CATHEDRAL
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The Credit Crisis of 2007 and 2008

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The recurring question today is, “What is going on in the financial markets?” Subordinate questions are, “How did we get here?” and “What does this mean?” This white paper endeavors to address these three questions.

I. HOW DID WE GET HERE?

A. What is truth?

As a preamble we need to address the question, “What is truth?” Without a clear understanding of what has happened and what the implications are of these events, it is difficult to formulate actions for the future. In this paper Bible passages are referenced for examples of the financial principles and issues seen today. The Bible is being used to show that these financial principles and issues are not new.[1]

In Mark 11:27-33 we find the following exchange between Jesus and a group of Jewish leaders:

> They arrived again in Jerusalem, and while Jesus was walking in the temple courts, the chief priests, the teachers of the law and the elders came to him. "By what authority are you doing these things?" they asked. "And who gave you authority to do this?" Jesus replied, "I will ask you one question. Answer me, and I will tell you by what authority I am doing these things. John's baptism--was it from heaven, or from men? Tell me!"
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> They discussed it among themselves and said, "If we say, 'From heaven,' he will ask, 'Then why didn't you believe him?' But if we say, 'From men' . . . ." (They feared the people, for everyone held that John really was a prophet). So they answered Jesus, "We don't know." Jesus said, "Neither will I tell you by what authority I am doing these things."[2]

In the search for truth, we see a clear example of what is called “nuanced” analysis. The chief priests consider implications of the question. Note the complexity if they answer one way versus answering in another way. What they do not consider is what is the truth. Their conclusion is not to answer. As we consider the current financial crisis we need to see that many of the comments and analysis will involve this kind of nuanced analysis rather than a

[1] The author also holds that the Bible is the inerrant Word of God. Therefore, the Bible deserves to be treated as a sacred document. A key element of the Word of God is man’s fallen nature and man’s need for a redeemer/savior. This paper is not about the redemption of mankind. Further, it is often tempting to say that crises, such as this financial crisis, is solely due to the fallen nature of man. The use of Bible passages may cause some readers to think that the author holds to such a view. This would be wrong. Rather there are principles in the world of finance, just like in the world of science, and when those principles are violated, crises may come. The Bible sets forth many of these financial principles. But the Bible is not the source of these principles any more than the Bible is the source of gravity. Rather, these principles are part of God’s world and operate within God’s world. The fallen nature of man does not change the operation of these financial principles, but fallen man can exploit these principles to man’s fallen desires. The exploitation is a separate problem.

[2] New International Version (NIV) is used for Biblical text unless otherwise noted.

search for truth. Often we chock this up to bias, but it is more nuanced than bias. Please understand this lack of willingness to search for and accept truth plays a key role in both understanding how we got here and what we should do about the financial crisis going forward. The reader is pointed to the discussions around subprime lending and what to do with homeowners who took out subprime loans as an illustration of nuanced thinking rather than a pursuit of truth.

A second passage is John 18:37-38, where Pilate is interviewing Jesus at Jesus' trial just before being sentenced to be crucified:

> "You are a king, then!" said Pilate. Jesus answered, "You are right in saying I am a king. In fact, for this reason I was born, and for this I came into the world, to testify to the truth. Everyone on the side of truth listens to me." "What is truth?" Pilate asked. With this he went out again to the Jews and said, "I find no basis for a charge against him."

Jesus claims that there is truth. Pilate responds with a rhetorical question as to the essence of truth. Then Pilate asserts a truth – Jesus is innocent of charges. Yet, we all know the story that Pilate goes on to order Jesus' death. For our analysis of the financial crisis, truth does not necessarily lead to actions consistent with the truth. Pilate was expedient in his assessment of what needed to be done, even as in a financial crisis actions taken may be for expediency. This financial crisis arises during the U.S. presidential election. It should not surprise the reader to find that expediency will be the determining standard for action rather than the best fiscal actions, that may have negative implications to various communities.

Therefore, we need to see that wisdom is needed to properly discern truth and the necessary actions. There is a spirit in people that points to a capacity to discern the truth in a matter and address that truth. At the same time, there are spirits in people that deny truth, even when made known to them, and such denial can come at a very high price. Isaiah 6 contains a passage where a spirit of denial is illustrated. Isaiah is told that he is to go to the people of Israel and give them warning of their errors. Yet, Isaiah is also told that they will not hear. Today we need to pray that God's Spirit will aid us as a people to hear and see truth and act upon the truth.[3]

A last point on the pursuit of truth is the role of greed and social dynamics. Greed is another scapegoat. It is easy to say that it is greedy executives, brokers, and investors that caused this crisis. There is some truth to this, but this paper asserts that there are more fundamental principles that were ignored. Just going after the greedy means we will miss the needed reinforcement of fundamental principles. Similarly, there are some social dynamics that contribute to this crisis. It is tempting to blame the crisis on a wayward society, but this would miss the fundamental principles as well.

B. Risk management

Let's consider the fundamental principles that surround risk and risk management. Risk is the potential that what is expected or desired will not happen, herein called "an event." In addition to the potential that an event will happen, the magnitude of the loss caused by an event is another part of risk. Risk management is about reducing both aspects of risk – reducing the potential that an event will happen and/or reducing the loss caused by an event. Loss transfer,

[3] The role of the Holy Spirit in preserving a culture and influencing a society is beyond the scope of this paper. But the reader is encouraged to research and reflect on the Holy Spirit's influence in preserving our communities.

called insurance, is a tool used to reduce the amount of the potential loss if an event occurs. Keep in mind that the reduction of downside has significant value, so risk management has been a valuable business and financial management principle.

There is a lot of talk about financial risk and risk management tools today, but let's look at a few principles concerning risk that are as old as time.

1. Risk of Future Events and Math:

Solomon addresses the existence of risk in Ecclesiastes 11:2, "Give portions to seven, yes to eight, for you do not know what disaster may come upon the land." We do not know the future. In Luke 12:15-21 Jesus speaks of a rich man with an abundant harvest who decides to store more for his security.[4] Jesus notes the vagaries of life, in that the rich man may die even that day. While written over a thousand years apart, the risks of the future are highlighted in each passage. Today we have mathematical formulas using portfolio theory and market models that are used to predict the future. Yet the risk remains the same – we do not truly know what the future will hold.

A great example of mathematics failing to predict the future is Long Term Credit. Long Term Credit created highly leveraged models (see below for the principles on leverage, also called debt) based upon the notion that their models fully predicted the effect of market movements. Yet, it seems that these models missed the impact of the Russian credit crisis of 1997. The result was a credit crisis similar to today's crisis. The U.S. government had to bail out Long Term Credit.

