

## Impact of Global Financial Crisis and the Need for Prudent Financial Management in India.

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The US financial earthquake that had New York as the epicentre that caught everyone unawares, as is believed, did not originate all of a sudden. The problem can be traced back to the US Federal Reserve policy and the problems that the US economy went through at periodic intervals. The relaxations in the Glass Steagall Act in 1970s, the Savings and Loan crisis that the US economy experienced in the 1980s, the tight money policy that resulted in high inflation in early 1980s when Paul Volker was the chairman of the US Fed, the recession of the US economy in 1981 and 1982 and the failure to learn from the lessons of failures of small S&L associations during Ronald Reagan's administration, the liberal credit policy of the US Fed during Allan Greenspan's regime, the substantial growth of the US economy during the Bill Clinton's regime and the dot com bubble in the early 2000s can be cited as the origins of the US financial crisis. The US stock market grew with the credit expansion and investors in the stock market started accumulating the financial wealth that grew with the stock market growth. This type of growth was triggered by the US Fed policy of easy money whenever the US economy showed the signs of recession.

Further, the crisis also owes its origin to the findings of the research in financial literature which tracked the performance of the bond investors. The substantial portion of the literature showed that the investors in junk bonds earned significantly higher returns than the investors in the highly rated debt instruments. This fact also gave courage to the financial institutions to help companies/institutions with low credit rating to raise money by offering higher interest rates than that of the prevailing market rates. Further, the 1990s and 2000s were also the decades of financial innovations. Financial engineering reached its magnificent heights

in the form of innovative financial instruments which combined the features of equity, preference, debt, insurance, money market instruments, securitisations, bank deposits etc. These were also the decades during which the CEO remunerations in the form of incentives reached the heights which were unheard of earlier.

The greed of Wall Street CEOs to earn more bonuses triggered the growth of financial engineering products which helped them to earn substantially higher profits in the short run at the cost of the long term survival of the institutions they were heading. This was partly facilitated by the US corporate policy of contractual appointments and the performance based incentive schemes. The performance is assessed on quarterly, half-yearly and yearly basis. Therefore, the CEOs were under pressure to perform in the short run as their remuneration and the incentive bonuses depended on the profits they earned. Therefore, they also encouraged various innovations in the financial world which shifted the risk and enabled them to show higher profits, at least during the period for which they remained on the rolls of the companies they were heading. The incentive structure, coupled with a weak regulatory system, gives executives enormous incentive to use financial engineering to gain quick profits regardless of long-term costs. In 1996, the financial sector accounted for less than 16 percent of corporate profits. By 2006, the sector accounted for more than 30 percent. Needless to say, much of what financial corporations booked as profits in 2006 was illusory. Their "profits" were fees on transactions that would eventually lead to large losses for their companies. But, these profits provided the basis for large rewards for the big actors in the sector. Everyone in the system thought that they are designing the products which have substantial features to reduce the risk. No one

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paused to think for while whether the risks they were avoiding or shifting still remained within the system. The housing bubble grew up alongside the stock bubble of the mid-1990s. People who had increased their wealth substantially with the extraordinary run-up of stock prices were spending based on this increased wealth. This led to the consumption boom of the late 1990s, with the savings rate falling from 5% in the mid-90s to 2% by 2000. The stock-wealth induced consumption boom led people to buy bigger and/or better homes and even the second house to earn capital gains, since they sought to spend some of their new stock wealth on housing.

The next phase of the housing bubble was the supply-side effect of the dramatic increase in house prices from the mid-1990s onwards. As the US stock market experienced the problem of dot com bubble, it fell substantially and the collapse of the stock bubble helped to feed the US housing bubble. The loss of faith in the stock market caused millions of people to turn to investments in housing as a safe alternative to the stock market. In addition, the economy was very slow in recovering from the 2001 recession, the weakness of the recovery leading the Federal Reserve Board to continue to cut interest rates. Fixed-rate mortgages and other interest rates hit 50-year lows. To further fuel the housing market, Federal Reserve Board Chairman Alan Greenspan suggested that homebuyers were wasting money by buying fixed rate mortgages instead of adjustable rate mortgages (ARMs). This triggered a lot of home buyers going for ARMs instead of fixed rate borrowings. Further, the story did not stop here. As the interest rate fell because of the US Fed's cheap credit policy, there was less incentive for the banks, financial institutions and other organizations to invest in the US treasury securities. As the housing market was perking up, the institutions also thought the housing sector offers higher returns on the investments and therefore, could shift their investments into this sector. Therefore, it was not just the individuals

buying houses that led to increase in house prices but the institutions stepping into this sector in various modes. The foreign banks and institutions did not lag behind in bringing money from different parts of the world to invest in the US housing market. As long as the going was good, every one started earning good returns.

