THE GLOBAL FINANCIAL CRISIS: AN ACADEMIC RESEARCH AGENDA

John B. Attanasio

For a number of years, the Dedman School of Law at SMU has played an important role in presenting a platform from which to discuss contemporary issues of law and public policy. We also provide a platform for international and comparative discussions, notably organizing four summits between the Supreme Court of the United States and other highest courts of Europe, Russia, Germany, Great Britain, etc.

When I became dean of the Law School in 1998, our first project was to organize a series of six conferences around the world to discuss the global financial crisis. As all of you probably recall, that one began in Asia, specifically in Korea and Thailand, with the collapse of their banking systems and currencies. The 1997 crisis spread quickly to Japanese banks. From there, it moved on to Indonesia, Russia, Brazil, China, South Africa, Germany, and around the world. It affected the U.S. considerably less than most other countries.

In addition to the main conference which was held at the Law School, we organized five satellite conferences at prominent universities around the world including London, Hong Kong, Cologne, Witwatersrand and Bangkok. Conference speakers included the Chairman of the Dallas Federal Reserve Bank; the Vice-President for International Affairs at Goldman Sachs; the Managing Director of the Bank of Japan for the Western Hemisphere; the Chairman of the Pacific Basin Economic Council; the Chairman of the Senate Banking Committee; the General Counsels of the U.S. Treasury, the IMF, the European Central Bank, and the New York Federal Reserve Bank; the Japanese Ambassador to the U.N.; the Senior Economist of the Bank of China in New York; the CEO of InterMarine, Inc.; the former Vice-minister of China for Restructuring the Economy; and the Head of the Hong Kong Stock Exchange.

Our conclusion from these conferences was that the United States and China played critical roles in stopping the crisis. China helped, by refusing to devalue

the RMB and also by protecting the Hong Kong dollar, both at considerable cost in the way of slowing down its economic growth from what had been around 8 to 9%, to a virtual standstill. The United States helped, by organizing the bailout of Long-term Capital, the infamous derivatives group that had been so heavily leveraged, and by Alan Greenspan's lowering interest rates, when he wanted to increase them, to deflate what he perceived to be a stock market bubble, driven by what he correctly called "irrational exuberance."

To some extent, as Greenspan himself has admitted, we are probably still paying for that extreme reduction in interest rates (particularly the second reduction that occurred in the wake of the September 11, 2001 attacks) as it mutated into the global financial crisis of 2008. Unlike the 1997-98 global financial crisis, which did not affect the United States very much, this one started in our country. I believe that the low interest rates helped lead to the current crisis because the immediate trigger for the current crisis was excessive borrowing incentivized by low interest rates. As I will explain, those low interest rates also spawned alternative markets for lending and borrowing where lenders could receive higher returns. While these markets were generally legal, they lacked transparency, some so much so that they displayed some characteristics of black markets in terms of being opaque and circumventing virtually all regulatory structures. Economic theory would predict that spawning such alternative, non-transparent markets under these circumstances was probable. When the marketplace produces extremely low rates of return, alternative markets will develop with more attractive returns. Here I am thinking of the securitization of loans, highly leveraged by derivatives.

But that is getting ahead of the story. The key point that I will argue is that the United States was by no means solely responsible for the current crisis. There clearly was American greed, but there was also plenty of other greed as well. When the crisis first began in the United States, the then Finance Minister of Germany gloated that America had lost its position as the leader of the global financial structure. Within a few weeks, Germany was salvaging one of its largest financial institutions, which was focused on real estate financing, and fashioning its own huge bailout package. So the crisis is not simply American and is not simply caused by American folly. In fact, most economists think that Europe's recession will be deeper and last longer.

Following from this point, it is incorrect to think of the current crisis simply as a mortgage debt crisis. It is even incorrect to think about the current crisis as a mortgage and consumer debt crisis. Instead, mortgage and consumer debt should be more aptly thought of as two heads of a multi-headed monster, or as two of a series of ghosts.

I. The Six (Now Eight) Ghosts. I believe that at least six ghosts have combined in a kind of perfect storm to create the crisis. I suggest this thesis to provoke discussion. The crisis is simply too large for any one individual to comprehend, let alone digest. I look forward to suggestions and comments.

In my view, the six ghosts that initiated the crisis have been: 1) the skyrocketing price of oil; 2) the skyrocketing price of the euro versus. the dollar, and related to that, the low value of the Chinese RMB; 3) mortgage debt in the United States, but certainly not limited to the United States. (It is also present in countries like Spain, Germany, and England); 4) consumer debt which also is not limited to the United States. (For example, it is also present in England); 5) derivatives including securitized debt instruments which were then heavily leveraged up by derivatives to absurd multiples; and 6) dramatically increased short selling intensifying the decline in the stock markets. The downward spiral that these first six ghosts created have also spawned another ghost, which is 7) commercial debt. To state the obvious., these ghosts have also spawned another extremely dangerous ghost, 8) unemployment.

I call these causes ghosts, because just like ghosts, they are difficult to see. Also like ghosts, the contours of these various causes of the crisis are themselves ill-defined, as they can expand and contract quickly. Some of the ghosts are related to each other, such as consumer debt, mortgage debt, and derivatives. The excessive appreciation of the Euro versus other currencies, and the concurrent excessive appreciation of oil appear to be highly related. Intensified short selling appears to be related to all of the other ghosts; however, it may be somewhat independent as the Securities and Exchange Commission repealed its strict regulation of short selling in June of 2007.

I do not pretend to understand the precise contours of the various ghosts. The

amount of data required to understand their various shapes and sizes is simply overwhelming and my day job kind of precludes adequate investigation into the ghosts. I do believe that the ghosts' geometry can be ascertained, or at least that they can be roughly quantified. Insufficient attention has been devoted to quantifying the various ghosts in terms of their adverse impact upon the global economy. Some of the information is not readily available and some of it has been inferred by bringing other sources together. Still other information will require greater disclosure, notably in the case of derivatives.

