured by virtue of the fact that the sellers of the Credit Default Swaps that insured them would be unable to meet their financial obligations.

The history of this period is yet to be written, but to date virtually all of the economists, regulators, lawyers, bankers, bond raters, and other individuals that either participated in, or in some other way gained firsthand knowledge of this debacle that testified before the congressional hearings on the financial crisis have agreed that the scenario laid out above is essentially what brought us to where we are today. (Hearings) The end result of these forces combined created a huge speculative bubble in the housing market

where prices rose beyond all reason, and when this bubble burst it brought down the system as a whole.

But why has the bursting of this bubble cause so much turmoil in the economic system, especially since only 2% or 3% of mortgages were in default at the beginning of this crisis? To answer this question we have to begin with an understanding of how the financial system works and the role it plays in the economy.

Part II: The Nature of Financial Institutions

Bibliography

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Part II: The Nature of Financial Institutions

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Most financial institutions (commercial banks, investment banks, savings and loans, credit unions, insurance companies, hedge funds, pension funds, etc.) act as intermediaries between borrowers and lenders who have different objectives. In general, most lenders wish to lend for a shorter period of time and in smaller amounts than borrowers wish to borrow. You can see how this works by looking at a commercial bank.

When you put money in a checking account you are in effect lending the bank a small amount of money for a short period of time—the amount of money you deposit and the time you leave it there until you write a check. The bank takes the small amounts of money its depositors lend for this short period of time and makes larger loans to its borrowers for a longer period of time, say, tens or hundreds of thousands of dollars for 90 days or six months. They can do this because in normal times depositors deposit money in their accounts at more or less the same rate they take money out so even though the balances of individual accounts change rapidly and dramatically the total amount of deposits available to the bank to lend is relatively stable. When times are not normal, however, banks and other financial institutions can get into trouble.

Understanding Financial Institutions

There are two ways a financial institution (or any business or firm for that matter) can get into trouble. One is if the value of its assets (those things that the institution owns) is less than the value of its liabilities (those things that the institution owes to others). Even in normal times this is a serious problem for a financial institution because it means that the institution's net worth (the difference between the value of what it owns, i.e., its assets, and what it owes, i.e., its liabilities; net worth is also referred to as net or owner's equity or capital) is negative. In this situation the financial institution is insolvent, and

even if it *liquidates* (sells) all of its assets it will not be able to pay all that it owes to others. When a financial institution is insolvent it is in real trouble and is in danger of being forced to close its doors.

The other way a financial institution can get into trouble is if it has a liquidity or cash flow problem. When there is a net cash flow out of a financial institution this generally means its financial obligations to others are coming due, and it must meet these obligations with cash. If it doesn't have cash available to meet these obligations, for example to meet its payroll or make a payment on a loan it will default on its payments and, again, is in danger of being forced out of business. When financial institutions do not have enough cash on hand to meet their obligations they must either borrow money (hence, keep their total liabilities from falling by creating a new liability) or, if necessary, they must sell off some of their assets to obtain the cash they need.

Confidence and Financial Institutions

In normal times the financial system as a whole is able to handle the liquidity and solvency problems of individual institutions with relative ease, but there is a vulnerability that is inherent in the very nature of financial institutions (and to some extent in the nature of most businesses and firms) that arises from the fact that, in general, their assets have a longer term to maturity than do their liabilities. You can see how this works in your bank.

Your deposit is a short term loan to your bank that it owes to you and hence is its liability. The bank makes a loan with the money it gets from you for a specific period of time in the future, say 90 days, and this loan becomes its asset, something the bank owns. The bank's loan from you is on demand, that is, its term to maturity (period of time until the date your loan matures and your bank must pay it back to you) is zero since the bank must pay back your loan at your demand while the term to maturity of the loan the bank makes is 90 days.

This means that the very existence of a financial institution depends on the confidence lenders have in the institution. If lenders lose confidence in an institution, new lenders

will refuse to lend to it, and old lenders will refuse to renew their loans when they come due. In the case of your bank, new depositors will choose other banks, and old depositors will close their accounts. In this situation your bank will be forced to pay out cash to pay off its depositors, and when it can't get the cash from new depositors it will be forced to liquidate its assets by selling them off to meet the demands of its depositors. It will be forced out of existence if it is insolvent in this situation, that is, if its net worth is negative. *What's more, even if it is solvent before depositors lose confidence in it, it can be made insolvent after depositors lose confidence if it is forced to sell off its assets at fire-sale prices that are below what its assets are actually worth.*

Confidence and the Financial System

This inherent vulnerability to the confidence of lenders not only applies to individual financial institutions; it extends to the financial system itself. The reason is financial institutions are interconnected and interdependent in innumerable ways. To a very large extent the assets and liabilities of one financial institution are the liabilities and assets of other financial institutions. When you deposit money in your bank the bank agrees to pay you back the principal plus interest (if any) on the terms the bank sets for your account. That deposit is your asset, something you own, and the bank's liability, something it owes. Your bank takes your money, combines it with the money of other depositors, loans the money to someone to buy a house and takes a mortgage on the house which becomes your bank's asset and the homeowner's liability. Your bank then sells the mortgage to an investment bank and it becomes the investment bank's asset and the money your bank gets from the investment bank becomes its asset which it can use to make more loans.

The investment bank combines the mortgage it got from your bank with mortgages it got from other banks and uses these mortgages as collateral for Mortgage Backed Securities (MBSs). These securities (mortgage bonds) are given a rating by a credit rating agency (such as Standard and Poor's, Moody's, or Fitch Ratings) and are then sold to other financial institutions such as pension funds and insurance company—perhaps, even to your pension fund or life insurance company or the pension fund or insurance company of the mortgagee who borrowed the money in the first place.

At the same time the investment bank insures its mortgage assets against default by purchasing a Credit Default Swap (CDS) from a hedge fund or an insurance company. This CDS becomes a kind of contingent asset for the investment bank, its value being contingent on the extent to which there is a default on one of the mortgages that it insures, and a contingent liability of the hedge fund or insurance company that sold the CDS where this liability is contingent on the same conditions as the investment bank's contingent asset. At this point the investment bank holds your mortgage and the mortgages of others as assets and the Mortgage Backed Securities (MBSs) that it sold are its liabilities. The MBSs that are purchased by pension funds and insurance companies are their assets. The investment bank also gained money, an asset, from its sale of MBSs, and this money can now be used to purchase more mortgages.

This example should give you some idea how financial institutions are interconnected and interdependent, but even this example is highly simplified. Banks, mortgage companies, hedge funds, and insurance companies all issue stock to finance themselves. These institutions also borrow from banks, issue commercial paper, and sell bonds and interact with financial institutions via the markets for these financial instruments. In addition, they borrow and lend directly from and to each other in order to meet their liquidity needs as their cash receipt and expenditure flows change on a day by day basis. And we haven't even touched on the role of the Federal Reserve and the US Treasury in the financial system.

The financial system is like a huge spider web that folds back on itself in ways that are beyond imagination, and this simple example doesn't even come close to indicating its full complexity and interconnectedness. What's more, its complexity and interconnectedness not only includes domestic financial institutions, it is international in scope encompassing the financial institutions of foreign countries, their central banks and treasuries, the International Monetary Fund, the Bank for International Settlements, and the World Bank. And all this system is dealing with is assets and liabilities that are nothing more than obligations to pay interests, principals, benefits, premiums, etc. at particular points in time.

I can't emphasize this enough: *All this system is dealing with is obligations, promises, contracts, or agreements that define the times and amounts that payments of money are to be made in the future.*

How we Benefit from the Financial System

When the system works properly, everyone benefits from this process. In the simple example above, you benefit by having a convenient place to keep your cash to facilitate your expenditures, a higher yielding investment opportunity for your pension fund, and lower rates on your insurance policies. The home owner benefits from the ability to get a mortgage at a lower rate than she would have been able to if the bank were forced to tie up its assets with a long term, illiquid mortgage that it couldn't sell very easily if it needed cash. The home owner also gains the same pension fund and insurance benefits you do. The investment bank benefits because by securitizing the pool of mortgages it can issue an equivalent amount of mortgage bonds (MBSs) on which it pays a lower rate of interest than it receives from the pool of mortgages it has purchased.