The CEOs were happy that they were getting fat remuneration and incentives, banks were happy that they were able to lend more and earn more, financial institutions were happy that they were able to get the refinance from the banks and were also able to raise debts from the capital market, credit rating agencies were happy that they were getting enough business for them to keep growing, government was happy that its economy was doing well and there were a lot of financial innovations, consumers were happy because their incomes increased as a result of higher growth of the manufacturing and services sector, economists and policy makers were happy to see the economy growing, political parties were happy to know the economy doing well and therefore, claimed credit for what was happening. Everyone in the system was happy. But who was unhappy. There were economists like Dean Baker who, in August 2002, pointed out that there was a housing bubble in the US, basing his analysis on US-government house-price-data from 1953 to 1995 <sup>[1]</sup>. Baker correctly drew the conclusion of the existence of a bubble in the US housing market, and an ensuing crisis was predicted by him and a small handful of other economists, but it proved impossible to convince responsible parties such as the Board of Governors of the Federal Reserve of the need for action.<sup>[2][3]</sup> Baker also correctly predicted that, "The collapse of the housing bubble will also jeopardize the survival of Fannie Mae and Freddie Mac and numerous other financial institutions. Baker's argument was confirmed with the construction of a data series from 1895 to 1995 by the influential Yale economist Robert Shiller which showed that real house prices had been

essentially unchanged over that 100 years.<sup>[4]</sup> Long before the collapse took place, at the end of September 2002,<sup>[5]</sup> It was commonly claimed during the first weeks of the financial crisis that the problem was simply caused by reckless, sub-prime lending. As Baker has pointed out repeatedly, however, the sub-prime mortgages were only part of a far more extensive problem affecting the entire \$20 trillion US housing market: the sub-prime sector was simply the first place that the collapse of the bubble affecting the housing market showed up. Baker notes that if the course of the bubble in the United States had followed the same pattern as in Japan, the housing bubble would have collapsed along with the collapse of the stock bubble in the years 2000-2002.

The bubble began to burst in 2007, as the building boom led to so much over-supply that prices could no longer be supported. Prices nationwide began to head downward, with this process accelerating through the fall of 2007 and into 2008. As prices decline, more homeowners face foreclosure.

The financial crisis would not have been of a serious nature if it had affected only the home owners in the US. Unfortunately, it was not just the home owners who were affected but the host of institutions and individuals which/who were involved in the entire process of assessing the credit worthiness, arranging the finance for the banks and financial institutions, buying the homes for living, buying the homes for speculative purposes, mortgaging the home loans and borrowing from the open market based on the strength of these assets, securitising the mortgage backed assets (MBS), bundling the varieties of MBS into trenches and converting them into marketable securities etc that have been affected. Therefore, it is necessary to understand the causes and consequences of such a financial crisis. This paper addresses these issues. The rest of the paper is organised into six sections. The second section deals with the literature review, the third section deals with the causes and the process

of the crisis, the fourth section deals with the responses to the crisis and the fifth section presents current status of the world economy after the financial crisis started and the sixth section presents the conclusion. This paper in the light of happenings in many parts of the world makes a case for prudent financial management in India to experience recovery and resurgence.

### Review of Literature

As discussed above the financial crisis that is experienced by the world from 2007 to 2009 is the worst in the history. It is also multi-dimensional in nature. Therefore, it is necessary to understand some of the studies that are related to the global financial crisis. The discussion below presents some of the studies that have been conducted in this area.

**Check-Teck Foo (2008)** presents reflections upon the sub-prime derivatives market that had begun to evolve since 1993. Reviewing the situation from then until as late as of October 18, 2007, five key lessons are conceptualized. Where possible, insights on the major lessons to be drawn are rendered through simple diagrams. He says that five major lessons may be drawn from the sub-prime turmoil. For easy citation, these are presented as idioms: "Do not put all bad eggs in one basket," "Excessive demand outbalances risk and return," "Robustness of actions for resolving a crisis," "Banks to stay respectable as banks," "Outcome of innovation, greed, and politics." In conclusion, all these lessons are integrated through an overview. **Foreman (2007)** offers a look at the implications of the sub-prime crisis being experienced in the U.S. for Gulf contractors. Companies working on less profitable projects are suffering from a downturn in activity in relation to the delay or postponement of schemes. According to a developer, although financing is still available, the expensive costs of schemes are causing project delay or

postponement.

**Brown and Davis (2008)** argue that the sub-prime crisis which emanated from the USA in 2007 has had profound effects around the world and is providing new insights into financial inter-linkages and risk management issues. This paper examines the effects of the sub-prime crisis on the Australian financial sector.

**Sebastiano (2007)** assesses the impact of the crisis in the sub-prime mortgage market in the U.S. on Canadian pension funds. While the crisis led to a panic of stock market investors, it caused minimal damage to pension funding levels, according to Paul Forestell, worldwide partner and leader of the Canadian retirement professional group at Mercer Human Resource Consulting. **BRW (2007)** reports that uranium mining company stocks were some of the worst affected on the Australian Securities Exchange in the fallout from the sub-prime mortgage crisis in the U.S. This is because the sub-prime crisis in the U.S. occurred around the same time as the first fall in the uranium spot price for several years.

**Salzman (2008)** reflects on the effect of sub-prime crisis to the economy of Great Britain. She cites some of the economic effect caused by sub-prime crisis such as business foreclosures and layoffs. She illustrates that the personal debt in the country estimated almost £1.4 trillion and household debt of £7 trillion in which both are associated of the country's gross domestic product (GDP). She suggests that communication is an effective tool in resolving critical business crisis.

**Davis and Karim (2008)** say that one of the features of the sub-prime crisis that began in August 2007 was its unexpected nature. They say that it came as a surprise not only to most financial market participants but also in some degree to the policy community.

**DeCovny (2007)** talks about the impact of the sub-prime mortgage debacle. According to Alan Greenspan he did not recognize until it was too late that usually low interest rates would trigger the current global credit crisis and that he underestimated the impact of the

sub-prime mortgages. Stan O' Neal and Charles Prince have been dismissed from their top jobs at Merrill Lynch and Citigroup respectively. It highlights an article which illustrates that sub-prime is a technology story.

