A recession is a decline in a country's Gross Domestic Product (GDP) growth for two or more consecutive quarters of a year. An economy, which grows over a period of time, tends to slow down the growth as a part of the normal economic cycle. An economy typically expands for 6-10 years and tends to go into a recession for about six months to 2 years. A recession normally takes place when consumers lose confidence in the growth of the economy and spend less. This leads to a decreased demand for goods and services, which in turn leads to a decrease in production, lay-offs and a sharp rise in unemployment. Investors spend less, as they fear stocks values will fall and thus stock markets fall on negative sentiment. Risk aversion, deleveraging and frozen money markets and reduced investor interest adversely affect capital and financial flows, import-export and overall GDP of an economy. This is exactly what happened in US and as a result of contagion effect, spread all over the world due to high integration in the global economy.

Wider implications of a recession documents simultaneous decline in employment, profit and investment, and an upscale inflation. A severe economic recession is a devastating breakdown of an economy. According to IMF, a Global
recession is to occurring when the global growth rate moves below 3%. According to Merry Linch (Global Investment Bank) “Negative sign in economic development in two or more consecutive quarter of the year is called recession”. A recession is characterised by lower output, lower investment, higher unemployment, increased PSNCRl and lower Inflation’.

3.1 HISTORICAL PERSPECTIVE OF U.S. RECESSION

The global financial crisis of 2007 has cast its long shadow on the economic fortunes of many countries, resulting in what has often been called the ‘Great Recession’. The old proverbial truth that the rest of the world sneezes when the US catches a cold appeared to be vindicated, as systemically important economies in the European Union and Japan went collectively into recession by mid-2008. Overall, 2009 was the first year since World War II that the world was in recession, a calamitous turn around on the boom years of 2002-2007. The crisis came largely as a surprise to many policymakers, multilateral agencies, academics and investors.

When President Bush took over from President Clinton in 2001, the budget had a surplus of $230 billion, the largest in US history that reduced the national debt level to about $5 trillion. But terrorist attack on 9/11 provided Bush a pretext to invade Afghanistan in October of 2001, and Iraq in March of 2003. These wars derailed the economy. Haunted by the Vietnam War and its aftermath, it was
necessary for Bush to avoid public anger and disenchantment against these new wars. The best way, they thought, was to keep the money supply spigot fully open to keep people happy and contained, while the huge cost of the war continued to drain the treasury. This created an economic bubble which ultimately burst with devastating impact, not only in the US but worldwide. (Dr. Nakadar A. S., 2009)

According to Boston University historian, Bacevich Andrew (2008), President Bush encouraged financial irresponsibility. The individual tax cuts and the reduction in capital gains tax was the first step in this direction. This provided extra money for people to spend. But when this extra money started to run out, with the hint of an economic slowdown, Allan Greenspan, Chairman of the Federal Reserve began the second phase of money supply. He sufficiently lowered the prime lending interest rates. This encouraged people to refinance their homes, and they did that, to the hilt, because of lower interest rates and because of liberal lending policies. This fueled the credit binge further.

In the third phase, banks were encouraged to give mortgages to less creditworthy people. The mortgage companies targeted people who couldn’t afford a down payment and had poor credit, so called subprime borrowers. These subprime mortgages later came to be known as toxic mortgages, as they affected the overall financial health of the institutions that held them. By 2008, these toxic mortgages had affected all the major investment firms. The largest
financial institution and the largest lender in the world created by the government to make loans on affordable houses, Freddie Mac and Fannie Mae, with about $15 trillion asset cracked, because it held over $5 trillion in toxic mortgages. In the investment banking system, they are all connected, it is a huge web, and everyone is plugged into other. Thus its failure created a domino effect. Other giant firms like AIG and Bear & Sterns, apart from involvement in toxic mortgages, had also committed *credit default swaps*, meaning the firm insured payment on mortgage default to other banks who bought the bundle of mortgages from them. The steps to financial crisis during the U.S. sub-prime meltdown can be seen at a glance in the table 3.1:

**Table 3.1**

**THE STEPS TO FINANCIAL CRISIS DURING THE U.S. SUB-PRIME MELTDOWN**

<table>
<thead>
<tr>
<th>STEPS</th>
<th>RISKS</th>
</tr>
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</table>
| 1. Household borrows from the originator | • Asymmetric information – broker did not fully know the credit worthiness of the borrower.  
• Lax lending standards further deteriorated in 2004 and 2005 (‘teaser’ interest rates, no equity loans, no documents).  
• In some states of the US, the mortgage contract is ‘without recourse to the borrower’ – i.e. households can walk away from the mortgage. |
| 2. Originator sells the mortgage to another financial institution | • Perverse incentives – Since the risk was sold on, originators had the incentive sell as many mortgages as possible (the ‘originate-to-distribute’ model) |
| 3. Financial institutions issue mortgage-backed securities (MBS) | • MBS issuers (particularly the government-sponsored enterprises, Fannie Mae and Freddie Mac) transferred thousands of loans to structured investment vehicles (SIVs), an off- |
### 3. Balance Sheet Special Purpose Vehicle (SPV)

Balance sheet special purpose vehicle (SPV), which allowed these institutions to avoid capital requirements (allowing greater leverage). These SIVs had to be brought back onto the balance sheet once securities were downgraded after the crisis started.

- Securities were separated into senior, mezzanine (junior) and non-investment grade (equity) tranches, but effective tranching relies on the assumption that proper risk analysis on the underlying assets was done (which was not the case).
- Mortgages were selected from geographically diverse areas but the risk of correlated default was much higher than predicted.
- Securitization increased rapidly since 2001, which was based on the growth in sub-prime and Alt-A loans.

### 4. Private Financial Sector Issues

**Collateralized Debt Obligations (CDOs)**

- CDOs issuers purchased different tranches of MBS and pooled them together with other asset-backed securities (backed by such assets as credit card, auto, business, and student loans).
- CDOs ‘re-securitized’ securities, allowing further redistribution of risk (and hence, adding further complexity), converting some of them into new senior AAA-rated securities.
- Investment banks were not supervised like commercial banks and thus were not required to adhere to capital requirements. These banks could borrow short-term and hold risky longer-term assets with low levels of capital or reserves.

### 5. Growth in Credit Default Swaps (CDS)

- CDO issuers purchased CDS, which enabled them to receive AAA ratings. These purchases were not regulated as over-the-counter transactions.

Source: Adapted from Astley et al. (2009) and Baily et al. (2008).
3.2 SOURCES OF THE RECESSION

The causes of the crisis have become, understandably, a major topic of discourse among both academics and policymakers. Many causes for the financial crisis have been suggested, with varying weight assigned by experts *UK Double-Dipping* (2012), which have been described below:

(1) GROWTH OF THE HOUSING BUBBLE:

Many agree that the primary cause of the current recession was the credit crisis caused by the collapse of the housing market. The sagging real estate market leaves no doubt that the housing bubble is quickly crashing and that hard times is on the way. The slump in home prices from the end of 2005 to the end of 2006 was the biggest year over year drop since the National Association of Realtors started keeping track in 1982. The Commerce Department announced that the construction of new homes fell in January by a whopping 14.3%. Prices fell in half of the nation’s major markets and existing home sales declined in 40 states. Arizona, Florida, California, and Virginia have seen precipitous drops in sales. (Whitney Mike, 2007).

(2) LOWER INTEREST RATES:

According to *Confer Thomas Philippon*, steadily decreasing interest rates backed by the U.S Federal Reserve from 1982 onward and large inflows of foreign funds
created easy credit conditions for a number of years prior to the crisis, fuelling a
housing construction boom and encouraging debt-financed consumption. The
combination of easy credit and money inflow contributed to the United States
housing bubble. Loans of various types (e.g., mortgage, credit card, and auto)
were easy to obtain and consumers assumed an unprecedented debt load. (New
pressure on interest rates was created by the high and rising U.S. current
account deficit, which peaked along with the housing bubble in 2006. Federal
Reserve Chairman Ben Bernanke explained how trade deficits required the U.S.
to borrow money from abroad in the process bidding up bond prices and lowering
interest rates. (Federalreserve.gov.)