The hedge fund that insured this pool of mortgages by selling a CDS benefits because it can earn an income from the insurance it sells, and the investment bank benefits from this insurance by being insured against a loss on the mortgages it holds. The pension funds and life insurance companies that purchase these Mortgage Backed Securities benefit because they are able to purchase long term, high yielding assets that are both 'safe,' because they are collateralized by real estate, and liquid because the market for Mortgage Backed Securities is much more liquid than is the market for individual mortgages. And everyone benefits from the credit rating agencies that perform due diligence in investigating and reporting on the quality of the Mortgage Backed Securities that are sold in the markets, thus providing a valuable source of information to investors and making the market more efficient.

Everyone benefits from this process so long as it works properly. When it doesn't work properly, however, there is a chain reaction throughout the system that can shake the system to its core if it is allowed to get out of control.

When Things go Wrong

Note that in the example above it is assumed that all of the future payments of money that the participants are obligating themselves to pay will be financed out of the payments made by the homeowner. The homeowner makes interest and principle payments to the investment bank, out of which the investment bank pays interest payments to the pension fund and insurance premiums to the hedge fund, out of which the pension and hedge funds pay their pensioners and investors.

What if the homeowner defaults on the mortgage? If the homeowner defaults then the hedge fund that sold the CDS that insured the mortgage must pay. If the hedge fund defaults on its CDS, then the investment bank that holds the mortgages must pay. If the investment bank defaults on its Mortgage Backed Securities then the pension funds and insurance companies that purchased the Mortgage Backed Securities don't get paid, and if the loss is sufficiently large they may default on their obligations to their pensioners and policy holders, and the pensioners and policy holders who are the ultimate lenders in this example must ultimately take the loss.

But the disruption to the system does not stop here. As was noted above, banks, hedge funds, mortgage companies, pension funds, and insurance companies all borrow from other financial institutions. If one of these institutions defaults on its obligations it will be forced out of business. All of the loans that are its liabilities are held as assets by the institutions that lent to it. Since these assets are now at risk investors and lenders everywhere will begin to look at the liabilities of the failed institution to see what institutions hold its liabilities as assets to see how the failure of the given institution will affect the viability of the institutions that lent to the failed institution.

This is why lenders *must* have confidence the obligations, promises, contracts, and agreements that are the essence of the financial system will be honored. If lenders lose confidence in the ability of a particular institution to meet its obligations lenders will stop lending to it, and that institution will be forced out of business. This sets in motion a chain of events, often referred to as contagion, which brings into question other financial institutions in the system. In normal times this process works itself out with very little

difficulty, but we do not have normal times. If the financial institution that fails is a major player in the system ('too big to fail') or if a large number of smaller institutions begin to fail (through a process referred to as contagion) the system itself is threatened, and once lenders lose confidence in the system itself the entire system simply grinds to a halt.

This is no small matter because as the process of resolving this situation works itself out there are huge amounts of wealth that are at stake, and the economic wellbeing of everyone is at risk.

The Financial Crisis

As was noted above, the immediate cause of the financial crisis was the bursting of the housing bubble that had been building for the past seven years brought about by 1) deregulating the financial system, 2) what was either duplicity or stupidity on the part of securitizers and rating agencies, and 3) a failure to stop predatory lending practices on the part of mortgage originators. (Andrews) Now that we have examined the nature of financial institutions, we are in a position to understand why the bursting of the housing bubble caused so much turmoil even though only a small percentage of mortgages, 2% or 3%, were in default at the beginning of the crisis.

The defaulted mortgages had been securitized by including them in combined mortgages (MBSs), insured by Credit Default Swaps, and then spread throughout the financial system. To make things worse, financial institutions have been allowed to speculate in unregulated markets on CDSs by allowing them to buy and sell CDSs for Mortgage Backed Securities, for Collateralized Debt Obligations (CDOs) (which are combinations of lesser rated MBSs), and other Asset Backed Securities that the buyer of the CDSs doesn't own.

This practice had grown to the point where the value of the contingent liabilities created by these Credit Default Swap on the books of financial institutions are often five or ten times the value of the Asset Backed Securities they insure. What's more financial institutions have been allowed to treat ABSs in such a way that they can be hidden in

their financial statements, and the way in which these securities have been put together it is difficult if not impossible to know what these financial assets are made up of or to evaluate the degree of risk that should be associated with them to the effect that it is impossible to know what these assets are actually worth. ([Kroszner](#))

The result was that no one knew at the time of the crash in 2008—and no one knows today—who owns the bad mortgages or the [contingent liabilities](#) and assets created when these mortgages were combined into Mortgage Backed Securities ([MBSs](#)) and other Asset Backed Securities and insured innumerable times with Credit Default Swap, let alone who owns the financial obligations of those institutions who own these toxic assets. This lack of knowledge (often referred to as [a lack of transparency](#)) undermines the confidence of lenders in all financial institutions since no one knows which of these institutions are at risk and which are not.

What's more, as we head into a recession and housing prices fall further there is no guarantee the percentage of mortgages in default won't go from 2% to 4% to 8% to 16% to 32% as this problem works itself out. In fact, it is clear that this percentage is going to increase over time. ([Yang](#)) The only question is by how much. As a result, [CDSs](#), [MBSs](#), [CDOs](#), and other Asset Backed Securities have become known as '[toxic assets](#)' and lenders are afraid to lend to any financial institution that *might* have an association, either directly or indirectly, with them.

Why Leverage Matters

This situation, combined with the wanton deregulation of the financial system that has taken place over the past 30 years (which accelerated dramatically under the Clinton Era and Republican Congress in the 1990s) ([RiskGlossary](#)) and the deplorable lack of enforcement of existing regulations under the Bush Administration for the past seven years, has led to a financial system that is a house of cards.

Deregulation has allowed many of the major players in the financial markets to [leverage](#) themselves (increase the ratio of their liabilities to their net worth) to the point that their net worth may be as little as 2% or 3% of their total assets. ([Gandel](#)) This means that a

very small decrease in the value of their assets (2% or 3%) will make them insolvent, and there is a very serious possibility that these institutions will not be able to meet their financial obligations at some time in the near future.

To see how central the increase in leverage is to the current financial crisis assume you have \$1,000 and decide to become an investment banker:

1. If you lend your \$1,000 out at 6% you can earn \$60 a year. ($\$1,000 \times 0.06 = \60)
That gives you a 6% return on your \$1,000 investment.
2. If instead of just lending your money you borrow \$1,000 from a friend at 5% and lend out the \$2,000 at 6% you can then take in \$120 that cost you \$50 in interest to your friend. This leaves you \$70 profit which is a return of 7% on your investment of \$1,000 instead of 6%. This extra 1% was obtained by leveraging you capital at a 1 to 1 ratio with your friend's money.
3. Suppose you have enough friends to borrow \$10,000 at 5% and are able to lend \$11,000 out at 6%. You have now leveraged your capital at 10 to 1 and can take in \$660 that cost you \$500. This leaves you a \$160 profit which is a return of 16% on your \$1,000 investment. But why stop here?
4. If you leverage your capital at 30 to 1 by borrowing \$30,000 at 5% and lend the \$31,000 out at 6% you take in \$1,860 that costs you \$1,500 which leaves you a \$360 profit. You end up with a return of 36% on your \$1,000 worth of capital.

This is what leverage is all about: It increases the rate of return on the capital of financial institutions, and using this kind of reckless leverage and worse has allowed some of our largest financial institutions to make hundreds of billions of dollars over the last few years as the housing bubble grew.

At the same time this leverage increased the instability of the financial system as a whole. If, as in the above example, you are leveraged 30 to 1 all it takes is a 3.2% loss in your \$31,000 worth of assets and your net worth is zero. That is, your \$1,000 worth of capital that represents what you invested of your own money is completely wiped out.