I can give you some preliminary numbers based on some research as to the scope of the various ghosts. Apparently, $100 a barrel of oil inflicts $3 trillion on the purchasers of oil. Well if that's the case, then it can be inferred that an increase in the price of oil from approximately $40 a barrel to approximately $145 a barrel also inflicted over $3 trillion on those societies purchasing oil. To give some perspective of how large a bill this is, the entire mortgage debt in the United States was estimated to be around $13.3 trillion, and the entire consumer debt was estimated to be around $2.5834 trillion ("not seasonally adjusted") as of October 2008. At that time, estimates of the problematical consumer debt in the United States were around $970 billion and estimates of the problematic mortgage debt were approximately $900 billion. Unlike the price of oil, these are not annual costs on the consuming economies, but instead are one-time, aggregate costs. Moreover, the original $970 billion in consumer debt, and the $900 billion in mortgage debt were maximum numbers. Barring a downward spiral, that was the amount to be paid and no more. It could well have been less, as a considerable amount of this debt might be worked out by banks and other entities. Instead, the $3 trillion inflicted by the sharp increase in the price of oil on consuming economies was not a maximum cost, but instead it was a sure cost--at least, until the price decreased, which it did to a low near $30, before climbing again to near $70, and now settling back to $64.87. So some of the ghosts that initiated the crisis were much larger than others.

Magnifying the problems with the consumer debt and the mortgage debt is that they are both heavily leveraged by derivative instruments. No one knows just how heavily leveraged. If the ghosts are difficult to perceive, the one that is the most difficult to perceive is the derivatives ghost, which at the time was almost

totally invisible. As far as I can tell, not much is known about this ghost, because derivatives are almost totally unregulated. Proposals to regulate derivatives are now on the table in the U.S. and Europe but they have been moving ahead slowly.

Now depending on what the numbers really are, derivatives are probably the largest ghost. While again one sees different numbers, the range one sees in the actual dollars underlying these derivatives is much more constricted than the range one sees on the leveraged numbers. What the effects are of the additional trillions invested in derivatives on top of derivatives is to say the least unclear. Obviously, there probably are investments in real goods and structures secured by these derivatives on top of derivatives.

The 2007 report of International Financial Services of London says that the total notional value of over-the-counter derivatives contracts increased from a little over $50 trillion in 1996, to $298 trillion at the end of 2005, and then to $415 trillion at the end of 2006. According to the Bank of International Settlements the amount continued to increase from $515 trillion in June of 2007, to $595 trillion at the end of 2007, and then to $684 trillion in June of 2008, before falling 13%, to $592 trillion by the end of 2008, the last period for which this information is available. In 2007, 43% of all over-the-counter derivatives trade occurred in the United Kingdom, with 24% occurring in the United States. Interest rate derivative instruments accounted for 70.3 % of all derivatives trading, with foreign exchange accounting for 9.7%, and credit default accounting for 6.9%. Equities-linked and commodities-linked derivatives each accounted for less than 2% of the total trade. As of June 2008, interest rate derivatives instruments accounted for 67% of all derivatives trading, with foreign exchange contracts accounting for 9.2%, and credit default swaps accounting for 8.4%. Equities-linked contracts accounted for 1.4% of all derivatives trading and commodity contracts accounted for 1.9%. As of December 2008, interest rate derivatives instruments accounted for 70.7% of all derivatives trading, with foreign exchange contracts accounting for 8.4%, and credit default swaps accounting for 7.1%. Equities-linked contracts accounted for 1.1% of all derivatives trading and commodity contracts accounted for 0.7%.

In 2007 interest-rate derivatives, the Euro dominated with 39% of the business;

the Dollar had 32%; the British Pound had 10%; and the Japanese Yen had 8%. In June of 2008, the Euro accounted for 37.5% of interest-rate derivatives; the dollar had 32.7%; the British Pound had 8.4%; and the Japanese Yen had 12.7%. In December of 2008, the Euro accounted for 37% of interest-rate derivatives; the dollar had 37.9%; the British Pound had 7.1%; and the Japanese Yen had 13,5%.

Adding the amount traded in exchange derivatives to over-the-counter derivatives increased the total notional value of derivatives traded to $766.5 trillion, as of June of 2008. This was over 4½ times the size of total assets in the entire world, which were estimated at $167 trillion last year by McKinsey. In December 2008, exchange derivatives plus over-the-counter derivatives had a notional value of $649.553 trillion. While 2009 BIS numbers on over-the-counter derivatives are not yet available, March 2009 statistics show the notional value of exchange traded derivatives has dropped to $55.7579 trillion from $57.8599 trillion in December 2008. The IMF and the World Bank both estimate global GDP before the downturn at $54 trillion. An October 15 article in Slate magazine estimated that the gross market value of all outstanding derivatives shrunk to $14.5 trillion if all the over-the-counter derivative contracts were settled. The number further shrank to $3.3 trillion, if one subtracted the value of derivative contracts which directly offset one another. Others say that approximately $2.1 trillion in actual cash underpins the derivatives, and the rest of the money is derivatives piling up on other derivatives, almost in a Ponzi scheme kind of way. Which one of these valuations is the most accurate or most relevant is difficult to know, because we still know very little about derivatives generally. Significantly, we do not know the specific deals that they represent.

Conceivably and importantly, contracts could be in place that adversely affect the bailouts of financial, insurance, and other vital institutions. Some of this seems to have occurred during the AIG bailouts. There's simply no way to know the impact that derivatives have had on efforts to stem the crisis, including bailouts, until the derivatives' contracts are made transparent so that they can be subjected to scrutiny; then, government policy, including government investment, can be modulated accordingly. I will talk about the regulatory failings that helped cause the global financial crisis presently.

So again, the size and contours of the derivatives remain totally unclear and a handle needs to be gotten around these contours as quickly as possible. That a March 2009 government report cites the same December 2008 over-the-counter derivatives information cited above, further suggests just how little current information on derivatives is available.

The G20 has recently released recommendations on how to regulate derivatives in a way that would decrease the systemic risk derivatives pose to the global financial system. One important proposal is the implementation of central counterparties for credit default swaps. These central counterparties would interpose themselves between the parties of a credit default swap so that they become the buyer to the seller and the seller to the buyer. The idea would be that the central counterparties are able to bear the credit risk of both counterparties. The purported benefits of such a system include enhancing market efficiency by ensuring that eligible trades are completed in a timely manner; improving market transparency; providing open information on prices which improves the fairness, efficiency and competitiveness of markets; and the ability to contain the failure of a major market participant. Other interesting reforms suggested by the G20 report include the publication of weekly aggregate market data from a central repository, the implementation of central counterparties for other types of derivatives trading over-the-counter and standardized contracts for derivatives transactions.

The United States has made halting progress on regulating derivatives. In November, 2008, a Presidential Working Group put forth the following objectives: public reporting of prices, trading volumes and aggregate open interest; the development by supervisors of consistent policy standards and risk management expectations; the registration of all transactions in credit default swaps not cleared through a central counterparty in central contract repositories; support for trading on exchanges or other centralized trading platforms for standardized credit default swaps; and a review by regulatory agencies to determine if they have adequate enforcement authority to police against fraud and market manipulation.[1] While these proposals are all

[1] The Federal Reserve, on March 4, 2009, approved the application of ICE U.S.

interesting, the first step towards regulating derivatives must be full disclosure so the governments understand the precise instruments that they are regulating.