**Foster (2007)** presents an interview with James Gilligan, board vice chairman of the Association of Financial Professionals and corporate treasury manager at Great Plains Energy. When asked what treasury issues the energy industry faces, he refers to the availability of financing for power plants which has been adversely affected by the subprime mortgage crisis. He says an uncertain interest rate and financing environment will be the biggest challenge in liquidity management in 2008. He believes advanced thinking and planning are needed to meet the challenge.

**Connolly (2008)** reports on the impact of sub-prime mortgage on the sale of life insurance in the U.S. According to the report entitled "The Sub-prime Mortgage Crisis, A Crisis of Structured Finance and Its Effects on Insurers," one of the potential impacts of the crisis is that insurance firms will see a drop in demand for life insurance and annuities. The reason for the drop in insurance sale is that households that are in financial difficulty are less likely to buy life insurance. **Harris (2007)** in an article reports on the sub-prime mortgage crisis in Great Britain. It is said that the U.S. is the responsible for the sub-prime crisis that affects the nation's economy. It also discusses that due to the crisis, there are consequences to be realized such as binge borrowing by consumers, poor lending and bust in the housing market. However, interest rates in Great Britain increases since 2003 in an attempt to discourage reckless borrowing to contain the long-term threat of inflation. **Grogan (2007) in an** article presents forecasts on the construction industry in the U.S. Construction inflation in 2008 is expected to be reeled in another notch, according to industry forecasts. Engineering News Record (ENR) predicts that falling material prices will dampen annual escalation measured by its Building Cost Index. But as



the main cost driver shifts from the materials to the labor markets, labor-intensive cost indexes such as ENR's Construction Cost Index will get a boost. **Coulson (2007)** discusses the condition of different sub-prime mortgage market from various parts of the world. The sub-prime mortgage crisis in the U.S. has not yet ended because the housing market is getting worse and could trigger negative wealth effect. Meanwhile, South Africa geared to combat inflation and hence with a continuing propensity.

**Lachal (2008)** examines the impact of the sub-prime mortgage crisis in the U.S. on Australia. It is explained that the fallout wave occurred when the sub-prime crisis went beyond the loan originators. Securitization agreements permitted several mortgage lenders to transfer the rewards and risks of sub-prime assets to investors. The decline in investment portfolios' market value caused a drastic drop in the values of stocks in financial institutions. **Jonker (2008)** offers information about sub-prime crises in the U.S. He says that the term, sub-prime, is the name given to mortgages extended to individuals who do not qualify for prime credit, or those persons who have higher likelihood of default. For the past several years, banks in the country have extended myriads of sub-prime mortgage loans, thus increasing their risk of default. In the middle of 2007, the sub-prime shares started failing and their prices were marked down. **Cavenagh (2007)** reports that the credit crisis sparked by the decline in the U.S. sub-prime mortgage market has had a fast and serious effect on international mergers and acquisitions. The sources of inexpensive debt for sponsors for leveraged buyouts have disappeared. Also, investment banks have been trying to get rid of the short-term loans they have underwritten. **Gill (2007)** reports on the impact of the sub-prime loan crisis in the U.S. on the Philippine stock market. It is inferred that the crisis has exposed the weaknesses of the stock market's structure in the country as international investors hurried to harvest profits while valuations were still

high. The unfolding sub-prime related losses by hedge funds and banks late in July 2007 staggered the world's markets and caused the Philippines Stock Exchange Composite Index (PSEi) plunged 15.8% to 3,200, from 3,800.

**Reinhart and Rogoff (2008)** seek historical parallels to the 2007 crisis involving sub-prime lending in the U.S. Specifically, the authors examine data for economic crises extending back to 1800 in an effort to determine what kinds of circumstances predate crises, and which of these the U.S. experienced prior to 2007. Several commonalities emerge including bubble-like growth in asset prices, accelerated debt accumulation, and a widening current accounts deficit. The authors comment on factors that might mitigate or exacerbate the impact of faulty sub-prime lending in the U.S. **Martin (2008)** reports on the losses expected to be reported by several major regional banks in the Middle East for 2007 because of fear over their exposure to assets related to the U.S. sub-prime mortgage crisis. Ratings agencies Fitch and Moody's Investors Service name financial institutions including Gulf International Bank (GIB), Arab Banking Corp. and Bank of Bahrain & Kuwait as having some exposure to the assets, which have dramatically decreased in value in 2007. Fitch also names Gulf Investment Corp. as being at risk. **Rötheli and Berger (2008)** focus on trends witnessed by Switzerland's real estate market during the sub-prime crisis. Despite the sub-prime crisis, the value of Swiss real estate has risen and is experiencing positive trends. Both demand and supply of residential houses are in good shape. Supply is driven by the large number of houses under construction. The Swiss residential rental price index, established by the Federal Office for Statistics, shows an increase of 2.3% for 2007. The Swiss commercial real estate market is experiencing positive trends after its previous years of overcapacity. Indeed, Swiss property law has not undergone any major revision since its enactment, its system proving to be efficient and clear in practice.

**Balls** (2008) comments on the sub-prime credit crisis in New Zealand. According to the author, businesses need to understand the inherent risks associated with most finance companies. He compares the credit crisis in the country with the U.S. sub-prime mortgage crisis. He believes there will be more failures before the sector of the finance market comes to rest. **Banyard, (2008)** reflects on the crisis that has afflicted the U.S. sub-prime mortgage market which is expected to happen in Great Britain in due time. He argues that congress should be discussing a nationwide rescue plan and debate on tighter regulations, to address the problem. An overview of the situation faced by consumers on housing rates is offered. He believes a stronger pound and higher borrowing cost would result to the suffering of the industry and rising unemployment.