What's more, *if all of the institutions in the financial sector are leveraged at a 30 to 1 ratio and the value of the total assets held in this sector fall just 3.2% all of the net worth in the entire financial system will, in effect, be wipe out.* Some institutions may have a positive net worth that is offset by some that have a negative net worth, but the net worth in the financial system as a whole will be zero.

Even though there is not necessarily a liquidity problem at this point (in the above example you have only lost \$60 of the \$1,860 income you were making before the default and are still only paying out \$1,500 thus making a \$300 annual profit) there soon will be because this is the kind of situation that makes lenders nervous. The handwriting is on the wall so to speak.

When a large number of financial institutions find themselves in this situation the entire system is at risk. Since most financial institutions borrow short and lend long, as loans to them come due lenders will be less willing to renew their loans at current rates of interest. Rates of interest that insolvent institutions must pay will begin to increase, and they will inevitably run out of cash at some point and be forced to sell off assets to meet their cash flow needs. The prices of these assets will fall making the situation worse, and, in the end, lenders are going to stop lending and the entire system is going to collapse.

This is, more or less, how we got to where we were in September of 2008. Reasonable leverage is essential for the financial system to function efficiently. Reckless leverage, however, is disastrous for the system.

Why the System Ground to a Halt

Given the failure of [Bear Stearns](#), [Lehman Brothers](#), [Fannie Mae](#), [Freddie Mac](#), and [AIG](#) in September of 2008 we found that lenders had lost confidence in the financial system itself and had been driven into a panic. As a result of this panic it was virtually impossible for financial institutions to borrow money or to sell their assets at prices that would keep them from becoming insolvent because there were no lenders or investors out there who were willing to assume the risk of lending financial institutions money or

of buying their assets at prices that would not force them out of business. This caused the financial system to grind to a halt.

In the meantime, since most financial institutions lend for a longer term than they borrow the liabilities of financial institutions continue to mature at a faster rate than their assets, exacerbating their liquidity and solvency problems, and the entire system found itself in the process of collapsing. It would have made no difference if the fundamentals of the economy were sound which, unfortunately, they were not. All that mattered was that lenders no longer had confidence in the financial system and were refusing to lend to financial institutions.

What's more, since our financial system is interconnected with the financial systems of the rest of the world, many of the assets and liabilities of our financial institutions are the liabilities and assets of foreign financial institutions which put foreign financial institutions at risk as well. As a result, we were faced with a worldwide financial crisis.

(Kodres)

The Coming Recession

Unfortunately, the story of the Crash of 2008 does not end with simply a crisis among our financial institutions because the financial sector of the economy is inextricably intertwined with the real sector of the economy.

The financial sector amounts to something like ten percent of the economy. Ninety percent of the economy is in the nonfinancial or *real* sector. This is the sector that produces nonfinancial, real goods and services: real consumer goods that provide the food and clothing and shelter that are used to satisfy consumers' wants and needs, and real investment goods that provide the tools, machines, and buildings that are used to produce economic goods. It is the real sector of the economy that is the ultimate engine that produces the economic goods that are essential to our wellbeing and, indeed, to our very survival. Without the real sector the financial sector has no reason to exist and, indeed, cannot exist. At the same time, in a modern economy a functioning financial sector is essential to the efficient functioning of the real sector.

Income and the Circular Flow of Money

The real sector of the economy is made up of firms (businesses) and households (individuals and families): Firms purchase labor from households and produce goods that are sold to households as well as to other firms. Households sell their labor to firms and purchase goods from firms. These purchases and sales are made possible by a circular flow of money through the economy from households to firms and back to households. The money used by firms to purchase labor from households is also used by households to purchase goods from firms, and is, in turn, used by firms to purchase labor from households. In the industrialized economies of the world *this circular flow of money is the mechanism by which income payments are made by firms and received by households*. As a result, the financial sector of the economy is essential to the real sector of the economy in that *the financial sector coordinates the circular flow of money from firms to households back to firms in such a way as to finance the purchases and sales of households and firms*.

Role of Financial Institutions

When individuals receive income payments from firms a portion of the money they receive is spent directly on products sold by firms and a portion is saved. That portion that is saved is generally lent to a financial institution in the form of a payment to an insurance company, a contribution to a pension fund, a deposit in an investment account or some other financial institution, or it is just left in the checking account where the check that represents the income payment is deposited. When saved income is lent to the financial system it is available to be lent to others, both firms and households alike, to balance out their income and expenditure flows.

This makes it possible for a firm to make expenditures on payrolls, inventories, buildings, and equipment that exceed the amount of money it has on hand by going to the financial system to borrow the difference to finance its expenditures and then repay the loan from the income it expects to generate from its expenditures. Similarly, this makes it possible for a household to make expenditures on food, clothing, washing machines, cars, and to purchase a home that exceed the amount of money it has on

hand by going to the financial system to borrow the difference to finance its expenditures and then repay the loan from the income it expects to earn in the future.

The circular flow of money from households to firms back to households is possible only if the financial sector of the economy is functioning properly, and a loss of confidence in the financial system that causes the financial sector to no longer function properly has a direct effect on the real sector. As households and firms become less willing to lend to the financial system, the financial sector must contract. As the financial sector contracts financial institutions become less willing to lend to households and firms, and households and firms find themselves more and more limited in their expenditures by the amount of money they have on hand.

Non financial firms have the same kinds of liquidity and solvency problems that financial institutions do. In general, their assets are longer term and earn income over a longer period of time than their obligations to make payments to manage their liabilities. As firms find it more difficult to borrow they also find it more difficult to meet their payrolls and fund their other expenditures. As the situation gets worse they are forced to cut back their expenditures, reduce their levels of production, and lay people off. In addition, if the inability to borrow gets bad enough, otherwise solvent firms can be forced to sell off their assets at fire-sale prices and can be forced out of business in the same way that otherwise solvent financial institutions can be forced to sell off their assets and go out of business.

As firms lay people off and go out of business the incomes of households fall, and households, in turn, find themselves restricted in their ability to make expenditures. Households are forced to cut back on their purchases of goods from firms, which has a feedback effect on firms that increases their liquidity problems and forces more firms to lay people off and go out of business, which has a feedback effect on households. As employment and incomes fall there is tremendous pressure on wages and prices to fall as well.

Feedback Effects on the Financial Sector

A contraction in the real sector of the economy, in turn, has a feedback effect on the financial sector. As employment and incomes fall, firms go out of business, and wages and prices fall in the real sector, not only does the willingness and, indeed, the ability of this sector to lend to the financial sector also fall, it becomes more and more difficult for households and firms to honor their existing obligations to the financial sector: Firms find it more difficult to pay off their loans, make interest and principal payments on their bonds, ([Kouwe](#)) maintain the value of their stocks, or to make dividend payments to their stockholders. Households find it more difficult to make payments on their loans, credit cards and other installment debts, and to make payments on their mortgages.

These financial obligations of firms and households provide the very foundation of the financial sector of the economy, without which there is no reason for the financial system even to exist. It is faith in the ability of firms and households in the real sector to meet their financial obligations to the financial sector that ultimately underlies the confidence in the financial sector itself because ultimately all of the income earned in the financial sector of the economy must come from the real sector of the economy.

As this process unfolds we find ourselves in a vicious circle: A lack of confidence in the financial sector causes a reduction in the willingness of this sector to lend to the real sector, which causes the real sector to contract and default on its obligations to the financial sector, which increases the lack of confidence in the financial sector which feeds back on the real sector. The result is a downward spiral with more and more firms and financial institutions going out of business and more and more people losing their jobs, losing their homes, and going into bankruptcy. This downward spiral must continue until either confidence in the financial sector is restored or the economy contracts to the point where virtually all expenditures by households and firms that survive in the real sector are made with the cash they have on hand. At this point the financial sector will be more or less irrelevant except to the extent that banks—whose checking deposit are the primary form of money in use today—survive, since the real sector of the economy will be functioning on a cash only basis.