Those dealing in derivatives have consistently resisted any regulation. They have even resisted disclosure, some arguing that their methods are akin to trade secrets, and that revealing their methods through any sort of transparency would be akin to revealing trade secrets. Under this theory, it seems that no buying and selling shares in the stock markets could be regulated. Nor, for that matter, could any other business practices.

It seems to me we had that debate in the United States many years ago during the Great Depression. And for many years it has been thought that regulated capitalism appears to be the most efficient kind of economic system. What is happening in the area of derivatives appears to be a testimonial to the problems associated with unregulated capitalism.

The recent U.S. Treasury White Paper has finally moved toward full disclosure and regulation of at least over-the-counter derivatives. In a speech earlier this month, President Obama made clear that these proposals would apply to all derivatives. Moving beyond disclosure, he also stated that all derivatives should be traded on exchanges and meet certain capital requirements. These are important regulatory moves which are long overdue in light of the pernicious nature of the financial crisis.

As I have suggested several times, part of the failure that led to the crisis seems to be a failure of regulation. Many of the ghosts were spawned by a failure of regulation. Indeed, it is ironic that the Glass-Steagall Act was repealed in 1999 -- during the last global financial crisis-- partly owing to Citicorp's purchase of Travelers', which it has since sold.

Trust LLC as a central counterparty for some derivatives trading. As a central counterparty, ICE U.S. Trust has the authority to set eligibility requirements for those parties Using its services. Among the requirements for market participants are a net worth of $5 billion and a credit rating of "A" or higher. In addition, ICE U.S. Trust is able to establish funds that are able to be used to offset the money lost in the event of a default by a party.

The Glass-Steagall Act was one of the key pieces of legislation enacted during the Great Depression of the 1930s. It separated the commercial banking business from the investment banking business, thereby helping to secure three pools of capital, each with diminishing levels of risk. Investment banking, which inherently involves trading equities and raising capital in equities markets, is inherently a very risky business. Commercial banking, which involves normal loaning of capital, is much less risky; insurance companies are much less risky still. With the repeal of Glass-Steagall, it was predictable that money would seek higher and higher levels of return and concomitant risk, because shareholders in banks would demand that. In fact there is a strong argument that the fiduciary duties of the bankers would require them to seek the higher returns entailed by greater risks. Even if fiduciary duties do not impose such obligations, certainly the market would discipline those managements who refused to take risks with the bank's money, and thereby earn lower levels of return for the holders of equity in the bank.

The low interest rates, which came from the global financial crisis of 1997-98, and were further reduced after September 11, 2001, only exacerbated this problem because they gave greater and greater incentives to put money at greater risk, as the historical source of bank income, traditional lending, paid very little.

The availability of unregulated, high-paying derivatives further complicated this problem by driving money to riskier and riskier investments. The securitization of the debt was also fed by the repeal of Glass-Steagall and incented by these low interest rates because lending money to risky borrowers paid greater yields, which at the time could not have been earned in more traditional ways.

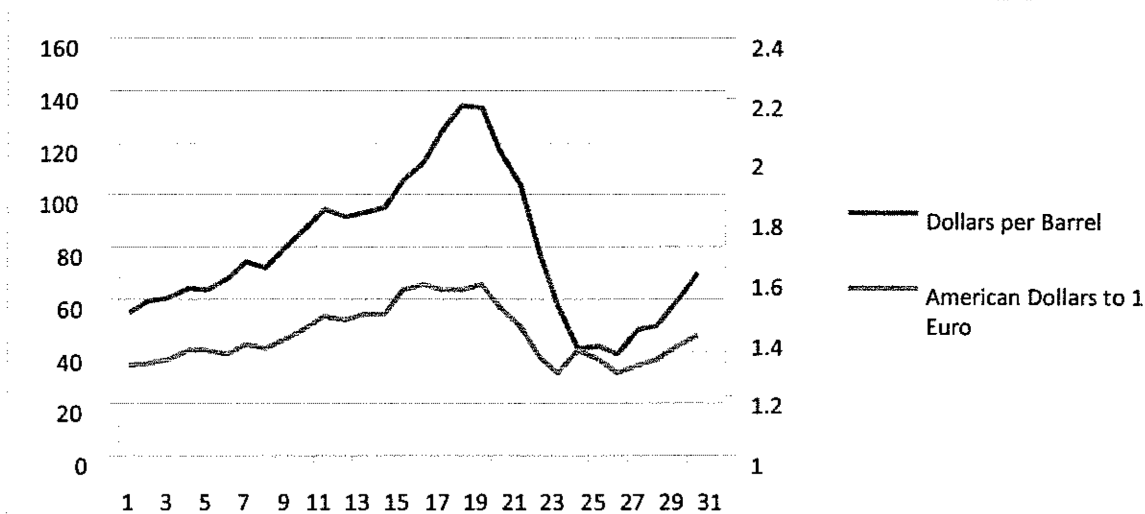
Speculative instruments were not limited to securitized debt, however. The United States Senate held hearings in June 2008 about speculation in the price of oil. Judging from the sharp decline in the price of oil since then, the Senators appear to have been on to something.

To the extent that banks were engaging in the speculative investments, again a failure of regulation is partly responsible. It is at least arguable that the Federal

Reserve Bank should have made much greater inquiry into this sort of activity by banks. As Professor Julie Forrester of the SMU Dedman Law faculty recounts in her work, there should also have been regulation of predatory lending.

There is also considerable evidence of speculation going on in currencies, as derivative instruments are also involved in currency exchange rates. On speculation in the Euro, one thing I can tell you is that many of my European relatives in business in Europe said that clearly the Euro was overvalued at $1.60 to the dollar last summer. This considerably weakened the European economy and made it quite vulnerable to recession as soon as the financial crisis began. Certainly Europe's share of global GDP would not bear out this price differential between the Euro and the dollar.

It is curious that the Euro appears to have trended down at the same time as the price of oil trended down. The Euro also appears to have trended up at the same time as the price of oil. The following chart denominated in the price of West Texas Intermediate Crude, indicates a tantalizing correlation between January 2007 and now.



Again, this is an area in which a considerable amount of research needs to be done.

Another source of speculative investing further complicating the current financial crisis is the sharp rise in short selling which peaked in July 2008. One

could argue that this was not speculation at all, as the stock market declined so much between September and February that it was almost a sure bet that the market would continue to go down.