2. Diversification

The other principle for risk management Solomon highlights is "do not have all your eggs in one basket." In other words you could say, "Diversify your investments." In business we call it "do not bet the ranch.[5]" The investment community refers to diversity as a modern concept, yet, here is Solomon setting it down about 3,000 years ago. Note that Solomon recommends seven to eight different baskets.[6] This idea of not betting the ranch is critical to understanding Lehman and AIG.

3. Diligence in Risk Management:

Proverbs 27:23-24 states, "Be sure you know the condition of your flocks, give careful attention to your herds; for riches do not endure forever, and a crown is not secure for all generations." These verses point out the importance of systematic risk management. When one takes on risks, one must watch them. Great management has the systems to allow the senior executives to monitor the risks within the company. We will see this simple principle contributing big time to the Citibank, Lehman, Merrill Lynch and AIG problems.

[4] Jesus tells the parable to point out the importance of not storing up treasure on earth, when our future is in the after-life. This paper does not explore this point, but the reader is encouraged to fully understand the concept of storing up their treasure in heaven.
[5] While do not bet the ranch is used in the context of betting everything, it is applicable in business risks situations, where one does not take on a risk that has the potential to jeopardize the entire enterprise, even if the upside is large.
[6] A full discussion of diversification is beyond the scope of this paper.

The *New York Times* article "Behind the Biggest Insurer's Crisis, A Blind Eye to a Web of Risk: How a Small, Freewheeling Unit Brought A.I.G. to Its Knees" by Gretchen Morgenson[7] does a nice job of showing the lack of senior management oversight of a team that was taking on increasing amounts of risk and the reasons for that oversight failure being profits or the appearance of profits. This notion of leaving the profit producers alone, giving them free reign, has brought down many an otherwise well founded enterprise. Management that fails to administer oversight of even the most profitable units fails in this core risk management duty.

4. Lender Risk Management:

There are a number of basic principles of risk management for a lender. A lender's goal is to receive a return of principal (the amount loaned) as well as the payment of interest at the agreed time. Principles to secure loan repayment are a) loan to those who have the capacity to repay and b) loan to those who have the desire to repay. The role of collateral is to reduce the risk of failure to repay by encouraging the desire to repay and by giving the lender an alternative way to collect the principal and interest, i.e., by selling the collateral. Exodus 22:25-27 outlines how to treat a borrower's pledge of a cloak for a loan.[8] The point is that collateral to secure repayment is not a new concept. We will see that much of the credit crisis arises from the failure to follow basic principles for lending.

5. Leverage to increase returns:

As we approach this topic, the words of Proverbs 23:4, 5 give warning not to labor to be rich, thereby ignoring wisdom, and to keep in mind that somehow riches tend to fly away.

Leverage is a tool used to increase the rate of return on an investment. Leverage is placing debt into the activity. Debt reduces the amount of equity investment. Therefore, the same return or gain generates more return on the equity investment, because the amount of equity invested is less. For example, an investment will pay $100 a year. If $1,000 is paid for this investment the return is 10% ($100/$1,000). If $900 is borrowed and $100 of equity is used to buy the investment, the return on equity is 100% ($100/$100). For simplicity the interest on the loan has been ignored. In today's world leverage is used in many places, especially in new financial tools, to increase investment returns.

But leverage has a downside – it increases the risk of an investment. In the example above, what happens if the investment value declines by 15%? Where the full price was paid with equity, the equity is worth $850 ($1,000-$150=$850). Where there has been leverage of $900 used, the investment is wiped out and is negative $50 ($100 equity - $150 = -$50). Often the leverage increase and the degree of risk increase is not linear. In other words the risk can go up much faster than the percentage of debt would appear to add. The downside of being wiped out is not the same as losing some equity value, because a wiped out investment does not have the chance to recover if the decline is a market movement rather than intrinsic value change.

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[7] Morgenson, Gretchen, "Behind the Biggest Insurer's Crisis, A Blind Eye to a Web of Risk: How a Small, Freewheeling Unit Brought A.I.G. to Its Knees," The *New York Times,* September 28, 2008, p.1.

[8] This passage has a number of provisions addressing lending that are beyond the scope of this paper. Of note are provisions for lending to the poor. It is tempting to extrapolate the provisions in this text to the current situation of the poor in the United States, but discretion should be used. The poor in the United States have far more opportunities and social support than available to the poor of Moses' day. At the same time, these required treatments are criteria for thoughtful treatment of all individuals.

These principles apply to companies as well as investments. The concept behind leveraged buy-outs was the same as illustrated above for the investment. If the company hits a down market for a period, the company is wiped out or bankrupt. The more leverage in a company, the less down market it takes to wipe-out the company.

Many of the new financial tools started as risk management tools, but became high leverage tools to increase earnings of those employing them.

6. Role of Government:

The last set of principles in risk management is the role of government in protecting the community from risks.[9] The key issue is the balance between the responsibility of the individual or enterprise that is taking on the risk and government protecting that individual from the consequences of the risk. This balance then adds the government's responsibility to protect its citizens at large from risks taken on or created by individuals or entities, often referred to as systemic risks, which can affect the whole economy. The credit crisis has a systemic risk component. In this balancing act, the government has tools it can use: (a) regulation, which is a proactive approach to risk management by constraining risks that can be created or assumed, and (b) allowing the burden of risks assumed to impact the assuming individual or enterprise to various degrees. Needless to say since governments are political, regulation is political. Free market language is used to say, that risks and rewards go together and therefore individuals and enterprises should bear the burdens and benefits of their risk taking. Socialistic language says that society is the priority and must be protected from risks, and that rewards belong to the greater community. We will see this balancing act as part of the struggle in how to address the credit crisis.

An added regulation component is pushing social agendas through regulatory agencies and rules. In 1995 the Clinton administration modified the rules under the Community Reinvestment Act of 1977 (CRA) to encourage banks to make loans to lower income individuals who would not otherwise qualify for mortgage loans. Under the CRA, there were requirements for banks operating in certain communities to meet its requirements. This was particularly true for bank mergers. Thus these regulations caused/encouraged banks not to comply with their otherwise loan risk management criteria and to loan to less credit worthy individuals, creating subprime loans.[10]

C. The financial instruments and innovations:

Over the past thirty years a number of financial innovations have been developed. The following is a brief review of these innovations in order to set the stage for how we got here.