Thus, if the financial crisis is allowed to get out of control, the end result will be the failure of innumerable firms in both the real and financial sectors and significant increases in the number of households, that is to say *people* who will lose their jobs, their cars, their homes, their businesses, and their life's savings. In addition, there will be massive transfers of wealth from those who are crushed in this downward spiral of the economic system to those who are able to survive, mostly by holding US Treasury obligations and watching the carnage unfold from the sidelines as they wait until they are ready to convert their assets to cash and buy up the real and financial assets of firms and households at fire-sale prices.

Part III: Bailing out the Financial System

Bibliography

A Primer on Economic Crises

Part III: Bailing Out the Financial System

George H. Blackford (2008)

In September we found ourselves in the midst of a worldwide financial crisis.

(Dougherty) The only thing that kept the system from imploding at time was the fact that the Bush Administration threw the problem to Congress and asked Congress to fix it. In so doing Bush asked Congress to authorize the Secretary of the Treasury, Henry Paulson, to spend \$700 billion dollars to purchase the toxic assets from financial institutions. This, Bush and Paulson argued, would reassure lenders and restore their confidence in the financial system.

At this point Congress had a choice. If they did nothing the consequences were clear: A massive reorganization of the economic system would take place. Output and employment would fall, and there would be intense pressure on wages and prices to fall as well. The prices of assets would also fall as firms and financial institutions hanging on by their teeth would be forced out of existence and their assets sold off at bargain basement prices. Many otherwise sound firms and financial institutions would be driven into insolvency and taken over by stronger firms and financial institutions (those that have managed to acquire substantial holdings of cash and Treasury securities before this crisis began) at very unfavorable terms to the owners of the otherwise sound firms and institutions. In addition, the stronger institutions would be in a position to pick up at depressed prices the assets of the firms and financial institutions that fail. The end result would be widespread unemployment and hardship accompanied by massive transfers of wealth to the owners of firms and institutions that survive from the owners of firms and institutions that fail or are taken over. So what about the Bush/Paulson proposal?

This proposal hit a brick wall in Congress when it was discovered that it gave a single individual (who at the time was George W. Bush, since the Secretary of the Treasury is

responsible to, and only to the President of the United States) the ability to spend \$700 billion without any congressional oversight and with complete immunity from any legal consequences. The amount of money involved here is staggering and beyond the grasp of most people. If you had \$700 billion to spend you would be able to give a gift of one million dollars to 700,000 of your closest friends, or a gift of 10 million dollars to 70,000 of your closest friends, or a gift of 100 million dollars to 7,000 of your closest friends, or a gift of one billion dollars to 700 of your closest friends, or a gift of 10 billion dollars to 70 of your closest friends (that's 10,000 million dollar bills!), or a gift of 100 billion dollars to 7 of your closest friends.

The potential for misfeasance, malfeasance, favoritism, cronyism, and outright fraud and corruption was so great with this much money that even the staunchest Bush supporters decided that this was too much temptation to put in the hands of one man. In response to these concerns Congress added oversight provisions to the **bill that was eventually passed into law**. How effective these provisions will be remains to be seen. There are, however, other problems with this proposal.

Wealth Transfers in A Speculative Bubble

To fully appreciate the economic implications of the Bush/Paulson bailout scheme it is instructive to begin with an examination of the kinds of wealth transfers that occurred as a result of the speculative bubble in the housing market that helped to bring us to where we are today. (Andrews)

Suppose I borrowed \$100,000 and purchased a house in 2004 that I lived in until today, and you did not own a house during this period of time. What effect does the housing bubble and its bursting have on the two of us as housing prices increase to the point where my house is worth, say, \$200,000 by 2007 and then the bubble bursts and housing prices fall to the point where my house is again worth only \$100,000 today?

The increase in the price of my house to \$200,000 in 2007 made me richer in 2007 in that I owned a house that was worth \$100,000 more than I paid for it. In effect, I then owned half a house that I didn't have to pay for. At the same time, this increase in

housing prices made you poorer in that it then cost you \$100,000 more to buy a house like mine than it would have if housing prices had not increased. You were poorer in terms of houses by half a house. The result of this housing boom was, in effect, a transfer of wealth from you to me, that is, from those who did not own houses to those who did own houses during that period of time. *(More precisely, it transferred wealth from those who held a smaller proportion of their wealth in the form of houses to those who held a larger proportion of their wealth in the form of houses.)*

The result of a housing bust is a transfer of wealth in the opposite direction. As housing prices fell to the point where my house was worth \$100,000 today I became poorer than I was in 2007 in that I no longer own a house that is worth \$200,000. You, on the other hand, become richer in that you can now buy a house like mine for \$100,000 again. I became poorer and you became richer in terms of houses by half a house. Thus, the result of the busting bubble was a transfer of wealth from me back to you, that is, from those who owned houses to those who did not own houses. *(More precisely, it transferred wealth from those who held a larger proportion of their wealth in the form of houses to those who held a smaller proportion of their wealth in the form of houses.)*

These wealth transfers may seem ethereal, but they are very real as anyone knows who lived through the housing boom of the seventies: Those who owned a house during that period found it very easy to sell their old house and move into a larger one because they could finance the down payment for the larger house with the equity that had accumulated in their old house due to the inflation. Those who did not own a house during that period found it very difficult to come up with the down payment for a large house and had to settle for a much smaller one.

Now let's see what the situation would look like if I had sold my house to you in 2007 for the \$200,000 it was worth at that time, paid off my bank loan, and invested my \$100,000 gain in a Treasury bill or just held it in the form of cash. Now the house that I owned as its price rose from \$100,000 to \$200,000 you owned as its price fell from \$200,000 to \$100,000. How does this fall in housing prices affect wealth?

I have clearly gained by half a house as a result of the fall in the price of houses in that it now costs me half as much to repurchase my house than I sold it for. How does this fall in the price affect you? That depends on a number of things:

If you paid in cash, you are clearly a loser. You now own a house that you paid \$200,000 for that is now worth only \$100,000. As a result, you have lost \$100,000 on this transaction and are now worth \$100,000 less than you were before. The result of this housing bust is a transfer of wealth from you to me, that is, from those who own (*hold a larger proportion of their wealth in*) houses to those who do not own (*do not hold a larger proportion of their wealth in*) houses during this period of time.

How does this situation change if you had financed your purchase by borrowing from a bank? This doesn't change my situation at all since nothing has changed for me, but what it means for you, again, depends on a number of things:

If you have a secure job and have not been the victim of a predatory lender who has talked you into a mortgage that you will not be able to afford when the interest rate resets, you still lose. You still own a house that is only worth \$100,000 and you are now obligated to pay \$200,000 for it. Your net worth as a result of this transaction has fallen by \$100,000 and you are \$100,000 poorer than you were before.

Suppose, however, you do lose your job or have been the victim of a predatory lender who talked you into a mortgage you will not be able to afford when the interest rate resets. Again, this doesn't change my situation, but now whoever holds your mortgage (or insured your mortgage) is on the hook.

In this situation the mortgage holder can foreclose on the mortgage, force you out of your home, and resell your house for \$100,000, and write off the \$100,000 loss. You have lost your home, which is a horrible tragedy for you, but your wealth is unchanged (except, of course, for the loss of your down payment). You lost a house you borrowed \$200,000 to purchase, but this debt has been canceled. In this situation the transfer of wealth is from the mortgage (or insurance) company to me. The mortgage (insurance)

company is now \$100,000 poorer than it was before, and I have still gained half a house.

What happens if you default on the mortgage and the government steps in and purchases the bad mortgage from the bank in accordance with the bailout proposal passed by Congress? The answer to this question depends on the price the government pays for the mortgage.

If the government pays the market value of the mortgage (\$100,000 in our example) virtually nothing has changed in our example. You still lose your down payment, the mortgage holder or insurer still loses \$100,000, and I still gain half a house. The only difference is the government now holds the mortgage it paid market value for.