**Davidson** (2008) reflects on the financial crisis which resulted from the high-risk loans or sub-prime. He stresses that the cause of crisis is that many investors undervalued the risk of financial instruments such as loans and securities. He addresses the lack of knowledge of the investors or the borrowers on the terms of their mortgages.

**Chambers** (2007) in an article reports that the credit card asset-backed security (ABS) has so far escaped contamination by sub-prime. He reports that banks have revealed more losses, largely a consequence of the rating agencies announcing fresh downgrades of asset-backed bonds and ABS collateralized debt obligations (CDO), and from further deterioration in the market value of those securities. **Harris** (2007) in an article reports on the impacts of the U.S. sub-prime mortgage-related global credit crunch on investment company in South Africa. **Schmerken (2007)** reveals that the credit crisis in the sub-prime mortgage have not only impacted hedge funds with exposure to collateralized debt obligations (CDOs) but are spreading to other asset classes and is threatening the global markets. **Gorton (2007)** discusses his research on banks and

banking, particularly on referring to the sub-prime crisis that affects the sector, and the banks significant role in monitoring. It also tackles on the issue of banking panics and offers the challenges faced by bank regulators. He also shows how banks compete in lending and how they set their credit standards. **Roy** (2008) in an article reports on the status of the asset-backed securities (ABS) and mortgage-backed securities (MBS) market in Argentina in 2008.

The discussion above shows that the issues associated with the financial crisis are multi-dimensional. Therefore, it requires the understanding of the various issues and problems associated with the crisis. The discussion to follow focuses on these issues.

### **The causes and the process involved in the Financial Crisis**

There were several reasons behind the financial crisis. Some of these are discussed below.

### **The Replacement of Glass Steagall Act by Gramm-Leach-Bliley Act:**

Glass Steagall Act (GSA) was enacted by the US senate in the year 1933 in the wake of a large bank and financial institutions' failure. This Act contained stringent restrictions prohibiting the commercial banks which depended on the depositors' money to enter into speculative activities. The Act virtually erected a wall between the usually banking activities like lending and borrowing and high profile investment bank and securities trading. GSA allowed only ten percent of commercial banks' total income to accrue from securities related activities. The Act, enacted during the great depression period, did well to prevent the banks from venturing into high risk profile businesses till 1960s. However, the nature of this Act got changed in 1970s when the world went through two oil crisis in 1973 and 1978. In this decade some amendments were allowed to this Act which enabled banks to enter

into activities which were hitherto prohibited by the Act. The high profile and high profit investment activities lured the commercial banks to enter into these areas and there was a hectic lobbying by these banks to change the GSA and allow banks to enter into investment and securities trading businesses. Although there were oppositions in the US senate for amending the GSA, the US senate passed the legislation to withdraw GSA and replace it by Gramm-Leach-Bliley Act (GLBA) in the year 1999. GLBA removed the restrictions that were contained in the GSA against affiliations between commercial banks and investment banks. This happened when Bill Clinton was the president of the US and its economy was registering the robust growth rate. Normally when the profits are high and the corporates are registering high profits, the economy would be doing well and it is at this time, that the policy makers lose sight of the consequences of relaxations in the legislations. The US senate was no exception to this when the bill was passed by majority votes. Although there were pleas by some of the US senators to retain the GSA, these were ignored. As a consequence the GLBA was passed by virtue of which banks were allowed to enter into high profile investment and security trading business. This Act favoured the banks' CEOs as they turned out high profits for the banks and they also pocketed high incentives. However, the banks went too far in their activities and took high risks for themselves and these came to light only when the credit crisis started with the collapse of a large number of banks, insurance companies and financial institutions.

### **Sub-prime Mortgage Lending:**

The US policy of encouraging its citizens to own their houses was a good policy as it made the lives of the individuals more secure. No individual will have enough savings to purchase a house. It is a usual practice for people to borrow from banks and FIs, purchase the houses and repay the installments at

monthly intervals. There is no problem with this as it is practiced world wide. As people started making investments in the houses, they saw the prices in this sector increasing disproportionately compared to the other sectors. Therefore, home owners felt happy, as their asset values appreciated. This gave incentive for more and more people to purchase houses and mortgage them to the banks and FIs which had given the loans. The story assumed much rosier picture as the house prices started increasing and the interest rates were heading southwards. This double advantage encouraged some people to go for their second houses, this time as an asset from which they make capital gains. How did they calculate the repayment for the second house. It was simple, through the rental incomes or through sale of houses when the prices rose sufficiently. This process has no problems as long as the people have enough assets to back the loan repayments. However, in several of the cases this was not so. This trend was encouraged by the bank lending policies.

Usually commercial banks cannot lend to certain category of borrowers if their credit worthiness is doubtful. However, banks were vying for more business in the housing sector which saw dramatic returns. Therefore, when banks could not directly lend to certain categories of borrowers because of their low credit worthiness, they lent the loans to FIs which, in turn, lent this amount at higher interest rates to low credit worthy individuals and institutions. The latter category of loans is called sub-prime loans and lending to these categories is called sub-prime lending. When the defaults started, the first category to default was the sub-prime category. From the sub-prime category, the defaults started spreading to the prime category loans also.