(3) RELAXED STANDARDS FOR MORTGAGE LOANS:

Standards for mortgage loans were relaxed because of new governmental
policies promoting an increase in home-ownership rates among lower-income
households, greater competition in the mortgage loan market, and irrational
exuberance surrounding all parties involved in the mortgage lending process. In
fact, beginning in 1995, banks were required to increase their mortgage lending
to lower-income households and relax their mortgage lending standards.
Decades before the housing bubble, mortgage loans were consistent, requiring a
down payment of at least 20% and proof that their income was enough for the
monthly mortgage payments to be manageable. Fannie Mae and Freddie Mac,
government-sponsored enterprises, increase the funding available in the mortgage market by purchasing mortgages from loan originators, ditched their strict standards on payment and income requirements.

(4) IRRATIONAL EXUBERANCE:

As with all bubbles, irrational exuberance played a part, as all participants involved believed that home prices would continue to rise, as discussed by Miller et al. (2007). When the mortgage standards began to relax, there was an increase in subprime mortgages, which are home loans given to people with poor credit and are therefore considered risky, thereby increasing the foreclosure rate. Housing was a good investment before the housing bubble, home prices rose to its peak in 2006 and then fell dramatically, increasing the mortgage default rates. Large losses were felt by not only homeowners but mostly by mortgage lenders, investment banks, foreign investors investing in mortgage-backed securities, and insurance companies. The bursting of the housing bubble hurt the economy because the decline in home construction reduced GDP and this sent a shock throughout the entire financial system, increasing the perceived credit risk throughout the economy. The bursting of the housing bubble paved the way to the credit and banking crises.
(5) WEAK AND FRAUDULENT UNDERWRITING PRACTICES:

Testimony given to the Financial Crisis Inquiry Commission by Richard M. Bowen III suggests that by the final years of the U.S. housing bubble (2006–2007), the collapse of mortgage underwriting standards was endemic. His testimony stated that by 2006, 60% of mortgages purchased by Citigroup from some 1,600 mortgage companies were "defective" (were not underwritten to policy, or did not contain all policy-required documents). This, despite the fact that each of these 1,600 originators were contractually responsible (certified via representations and warrantees) that their mortgage originations met Citi's standards. Moreover, during 2007, "defective mortgages (from mortgage originators contractually bound to perform underwriting to Citi's standards) increased to over 80% of production", (Roger C. Altman, 2009). In separate testimony to Financial Crisis Inquiry Commission, officers of Clayton Holdings revealed that scarcely 54% of the loans met their originators’ underwriting standards. (Morgenson Gretchen, 2010).

(6) DEREGULATION:

While the housing and credit bubbles were building, a series of factors caused the financial system to both expand and become increasingly fragile, a process called financialization. U.S. Government policy from the 1970s onward has emphasized deregulation to encourage business, which resulted in less oversight
of activities and less disclosure of information about new activities undertaken by banks and other evolving financial institutions. Thus, policymakers did not immediately recognize the increasingly important role played by financial institutions such as investment banks and hedge funds, also known as the shadow banking system. Some experts believe these institutions had become as important as commercial (depository) banks in providing credit to the U.S. economy, but they were not subject to the same regulations (IMF 2010). Critics such as economist Paul Krugman and U.S. Treasury Secretary (Geithner & Summers, 2009) have argued that the regulatory framework did not keep pace with financial innovation, such as the increasing importance of the shadow banking system, derivatives and off-balance sheet financing.

(7) INCREASED DEBT BURDEN OR OVER-LEVERAGING:

Prior to the crisis, financial Institutions became highly leveraged, increasing their appetite for risky investments and reducing their resilience in case of losses. Much of this leverage was achieved using complex financial instruments such as off-balance sheet securitization and derivatives, which made it difficult for creditors and regulators to monitor and try to reduce financial institution risk levels. These instruments also made it virtually impossible to reorganize financial institutions in bankruptcy, and contributed to the need for government bailouts (Michael Simkovic, 2009). U.S. households and financial institutions became increasingly indebted or overleveraged during the years preceding the
crisis. This increased their vulnerability to the collapse of the housing bubble and worsened the ensuing economic downturn.

(8) FINANCIAL INNOVATION AND COMPLEXITY:

The term financial innovation refers to the ongoing development of financial products designed to achieve particular client objectives, such as offsetting a particular risk exposure (such as the default of a borrower) or to assist with obtaining financing. Examples pertinent to this crisis included: the adjustable-rate mortgage; the bundling of subprime mortgages into mortgage-backed securities (MBS) or collateralized debt obligations (CDO) for sale to investors, a type of securitization; and a form of credit insurance called credit default swaps (CDS). The usage of these products expanded dramatically in the years leading up to the crisis. These products vary in complexity and the ease with which they can be valued on the books of financial institutions.