This brings us to the crux of the issue at hand: What are the implications for this kind of transaction for the system as a whole?

Paying Market Value for Toxic Assets

When it comes to the financial system as a whole there is a major problem in trying to implement the asset **purchase** scheme in trying to bail out financial institutions. The individual mortgages are buried as collateral for Mortgage Backed Securities (**MBSs**) on the books of financial institutions, and it is the **MBSs** that are held by financial institutions. Because of the lack of transparency in creating these assets and in insuring them in a non-regulated Credit Default Swap (**CDS**) market no one knows status of the mortgages that make up collateral for the Mortgage Backed Securities (**MBSs**). This is true not only for **MBSs**, but for all of the Asset Backed Securities (**ABSs**) held by financial institutions. Hence, there is great deal of risk associated with purchasing these assets. As a result, no one is willing to purchase them except at a substantial discount below their face value. (**Lindsey**)

Many, if not all, financial institutions keep these assets on their books at prices above their market values. If these institutions are to sell these assets they must accept prices below the book values on their balance sheets. This means that if they sell these assets at their market values they will have to accept a loss on these assets, and in today's

world this loss will make many, if not most of these institutions insolvent. Since no one is willing to purchase these assets at prices that will keep financial institutions solvent, financial institutions are unwilling to sell these assets at their market values, and there is no market for these assets. As a result, there is no market price by which to determine their values, and the actual prices the government pays can only be a guess at the market values of these assets. For the moment we will ignore this problem and just assume the government is able to pay the market price for these assets whatever that price may be.

While buying up the bad assets of financial institutions at market values does increase the liquidity of financial institutions by providing them with cash, neither the total assets as measured at market prices nor the total liabilities of these institutions are affected by this kind of transaction. As a result, neither the true value of their net worth (assets – liabilities as measured by the market) or leverage (liabilities/net worth as measured by the market) are affected by this purchase. Thus, it does nothing to reduce their leverage or to improve their solvency or to induce them lend more or for investors to invest more in banks. All it does is force insolvent banks out of business since they will no longer be able to hide the fact that they are insolvent from lenders or investors by carrying the toxic assets on their books at above market value.

This brings to the core of the problem. The financial crisis was brought into being by a speculative boom in the housing market that bid up the prices of houses to the point where housing prices are out of line with the incomes of homeowners. ([Ohlemacher Kaviat](#)) This boom was the direct result of deregulation in the financial sector that made a number of formally illegal practices legal (e.g., allowing commercial banks to become investment banks ([Lipton](#))), a refusal to regulate hedge funds and the Credit Default Swap ([CDS](#)) market, and a failure of the government to enforce regulations that were left in place (e.g., not cracking down on predatory lending practices or enforcing capital requirement on financial institutions ([Andrews](#))). The end result was an explosion in predatory lending practices in the housing market and a huge expansion of the financial sector that financed the toxic assets created in the process of this expansion. The result is not only that housing prices are out of line with the incomes of homeowners, and

housing prices must fall; *the entire financial sector of the economy is out of line with the real sector of the economy, and the size of the financial sector must fall as well.* ([Crises Gudmundsson Hearings](#))

There's the rub, for the expansion in the financial sector was brought about primarily through a huge increase in leverage on the part of bank holding companies, investment banks, hedge funds, and other financial institutions that participated in financing the housing boom. This increase in leverage in the financial sector made it a house of cards that is threatening to collapse. As the market value of their assets fall in response to the housing bubble bursting financial institutions are being driven into insolvency as their net worth as measured by the market is being wiped out. Purchasing the toxic assets of financial institutions at their market value (\$100,000 in our example) does nothing to increase asset prices or decrease liabilities, thus, does nothing to restore net worth. All it does is cause the house of cards to fall faster as insolvent banks are forced to sell off their toxic assets in the face of a collapsing housing market.

Paying Face Value for Toxic Assets

What if the government were to pay the face value for these assets (\$200,000 in our example)? This would increase the net worth of financial institutions directly by restoring the total value of their assets as they exchange their toxic assets at face value for cash. It would also provide the liquidity (cash) necessary to reduce their leverage by paying off their liabilities as the financial sector contracts to get back in line with the real sector. Financial institutions would be off the hook and the entire loss in wealth, to the extent assets are purchased at their face value, would be shifted to the society as a whole.

This scheme could be utilized to provide an orderly contraction of the financial sector of the economy to bring it back into line with the real sector by concentrating on those institutions that are otherwise financially sound or have the greatest impact on the economy while allowing those that are beyond redemption to go out of existence. The added liquidity combined with the increase in real equity (as opposed to the equity created by carrying toxic assets on their books above market value) could be used to keep sound and teetering financial institutions from going under.

This also could, in principle, restore confidence in the financial sector and give financial institutions an incentive to increase their lending and give private investors an incentive to increase their investment in the financial sector, but it is highly unlikely it would do this unless the government purchased virtually all of the toxic assets out there. In principle the government could do this. The problem is this would be very expensive, especially as the developing recession worsens.

The cost would, undoubtedly, be in the trillions of dollars. Choosing this option would lead to a significant increase in the [National Debt](#) that will have to be serviced, and as the real economy goes into a significant downturn it is not at all clear how disruptive this increase in the National Debt will be to the economy and to the proper functioning of government. *This increase in the National Debt could necessitate huge increases in taxes and reductions in government services that could further destabilize the real sector of the economy and hamstring the government when it comes to dealing with the economic hardships that develop as the recession worsens.* ([Reinhart N Klein](#))

In addition, this scheme provides a pure gift from the taxpayers to those institutions that are able to sell their toxic assets to the government. It is unlikely that taxpayers will stand for this solution once they grasp the size of the bill they will have to pay. After all, the government will be providing this gift, at taxpayers' expense, to the very people whose poor judgment, recklessness, and overall incompetence are responsible for the mess we find ourselves in today, and these people are among the wealthiest people in the world. Not even the most optimistic financial institution or investor believes the government will be able to pull this off without creating a powerful backlash from the electorate as we head into a worldwide recession.

There is one other, somewhat ironic, aspect of the government paying face value for the toxic assets rather than market value that is worth noting. Suppose the government pays face value for the mortgage in our example (\$200,000). Now the mortgage holder is off the hook, and the entire \$100,000 loss in wealth is shifted to the society as a whole. There is now a transfer of wealth from taxpayers to people who do not own houses. In this situation it is the taxpayer that must write off the loss of \$100,000 (half a

house) suffered by their government either through increases in taxes or cut backs in government services.

This means my \$100,000 gain is now at risk to the extent my taxes go up or I lose the government services cut as a result of the government taking this loss. (*More precisely, this means the speculative gains of those who profited from the speculative bubble in the housing market are now at risk to the extent their taxes go up or they lose the government services cut as a result of the government taking the loss.*)

This is not a reason to favor this option, however. In the end it boils down to who is going to pay the costs of bailing out financial institutions by paying the higher taxes and suffering the loss of government services that result from the government paying above market values for the toxic assets. Chances are, if financial institutions have the political clout necessary to receive this kind of favorable treatment from the government, they also have the political clout necessary to avoid having to pay the increased taxes or suffer the loss of government services that result.

Insurance Bailout Option

There are two other ways in which the government can intervene in this situation that were not in the original Bush/Paulson proposal but were added by Congress. The first was added by congressional Republicans, namely, instead of buying the toxic assets of financial institutions the government can insure these assets.

This option has almost the same effects as the government buying the toxic assets at face value, \$200,000 in our example. It would restore equity to financial institutions indirectly by increasing the value of their assets to their face values by way of the government guarantee, but it would not provide liquidity directly to these institutions. This scheme could be utilized to provide an orderly contraction of the financial sector of the economy to bring it back into line with the real sector by concentrating on those institutions that are otherwise financially sound or have the greatest impact on the economy while allowing those beyond redemption to go out of existence. Financial institutions would be off the hook and the entire loss in wealth, to the extent assets are

insured, would be shifted to the society as a whole. My \$100,000 (*speculative*) gain would still be at risk depending on how the government losses are financed.