1. Securitization:

Securitization is a tool for maximizing the value of a cash flow stream by breaking the cash flow into its separate payments and selling these separate payments to different investors. The underlying principle is the interest rate yield curve. As a general rule, the interest rate yield curve shows short-term interest rates that are less than long-term rates. Therefore, a 30-day loan will have a lower interest rate than a 30-year loan. Mortgages in the early 1980s were

[9] The role and scope of government is a subject of much debate. This debate is beyond the scope of this paper.
[10] At this point it should be noted that there is debate as to the magnitude of effect on subprime loans caused by these rule changes. However, in 2005 the Bush administration desired to curb these rules, and that proposal was rejected by the Democrats. Expanded discussions on CRA can be easily found on the internet.

primarily fixed rate 30-year loans. However, the next mortgage payment was a 30-day loan and the last mortgage payment was a 30-year loan. Yet the interest rate for each payment was the same based upon the 30-year loan interest rate. By slicing the mortgage into a series of payment streams, each stream could be sold to a separate lender, who would give a lower interest for the shorter-term streams. As a result, the financial institution making the fixed rate 30-year mortgage would receive a gain based upon the lower overall interest for the securitized mortgage loan.[11]

As securitization became the industry practice, mortgages were originated with the intention of being sold into pools for securitization. The pools of mortgages were designed to make it efficient to sell off the various cash streams. However, the result was that mortgages went from being owned by the banks that made the mortgage loan to an origination process where there were mortgage writers who never made the loan, but were simply agents for financial companies that provided the funds to assemble the mortgage pools.

Securitization worked well and was expanded to include all kinds of loans and cash streams. A key to making the cash streams securitizable was their predictability of cash receipt. Predictability is an aspect of risk - remember repayment must be timely. Initially, only high quality loans could be securitized. Then more risky, less predictable loans were securitized using various portfolio theory based models.
The ultimate examples are the Collateralized Debt Obligation (CDO) and the Special Investment Vehicle (SIV). These were pools of the unsellable pieces of other securitized loan pools. In short, these were where the risk was. Yet, using portfolio theory models, pieces of a CDO or SIV were treated as high quality investment opportunities. These pools have now been relabeled toxic assets.[12]

A key outcome of a securitization is the separation of the ultimate lender from the borrower. Because the ultimate lender holds a piece of a pool of loans, they do not have direct access to the borrower or the loan's collateral. CDOs and SIVs are the third and fourth iterations of loans. Thus, they are even further removed from the borrower and collateral. This means that evaluating the riskiness of the investment is now more difficult.

2. Mortgages:

Adjustable rate, option arm, fixed, balloon, zero down, and the list goes on relative to types of mortgages offered in 2006 and early 2007. What are these mortgages? A mortgage is a loan secured by real estate. Until the 1970's the interest rate was fixed at the start of the mortgage and mortgages were generally paid over 30 years, with shorter terms, such as 15-years, as an option. The monthly mortgage payment covered the interest on the outstanding balance of the loan, the principal, plus some amortization of the principal. The types of mortgages listed above were designed to address the cost of the mortgage to the borrower. The 30-year fixed mortgage was priced based upon a 30-year interest rate, which would usually be higher than the shorter-term interest rate when the mortgage loan was taken out. Adjustable mortgages allowed the borrower to benefit from the lower interest rate of shorter-term money. The lender could give this lower rate because the interest would reset if interest rates changed after the

[11] Often it is said that innovations such as securitization create or find or unlock value that otherwise did not exist. Generally, this is not true. The banks making 30-year fixed rate mortgages received the profits from the difference between the short term and long term rates, making them stronger. Today, these banks have shifted from lending to a fee business model because of securitization's capacity to skim off these profits upfront. This business model shift contributed to the S&L crisis of the 1980s and to the current problem in many banks today.
[12] Please note this is a generalized discussion and exceptions abound.

short term. In such a case, the borrower is benefiting from the lower interest rate. However, interest rates change regularly. If interest rates move up, an adjustable rate mortgage could reset at a rate higher than the borrower was currently paying. The short-term interest rates during 2001 to 2005 were historically low,[13] and therefore adjustable rate mortgages appeared particularly attractive. So far, adjustable rate mortgages have been beneficial as a whole for homeowners. This fact may be missed, as the adjustable rate mortgage is now viewed negatively.

As housing prices moved up, their affordability became an issue for buyers. Mortgage loan payments could be reduced by several different features, allowing a buyer to make payments and thus buy the house. Some of the features designed to facilitate buyers' ability to pay were (a) introductory interest rates that were artificially low for a period or (b) interest only with no principal for a period. In many cases the buyer was anticipating either added income, such as from a raise, or an increase in real estate value where the property could be sold for a profit before the interest rates adjusted, generally known as flipping.

Another affordability feature was the reduction or elimination of down payments. Historically, down payments were usually 25% of the purchase price for a residential property. As housing prices climbed, down payments became very large. In developments, the developers began to subsidize the down payment, effectively taking a price cut. Taken to an extreme, the subsidized down payments became zero down needed for the buyer. Since the buyer has put up no monetary collateral, the lender has no collateral above the house. Down payments were a fundamental part of collateral for a mortgage loan. Down payments were incentive for the borrower to pay the loan and added protection to the lender in case of failure to pay.

The final development was the no documentation mortgage. As we have seen, the mortgage terms had been eroding in order to allow buyers to get into properties for which they had little capacity to make mortgage payments. The documentation of the capacity to pay finally went away, with the "no documentation of income and ability to pay" mortgage loans. This meant that the borrower could represent a capacity to pay without proof of such capacity. Lenders" risks increased because they were potentially loaning to individuals who lacked the capacity to repay.

While the capacity to pay the mortgage and the collateral for the mortgage was eroding, the willingness of the borrower to pay was also eroding. Historically, a willingness to pay one's debts was viewed as credit worthiness. With the automation of credit information, credit scores have become the proxy for credit history and willingness of a borrower to pay. Subprime loans are those made to individuals with poor credit histories. This means that subprime borrowers have not demonstrated a willingness to pay their debts.

As lending progressed the riskiness of the mortgage loans accelerated, because of violations of the basic principles noted above. Loans were made without evidence of capacity to repay, with evidence of unwillingness to repay and without collateral support for either willingness or alternatives. In short, these were fundamentally unsound loans. Securitization, Fannie Mae, Freddie Mac, and CRA are all contributors to this state of affairs.

[13] It is argued that the housing bubble was caused in part by Alan Greenspan's, or the Fed's, keeping interest rates artificially low for too long. What is missing in this argument is a full look at the economic environment during the first part of this decade and the fact that the interest rate decision is a judgment call.

3. Derivatives:

Derivatives are a financial tool designed to shift risk from one party to another. For example A borrows from B. B wants added protection from A's potential failure to pay back the loan, i.e., default risk. For a fee, E offers to B to cover A's default risk, effectively guaranteeing A's loan. Proverbs 6:1, 11:15, 20:16, and 27:13 make a number of observations about being a guarantor, generally not showing it to be wise. So the principles of guarantee and risk-bearing are not new and should be treated with a level of prudence and caution.