In fact, short selling was one of the primary causes of the Great Depression. One of President Franklin Roosevelt's first moves was to appoint Joseph Kennedy head of the Securities and Exchange Commission, because Kennedy had made so much money selling short. Short selling may also be impacted by hedge funds who may be selling short to cover their losses. Short selling hedge funds gained 28% in 2008; only 24 stocks on the S&P 500 actually rose in 2008. Moreover, while the S&P gained only 1.78% in the first half of 2009, according to Hedge Fund Research's index its tracked hedge funds as a whole gained 9.41% in the same period. A similar fund index compiled by Hennessee Group LLC shows gains of 11.74% for the period. In addition to equities, short selling has also been taking place in bonds, even T-bills. Certain derivative instruments may be facilitating short selling.

The short selling ghost in some ways followed, and was created by, the other ghosts; that is, the problems created by the other ghosts, afforded the opportunity for short selling. I count short selling as one of the original six ghosts, as it occurred in close time proximity to the other original ghosts. As already mentioned, the six original ghosts have spawned at least two others. The first involves commercial debt. This was not really a problem at the beginning of the crisis. Rather, as the economy began to spiral downward a number of commercial loans that were perfectly viable when they were made fell into jeopardy. For example, as sales lagged and store closings ensued, shopping center loans that were perfectly viable at 90% occupancy fell into jeopardy to 70% occupancy. The same was true for office space.

The original six ghosts also spawned an eighth, which is perhaps the most dreaded ghost of all, unemployment. As this goes to singularly dangerous, I will address it at some length.

All this leaves the problem of what to do about the future. I will address five themes, and some specific measures within each of those themes. The first is some immediate regulation; the second is the downward spiral dilemma and the

integrally related issue of unemployment; the third is sources of needed cash, both domestic and particularly international; and the fourth is international cooperation in stabilizing exchange rates and avoiding protectionism. The fifth is the information needed to track the size and the rate of expansion of the downward spiral which will be needed to formulate additional regulatory responses which may be necessary to combat the crisis.

I. Regulatory Changes. The Obama administration has been slow in straightening out this regulatory mess. It also has already spawned some potential regulatory problems of its own. As near as I can tell, there are four major regulatory heads overseeing the financial crisis. These are the Secretary of the Treasury, Timothy Geithner; the Chair of the Council of Economic Advisors, Christina Romer; the Chair of the National Economic Council, Lawrence Summers; and the return of Paul Volcker as Chair of the Economic Advisory Board. The regulatory power is even more scattered over other potential power centers, including Secretary of State Hillary Clinton and Secretary of Commerce Gary Locke. Another important power center is the Office of Management and Budget, headed by Peter Orszag. Who is ruling the economic roost in this scattered milieu is difficult to say. Currently, it seems to be some combination of Secretary Geithner and his mentor and predecessor Chairman Summers. They recently co-authored an op-ed piece in the Washington Post about the then pending government While Paper.

Some immediate regulation is probably vital. This is particularly true of regulating derivatives and short selling.

1) **Derivatives** should be made transparent immediately as a prelude to deciding what regulation is appropriate. There should be reporting requirements on the size, nature, and location of these instruments. The size of the notional value of derivatives prompts one to worry whether these can be unwound. After all, the notional value of derivatives is many times the size of annual world GDP; they even dwarf total world assets. The good news is that it is at least theoretically possible to unwind these derivatives from a macro economic perspective. After all, to the extent that their notional value represents several times the value of total world assets, the derivatives are like castles in the air, which theoretically can be destroyed without adversely

affecting the world economy. However, as previously discussed, how one unwinds these massive derivatives bets will have to be done carefully, and we will need far greater amounts of information to determine how to do that without adversely impacting the underlying valuable assets upon which they are built. Moreover, unwinding the derivatives could entail legal problems in the United States in the way of taking property without just compensation. In approaching this problem, a recent Supreme Court case, styled Brown v. Legal Found. of Washington, could prove relevant. Brown, a 5-4 decision, essentially held that a taking was not a compensable event if the person whose property was taken could not have earned any money from these investments had the investor invested the money herself.

2) All **short selling** should have been banned by temporary order of the SEC immediately for a period of several months. Hong Kong banned short selling during the financial crisis in 1998-99. England and Wales also halted all short selling from September 2008 until the middle of January 2009. In June 2008, the British Financial Services Authority required disclosure of short positions of more than 0.25% in a company's stock. The EU has imposed short selling disclosure requirements for those taking substantial short positions in financial sector shares. On July 8, the Committee of European Securities Regulators proposed disclosure to regulators of all short positions of 0.10% or more in a company's shares, and public disclosure to the marketplace of positions exceeding 0.50%.

Professor Marc Steinberg of our law faculty suggested last November that alternative permanent regulatory schemes for short selling could be discussed during a period of notice and comment. Among these should at least be the restoration of the uptick rule, which prevents selling short, unless the previous. sale has been on a gain or uptick.

In April 2009, the SEC issued five proposals to limit short selling stocks. The five proposals fall into one of two categories: either market-wide restrictions or restrictions on sales of individual stocks that are down severely on a given day. The five proposals consist of: (i) reinstating the Depression-era uptick rule, repealed in 2007, which prevents investors from shorting a stock unless the last sale price was higher than the preceding sale price; (ii) establishing the modified

uptick or "bid test" rule, which prevents investors from shorting a stock unless the last bid to buy the stock is rising, or unless that last bid price was higher than the previous; the final three proposals are triggered only after a stock's price declines 10% in one day, initiating either (iii) a ban on short selling for the rest of the day; (iv) reinstating the old uptick rule for the rest of the day; or (v) enforcing the bid-test rule for the remainder of the day. The notice and comment period ended in June.

Rumors suggest that the "bid test" rule is favored by the SEC and the three exchanges, due to greater ease in implementation and tracking. While the accurate uptick price changes constantly, the bid price tends to stay constant for a longer period of time. It seems to me however that the old uptick rule merits serious consideration as it was installed in 1938, following a four-year study initiated by SEC Chairman Joseph Kennedy, after Kennedy had made a fortune short selling into the Great Depression. It worked well for the ensuing 55 years until June, 2007. The 10% loss tests should certainly be rejected. Even during the horrific shorting of bank and other stocks that occurred last November, few stocks declined 10% in any single day. The bid test may be manipulable with bids that do not result in actual sales. Some commentators think that it could take 6 months to implement. Such delays are hard to defend when taxpayers, shareholders, and bondholders have already lost trillions of dollars, probably owing to previous government mistakes including the abolition of the uptick rule.