### **Housing Bubble:**

The housing prices in the US market started increasing from mid-1990s and the rate of price rise

was more pronounced in decade of 2000. When the housing prices started increasing, the American citizens started making investments in the houses to fulfill the great American dream of owning a house. The personal equity of many of US citizens started increasing with rise in house prices. Therefore, some of them went in for second houses also. At the same time, institutional investors also started making investment in the housing sector as it was giving them good returns. The institutions from across the world also joined this bandwagon of more investments in the housing sector. The investors did not take adequate care to assess the risk involved when the prices reverse. A continuous increase in the house prices had made the people and institutions to believe that the real estate sector will not see the reversal effect. However, when the housing prices started declining in the US, the personal equity of home owners declined and the income levels either remained constant or saw a decline. The bubble then burst to adversely affect the home owners and this saw a large number of institutions and citizens putting up the houses for sale. By then there were no takers. The supply exceeded the demand in the housing sector and therefore, the housing prices declined from 2006 onwards giving rise to real crisis in the year 2007.

#### **The US Federal Reserve Interest Rate Policy:**

The Fed interest rate policy also played a significant role in the housing crisis. Historically, the US Fed has used the interest rate policy to steer the US economy through different phases of business cycles. It successfully used the interest rate policy to spur the economic growth whenever, the US economy peeped into recession. Encouraged by the success of the Fed policy of interest rates under the legendary chairmanship of Alan Greenspan, the Fed lowered the interest rates whenever, the US economy showed the signs of recession. When the US economy was in trouble in 2000 and 2001 because of the dot com

bubble and the terrorist attack, the Fed followed the liberal credit policy and went on to decrease the Fed rate continuously. This made the housing loans cheaper and also the equated monthly installments (EMIs) of the borrowers lower. This encouraged the people to borrow more and more and invest in the booming housing sector. Added to this, the banks and FIs also sweetened the housing loan offers by using the adjustable rate mortgages (ARMs) which had the initial payments lower and later payments increasing gradually. The misinformed borrowers borrowed more and more only to learn later when the installments rose that they made a miscalculation. This was further worsened when the US Fed started increasing its interest rates in the year 2006. The declining house prices, increased interest rates, increased installments and constant incomes made the borrowers to default and sell the houses in distress. Some of the home owners started walking away from their homes as they could not repay the installments. They also found that this was better policy than suffering the problem of adjusting the money to meet the installment payments.

#### **Collateralised Debt Obligations (CDOs):**

Collateralised Debt Obligations (CDOs) are the new financial instruments which the banks and financial institutions created to make their MBS marketable. The banks and FIs combined several MBS and other assets, pooled them together, bundled them into different categories ranging from the safest to risky asset classes. These classes of assets were marketed by the banks and FIs to raise loans/equities from the capital markets. The CDOs offer layered financing, with bonds of higher quality having first claim to payments and bonds of lower quality having the last claim to payments. The banks and FIs succeeded in getting the required ratings from the rating agencies and issue bonds/loan notes in the market to raise the loans. It was only when the defaults started in the housing sector that the holders of these securities were



caught unawares about the quality of these guarantees and the MBS.

### **Credit Default Swaps (CDSs):**

This period of late 1990s saw an enormous proliferation of credit default swaps (CDSs). CDSs are effectively insurance against bond defaults that were issued by the major banks. They provided security to lenders against the risk of default on assets of questionable quality. CDSs were issued against MBS and various derivative instruments, which facilitated the sale of MBSs of questionable quality. While CDSs just came into existence in the late 90s, their use exploded during the peak years of the housing bubble. The Bank of International Settlements estimated the total notional value of CDSs at more than \$45 trillion in June of 2007. Since their issuance was largely unregulated, banks leveraged themselves very heavily in issuing CDSs that had notional values that could be more than a hundred times their capital. The proliferation of the CDSs brought insurance companies into the sphere of loans and asset financing. The moment the defaults started, every one in the system was affected and so also the insurance companies.

### **The Role of Credit Rating Agencies (CRAs):**

The process of raising bonds from the capital markets require the credit rating from accredited rating agencies like the S&P and Moody's Investor Services at the international level, and agencies like CRISIL and ICRA in India. The ratings assigned by these agencies play a significant role in raising financing and also in fixing the interest rates on these instruments. The highly rated instruments will have relatively low interest rates and low rated instruments will have higher interest rates. The ratings also conveys how safe the principal and interest is. The rating are supposed to take all the factors into consideration while assigning the rating to the instruments and the banks and FIs involved in raising the finance. In the height of the housing mortgage crisis, it turned out that the rating

agencies neglected many of the factors, including the possible decline in the house prices and changes in the interest rates, while assigning ratings. This is partly because the rating agencies are paid by the same banks and FIs whose credit worthiness they are rating. In their enthusiasm to retain business and to grow by getting new business contracts, rating agencies seem to have overlooked the very factors which they need to assess while rating debt instruments.