Derivatives come in a variety of types and forms. The basic idea is the matching of risks. Another example of risk matching is with interest rates. As noted above in the mortgage discussion, interest rates change, so one borrower, D, may have a loan with an adjustable rate and wish to have a fixed rate. Borrower F may have a fixed interest rate and desire an adjustable rate.[14] So D offers to pay F an adjustable rate and F agrees to pay D a fixed rate on the same amount of loan. So far so good, but what if an institution, L, is between F and D? So D offers to pay L an adjustable rate receiving from L a fixed rate and F offers to L a fixed rate and receives an adjustable rate? So far so good, until L fails, then both F and D are out of luck.[15]

Risk transfer is not new; it is generally called insurance. There are many insurance companies that do risk transfer well. Yes, insurance companies do use mathematical models. Lessons from insurance companies and their regulation are useful to this discussion, but beyond this paper (see AIG below).

4. Short selling:

A short seller borrows stock and sells it, anticipating buying it back at a lower price, because the stock has fallen in price. Two types of short selling are notable. The "short against the box" or "covered short sale" are the selling short of securities that you already own. This trade is done in anticipation of downward movement in the stock. There are a number of reasons an investor would not want to sell his stock. The financial result for the investor tends towards a neutral economic effect, which is a positive for the investor if the stock price moves down, since the potential loss is avoided.

The "naked short" is when the seller does not borrow or own the stock, but sells it short. The important market effect of a naked short is that the number of shares in the market can exceed the number of shares issued by the company. Normal short sales and covered short sales involve existing issued shares. Naked shorts expand the number of shares available to buyers. The natural economic effect of increased product with fixed demand is a decline in price.

Add to the naked short concept the concept of "piling on." Piling on occurs when a stock's price is driven down by short sellers aggressively shorting the stock. Piling on is not new. The playground idea of kicking someone when he is down comes to mind. Piling on is a bigger issue today than in the past because of internet and electronic trading. In the past the market involved individuals on the trading floor. While the traders could pursue a movement in the stock, both floor rules and rules similar to requiring short sales to be covered had a dampening

[14] The reasons why borrowers would desire different types of interest rates are beyond the scope of this paper. However, some reasons involve asset types or anticipations of interest rate movements.
[15] Rights of offset and other devises to protect D and F from L's failure are beyond the scope of this paper. For sure, L's failure will require all of the Ds and Fs to expend funds and time to sort out their rights and obligations.

effect on the scale of piling on. However, it is fair to say that prior stock market crashes prove that piling on is not the only factor in a stock's price movement.

Today, there is an argument against regulating short selling by asserting that short selling enhances market liquidity. Welcome to a search for truth question. How can short selling provide liquidity? If an owner of stock wants to avoid loss or wants cash, sell the stock. Even more so, how can naked short selling provide liquidity? Naked short selling is a pure speculation activity and absorbs demand for the stock from those who have it and need to sell the stock for liquidity.

5. Speculation:

Speculation is investing where one takes on risks, usually higher levels, with the expectation of commensurately higher gains based upon market movements. Investing is distinguished by looking to the underlying investment as the basis for the increase in value creating the gain. While both speculation and investing need the market to move up for gain, investing looks beyond the market to the merit of the investment for the reason for the market movement. Speculation can be based upon both upward movement and downward movement of the market, with downward being a short selling kind of speculation.

Speculation is not new. In times past it was called getting rich quick. Proverbs 23:4, 22:16 warns about trying to get rich quickly. Part of that warning is that the pursuit of riches will causes the pursuer to cut corners, compromise values and often to lose out.

What is important to see in this financial crisis is there has been systematic speculative activity where corners were cut, i.e., fundamental principles were ignored, risks were taken and enterprises incurred losses.

6. Investors pursuit of higher returns:

We have all heard the adage "if it is too good to be true, then it is not true." This is particularly true for investments where the higher the risk the higher the required reward and vice versa. In a market with ten year U.S. treasuries yielding four percent, an investment offering ten percent does not have an equivalent risk, much less an investment offering fifteen percent. But what about a hedge fund generating thirty five percent in the past quarter, using a guaranteed successful trading strategy? And so it goes. Whenever low risk investments, such as U.S. treasuries, have low yields, the investment community turns to opportunities for higher returns. Proverbs 23:4, 5 would offer caution to those pursuing yield.

As the marketing of investments offering higher yields developed, the investments became more complex. The term "alternative investment strategies" was developed to categorize these investments. Alternative to what? Into these alternative investments went derivative programs, market timing concepts, use of debt to increase yields, and other programs that were to add yield to the investment.[16] The most interesting part of alternative investment strategies is the number of institutions, who are called the smart money, which made or owned these kinds of investments.

[16] Debt to increase yield is not covered here, because the basic principles of borrowing and lending should apply first, then the concept of risk-return comes into play. It should not surprise the reader that both of these sets of principles have been set aside.

On the individual investor side, the money market fund is a place where this converged in 2007 and 2008. Money market funds have been in existence for decades. They are not government guaranteed, or at least not before September 2008. Yet, money market funds were viewed as extremely safe, giving interest on the investment money placed in the fund with a capacity to withdraw the invested money at any time. Money market funds' core principle was a dollar in and a dollar out. In other words, the investor would get back their investment. To do this the money market fund had to value its investments each day, called mark to market, and the value of these investments had to be equal to the amount of the investors' investments. Therefore, the money market funds had to invest in short term very safe investments, often called commercial paper.

What changed in 2007 and 2008 was the application of portfolio theories. As noted above, financial modeling theory suggested, and the math proved, that a certain amount of higher risk and thus higher yield investments could be added to a low risk portfolio and the overall risk in the portfolio would change very little. Bear Stearns and other financial institutions used this theory to add a certain amount of securitized subprime mortgage investments to money market funds they managed. Unfortunately, these investments were indeed truly risky and dropped in value, causing the money market funds mark to market value to be below the investors' investments. The result was a need for the securitized pieces of these money market funds to be repurchased by the managing institutions. This happened in 2007. Yet, the effect of poor investment choices in money market funds continued to worry the market to the point that the U.S. Treasury had to guarantee such funds in September 2008.

7. Liquidity, values and accounting:

"Cash is king" is a refrain used to discuss various aspects of business and business planning. One component of cash is liquidity. Liquidity relates to the capacity to meet obligations when due. Much of the credit crisis is labeled a liquidity problem.

One principle of operating a company is forecasting liquidity needs and having reserves to meet these needs. Large financial institutions do the forecasting, but also have large liquidity needs. A financial institution would plan on normal levels of deposits and withdrawals or payouts and have an additional measure of reserves. No business can plan or operate its business on abnormal activity. A run on a bank was the idea the deposit holders were withdrawing funds at an abnormally high rate. The bank would plan for normal levels of withdrawals and a normal level of deposits. The bank would have a reserve for a measure of shortages in the amount of deposits as against the withdrawals. The reserves would not be sufficient to cover abnormal withdrawal activity, which is usually accompanied by an abnormal shortage in deposit activity, compounding the problem. Thus a run on a bank creates a liquidity crisis. The liquidity crisis may or may not reflect the fundamentals of the bank's operations. However, when an institution cannot meet its obligations when they come due, the liquidity crisis turns into a bankruptcy.