3) Concerted action of some sort needs to be taken so that the **price of oil** is not artificially increased by the concerted action of OPEC or other entities, at least until the recession is over. While the price of oil will increase over time because oil is a diminishing commodity, one of the few bright spots in the crisis has been the sharp decline in the price of oil, which has put money straight into people's pockets. Trying to avert sharp increases in the price of oil during the near term appears to me to be very important. OPEC has tried to substantially cut the amount of barrels of oil available to drive the price of oil back up. Whatever might be a fair price going forward, the recent near doubling of the price in such a short time is very dangerous. to economies that were in near freefall until quite recently. Of course, the oil-producing countries have made massive investments, based on a higher price of oil. Some say that countries

like Iran and Venezuela need the price to be around $90 a barrel to cover their budgetary commitments.

4) Something like the **Glass-Steagall** Act needs to be reinstated. While the U.S. and Europe have not seriously considered such a measure, U.K. lawmakers and the Bank of England have been studying such action for the British financial system.

The alternative to Glass-Steagall which is currently being considered by the Basel II, the EU, the UK and the U.S. appears to focus on increasing capital requirements. Some of the bigger banks which have taken public funds will be compelled to restructure on a one off basis by the governments which lent them money. The U.S. Treasury White Paper also proposes giving government the power to "resolve" large failing firms in cooperation with the Federal Deposit Insurance Corporation or the Securities and Exchange Commission. Treating this proposal as a substitute for Glass-Steagall is like substituting the child with his finger in a breaking dyke for shoring up the dyke before it is threatened as Glass-Steagall did.

No one is suggesting that re-instituting Glass-Steagall would be easy. At minimum, it would take time and patience. As Professor Joseph Norton of our faculty has pointed out, the problem here is that many investment banks have already merged with commercial banks, some to avert bankruptcy. This will increase the difficulty of separating the sources of capital according to risk, which may have to be done after the recession is over. Though implementing a new form of the Act would be challenging, similar challenges were successfully faced when the Act was first promulgated. In 1933, when Glass-Steagall was originally enacted, banks had also been performing investment activities, much like many institutions have been today. They were given one year to decide which function they would perform. Also, up to 10% of commercial banks' income could still come from securities and they were still able to underwrite government-issued bonds.

5) The **mark-to-market** accounting rules have been suspended as they should have been some time ago because they artificially have been forcing write downs

of loans that still produce income. The rule is devastating in a down economy when the sale value of assets is in sharp decline. The GAAP rules only suspended mark-to-market in severe down markets. Mark-to-market rules still apply in steady markets.

The danger with this strategy is that mark- to-market accounting rules can result in manipulation of valuation. Their utilization was intensified after the Enron crisis. The danger of suspending them is that they leave greater opportunity for manipulation of value and consequent market manipulation. Consequently, mark-to-market rules should probably be suspended only temporarily. Even during this temporary suspension, regulators will have to be extremely vigilant of accounting and valuation practices. Some evidence exists that the banks in particular may be manipulating their valuations and accounting of late to exaggerate their profitability.

What one substitutes for mark-to-market is also an interesting problem that must be addressed very carefully. Some variation of historic accounting or discounted cash flow rules are two possibilities. Historic accounting is biased toward inertia. It will generally exaggerate valuations in bad times and underestimate valuations in good times. Discounted cash flow can be manipulated based on the discount afforded. Mark-to-model rules inherently offer a tantalizing opportunity for tremendous manipulation.

Problems abound, however. While the relaxation of mark-to-market seems inevitable in an illiquid market, the ready substitute is not easily found. Even the new U.S. Senate bill which gives the Securities and Exchange Commission the power to suspend mark-to-market rules, also requests a study for a reasonable substitute.

More generally, financial reporting by corporations and other businesses should be checked more carefully for accuracy. Some of the current problems were probably caused by under-regulation by the Securities and Exchange Commission in a number of respects. Some of the problem was also caused by a failure of the Federal Reserve Bank to regulate financial institutions sufficiently. However, an important problem with any regulation is to avoid the temptation to over-regulate. The Treasury White Paper's intensified

proposals for government oversight of the banks—although it may be a bit excessive--should also help.

6) Related to the problem of valuation, the reporting practices of **credit-rating agencies** need to be looked into as does their compensation, most of which is paid by the very institutions whose credit they are rating. Obviously this represents a major conflict of interest which could inhibit them from providing accurate ratings. In the future, credit rating agencies need be compensated not by issuers but by investors, as they were in the past.

7) Some of the proposals for regulation of **executive compensation** seem ludicrous, particularly the $500,000 a year rule for top executives. Some proposals also suggest that executives be financially responsible for the decisions they make for 10 years.

While some regulation of executive compensation may be warranted, these draconian alternatives would undoubtedly drive talent away from these positions with inevitably devastating consequences. Even less onerous rules may pose unintended dangers such as the advisory votes by shareholders who are ill-equipped to make such judgments as they lack information, context, and expertise. Effectively, shareholders rights organizations will play a big role in such votes. Even how one would frame the question for a vote is not obvious. Moreover, what legal consequences such a vote would entail is difficult to predict.

8) The SEC should reinstitute the **market capital rule**, which it promulgated in 1975, and which required that brokerage houses maintain a debt to capital ratio of 12 to 1. In 2004, the SEC abolished the market capital rule for large brokerage houses in response to the abolition of the rule for their European counterparts. This resulted in brokerage houses maintaining debt to capital ratios of 30 to 1, and even 40 to 1. Three of the five major brokerage houses exempt from the market capital rule have since failed.

II. Downward Spiral. The trick of weathering any deep recession, including this one, is to contain the downward spiral as quickly as possible by stimulating

demand. Action taken quick and early will cost a lot less than action taken later on.

As President Obama articulated in his first press conference, a downward spiral feeds on itself. As consumption diminishes, unemployment rises; with unemployment consumers tighten their wallets, which increases unemployment further, which diminishes demand further, etc. The resultant race to the bottom destroys real productive capacity. The last time we had such a race, it ended in the Second World War. December and January unemployment figures notched .4% jumps, February unemployment figures notched a .5% jump, March and April each saw an increase of .4% and May saw a further increase of .5%. Moreover, half of the increase in both the number of unemployed and the unemployment rate over the past year has occurred within the last several months.