This boom in innovative financial products went hand in hand with more complexity. It multiplied the number of actors connected to a single mortgage (including mortgage brokers, specialized originators, the securitizers and their due diligence firms, managing agents and trading desks, and finally investors, insurances and providers of repo funding). With increasing distance from the underlying asset these actors relied more and more on indirect information (including FICO scores on creditworthiness, appraisals and due diligence checks...
by third party organizations, and most importantly the computer models of rating agencies and risk management desks). Instead of spreading risk this provided the ground for fraudulent acts, misjudgments and finally market collapse. (Lewis Michael, 2010).

(9) INCORRECT PRICING OF RISK:

The pricing of risk refers to the incremental compensation required by investors for taking on additional risk, which may be measured by interest rates or fees. Several scholars have argued that a lack of transparency about banks’ risk exposures prevented markets from correctly pricing risk before the crisis, enabled the mortgage market to grow larger than it otherwise would have, and made the financial crisis far more disruptive than it would have been if risk levels had been disclosed in a straightforward, readily understandable format.(Michael Simkovic2011). For a variety of reasons, market participants did not accurately measure the risk inherent with financial innovation such as MBS and CDOs or understand its impact on the overall stability of the financial system.

(10) BOOM AND COLLAPSE OF THE SHADOW BANKING SYSTEM:

There is strong evidence that the riskiest, worst performing mortgages were funded through the "shadow banking system" and that competition from the shadow banking system may have pressured more traditional institutions to lower
their own underwriting standards and originate riskier loans. (Michael Simkovic 2011).

In a June 2008 speech, President and CEO of the New York Federal Reserve Bank Timothy Geithner who in 2009 became Secretary of the United States Treasury placed significant blame for the freezing of credit markets on a "run" on the entities in the "parallel" banking system, also called the shadow banking system. These entities became critical to the credit markets underpinning the financial system, but were not subject to the same regulatory controls. Further, these entities were vulnerable because of maturity mismatch, meaning that they borrowed short-term in liquid markets to purchase long-term, illiquid and risky assets. This meant that disruptions in credit markets would make them subject to rapid deleveraging, selling their long-term assets at depressed prices.

Economist Mark Zandi testified to the Financial Crisis Inquiry Commission in January 2010: "The securitization markets also remain impaired, as investors anticipate more loan losses. Investors are also uncertain about coming legal and accounting rule changes and regulatory reforms. Private bond issuance of residential and commercial mortgage-backed securities, asset-backed securities, and CDOs peaked in 2006 at close to $2 trillion. In 2009, private issuance was less than $150 billion, and almost all of it was asset-backed issuance supported by the Federal Reserve's TALF program to aid credit card, auto and small-business lenders. Issuance of residential and commercial mortgage-backed
securities and CDOs remains dormant. (Brookings Institute – U.S. Financial and Economic Crisis, 2009).

(11) COMMODITIES BOOM:

Rapid increases in a number of commodity prices followed the collapse in the housing bubble. The price of oil nearly tripled from $50 to $147 from early 2007 to 2008, before plunging as the financial crisis began to take hold in late 2008. Experts debate the causes, with some attributing it to speculative flow of money from housing and other investments into commodities, some to monetary policy (Light Crude Oil Chart, 2010); and some to the increasing feeling of raw materials scarcity in a fast growing world, leading to long positions taken on those markets, such as Chinese increasing presence in Africa. An increase in oil prices tends to divert a larger share of consumer spending into gasoline, which creates downward pressure on economic growth in oil importing countries, as wealth flows to oil-producing states. A pattern of spiking instability in the price of oil over the decade leading up to the price high of 2008 has been recently identified (Mises Institute-The Oil Price Bubble, 2008). The destabilizing effect of this price variance has been proposed as a contributory factor in the financial crisis.
(12) PREDATORY LENDING:

Predatory lending refers to the practice of unscrupulous lenders, enticing borrowers to enter into "unsafe" or "unsound" secured loans for inappropriate purposes. A classic bait-and-switch method was used by Countrywide Financial, advertising low interest rates for home refinancing. Such loans were written into extensively detailed contracts, and swapped for more expensive loan products on the day of closing. Whereas the advertisement might state that 1% or 1.5% interest would be charged, the consumer would be put into an adjustable rate mortgage (ARM) in which the interest charged would be greater than the amount of interest paid. This created negative amortization, which the credit consumer might not notice until long after the loan transaction had been consummated.