Valuation and accounting rules contribute to the liquidity crisis and are discussed here. To solve a liquidity need, the institution must sell assets to generate cash. Buyers want to buy based upon market value. Value is the price a willing buyer will pay and willing seller will accept, both having adequate knowledge of relevant facts and neither being under compulsion. Generally this value is what is found in the open market. In stress situations there are a variety of reasons the open market is not working. Therefore, the value of assets is not clear and thus the capacity to sell them may not be available. This is the liquidity crisis that causes financial institutions that are fundamentally sound to become illiquid and thereby bankrupt.

Let's now add the accounting rules. Accounting for financial assets and liabilities has become as complex as the assets and liabilities themselves. Originally, financial statements were based upon costs and were not adjusted for market fluctuations. Increasingly, market changes in values are to be reflected in the financials and the accounting principles have incorporated very complex rules for this process. Financial assets and liabilities are particularly subject to these rules, generally referred to as mark to market. The latest set of these rules came into effect in 2007, so the history of the impact of mark to market accounting is less than clear. The two examples below are too simple to show the proper accounting, but are used to illustrate some of the issues in financial reporting for financial instruments.

For example, let's look at a fee received by B for accepting a default risk on F. The fee has a component of profit, called revenue, and a portion for risk insurance reserves, which should be held on the balance sheet as a liability in case there is a default. So far so good, but what about a year later when the default risk level on F increases because the riskiness of F has increased. The increased risk of default means that a greater reserve is warranted. Should this reserve be booked? If yes, how much and how is it to be determined? Historic cost basis accounting says, no – carry the amount at cost; but proper liability reporting would seem to say yes. Yet, the method for calculating the increased exposure amount is in question. If there is a public market for F default risk, then we should look to the public market pricing for the amount needed to be reserved. But what if the public market was there, then it stops working? Does B have to reserve the full amount of the potential risk, taking a charge against its earnings, or can it use some probability-based method? And does it matter if B has other such default risk instruments that it normally uses mark to market pricing to reserve?

Similarly, if bank A buys an interest in a securitized mortgage pool for $10 million, it would show that as an asset. But the next accounting period, the market for this mortgage pool has dried up. How does bank A mark their investment to market? If there are no buyers, then is it worth zero? In theory, yes, but in reality no. There may be no buyers because the normal markets have stopped functioning. But if one is not sure that the market will return to past functioning levels, then what is the value? Conservatism, an overarching accounting principle, points to the need for documentation and not optimism for financial reporting. As a result of no market, this asset has no market value and an argument for a write-off would seem to be warranted. A write-off would reduce net income, reduce equity and potentially impair the ability of the financial institution to continue to conduct business. Systemic risks develop in that today's financial system has financial institutions interconnected so that the failure of any one part dries up the market activity for the whole. Thus part of the systemic problem becomes a mark to market problem.

As noted earlier, these examples highlight the issues, but do not give what the actual accounting results could be. There are many other facts that would be considered in the final rendering. The points here are (a) accounting for complex instruments is complex, (b) getting the right answer is difficult in uncertain times, and (c) the accounting rules' effort to reflect changing market activity can lead to unintended results when market activity moves outside of its historic activity levels.

8. Not covered: greed

While the human element is a major factor in causing the financial crisis and may underlie the crisis, making it the first cause means we may not understand the specifics of what has happened. It is easy to point to the financial institutions, executives, and investors that have made boat loads of money over the past five to ten years. Labeling their takings as based on

greed is also easy. But it does not allow us to see the tools used in the market to create the returns and where these tools diverged from basic financial principles.

We also need to see that many engaged in "doing their job." Those selling various financial instruments and mortgages were making a living, believing that their products were indeed good for their customers. It is unfortunate that subprime loans sold by brokers have become labeled "predatory lending." Similarly, derivatives were taken on or sold by many in the belief that they indeed were good risk management tools and had real value. Yes, compensation schemes rewarded those employed, but that does not make them evil, bad, greedy, etc.

Similarly, management and board incompetence is not greed. It is incompetence and incompetence is unfortunate, but in the business world generally not criminal. Compensation for incompetent management does become a real problem. Citigroup and Merrill Lynch allowed their CEOs to be fired with enormous severance packages. This would seem to put the greed problem right on the table, but it is really a sign of the incompetence of these companies' boards. Today we have a culture of self interest. Therefore, if one can get a great severance package, why not? If one can get a house for a year with nothing down and no real payments, why not? Yes, they are the same.

A final observation on regulating human behavior would be that it is well known that one cannot legislate morality. Proper behavior comes from the heart of a people. Prudent investing and financial management and business management are not new ideas. Many individuals and companies have operated prudently and for them this storm will pass, all be it with some damage. Teaching and encouraging proper understanding and application of financial principles combined with an understanding of responsibility on both an institutional and a personal level, remains part of the solution.

II. WHERE WE ARE:

We now can turn to the events of 2008 to try to understand the events and actions taken or not taken. Keep in mind that 2008 is a perfect storm[17] of financial events creating the financial crisis. An added word of caution, we are outsiders looking in and therefore do not have a full picture of the scope of events, of the scale of events and of the impacts of alternatives. Therefore, the following observations are based upon deductions extracted from published materials, experiences and the above principles.

A. Bear Stearns, Citigroup, and money market fund guarantees:

Bear Sterns was taken over by JPMorgan Chase & Co. (JPMorgan). JPMorgan announced its acquisition of Bear Stearns Companies, Inc. (Bear Stearns) on March 16, 2008. As part of the transaction the U.S. Federal Reserve (Fed)[18] agreed to provide $30 billion of funding for Bear Stearn's less liquid assets. While there are many additional details, the questions to be

[17] Perfect storm is a term from the movie by the same name released in 2000 by Warner Bros. The picture is based upon the book *The Perfect Storm* by Sebastian Junger, which was published by Little, Brown and Company, 1997. Depicted is the convergence of natural events off the coast of New England that create a once in a century storm. To a certain extent this notion of convergence of events, each of which individually is manageable, into an unmanageable crisis seems appropriate to the current financial crisis.

[18] The U.S. government players in addressing this financial crisis include the Fed, the U.S. treasury, and others. Each of these governmental bodies operates under various legal powers that allow the agency to advance funds and undertake measures of intervention to address emergencies such as this crisis. For the purposes of this paper these will all be called the "Fed."

addressed here are a) why did Bear Stearns need to be acquired by JPMorgan, and b) why did the Fed agree to provide the support in the transaction. It is clear that JPMorgan thought they were getting a good deal.