According to the Bureau of Labor Statistics, in June, the number of unemployed persons reached 14.7 million, and the unemployment rate reached 9.5 %. So over 15 months, unemployment nearly doubled from last April's rate of 5%, to June's unemployment rate of 9.5%. At least this rate only increased 0.1% from May's unemployment rate of 9.4%. In addition, the real unemployment rate, which includes involuntary part-time workers and those who hadn't looked for work in 12 months reached 16.8% in June, up 0.4% from May's 16.4%.[2]

---

[2] The number of long-term unemployed (those jobless for 27 weeks or more) increased by 433,000 to 4.4 million. Furthermore, the number of persons working part time for economic reasons (sometimes referred to as involuntary part-time workers) was little changed in June at 9.0 million. Since the start of the recession, the number of such workers has increased by 4.4 million.

About 2.2 million persons were marginally attached to the labor force in June, 618,000 more than a year earlier. These individuals wanted and were available for work and had looked for a job sometime in the past 12 months. They were not counted as unemployed because they had not searched for work in the 4 weeks preceding the survey. Among the marginally attached, there were 793,000 discouraged workers in June, up by 373,000 from a year earlier. Discouraged workers are persons not currently looking for work because they believe no jobs are available for them. The other 1.4 million persons

Worldwide unemployment may be as high as 50 million by the end of 2009 according to the *New York Times* and the *International Labor Organization.*

A good example of the destructive power of a severe downturn is the recent vulnerability of commercial mortgages. Because occupancy in hotels and businesses in shopping centers are sharply declining, mortgages that were economically viable in a normal up or down economy are no longer viable during a steep recession.

The unemployment issue is integrally related to the issue of "too big to fail." In many peoples' views today, allowing Lehman Brothers to fail demonstrated that some entities are simply too big to fail, or to put the issue more precisely too big to fail immediately. At the time Lehman failed, I was in disbelief.

Over time, a business like Lehman's can fail in a normal economy, and the economy can digest such failures. The problem is that when a business that size fails instantly, particularly in a severe down economy, it is difficult for the economy to digest that failure. Take the example of a swimming pool. If a toddler does a cannonball in a swimming pool that is say, 20' x 20', there will be virtually no impact on the pool. If I do a cannonball in the same pool, there will be a considerably larger impact on the pool. If we throw an SUV into the pool, there will be a devastating impact on the pool. Some things may or may not be too big to fail, but at least they are too big to fail immediately.

Some version of the 'too-big-to-fail' doctrine, or at least the 'too-big-to-fail-fast' doctrine appears to have gained considerable acceptance after the catastrophic consequences and near free fall caused by the immediate failure of Lehman's. Institutions can be too big to fail because they can help to catalyze a downward spiral. Such companies can also cause systemic risk for the entire economy. For example, Lehman's was so big, and its assets were so tied to those of other major financial institutions, that its failure posed systemic risk to at least the entire American economy, and perhaps to the entire global economy.

---

marginally attached to the labor force in June had not searched for work in the 4 weeks preceding the survey for reasons such as school attendance or family responsibilities.

The "too big to fail principle" leads me to think that any failure of the automobile companies -- even through reorganization in bankruptcy -- could have a devastating impact on unemployment. Job losses from bankruptcy restructurings at Chrysler and General Motors are estimated to be 63,200 in 2009, and another 179,400 in 2010. On the other hand, the problem is tricky because the automobile companies simply cannot compete with their current labor costs. The Obama administration has tried to navigate this difficult path by allowing for what they hope will be a quick bankruptcy procedure connected with massive infusions of government capital. This approach seems reasonable, but only time can tell whether it will succeed.

Secretary Geithner has recently called for more intensive regulations for large interconnected companies that could affect the entire economy if they failed. One governmental response that makes sense is that if certain entities are too big to fail, they must face certain regulatory regimes that reduce the risk of quick failures. Measures discussed have included reserve requirements, auditing requirements, and additional supervision. While this approach seems sensible, one cannot put too much faith in reserve requirements per se as many of the banks that failed, or are currently in trouble, met the Basel reserve requirements.

Another less appealing governmental proposal in response to the 'too big to fail' problem is a call for a systemic risk regulator to monitor the entire nation's financial system. This seems like calling for a financial god who is both omniscient and omnipresent. Understandably, there is a debate among members of Congress and the Administration about who such a systemic risk regulator might be. While the concept of a universal financial risk regulator seems to be theological, eschatological, or at least ideological, the notion that systemic risk oversight should be expanded on a national level to entities like insurance companies seems quite useful.

The Federal Reserve Board has drawn the short straw to be tasked with this unenviable chore. Currently, we are fortunate that the head of the Federal Reserve Bank, Ben Bernanke, is a student of the Great Depression. The Fed will also be part of a council of systemic risk regulators. The Treasury

Secretary will chair this council and the Fed Chairman will sit on it. The council has broad coordination powers. Placing the Fed chair on a council headed by the Treasury Secretary is dangerous to the Fed's independence, or at least to its appearance of independence. Senator Dodd who chairs the Senate Banking Committee has also expressed concern that the enormous responsibility of being the systemic risk regulator will inevitably and appropriately subject the Fed to greater congressional scrutiny thereby impairing its independence. Both of these are legitimate concerns, particularly Fed chair on a council headed by the Treasury Secretary.

III. Money. Third, no amount of regulation now will save the world from a deep recession. For some time, Prime Minister Gordon Brown has been correct in saying that what we need is cash. The approach to fiscal policy taken by the Obama administration, the Federal Reserve Bank, and the former Bush administration will continue to be necessary to get U.S. out of this mess. Although some economists have controverted this statement, to some extent, nearly all of the current decision-makers share the view that Keynesian fiscal policy was necessary to stem the downward spiral of the Great Depression. The question of monetary policy is more complex. As interest rates have already been pushed down to 0, how much monetary policy can accomplish at this point is difficult to say.

The United States government has already implemented several enormous spending programs. The Troubled Asset Relief Program (TARP) was the first of the government's bailout plans. It allows the government to purchase or insure up to $700 billion in "troubled" assets. However, when The American Recovery and Reinvestment Act of 2009 (ARRA) was signed into law by President Obama on Feb. 17, 2009, it significantly expanded the executive compensation requirements previously imposed under TARP. In response, some banks have since stated that they intend to pay off their TARP loans as soon as possible. The TARP is also susceptible to criticism for lack of supervision in terms of how the money is being utilized. We saw this problem in the various sums given to AIG. While complete transparency cuts sharply against the way in which most financial institutions do business, some greater supervision is warranted.