### **CEO Remunerations, Incentives and Bonuses (CRIBs):**

The amendments to GSA was partly facilitated by the lobby groups lead by the CEOs of Wall Street firms. The remuneration, incentives and bonuses that the CEOs get is tagged to the profits that the companies make in a year. Therefore, the CEOs are under pressure to perform. This encouraged them to resort to methods that would facilitate them to earn short term profits at the cost of long term sustainability of such profits. Wall Street CEOs have been engaged in this game for a long time and the research literature has classified the behaviour of the CEOs as opportunistic behaviour hypothesis. In many of the firms the decisions were taken that resulted in huge short term profits and CEO remuneration which ultimately proved a very costly mistake. The world class automobile companies like General Motors, Ford, Daimler Chrysler in the US also experienced these problems. The worst affected were the investment houses/banks like the Merrill Lynch, Fannie Mae, Freddie Mac, Goldman Sachs, American International Group, Washington Mutual, Citigroup, Countrywide Financial, IndyMac Bank, Lehman Brothers, Bank of America, Northern Rock and Bear Stearns etc. The picture below shows the headquarters of one of the world's biggest investment house that collapsed under its own weight. The New York City headquarters of Lehman Brothers which filed for bankruptcy under the Chapter 11 of Bankruptcy Act.

### **The investment Glut in the housing market:**

Every investor would like to maximise the returns on the investments. When the US Fed continuously decreased the Fed rates from 2001 onwards, the investment in one of the biggest avenues in the US, the US treasury bills, became less attractive. Therefore, the institutions started looking for investments with higher returns. The US housing sector was one of the sectors of the economy which was growing faster than any other sectors of the economy. This encouraged the flow of institutional money from T-bill market to the real estate sector. This resulted in further rise in the prices in the US real estate sector. The glut in this market also pushed up the prices and supply side economy also started to grow by constructing and supplying more and more houses. The going was good as long as the prices were moving up. When the prices started showing reversal owing to several reasons, the investment in this sector became worthless and gave rise to credit crunch. The institutions which had invested huge amount of money either directly or through subscriptions to the debt instruments of this sector suffered huge losses when prices started showing reversal effect. We have seen the world's biggest financial institutions suffering their worst fate after the great depression of 1930s.

### **Policy Responses from Across the World**

The responses to the US financial crisis is one of the biggest responses that the world has ever seen. For the first time we saw the governments across the world coming up with fiscal stimulus packages to bail their economies and the world economy out of the crisis. A detailed discussion of the entire policy response is not possible in a single paper. Therefore, only a broad policy responses are indicated below.

#### **a. The US Response**

The US responded by resorting to multiple measures. The Federal Reserve opened a line of credit

to all the distressed banks and FIs, took measures to nationalise the institutions which could not be bailed out, encouraged the healthier institutions to take over the distressed banks and FIs, gave financial bail out packages to companies, and called for government intervention in the companies to bring them to the healthier levels. The US Senate passed bail out package setting aside \$700 billion to deal with the crisis. It also injected billions of dollars into troubled companies, both in financial sector and manufacturing sector. For the first time since the Second World War, the US had injected such a huge amount of money into the institutions to bring the economy back to the growth stage from the brink of collapse. Although the US senate discussed and debated at length the problems of moral hazard to bail out the failed institutions, it passed the Economic Stimulus Act to help the economy in one its worst historical crisis.

#### **b. The European Union Responses:**

Initially some of the European countries like the Italy felt that this is passing phase and no policy response was required. Soon they realised that they made wrong calculations and responded by fiscal stimulus packages, and bail out packages for the institutions. The governments stepped up stimulus measures and the European Central Bank injected billions of Euros into markets to encourage lending. The EU nations acted in unison to bail the economy out of the crisis.

#### **c. The Chinese Responses:**

As China is one of the biggest and high growth economies, its growth rate suffered as a result of the curtailment of the imports by the US and the EU countries. Therefore, China has set aside huge amount of money to deal with the crisis and injected huge money into the economy. It has set aside billions of dollars to give fiscal incentives.

#### d. The Indian Response:

Both the RBI and the Government of India have responded to the crisis by lowering the interest rate, CRR, SLR and setting money as fiscal incentive. The amount of money that is released into the economy after the crisis started is about Rs.5,60,000 crores. India has also set aside money to bail out any institutions if it becomes necessary. The ICICI Bank which experienced the crisis when the investors lined up to withdraw money from the ATMs was bailed out by the RBI as it was felt that it was more a crisis of confidence than a real problem.

#### e. G-20 Group of Major Economies' Responses:

The group met recently at Scotland and pledged to work together to deal with the worst financial crisis. They have also pledged to continue the fiscal stimulus packages until the world economy enters the recovery path. The British Prime Minister Gordon Brown told a meeting of G-20 ministers in his home region in Scotland that the public must be protected from the failure of the banking system in future.<sup>[10]</sup> Therefore, it is hoped that the stimulus package will not end until a clear signal of recovery of the world economy is in sight.

#### The Status of the US Economy:

The US economy has seen the worst time after the great depression. The fiscal incentives and bail out packages have saved many institutions and banks. However, the US economy is still not out of the crisis. The US economy has responded to the fiscal stimulus package by growing faster than expected but not fast enough to improve the employment rate. The US manufacturing and home sales data have shown positive growth rates and given signal of recovery in the economy. However, the economy as a whole is still experiencing the problem. Further, the US president, Barak Obama, is being criticised by Paul Krugman, the 2008 noble laureate in Economics, of

not taking bold and quick measures to steer the economy to the growth path. While the estimates of the required fiscal stimulus package showed that an amount of \$1.2 trillion is needed to put the economy on the growth path, the US president did not even take this requirement to the US senate fearing that it may not get the senate nod.<sup>[6]</sup> The most recent data on the US economy shows that its job losses is the highest in the 26 years. The unemployment rate has reached 10.2%.