Bear Stearns suffered from a liquidity crisis and probably an equity crisis, both brought on by a series of business practices that violated the principles noted above. Our focus will be on securitization since it seems to be the central cause of Bear Stearns' demise. Bear Stearns had developed funds to participate in the securitization of mortgages, including subprime mortgages. At this point Bear Stearns believed that they were managing the riskiness of these securities by selling them to others. Bear Stearns managed two highly leveraged funds invested in securitization paper and when the market for this paper declined, these funds were wiped out. Bear Stearns did not intervene, but let the funds fail putting all of the damage on the funds' investors. This started the Bear Stearns liquidity crisis. It is useful to note here that Goldman Sachs had a similar type fund and infused $3 billion to avoid its failure.

Come to find out, Bear Stearns, Citigroup, and others had placed securitized paper in money market funds they managed. These investments quickly were wiped out on a mark to market value basis as required by money market fund rules. The buying back of this paper from these money market funds created some of the write-downs in the fall of 2007 and increased the liquidity issues.

As the market dried up for various portions of the securitized securities, the liquidity and value issues of Bear Stearns continued to grow. With the write downs in the fall of 2007 and resulting illiquidity, the Fed was worried about the financial market system crashing if Bear Stearns was to fail. Remember that bankruptcy can occur because of deficient liquidity, and one company's bankruptcy can cause liquidity problems in others. As a result of having Bear Stearns continue to service its obligations, the problem in the markets would not grow. Thus the placement of Bear Stearns with JPMorgan and the support to JPMorgan for the less liquid assets occurred. Referring to this as a bailout of Bear Stearns would seem to be a misstatement. Bear Stearns no longer exists and the Bear Stearns shareholders suffered losses.

Citigroup is larger than Bear Stearns. Even though it got burned by some of the same issues, it moved quickly to shore up its liquidity by getting additional capital. The cost of this new capital was expensive, but as of this writing, Citigroup is out of the emergency room.

The money market problem continued, however. While the securitized investment pieces had been removed, the credit crisis creates mark to market problems for many companies' commercial paper. If money market funds had to report principle losses to their investors, the money market aspect of our financial system would collapse. Money market funds are a crucial part of the commercial paper market that provides short-term financing for corporations. A collapse in money market funds would result in serious liquidity problems for corporations as a whole, resulting in systemic failure. Therefore, in September 2008, the Fed chose to guarantee money market funds in order to avoid a run on the money markets.[19]

B. Fannie Mae and Freddie Mac:

In July, 2008, the Fed agreed to provide rescue funds to Fannie Mae and Freddie Mac in order to address liquidity issues arising from increasing mortgage defaults. On September 7, 2008

[19] Please note that there were specific limits as to which money market funds were guaranteed. Again not all money market funds are created equal. But a discussion of this is beyond the scope of this paper.

the U.S. government[20] assumed control of both entities. Let's review why the Fed did this rather than the Citigroup plan or the Bear Stearns plan.

These two entities buy mortgages and repackage them for investment, in effect providing a guarantee to the buyers of the investments. This worked fine in the early days because Fannie Mae was government owned. Fannie Mae was created in 1938 to help expand home ownership. Freddie Mac was created in 1970 to compete with Fannie Mae. Both do the same thing. Both were private companies after 1968, but had special operating provisions, such as reduced amounts of capital required to support their loan activity. The key aspect of these organizations was that they standardized the mortgage loans. To be bought by these entities a mortgage had to meet certain standards. The lower standards of the subprime loans had to be allowed by these organizations in order to be effective in the market as a whole. Add to this what was noted above about CRA, and the full magnitude of the movement away from prudent financial principles becomes clearer.

As the subprime mortgages and mortgages with adjustable rates began to reset, the default rates rose and these entities had to cover these loans. This created liquidity issues. These two entities support over $5 trillion in mortgage loans. The capital markets could not cover the risks of default that were now imbedded in this loan pool. But the failure of these two entities would not only wipe out their investors, but also be a shock to the holders of the investments sold and would disrupt the real estate market because the mortgage systems supported by Fannie and Freddie would be shut down. "Too big to fail" is a term that seems to apply here.

But we also need to see a sense of moral obligation. These entities were chartered by the U.S. government and given special privileges. The moral obligation notion is not new and the U.S. government did not disabuse the markets from this perception. This does not make the market's perception correct or even a good investment strategy. However, this moral obligation is part of the financial crisis picture.

So the rescue of Fannie and Freddie is different from Bear Stearns and is so for important different reasons.

C. Lehman Brothers:

On September 14, 2008 Lehman Brothers filed bankruptcy. It had struggled with liquidity issues arising from the above discussed mortgage and mortgage related investments, plus hedges and investments in real estate. Hedges are a form of derivative. So the derivative problems noted above, including accounting issues, were a strong contributor to Lehman Brothers' crisis. However, commercial real estate positions also seem to be a factor.

Lehman also had another factor – inaction. Merrill Lynch (ML) took a series of actions to head off liquidity issues during the period of fall 2007 until September 2008. Particularly, ML sold a substantial portfolio of illiquid assets at about twenty-two cents on the dollar in July, 2008. Lehman at the time said they did not have the liquidity needs. Unfortunately, Lehman no longer exists.

While it is hard for a non-insider to know all of the decision factors that the Fed weighed in allowing Lehman to fail, some are worth noting here. Inaction is one of them. Capitalism is a

[20] The Federal Housing Finance Agency took the action, not the Federal Reserve, and placed both entities under conservatorship.

concept, based upon individual responsibility for one's actions or inactions. The Bear Stearns and Fannie and Freddie support had been labeled a bailout and inconsistent with capital market principles. So a failure needed to be allowed. The scale of Lehman was clearly not the same as Fannie and Freddie, nor would its impact be felt as much. By September 2008, the Fed had a much clearer picture of where the pieces are and the interconnections so that the risk of Lehman's failure could be better judged than the Bear Stearns' failure. Finally, the market anticipation of Lehman's condition was much longer, giving parties a better opportunity to condition the blow of failure. This last point does not mean that there would be no pain; just that it was not a surprise. So Lehman failed.

D. Merrill Lynch:

It is tempting to lump ML with Citigroup. Both had similar subprime issues and the timing of their write-offs in fall, 2007 seemed connected. Both replaced their CEOs when the write-offs began, both took large write-offs, both had to reabsorb large pools of underperforming assets, and both had to raise fresh capital. However, they are very different financial institutions. Citigroup is a bank with other businesses and ML an investment bank with other businesses. Banks have regulators and requirements to maintain certain capital levels to deal with liquidity issues. Think back to the run on the bank issues discussed above and the experiences arising from the crash leading to the Great Depression. ML was basically a free market, capitalistic enterprise.