The extent to which it would restore confidence or give private investors an incentive to invest in these institutions would depend on the extent of the insurance. Virtually all assets would have to be insured to have these effects. As a result, the cost is still prohibitive, and it is still not clear how disruptive the resulting increase in the National Debt would be to the economy and to the proper functioning of government. In addition, we would still be providing a pure gift to those who are responsible for the mess we are in today. When the bill comes due it is still unlikely taxpayers are going to be willing to pay it graciously.

Preferred Stock Bailout Option

The second option for government intervention not in the original Bush/Paulson proposal but added by congressional Democrats is the government purchasing preferred stock from these institutions. This proposal gives the government an ownership interest in the financial institutions from which it purchases stock.

Such purchases would add to, and thereby increase the assets and liquidity of financial institutions directly by the amount of cash paid for the stock without changing the value of their liabilities. Thus, it would increase the capital (net worth) of financial institutions as well. As a result, it would address their solvency (net worth = assets – liabilities) and leverage (liabilities/net worth) problems directly.

One important difference of the preferred stock purchase option is that even though the government must put the money up front, and the taxpayer must suffer an initial loss, there is a possibility the government can recoup this loss, and possibly even make a gain. This can happen if the program is used wisely and the institutions the government invests in survive so they can repurchase the preferred stock issued to the government or if the government is able to sell this stock on the open market for what the government paid for it.

This scheme could be utilized to provide an orderly contraction of the financial sector of the economy to bring it back into line with the real sector if the government invests in the stronger banks and allows the weaker banks to go out of existence. This option makes more sense than the other options in the modified Bush/Paulson proposal in that it 1) addresses the problems of leverage and solvency directly, 2) improves the liquidity of financial institutions directly, 3) minimizes the cost to taxpayers and, hence, minimizes the impact on the National Debt and the extent of wealth transfers that result from government actions, and 4) minimizes the extent to which the people who caused the problem are rewarded, but only to the extent that the banks the government invests in did not cause the problem.

Speculative gains are still at risk to the extent taxpayers will have to bear these losses, but, as was noted above, the losses government will incur can be minimized via this scheme. There is still no reason to believe using this option will restore confidence in the financial system, however, until the process of contraction has worked itself out. The toxic assets are still on the books of the financial institutions, and so long as they are there and recorded at above market values there is little reason for investors to have confidence in the financial system.

In addition, there is no reason to believe using this option will be cheap. The financial sector is going to have to shrink. This means some banks are going to go out of business. The deposits of those banks are insured by the government. The government will incur the costs of insuring these deposits no matter what scheme is used to bail out the banks—even if no scheme is used at all—and taxpayers will have to bear these costs to the extent taxpayers are forced to bail out the FDIC. The question is not how to avoid these costs. We can't. The question is how can we minimize these costs and, at the same time, minimize the disruption in the real sector of the economy and distribute these costs equitably.

This seems to be the option Paulson relied on most when he was Secretary of the Treasury. ([NYT](#)) Nevertheless, there are fundamental problems with this and all of the other options in the Bush/Paulson bailout proposal.

Obama's PPIP Proposal

The fundamental problem with the Bush/Paulson bailout proposal is all of its options, save the market value purchase proposal, bailout the people who caused the problems we face today. As has been indicated above, the face value purchase and insurance proposals are the most egregious in this regard and the preferred stock purchase proposal the least, but even the preferred stock purchase proposal has this effect.

In addition, the preferred stock purchase proposal leaves the toxic asset on the books of banks. No one knows what these assets are worth, and since there is no market for these assets there is no way to assign a value to them. As long as banks hold these assets no one can have confidence in the financial statements of banks—or in the institutions these financial statements pretend to describe—and the financial crisis cannot be resolved. In recognition of this fact, the Obama Administration has proposed a complicated scheme to induce private investors to participate with the government to establish a market for toxic assets.

In the Obama/Geithner/Summers Private Public Partnership Investment Program ([PPIP](#)) private investors and the government each put up 7.15% of the purchase price and FDIC finances the balance by way of a [non-recourse loan](#). Private lenders then bid for the assets as they are offered for sale by banks, and the government and private investors share in whatever gains there may be from the assets purchased. This scheme is designed to create a market for the toxic assets by providing a subsidy to private investors by capping their downside losses at 7.15% of the total investment, thus, making it possible to get the toxic assets off the balance sheets of banks while, at the same time, establishing market prices for these assets. The government, in turn, benefits from this program by taking 50% of the profits from the toxic assets purchased.

However, given the 7 to 1 leverage it provides investors after accounting for the government's taking half the profits, combined with the non-recourse nature of FDIC loans which limits the potential losses of investors to 7.15% of the total investment, this scheme guarantee's investors will offer to purchase the toxic assets above their market values. ([Sachs Kotok Sachs](#)) Thus, while this scheme may succeed at getting the toxic

assets off the books of banks and provides a mechanism for pricing these assets, it will do so at the cost of inflating their prices above their market prices, and that cost is going to be paid by taxpayers.

Once again, under this scheme the government will be providing a pure gift, at taxpayers' expense, to the very people whose poor judgment, recklessness, and overall incompetence are responsible for the mess we find ourselves in today. And we are talking about a huge transfer of wealth here from the taxpayers to some of the wealthiest people in the world. Thus, the Obama/Geithner/Summers bailout plan is little better than the face value purchase option of the Bush/Paulson bailout proposal.

A Suggested Way Out

All of the schemes to deal with the financial crisis put forward by the Bush and Obama administrations, save the face value purchase option, entail transferring wealth from taxpayers to the people who got us into this mess, people who are among the wealthiest people in the world. ([Johnson](#)) All of these schemes have been put forth by people who have close ties to the banking community, and none serve the public interest. They serve only the interests of bank executives and bank stockholders.

There is, however, a very straightforward solution to this problem that would serve the public interest and minimize the costs to the taxpayer. Let the FDIC do what it was setup to do, and has been doing quite successfully for seventy odd years now, namely, send their examiners into the banks and enforce the laws on the books regarding the capital requirements of banks. Any bank that cannot meet the capital requirement it is required to meet by law—*after the quality of its assets have been evaluated and it has paid back any money it has received from TARP or from the AIG bailout* ([CNN](#))—should be forced to either meet that requirement or be taken over by the FDIC and put into receivership. ([Bair](#)) If this is done the stockholders will be wiped out, and the bank executives that created this mess will be out on the street without their multimillion dollar bonuses, forced to live on the hundreds of millions they have managed to accumulate over the years while they created this mess. This is, I think, a rather small price to pay to minimize the cost to the taxpayer. ([FDIC](#) [Krugman](#))

In doing this we may find the situation is so bad there is no capital left in the banking system—that the entire banking system is insolvent as a result of the outrageous leverage the conglomerate banks have undertaken and the poor quality of the [ABSs](#) banks hold. That would mean we will have to nationalize the entire banking system. So be it. It is better to find that out today before the Federal government is driven into bankruptcy trying to save a private banking system than when it is too late to do anything about it. It may turn out the financial institutions we thought were too big to fail were actually be too big to save without bringing down the government and the rest of the economic system with them.

It makes much more sense to preserve the government's ability to function at the cost of a private banking system, than it does to save a private banking system at the cost of bankrupting the government.

Working with the Real Sector of the Economy

There are a number of things the government should do to mitigate the effects of the developing recession and the concomitant feedback effect on the financial sector.

[\(Mishele\)](#) The place to begin is in the housing sector. There are innumerable mortgages in this sector on the verge of foreclosure, many of which can be salvaged if Congress acts to provide a legal mechanism whereby these mortgages can be renegotiated.

[\(CFRL\)](#) What's more, if this isn't done the fall in the prices of houses will be far greater than what needs to occur to bring these prices back in line with income. If this happens the ensuing recession will become much worse than it need be.