Another recent program is the Term Asset-Backed Securities Loan Fund (TALF). Under the TALF, the Federal Reserve Bank of New York will make up to $700 billion of loans against asset-backed securities with credit exposures such as student loans, auto loans, and credit card loans. The TALF is designed to increase credit availability and support economic activity by facilitating renewed issuance of consumer and business asset-backed securities. Any U.S. company that owns eligible collateral may borrow from the TALF, including hedge funds, private equity, existing banks, and newly formed investment funds. Some economists have criticized the TALF as something of a corporate giveaway as the recipients of these funds retain outside profits with very little downside risk.

In March, Treasury Secretary Timothy Geithner announced a Public-Private Investment Program (P-PIP) to buy toxic assets from banks' balance sheets. Economist and Nobel Prize winner Paul Krugman has been very critical of this program arguing the non-recourse loans lead to a hidden subsidy that will be split by asset managers, banks' shareholders and creditors. Banking analyst Meridith Whitney argues that banks will not sell bad assets at fair market values because they are reluctant to take asset write downs. Originally expected to be a $1 trillion program, the PPIP has been pared to about $50 billion.

Whatever one thinks of these programs, someone will need to finance this borrowing. There are four potential sources of cash. Western governments have been printing very considerable amounts of money to finance their bailout plans. Current publically held American debt has reached about $7.3 trillion, up 44% from $5 trillion at the beginning of the crisis. Total debt including intergovernmental borrowing within the American government has increased from nearly $9 trillion to $11.6 trillion during that same period. Currently the Congressional Budget Office projects the deficit to exceed 100% of GDP by 2023. In 2007, they had expected the deficit to exceed 100% of GDP by 2030.

One source of capital to finance such initiatives is higher taxes, which eventually are inevitable; however, if much is levied in the near term, higher taxes will, of course, contribute to the downward spiral.

A second source of capital is loans in the way of selling T-bills and other debt instruments. So far, China and Japan have helped the U.S. immeasurably in buying up American treasuries and also some of the housing debt. It is vital that they continue loaning the U.S. money, particularly by purchasing T-bills. The problem is that their economies have declined, too. China has increased its holdings of T-bills 5% since April to $801.5 billion.

We also must be careful not to borrow too much, because that could send the price of the dollar down against other currencies, which will make foreign investors less attracted. The good news is that the price of the dollar has increased as people around the world seem to be moving to the dollar in a flight to safety. Also interest rates for T-bills are at historic lows indicating that some room to borrow remains.

A third source of capital is needed to finance corporate debt. Corporations, notably banks, will need to augment their borrowing. Over time, so will many other corporations, as consumption of their products decreases in the recession.

And a fourth source of capital will be needed in the way of buying into equities markets. In order to attract buyers, those markets must be stabilized, both through regulation of phenomena like short selling and derivatives, but also in the way of pursuing strategies that will attract additional money. One way that Hong Kong did this during the last financial crisis was that the Hong Kong and Chinese governments bought shares in the Hong Kong market to kill off short selling and to put a bottom on the market. Another way to do this would be to require short-sellers to cover their positions in less than the three months that they normally have. In any event, short selling should be scrutinized immediately.

In the case of both corporate debt and equities, the U.S. will have to attract foreign capital. Our market is in a symbiotic relationship with both Japanese and Chinese markets. The U.S. must recognize that and cultivate those relationships. Some financing is also available in the Middle East, which will also need to be cultivated. Much as they did in the 1998 crisis, China again seems to be playing a highly constructive role in this one.

IV. International Cooperation. There needs to be stabilization of exchange rates. This is also related to avoiding the temptation of protectionism. For several years, the Chinese RMB has been considerably undervalued against the dollar. This low valuation has helped to foster our low dollar policy to remain competitive with Chinese goods, which helps to counterbalance the huge imbalance of trade between the United States and China. Our low interest policy contributed to the weakness of the dollar. Showing the interrelationship of many of the ghosts, our low interest rates also caused people systematically to prefer consumption to savings thereby causing people to over-consume and complicate our international trade imbalance with China and other nations.

However, this weakness in the dollar probably contributed to Middle Eastern or other sources of money shifting to the Euro, which unrealistically increased the price of the Euro, thereby weakening the European economies and making them immediately vulnerable to the severe global downturn.

Governments around the world now seem to recognize the problems of these currency imbalances. For a number of years, the Chinese and American governments have worked together to cooperatively increase the value of the RMB by about 20%. This cannot be done too rapidly as it will further increase the already massive unemployment, and particularly underemployment in China, thereby causing instability. Before the financial crisis, the increase in valuation of the RMB was proceeding in a very deliberate way, and some say that it was scheduled to go considerably higher.

However, the financial crisis has already steeply increased under-employment and unemployment in China, precluding further revaluation of the RMB for the present. The interdependence between the United States and China augurs patience in this process.

Governments seem to recognize the problem of preventing imbalances in exchange rates. When the Yen recently was increasing in value dramatically, governments intervened to reduce the value of the Yen, because an increase could have been devastating to the Japanese economy.

All nations must resist increases in protectionism of any sort. The Smoot-Hawley Tariff, which introduced heavy protectionism by the United States, is commonly reckoned to be one of the principal catalysts of the Great Depression of the 1930s. This must be avoided at all costs. The G-20 has recently come out strongly against protectionism; however, the WTO has reported at least 47 instances of protectionism since the G-20 Summit last November. It also recorded 83 instances of protectionism in April, May and June. In combating protectionism, WTO sanctions will not necessarily be helpful and could actually hurt because the only remedy available for protectionism is retaliation, that is, more protectionism.

An atmosphere of greed and selfishness got us to this point. We can only extricate ourselves from these problems by a spirit of trust, generosity and cooperation. The atmosphere of cooperation and continual communication, which governments around the world have pursued, is a great help to avoiding another similar catastrophe. Essentially, we can all cooperate together or we can perish together as we did during the financial catastrophe of the 1930s.

V. Tracking. It is critically important to do everything possible to ascertain the current geometry of the toxic assets. The problem is that this geometry is dynamic; that is, the size of the toxic assets, which is one measure of the size of the downward spiral, is a moving target. Until very recently, significant evidence compiled by respected financial institutions suggests that the downward spiral was expanding, perhaps rapidly and at an accelerating pace. Last October, analysts estimated troubled debt was at no more than $1.9 trillion. The IMF recently pegged the estimate of credit defaults in the U.S. at $2.2 trillion, though it will likely soon increase this figure to $2.8 trillion. The IMF will likely increase its estimate of global toxic debt to $4 trillion. Other estimates rise to the level of $5 trillion and higher. A secret document leaked by the European Commission suggested that European banks alone hold up to $2.4 trillion in "troubled" assets.