Why did ML sell to Bank of America on September 14, 2008? Again we need to note the outsider's view is expressed here. John Thain was the new CEO brought in to clean up ML. In July, 2008 he took action to clean out the underperforming assets, now referred to as toxic assets. While many argued that his was a fire sale, perhaps that was indeed what he was addressing. As a result, ML had sufficient liquidity to consider other options. Since the conclusion for ML was a sale, Thain must have seen that continuing as a stand-alone entity was too risky given its portfolio of assets and liabilities, the financial and economic markets and the potential of Fed support. It is likely that ML discussed its situation with the Fed and got a Lehman response – do not look here, use self-help .

The outcomes between Lehman and ML cannot be clearer. Lehman shareholders are wiped out. ML shareholders received a measure of value.

E. AIG

On September 16, 2008, the Fed extended a liquidity facility to AIG, the U.S.'s largest insurer. In the bailout facility, the Fed gets convertible loan terms for about 80% of AIG's equity. How did this happen?[21]

AIG is an insurance company with most of its insurance activities conducted in regulated subsidiaries. These subsidiaries remain financially strong and liquid on the whole. Remember the discussion above on derivatives being like insurance. This is a great example of an insurance company that has strayed from its roots and gotten burned.

A part of the burning has to be attributed to the forcing out of Hank Greenberg by Elliot Spitzer, former attorney general and governor of New York State. Why is this important? It is important because Spitzer began an investigation into the accounting for AIG arguing errors in recording

[21] Morgenson, *ibid,* should be reviewed for a more thorough discussion of the events leading up to the bailout.

derivatives and other risk products. PricewaterhouseCoopers was the AIG accounting firm issuing audits on the company. In addition AIG was forced to recast its accounting and restate its financial statements. Given the issues in accounting noted above, it is fair to question whether the restatements were more correct than the original financials. But this process led to a change in AIG. In March 15, 2005, Spitzer forced the board to remove Greenberg and put in his number two. The result was a systematic demise of the quality of AIG risk management. Think of the diligence principle for management. Point – managing risk is a key responsibility of senior management and the board must be able to be sure this is done. Greenberg had done this for decades building the best insurance company in the U.S. His successors were unable to manage the company and AIG's shareholders suffered.

AIG strayed from its insurance business at the top company level. The activity started small as a derivatives desk during the 1990s, selling credit default swaps. In recent years it took off to where in 2005 this desk produced 17.5% of overall operating income.[22] When the credit crisis hit in 2008, AIG could not control liquidity needs these derivative positions required. Whether Greenberg could have created a different outcome will never be known, but we do know that the new management did not manage this group or the risks that its activities were imbedding within AIG.

The Fed bailout is explained similar to the Bear Stearns situation. AIG is insurance and having the crisis move to insurance would be unacceptable from a systemic perspective. Many have noted that AIG's global reach meant that its failure would impact financial systems around the globe. The speed at which AIG collapsed left fewer options. AIG's core businesses are great, so the collateral value is reasonable for a bridge loan for liquidity. Finally, the Fed forced the shareholders to pay with serious equity to the U.S. for the loan. In short, the Fed got a pretty good deal.

F. Morgan Stanley and Goldman Sachs:

Finally we come to Morgan Stanley (MS) and Goldman Sachs. During a single day in September MS stock lost over sixty percent of its value. Why? Short trading. Piling on naked short selling is a speculative way to set value and prices. Does this value impact have any reflection of reality? This is the troubling question. At the time of this writing the SEC is wrestling with whether to curb short selling. What is at stake is the capacity of these and other companies to raise capital in an orderly way.

As of this writing, Warren Buffet has agreed to a $5 billion infusion into Goldman. See here the speed of Goldman's self-help. Yes, it will be expensive, but always remember the Lehman standard for getting self-help wrong.

Whether these two remain independent or find a bank for a home is yet to be determined. However, both have converted themselves to bank holding companies. This puts them under the Fed regulation the same as JPMorgan and Citigroup. Why? They both have the same access to Fed support as banks and this should minimize the short selling capacity to create self fulfilling prophesies.

What is wondered is whether Wall Street as we have known it is gone? But the answer to this question will need to await the outcome of the current crisis.

[22] Morgenson, *ibid.*

G. Washinton Mutual:

On Thursday, September 25, 2008, the Feds seized the assets of Washington Mutual (WaMu), the largest saving and loan in the U.S. These assets were placed with JPMorgan. Think Bear Stearns. A savings and loan is a bank that traditionally specialized in mortgage lending, holding the mortgages it made. WaMu over recent years had undertaken an aggressive expansion plan covering both the West coast and the East. Its demise can be directly attributed to the implosion of the housing market, the mark to market accounting rules, and some measure of subprime lending. In short, it was killed by the real estate part of the credit crisis. Unfortunately for its shareholders, the board acted belatedly in replacing the CEO and taking actions to shore up the enterprise. So the lesson here is diligence both at the board and management level. In that diligence, self-help is a critical factor and knowing the condition of your flock gives one time for a bit of self-help.

Yes, we will hear a bit of fussing over the new CEO's payout package. He is on the job 3 weeks and gets million of dollars, even though he failed. There is some truth here, but was it possible that he could succeed and did he do all that was necessary/possible to create a success? The more important question is what was the payout to the prior CEO, the one that led WaMu into the trouble? Similarly, what is the payout to the board members who were to oversee this enterprise on behalf of the investors?

H. Wachovia:

Over the weekend of September 27-28, 2008, Wachovia sold its core banking business to Citigroup with Fed support. Why? Wachovia was caught in the same real estate loan and related credit crisis as WaMu. Wachovia had built itself into one of the largest network bank over the past 20 years and was viewed as a well-managed institution. Of note here is that Citigroup became the new home. Fed support is a backstop rather than bailout, in that Citigroup has to absorb the first $40 billion of losses in the asset pool, thereafter the Fed will cover losses. Think Bear Stearns-type support to JPMorgan.

See here the benefit of getting on to self-help early. Wachovia worked hard at getting a buyer in Wells Fargo, but they did not have enough time to work out a deal. Wells Fargo walked away at the last minute on Sunday night, because they could not get comfortable with some of the risks in the loan pools. Wells Fargo was not willing to bet their ranch. But Wells Fargo had also not kept the Fed in the loop as a fall-back player by saying to the Fed that they could go it alone. Therefore, they could only walk away. Citigroup became the home. Yet, a year ago Citigroup was in such stress that it was canvassing the world for capital and taking write downs, etc. The new CEO of Citigroup clearly did his job in turning around the company so that it could undertake a Wachovia opportunity. Needless to say, whether Citigroup has bitten off more than it can chew or has misassessed the risks will be shown over time.

I. Global issues:

Across the world institutions are suffering similar stresses caused by their real estate, the systemic crisis elements, and individual enterprise ineffectiveness. Governments are struggling to manage some elements of the problem within their own financial institutions. A key element here is the notion that some institutions are becoming "too big to save." When we look at Europe, a pan-global financial institution can exceed the capacity of its home country to bail it out. In the U.S. we have spoken of "too big to fail" in that the U.S. could not let the financial institution fail because of the systemic impact. Now we see institutions of a size that no

government(s) may be able to rescue. As we will see below, this is an important message. Self-help becomes a critical management message for players in the world at large.