#### The Status of the European Economy:

The Euro zone economy has emerged from the worst recession since the Second World War as the exports from Germany and France have surged. The GDP in the 16 nations using Euro as the currency rose 0.4% in the third quarter when compared to the decline of 0.2% in the second quarter of the year 2009. The European Union's statistics office in Luxembourg said on November 13, 2009 that the median of 34 estimates in the Bloomberg survey of economists had shown that the economy will grow by 0.5%. The following table shows the growth rates of third quarter relative to the second quarter.

The GDP growth rate for September 2009 quarter (in percentages) relative to June 2009.		
The countries/Zone	Q3	Q2
16 EU Nations	0.4	-0.2
Germany	0.7	0.4
France	0.3	0.3
Italy	0.6	-0.5
The UK	-0.4	-0.6

Source: EuroZone out of the hole: EU GDP up 0.4% in Q3: Germany, France, Italy Lead Growth Charts, The Economic Times, November 14, 2009, p1. The given figures are in percentages.

The table shows that Euro zone has clocked the positive growth rates and the recovery is on the way. The move towards recovery is led by Germany, France and Italy. While the confidence in the economic outlook for EU zone is at 13-month high, rising unemployment, expiration of the stimulus package, and surging Euro are threatening to undermine the recovery process.

**The Status of the Chinese Economy:**

China has been one of the biggest beneficiaries of the world economic growth. Because of its increased manufacturing base, it has been able to export a large portion of its manufactured goods to the American, Asian and European continents. While this country has been acclaimed as the world’s manufacturing hub, India has been acclaimed as the world’s back office hub. When the world economy went into tail spin, China responded by huge fiscal incentives and it has seen the incentives working for its benefit. The growth rates have bounced back and it is clocking the highest growth rate in the world. However, there have been criticisms against the China’s central bank policy of continuously pegging Yuan against the US dollar. While the US dollar has depreciated in the last few years against all the major currencies of the world, the China’s central bank has continuously pegged its exchange rate against a prominent declining currency. This amounts to continuous devaluation of Yuan against the major currencies of the world. The problem with this is that China has been keeping its export competitiveness much against the adverse impact it has been having on major countries of the world. The worst thing is that China has a huge trade surplus with the US and has also made huge investment of about \$2.1 trillion in the foreign assets, most of it in US dollars. In spite of this comfortable position, it is keeping its currency pegged against the weakening dollar. This policy has been adversely affecting the developing as well as developed countries.

**The Status of the Indian Economy:**

Indian economy has shown the signs of recovery as indicated by the second quarter results of the listed companies and the index of industrial production (IIP). The IIP grew by 9.1% in September 2009 compared to 6.03 percent in the same month last year, 5.6% in April to August 2009 and 4.76% one year ago. The capital goods output grew 12.8% on a year-on-year basis in September 2009 compared to 8.3% in August and 2% in July 2009. Consumer durables grew by 22.2% in September 2009. Therefore, manufacturing sector has shown a robust growth relative to the growth rates in the previous year. The data from the airlines show that domestic airlines have carried 27% more passengers in October 2009 which indicates that the business sentiment is improving.

Some of the sectors have clocked good growth rates. The table below shows the comparative growth rates of mining, manufacturing and electricity.

Sectors of the Economy	Sept 2009	Sept 2008	April-Sept 2009	April-Sept 2009
Mining	8.6	5.8	8.2	3.5
Manufacturing	9.3	6.2	6.3	5.3
Electricity	7.9	4.4	6.8	2.5

Source: Capital Goods power industrial growth in Sept, The Hindu Business Line Nov 13, 2009, p1. The given figures are in percentages.

The table above shows that mining, manufacturing, and electricity have grown at a higher rate in September 2009 and in April-September 2009 relative to the same month and period last year. Therefore, the latest available data from the Central Statistical Organisation (CSO) clearly indicates that the fiscal incentives have worked and the Indian economy has been recovering faster than expected. The stock market in India has been surging and the index has almost doubled since the 2008 lows. The leading indices, Sensex and Nifty, closed at 16,848.8 and



4998.9, respectively, on the closing day of November 13, 2009. This seems to show stock market as a leading indicator of the economic recovery. However, the concern is whether this growth would be sustained after the fiscal incentives are withdrawn. It may be a premature judgment and needs to be confirmed for continuity in the subsequent months also.

There are also concerns that there is liquidity overhang and it is time to slowly withdraw the fiscal stimulus before it is too late to tackle the increasing inflation in food and other articles. Therefore, the RBI is worried about the impact of inflation on the future growth and the consequences of rising the interest rates, CRR and SLR. This task is not going to be an easy one for the RBI to tackle. The Ministry of Finance (MOF) has given a clear indication that the fiscal stimulus package will not be withdrawn until it is convinced that the economy has overcome all the troubles of the global financial crisis.<sup>[21]</sup> In consonance with this policy of the MOF, the latest policy of the RBI has raised the SLR by 100 basis points and has left the key rates untouched; but this cannot continue for ever. The mid-year review of the credit policy shows that inflation is expected to clock 6.5% by March 2010. RBI has the delicate work of balancing the growth and inflation.

The trend indicates that although there is recovery, there are sectors of the economy which have not showed definite signs of improvement. For example, the garment exports have dropped by 7.5% in September 2009 after a tiny recovery of 1.9% in August 2009.<sup>[22]</sup> The companies in the commodity sector, airlines, steel, chemicals, shipping, paper, petrochemicals showed that the growth is still far away as indicated by the sales growth rates of listed companies in India for September 2009 quarter. The following table shows the sales growth rates of listed companies in these sectors.