The American economy has harmed not only by the crisis itself, but also by the massive amount of private debt that America has recently incurred. Between 2001 and 2007, the amount of private debt incurred by Americans roughly

doubled. One analyst puts this amount at roughly 41% of GDP, which would be significantly greater than the debt incurred by Japan prior to its crisis of the 1990s, when Japanese private debt rose to 35% of GDP.

The Administration has come forward with considerable funding to bail the U.S. out of the crisis; however, the amount spent is very high in terms of percentage of GDP. Specifically, federal and state government debt as a percentage of GDP will increase from 65% in 2007, to 70% in 2008, to 90% in 2009, to 98% in 2010, and to 101% in 2011. China is quite concerned about U.S. spending because they are fearful of being paid back their massive $2 trillion loans to the U.S. in dollars that have declined in value, either through inflation or through the exchange rate being adversely affected by the massive debt. In March, Chinese Premier Wen Jiabao stated that his country was "worried" about their investment in the U.S. During a visit to Beijing in early June, U.S. Treasury Secretary Timothy Geithner tried to address China's concerns, stating that the U.S. goal is a deficit of roughly 3% of GDP. It is estimated that in 2009, the U.S. deficit will be 12.9% of GDP. Arriving in China, Geithner commented "No one is going to be more concerned about future deficits than we are". There has been some evidence of decline in the value of T-bills recently. This decline is probably attributable to the rise in the stock market and the concomitant amount of money moving out of T-bills, as T-bills are perceived as less valuable as a safe haven.

Another danger is the increased rate of default in high-grade corporate bonds. A February article in the *Wall Street Journal* suggested that the three main credit rating agencies predict that the default rate for noninvestment grade corporate bonds will triple from 4.5%, last year to 14%, this year -- a rate not seen since 1933. Earlier this year, Moody's expected default rates of high-yield (junk) bonds to be about 16% in 2009, worse than any time since (and possibly including) the Depression in the 1930s. However, as the economy improved, the situation ameliorated and default rates on high-yield bonds only reached at 9.2% in June. Standard & Poor's is still projecting that the default rate could reach 14.3% by March 2010.

There is some indication of deflation with prices decreasing by 0.4%, over the past year, the first 12-month decline since August of 1955. Personal

consumption expenditures decreased by 4.3% in the fourth quarter, after a decrease of 3.8% in the third quarter. However, the first quarter of 2009 brought a 1.4% increase. Prices for domestic purchases decreased by 3.9% in the fourth quarter, after increasing by 4.5% in the third quarter. They further decreased by 1.0% in the first quarter of 2009. Adding to deflationary concerns are the formidable voices of Paul Krugman and the World Bank. In a July report, Justin Lin, chief economist of the Bank, warned that we could be in a deflationary spiral driven by excess global capacity. The recent crisis wiped $30 trillion off world stock markets and an additional $4 trillion off U.S. housing prices. To state the obvious, these harsh realities would adversely affect global demand. In Japan, prices fell in May by 1.1% from a year earlier, and in Europe, prices fell 0.1% in June. In the U.S., the consumer price index dropped 1.3% from a year ago May, according to the Bureau of Labor Statistics._ The Bureau of Labor Statics also recorded a 0.2% drop year over year in June.

Meanwhile, personal savings increased from .4%, during the fourth quarter of 2007, and .2%, during the first quarter of 2008, to 2.9% during the fourth quarter of 2008. It increased from 3.0% to 3.8 %., between November and December 2008 to 4.4 % in January 2009, before decreasing to 4.2% in February 2009. In April, 2009, it increased to 5.7%. And in May, it increased to 6.9%. These sharp increases in American's propensity to save -- normally a good thing as the American savings rate has been far too low for too long -- will certainly hinder efforts to stimulate domestic demand, including by tax breaks.

As previously discussed, the unemployment rate has increased by over 50% over the last nine months. These numbers need to be tracked carefully. The Bureau of Economic Analysis stated that real GDP in the United States fell at an annualized rate of 6.3% in the fourth quarter of 2008, after a drop of .5% in the third quarter of 2008. U.S. GDP fell at an annualized rate of 5.5% in the first quarter of 2009. The Japanese government has reported that its GDP contracted at an annualized rate of 12.7% in the fourth quarter of 2008. In the first quarter of 2009, Japan's GDP plunged at an annualized rate of 15.2%. The German government reported that its first quarter GDP shrank 3.8%; the total 12 month fall was 6.7%. This was the sharpest contraction in Germany since at least 1970. Officially, economic growth in China has declined from 11-12% to a World Bank projected 2009 growth of 7.2%. However, electricity consumption

has fallen between 4-5% year on year, and by as much as 10% in heavily industrialized areas like Shanghai. In June, China posted its first modest electricity growth since October of around 2%.[3] However, some of the increase in electricity demand may also be owing to building up Chinese infrastructure which China needs.

This is one sign that things are beginning to improve. IMF predictions for both the American and Japanese economy have also recently improved. In its July estimates of GDP, the IMF said that the U.S. economy would contract by 2.6% this year and grow 0.8% in 2010. The European economy should contract by 4.8% this year and by 03% in 2010. Japan will contract by 6% this year and grow by 1.7% in 2010. Overall, the world economy will contract by 1.4% this year before expanding by 2.5% in 2010. The numbers are all over the place however. In sharp contrast to IMF predictions, the Bank of Japan recently projected that the Japanese economy will shrink by 3.4% in the fiscal year that will end in March 2010.

On another optimistic note, corporate profits fell $250 billion in the fourth quarter of 2008, but increased in by $48 billion during the first quarter of 2009, according to the Bureau of Economic Analysis. Moreover, in the past month or two, the various stimulus packages seem to have gotten traction to significantly slow the downward spiral as suggested by slowing unemployment and rising house sales.

Some prominent commentators worry that these improvements may be short-lived as they are largely stimulus driven. One important factor to watch is the number of American housing defaults which may soon increase again because of an increase in balloon payments coming due. Much more important will be quick progress in regulatory measures in key areas like derivatives and short selling and nowhere yet on the horizon, Glass-Stegall. Without such measures, we could be off to the races again as soon as the positive effects of the stimulus wear off.

---

[3] The actual growth in Chinese electricity consumption was 3.5%, but an estimated 40% of that was attributed to climate.

These reflections are presented in a preliminary way to provoke both further thought and additional research. There are many knowledgeable people in this room. I welcome your reflections and questions, recognizing that I've left much more unanswered than I have answered and that some of my answers are probably wrong.