III. WHERE TO FROM HERE?

There are several observations for the future. But first we should note that required financial disclosure – past performance is no guarantee of future results. This statement is written everywhere; it is a good idea not to ignore it. As Solomon said in Ecclesiastes 11:2 about 3,000 years ago, the future is uncertain. So these observations are just that - observations.

A. Basic principles of finance will not change:

A small bit of comfort is that the basic principles of finance as discussed in the first section will not change. Wise individuals and enterprises following these principles will be able to ride out many storms, even perfect storms.

A principle not articulated above, but worthy of note here, is reserves. Less debt is good, but reserves allow the enterprise or individual to truly weather long spells of disruption. Think of Joseph in Egypt some 5,000 years ago. In Genesis 39-50, the well-known story of the dream of seven good years followed by seven bad years is told. Joseph is assigned the task of preparing Egypt for seven years of famine. The key part of this story for this discussion is how long seven years of famine is and how much reserves are required. The story notes that everyone in Egypt knew about the seven good followed by seven bad. Some had some reserves, but few had enough for the full seven years. Economists would argue that Pharaoh's taxes made it impossible, but that is just an excuse. The key point is adequate reserves, especially ones with proper liquidity, are an important part of planning a long term strategy.

B. Deleveraging leading to a measure of economic slowdown:

One of the outcomes of this crisis will be a measure of deleveraging, both of companies and individuals. Deleveraging means paying down debt. Deleveraging will occur because of credit practices of lenders; in other words they will go back to practicing good lending principles. This means less credit will be available in the market to non-credit worthy individuals and companies. The effect will be a decline of consumer activity and thus a decline in the economy.

How deep this slowdown will be remains to be seen. A look at the last real estate financial crisis at the end of the 1980s and early 1990s, points to a moderate level of impact. There will be lots of horror stories for the news and press. But overall it is likely that the economy will roll along with a measure of recession. Why? The global platform of commerce is far more broad based than just the U.S. and its financial activity.

However, we return again to the notion that the borrowers are not driving deleveraging. Thus after the crisis is over, leverage desires will return.

C. Regulation and unwinding – years of work:

Clearly there will be an effort for more regulation. Dominique Strauss-Kahn, the managing director of the International Monetary Fund is quoted by the *Financial Times* as saying, "It's because there were no regulations or controls, or not enough regulations or controls, that this

situation was born. We must draw conclusions from what has happened – that is to say regulate, with great precision, financial institutions and markets."[23] However, given the discussion noted above, is regulation really the answer – perhaps Spitzer's actions and the CRA continue to affirm the need for this debate?

We need to see that regulation cannot change essential human weakness. The financial principles that were violated are not new. The proclivity to violate these principles takes a holiday as a crisis winds down but never goes away. When was the last financial crisis? How about the .com crisis of 2000?

We need to see that part of regulation will be the unwinding of the Fed positions and future positions. Yes, there may be more needed. For example there is the $700 billion bad asset fund that the Fed would like congress to set up. This fund and other actions will be coupled with added regulations. However, it will be years before the unwinding of the crisis effects[24] and full implementation of revised capital market activities. In the interim there will be moments of stress, both from the U.S. and from global problems.

This leads to a key observation – the world today is very different from that of the last 50 years. The new world order is global markets. We can regulate the U.S. markets all we want, but there are other markets for trading, investing and speculation. These markets do not have the same standards as the U.S. nor do they wish to have such standards.

D. *Caveat emptor:*

The warning to investors and enterprises is *caveat emptor*, buyer beware! While there have been many government bailouts or seeming bailouts in 2008, going forward and going around the world this will not be a good investment plan. The financial markets have always been hostile places, but necessary places to conduct business. Going forward such hostility will not go away. Caution and diligence has been and continues to be the rule for the wise.

E. Inflation – deflation or "?":

A big question is whether the effect of the crisis and Fed actions are inflationary, deflationary or what? There are serious mixed views on this. Deleveraging means non-inflationary. Yet, the government infusions seem to be inflationary. Yet, if the government infusions are just covering assets, then perhaps they are not inflationary.

Note that deflation has not been associated with this discussion. Japan with its crisis of the 1990s is a key example of deflation and the capacity of a government to fight deflation. However, deflation has some features which go far beyond this credit crisis or the actions taken by the Fed. That there may be limited inflation caused by Fed actions, does not go to deflation. To look at Japan as a basis for deflation assumptions shows a lack of understanding of the differences between the U.S. and Japan. For example, a key difference is demographics and its impact on an economy. The bigger deflation risk to the U.S. is globalization rather than the credit crisis. Globalization means that pricing is based upon the lowest cost producer. Clearly global labor markets are continuing to create downward pressure on U.S. labor prices, i.e.,

[23] Daneshkhu, Scheherazade, and Bertrand Benoit, "Strauss-Kahn welcomes US plan to 'put out fire,'" *Financial Times,* September 29, 2008, p.3.
[24] The S&L crisis lasted for about 4 years, late 1980s to early 1990s and the Swedish crisis lasted about 5 years.

wages. Thus a slowing U.S. economy due to the credit crisis will exacerbate the deflation pressures of globalization.

F. U.S. Debt and the U.S. Global role:

There are many worries coming out of the credit crisis. One of the under-discussed warnings from the crisis is the U.S. debt levels. It was ignoring basic finance principles that brought on the perfect storm of a credit crisis. Can the U.S. debt levels not be seen in this same light? At what point does the deficit spending overwhelm the GDP of the country? At what point do the trade deficits overwhelm the global markets for U.S. currency? At what point do the promises of the government to its people become unfundable? The point is - now is the time to take stock of these issues and the principles being violated and change behavior. This is what has happened to Citigroup, ML, and Goldman. Remember that the capital market standard is self-help and that global finance is a capital market activity. Thus the U.S. needs to begin to address its issues in a self-help fashion.

Failing to heed these warnings on proper financial practices, means that the U.S. role in the global market place will diminish. It is worth noting the number of companies that are adopting a “global company” orientation, claiming to have no home country, particularly not the U.S. As noted above this trend and regulatory trends raise real issues for the character of global commerce going forward. Global commerce character will also influence U.S. commercial practices as well.

G. The world is still round and the sun will rise tomorrow:

While there is a book about the flat earth and there are flat earth societies, the reality is that the world is still round and functions. In Genesis 8:20-21, it is declared that the world will have its seasons and with them its harvests. It is always tempting to say that this crisis is the defining moment in man’s history. While it is a moment, the financial crisis is probably not the defining moment. The seasons and harvests will go on next year and so will many businesses. With some wisdom and God’s providence each effort will have some success.