Sales growth rate for September 2009 quarter (in percentages) relative to September 2008 and June 2009.		
Sectors of the Economy	Over Sept 2008	Over June 2009
Shipping	-34.3	-7.6
Airlines	-23.8	-7.9
Mining/Minerals	-18.9	-14.3
Steel	-17.0	7.6
Trading	-13.1	5.8
Mid-Tier IT	-12.3	3.2
Chemicals	-10.7	4.8
Oil Exploration	-10.2	1.7
Paper	-8.9	3.2
Petrochemicals	-7.9	-2.7

Source: Recession pains not over for 16 of 65 sectors surveyed: Commodity companies, global trade-reliant players continue to suffer, The Hindu Business Line, Nov 15, 2009, p1).

It is clear from the table that the shipping, airlines, mining, steel, trading, mid-tier IT, chemicals and oil exploration companies have been the worst hit and the decline in their sales is double digit relative to the same period last year. These are struggling to get back to the revenues of the last fiscal. The decline in commodity prices has hit the realisations of the commodity companies. However, the silver lining has been the better volumes that have helped the companies to clock positive growth rates. An analysis of the sales growth rates of 3370 listed companies classified under 65 sectors by the Business Line showed that 16 sectors of the economy are still struggling to overcome the recession. These 16 sectors accounted for about 20 percent of the sales of the companies surveyed. For companies like Sesa Goa, Steel Authority of India Limited, Tata Steel, Jet Airways, Mastek, Great Easter Shipping, and many others the recession still lingers large.

The agriculture and allied activities have fallen back in 2009-10 compared to 2008-09. The estimates

of Agriculture Ministry and National Economic Advisory Council (NEAC) are based on different perceptions and have placed the production at 233 million tons and 221 million tons. There will be a negative contribution of 1.5% by this sector to the GDP growth rates compared to last year. However, the overall growth of the Indian economy is good in the context of the projected contraction of the world economy in the current fiscal.<sup>[8]</sup>

The fiscal incentives and credit policies can only be transitory measures to bring the economy back to the growth path. The real recovery and growth has to be registered by sustained demand for the goods and services domestically and from abroad. Therefore, we need to make the Indian economy grow at robust rates without the fiscal incentives. This is the real challenge ahead for the policy makers in India.

The discussion above has shown that the world economy is slowly limping back to the growth path. However, there are concerns in many sectors of the economy.

### Conclusion

The world went through the biggest economic crisis in its history, initially feared to worst and much more long lasting than that of Great Depression of early 1930s. The current recession was caused by the collapse of banks and financial institutions of much larger and having wider geographic reach than those in 1930s. The worst fear of the financial crisis affecting the real economy also came true when the GDP of all the countries of the world fell. The developed economies clocked the negative growth rates and Brazil, India, China and Russia clocked relatively good growth rates. The world economy as a whole went through unprecedented crisis which most unanticipated. Although some of the economists in the US had warned about the impending housing bubble, they had not predicted the fall of monolithic banks and investment houses and manufacturing companies. Thus the world

had experienced the financial and economic crisis which saw the collapse of the most profitable banks, insurance companies, mortgage guarantors and investment houses. No country in the world, including those that are relatively insulated from the world economy, was spared by this crisis.

The countries of the world responded both politically and economically in unison. For the first time in the economic and political history we have seen the governments and central banks acting together to bail the world economy out of the crisis. These efforts of the governments and central banks would go into the history as the best co-ordinated efforts to spur the economic growth. We have seen that these co-ordinated efforts have yielded results much faster than anticipated. It was initially feared that the recession may last longer. However, the world economy is now showing the growth path although there are concerns about the sustainability of the growth once the fiscal and monetary stimulus packages are withdrawn. The happenings in the economies of different countries show that the best efforts can steer the economy through the worst crisis.

We have seen that ever since this crisis showed signs of global melt down, the US Fed recognised it and took measures necessary to prevent the money supply from falling and to inject as much liquidity as required to prevent a Japanese-style debt/deflation spiral from developing. The crisis has been handled effectively, compared to the magnitude of its reach, and the world leaders should get credit for this. The lax in regulations can cause the worst damage to not only the nation's economy but also the world economy is demonstrated by the regulatory relaxations of laws governing the bank in the US. We have also seen the same developed economies which criticised the developing countries for bailing out the institutions and companies, resorting to the same measures as the developing economies when their economies are in distress. The world has learnt a lesson from the

products of financial engineering that are at the centre stage of the present global financial melt down. Therefore, there is greater need today, than ever before, to take a look at the systemic risks, regulatory mechanisms, functioning of the banks and financial institutions and the central banks.

This article has focussed on the causes, responses to the financial crisis and the current status of the world economies. The varieties of factors like the lax in regulations, consumption led economy, excessive speculation, financial engineering that developed products like securitised and collateralised debts and credit default swaps are the causes of the crisis. The responses to the crisis by the governments and central banks have been effective and have steered the world economy through the worst crisis in the history. However, there is a growing complacency that the recovery is on the way and therefore, we can roll back on the measures taken earlier. This can be dangerous until the economies are put on the clear growth trajectory. We shall hope that both the governments and central banks will assess the trends clearly before acting on reversal path of fiscal incentives. The world hopes that the developed economies will learn lessons and enact legislation to prevent excessive speculation and bubble economies/sectors. The developing economies, especially China, need to respond positively to the developments in the economies of different countries by setting its exchange rate right. Apart from other measures, India must go in for measures of prudent financial management to experience speedy recovery from recession and resurgence subsequently.

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