Next, the government should begin to implement programs to deal with the impending increase in human suffering that will result from increases in unemployment and the concomitant loss in health insurance that can be expected in the near future.

Unemployment insurance, the food stamp program, Medicaid, and the earned income tax credit should be expanded and interest rates, fines and fees charged by credit card companies need to be severely regulated to reduce the hardship of those who are unemployed, or who are about to become unemployed. [\(LAS\)](#) This should be done not

only because if these things are not done the ensuing recession will become much worse than need be, but because *it is the right thing to do*.

In addition, public works projects should be undertaken to improve our infrastructure. Long overdue maintenance of our bridges and highways and schools should be funded and implemented along with other projects that have been planned but not yet implemented. Furthermore, the private sector should be encouraged through subsidies and tax credits to expand investment in areas that reflect national priorities such as investment in alternative energy, the environment, and technology. Again, if these things are not done the ensuing recession will become much worse than need be.

Furthermore, government loans or a preferred stock bailout option should be extended to those firms in the real sector that are otherwise financially sound, have the greatest impact on the economy, or are essential to our national priorities. It makes no sense to try to save the financial sector while letting the real sector go down the drain. In the end, the financial sector cannot survive without the real sector.

Finally, there must be a wholesale reorganization of the regulatory system in the financial sector, and the regulatory system must be provided with sufficient funds to accomplish its mission. If this isn't done history will most certainly repeat itself, as it is in fact doing today ([TheHistoryBox](#)), and it will be only a matter of time before we go through this kind of crisis again.

Most of the above suggestions were included in the economic stimulus package put forth by congressional Democrats for inclusion in the modified Bush/Paulson bailout bill. This package was blocked, however, by congressional Republicans and a threatened veto by Bush. ([Faler](#)) Congress finally passed a [Recovery Bill](#) along these lines on February 13, 2009. I fear that this bill is woefully inadequate. ([Krugman](#))

Part IV: The Challenge Ahead

Bibliography

A Primer on Economic Crises

Part IV: The Challenge Ahead

George H. Blackford (2008)

It is well known, even to Republican politicians, that the government can use its tax and expenditure policies (i.e. its fiscal policy) to stimulate the economic system during periods of high unemployment.

How Fiscal Policy Works

When the government increases its expenditures on goods and services during these periods there is an increase in income (and employment) in the economy as a whole. What's more, this increase in income will be greater than the increase in government expenditures. The reason is a portion of the income received by those who sell directly to the government as a result of the increase in government expenditures is used to purchase consumer goods that otherwise would not have been produced and sold. As a result, producers of these consumer goods see an increase in income that is an indirect effect of the increase in government expenditures. This secondary effect on income has a tertiary effect as a portion of the secondary increase in income in the consumer goods industries is spent on additional consumer goods leading to a further increase in income for the producers of consumer goods as even more consumer goods are produced and sold. As this process works itself out there is a multiplier effect of government expenditures that increases income (and output and employment) in the economy by two or three times the initial increase in government expenditures.

A similar process works itself out when the government cuts taxes. A portion of the increase in after tax income that results from the tax cut is spent on consumer goods that would not have been produced and sold otherwise and thereby there is a secondary effect on income in the consumer goods industries. This process works itself out the same as when there is an increase in government expenditures, the only difference being the entire process is indirect since the initial increase in after tax income did not directly

increase output. Thus, there is a [multiplier effect of tax cuts](#) on income (and output and employment), just as there is a multiplier effect of government expenditures on income (and output and employment). This effect is less for taxes than for expenditures because the effect of a tax cut is all indirect, but there is some effect just the same.

Fiscal Policy, Deficits, and the National Debt

The government can use its tax and expenditure policies to minimize the effects of the coming recession, but only by borrowing the difference between what it receives in tax receipts and what it pays out in expenditures. This difference is referred to as the [deficit](#), and the deficit is the amount by which the National Debt increases each year. This debt must be managed, and given the irresponsible management of the National Debt during the Reagan and two Bush administrations, it must be managed well in the coming months and years if we are to avoid an international economic catastrophe far beyond the catastrophe we see today.

In 1980 Reagan inherited a National Debt of \$909 billion (\$0.91 trillion) that was equal to 33% of Gross Domestic Product ([GDP](#)). At the end of the Bush I Administration that debt had increased to \$4.0 trillion and was equal to 64% of GDP. During the Clinton years the National Debt grew to \$5.6 trillion, but the deficit was turned into a surplus, and the ratio of debt to GDP fell to 58%. Then came Bush II and the National Debt increased to \$9.7 trillion, and the ratio National Debt to GDP went up to 67%. Furthermore, this was accomplished by Bush II before the financial crisis began and the trillion dollar deficit created by this crisis came into being. ([BEA](#))

The end result of the Reagan/Bush administrations is a greater than tenfold increase in the National Debt, but what is more disturbing is the more than doubling of the National Debt to GDP ratio. This more than doubling is disturbing because the government must pay interest on the National Debt, and GDP is directly related to the government's ability to pay this interest. ([BEA](#))

Today (November, 2008) we are facing a National Debt approaching \$11 trillion and a debt to GDP ratio approaching 80%. Currently the government pays approximately 4%

interest on the National Debt. If the rate of interest the government pays stays at 4% the amount of interest the government will have to pay in 2009 will be over \$440 billion. If the interest rate were to increase to 6% or if the debt were to increase to \$16.5 trillion *or if there were any combination of these two increases* the bill would increase to \$660 billion. This would exceed the amount we are currently spending on any other item in the Federal Budget: more than Medicare (\$396 billion), National Defense (\$607 billion), and more than Social Security (\$615 Billion). (OMB) What's more, it is virtually inevitable that interest rates will rise as the National Debt increases, and we begin to pull out of this recession.

As the ratio of National Debt to GDP increases it becomes more difficult to pay the interest on this debt since the GDP is a major portion of the tax base available to pay this interest. The danger is the debt will get out of control and its growth will become explosive. If this were to happen there would be a tremendous buildup of inflationary pressure in the economy that could lead to increases in prices that would lead to increases in interest rates that would add to the inflationary pressure. This kind of inflationary cycle in the midst of a worldwide financial crisis and worldwide recession could lead to a lack of confidence in the Fed and the Treasury. These two financial institutions lie at the center of the international exchange system by which international trade and capital flows are financed.

Foreign central banks and other foreign financial institutions hold huge amounts of US Dollars and Treasury securities that provide the international reserves used to clear international transactions throughout the world. A flight from the Dollar caused by a loss in confidence in the Fed and Treasury would lead to a precipitous fall in the value of the Dollar accompanied by a precipitous increase in interest rates and a collapse in the international exchange system throughout the world.

Coping with the National Debt

Managing the National Debt in the face of the developing recession is the most important challenge we face today. The reckless borrow and spend debt management concept that has stood at the center of Republican economic policy for the last thirty years must come

to an end. If this debt grows out of control it will break the Federal budget as interest payments become a larger and larger proportion of government expenditures, and it will become more and more difficult to finance government programs. This means that in financing a financial bailout and an economic stimulus package we must be guided by two fundamental principles:

1. The first is with regard to expenditures by the government that do not involve an investment in the economy designed to increase economic productivity and growth in the future. Here we are talking about increases in unemployment insurance, food stamps, the earned income tax credit, welfare expenditures, Medicaid, and the government expenditures used to bailout financial institutions. *These kinds of non-investment government expenditures must be financed as much as possible through increases in taxes. At the very least taxes should be increased to the point where we can sustain a government budget without a deficit when the economy is at full employment.*
2. The second is with regard to expenditures that involve an investment in the economy designed to increase economic productivity and growth in the future. Here we are talking about increases in expenditures on transportation, communications systems, water systems, sewer systems, and other kinds of investment in our public infrastructure as well as investments our public educational system through construction and renovation of buildings, subsidizing student loans and grants, and through increasing expenditures on scientific research, both in the area of pure research and research devoted to sources of alternative energy and other areas that are consistent with our national priorities. *These kinds of government investment, and, to the extent possible, only these kinds of expenditures should be financed through increases in debt.*

It may seem counter intuitive to hear that we must increase taxes as we head into a recession, but the fact is taxes are too low in the United States for us to be able to sustain the kind of debt we are likely to incur in the troubled times ahead without putting the Federal budget at risk. Given the totally irresponsible mismanagement of the National

Debt on the part of the Reagan and Bush administrations if we don't do this it is likely we will find ourselves in a situation where the primary function of the Federal government will be to service the National Debt, and there will be very little left over to provide for other government functions.

If we were to follow the Japanese example where National Debt reached 165% of the Japanese GDP in 2008 ([Martenson](#)) we would end up paying well over \$1 trillion a year in interest to service the National Debt even if the rate of interest the government has to pay were to stay at 4%, and there is no reason to believe the rate of interest will stay this low. In fact, as was noted above, it is virtually inevitable interest rates will rise as the National Debt increases, and we begin to pull out of this recession. ([Bradsher Reinhart](#)) What would an interest payment of this magnitude portend for the ability of government to function in the future, to finance Social Security or Medicare or National Defense, if we were to follow this course? ([N Klein](#))

From a stimulus point of view, financing non-investment government expenditures with tax increases has at worst a neutral effect. It will probably stimulate the economy, but in either event it strengthens the government's ability to manage its debt, and it will help to maintain international confidence in the Dollar.

For the last thirty years we have been listening to the Republican mantra that government is the problem and all we have to do is deregulate the economy, cut taxes, and everything will be wonderful. Given the mess following this mantra has created it should be obvious government is not the problem. Toxic government is the problem, and the Republican idea that we can have good government without paying for it is the height of folly. Taxes must be increased.

If we wish to live in a civil society with a functioning criminal justice system, a nonpoisonous environment, a stable economy, an educational system that actually educates our children, an integrated transportation system, a comprehensive health care system, an effective National Defense, Social Security, Medicare and other social insurance programs we must be willing to pay for these things. The way these things are paid for is through taxes. If we aren't willing to pay the requisite taxes to achieve the kind of society

in which we wish to live, we are going to end up with a government whose primary function is to service the National Debt and virtually all else will go wanting. ([N Klein](#))

A Final Comment on Wealth Transfers

Even though we have used an example of wealth transfers that resulted from the price rise and fall of a \$100,000 house, we are not talking about hundreds of thousands of dollars here. We are talking about trillions of dollars of transfers that took place during the housing bubble that burst in 2007 and its subsequent collapse. What's more, the housing bubble fueled a bubble in the stock market as well. The combined value of both financial and nonfinancial assets owned by households increased by some \$22 trillion from 2002 through 2007 and then fell by \$11 trillion by the end of 2008—an increase in total wealth of more than fifty percent from 2002 through 2007 and a drop of more than twenty percent in the single year 2008 that wiped out half of the increase since 2002. ([FR](#)) This kind of volatility in wealth and the wealth transfers that result are extremely disturbing to those who play by the rules and are taken by surprise when they lose the wealth they thought they had. The result is the kind of anger that undermines the very fabric that holds society together.

The greatest gainers from these two speculative bubbles were those who purchased stocks and real estate at the beginning of the bubbles and sold toward the end, the mortgage originators who made billions creating the toxic mortgages that fueled these bubbles, the securitizers who made billions securitizing toxic mortgages and selling them to unsuspecting investors, and the owners and managers of financial institutions that created this mess and are being bailed out by the government. The greatest losers are those who purchased stocks and real estate toward the end of the bubbles and taxpayers to the extent that the government must increase taxes or debt or cut back government services to bail out the financial institutions.

In addition, even those who owned stocks and houses throughout this period and did not buy or sell with an eye to making a speculative profit feel cheated. Even though the wealth they thought they had 'earned' by virtue of the increase in the value of their houses and financial assets during the boom was ethereal, and they may appear no

worse off than if the speculative bubbles had not occurred, they are worse off to the extent the illusion of wealth at the top of the bubble allowed them to arrange their lives and plan their futures on the basis of this illusion. When the bubble burst their lives and plans were disrupted in ways that would not have occurred if there had been no bubble.

What's more, this is not a zero sum game where one person's gain is equal to another's loss. As this crisis turns into a recession there is a net loss to society as a whole. The major source of wealth for most people is their human capital as determined by their earning power. For most people simply being employed during a recession is potentially a gain as asset prices fall, but for those who lose their jobs the loss in wealth from the fall in the value of their human capital is devastating. The same is true for most business owners: Simply staying in business during a recession may lead to a gain as competitors fail, but for those who lose their businesses the loss in wealth is devastating. The losses in wealth by the unemployed and bankrupt business owners are much greater than the gains of the survivors since these losses are accompanied by a fall in the total output of goods and services available to society as a whole. These losses are measured in terms of real investments forgone and reduced productivity in the future; food, clothing, and shelter not produced; and ultimately in the homeless not sheltered, the sick not treated, and the hungry not fed.

Finally, it should be noted the story of wealth transfers created by the government bailout of financial institutions does not end with the abstract notion that these government induced transfers are from taxpayers. It makes a huge difference which members of our society these transfers are from:

If these transfers are financed by the government by issuing government debt they are from our children and grandchildren to the wealthiest members of our society.

If these transfers are financed through cutbacks in social programs such as food stamps, welfare, public education, Social Security, Medicare, Medicaid, unemployment compensation, a national health insurance program, the earned income tax credit or by increasing sales taxes, excise taxes, user taxes and fees, and increasing tax rates on lower and middle income taxpayers the net result will be huge transfers of wealth from

the poorest and moderately well off members of our society to the wealthiest members of our society.

By the same token, if these transfers are financed by increasing the highest marginal tax rates, cutting back on corporate subsidies, enacting a financial transaction tax, and increasing the capital gains tax the net result will be huge transfers of wealth from the wealthiest members of our society to the wealthiest members of our society—that is, among the wealthiest members of our society.

Needless to say, this last financing option is the one least favored by those who profited from the housing bubble and the subsequent collapse of the financial system since it is the only option that puts at risk the speculative profits and incomes they gained from this bubble. The only thing that could make it worse is if an increased in the estate tax was added to this mix so they cannot pass their windfall gains on to their heirs. This is the course we should follow as we attempt to recover from this crisis. To those who complain that following this course is class warfare, I can only respond call it what you will, *it is the economically sound thing to do, it is the right thing to do, and it is the only fair thing to do.* After all, how did we get in this mess in the first place?

Over the last thirty years we have cut income and capital gains and estate taxes paid by the wealthiest members of our society; increased sales taxes, excises taxes, and user fees paid by the least well off members of members of our society; and cut back on government programs that serve the lower and middle income earners in our society. At the same time we have deregulated both the real and financial sectors of the economy; refused to enforce the Sherman Antitrust Act to the effect of increasing the concentration of economic power in almost every sector of the economy; eliminated usury laws and allowed credit card companies to change our bankruptcy laws; and provided massive corporate tax breaks, loopholes, and other corporate subsidies all to the benefit of the wealthiest members of our society and to the detriment of just about everyone else.

[\(Krugman Saez Piketty Harvey Frank\)](#) And what have been the consequences of all this?

The consequences have been a dramatic deterioration in public schools, highways, bridges, parks, safety, health, welfare, and the environment; the creation of a corporate

welfare state supported by the taxes of lower and middle income people; the concentration of wealth, income, and economic power in the hands of fewer and fewer people; a ten trillion dollar National Debt that threatens the economic future of our children and grand children; and a financial crisis that threatens to create a worldwide economic catastrophe on an order of magnitude that could dwarf the disaster of the Great Depression. If we are talking about class warfare here we are talking about a war that started sometime in the 1970s and in which all of the fighting has been by one side. If the other side doesn't take a stand soon this war is likely to end in a Carthaginian peace from which we may never to recover. ([Frank Harvey Mayer](#) [N Klein](#) [Domhoff](#) [Krugman](#))

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