Countrywide, sued by California Attorney General Jerry Brown for "unfair business practices" and "false advertising" was making high cost mortgages "to homeowners with weak credit, ARMs that allowed homeowners to make interest-only payments". (Banking.senate.gov, 2009). When housing prices decreased, homeowners in ARMs then had little incentive to pay their monthly payments, since their home equity had disappeared. This caused Countrywide's financial condition to deteriorate, ultimately resulting in a decision by the Office of Thrift Supervision to seize the lender.
ROLES OF ECONOMIC FORECASTING:

The financial crisis was not widely predicted by mainstream economists, who instead spoke of the Great Moderation. A number of heterodox economists predicted the crisis, with varying arguments. A cover story in Business Week magazine claims that economists mostly failed to predict the worst international economic crisis since the Great Depression of 1930s. The Wharton School of the University of Pennsylvania's online business journal examines why economists failed to predict a major global financial crisis. (Peter Coy, 2009). Popular articles published in the mass media have led the general public to believe that the majority of economists have failed in their obligation to predict the financial crisis. For example, an article in the New York Times informs that economist Nouriel Roubini warned of such crisis as early as September 2006, and the article goes on to state that the profession of economics is bad at predicting recessions. (Knowledge.wharton.upenn.edu 2009). According to The Guardian, Roubini was ridiculed for predicting a collapse of the housing market and worldwide recession, while The New York Times (2008) labelled him "Dr. Doom".

3.3 THE IMPACT OF RECESSION ON GLOBAL ECONOMY

This recession has had a major impact on the global economy and has hurt many countries, characterized by the failure of key businesses, declining consumer wealth estimated in the trillions of U.S. dollars, substantial financial
commitments incurred by governments, and a significant decline in economic activity. The major impacts have been enumerated here:

- The **output of goods and services** produced by labor and property located in the United States decreased at an annual rate of approximately 6% in the fourth quarter of 2008 and first quarter of 2009, versus activity in the year-ago periods. (Dina Elnaggar, 2009).

- The **U.S. unemployment rate** increased to 10.1% by October 2009, the highest rate since 1983 and roughly twice the pre-crisis rate. The average hours per work week declined to 33, the lowest level since the government began collecting the data in 1964. (BEA Press Releases, 2010) and Data.bls.gov, 2010).

- The very rich lost relatively less in the crisis than the remainder of the population, **widening the wealth gap** between the economic class at the very top of the demographic pyramid and everyone else beneath them. Thus the top 1% who owned 34.6% of the nation's wealth in 2007 increased their proportional share to over 37.1% by 2009. (Herbst Moira, 2009; Taibbi Matt, 2010).

- Typical American families did not fare as well, nor did those "wealthy-but-not wealthiest" families just beneath the pyramid's top. On the other hand,
half of the poorest families did not have wealth declines at all during the crisis. The Federal Reserve surveyed 4,000 households between 2007 and 2009, and found that the total wealth of 63 percent of all Americans declined in that period. 77 percent of the richest families had a decrease in total wealth, while only 50 percent of those on the bottom of the pyramid suffered a decrease. (Wolff Edward N, 2010).

- The Brookings Institution reported in June 2009 that U.S. consumption accounted for more than a third of the growth in global consumption between 2000 and 2007. The US economy has been spending beyond its means while borrowing too much for years and the rest of the world depended on the U.S. consumer as a source of global demand.

- With a recession in the U.S. and the increased savings rate of U.S. consumers, declines in growth elsewhere have been dramatic. For the first quarter of 2009, the annualized rate of decline in GDP was 14.4% in Germany, 15.2% in Japan, 7.4% in the UK, 9.8% in the Euro area and 21.5% for Mexico. ("Cracks in the crust". The Economist. December 11, 2008).

- November 2008, Americans lost an estimated average of more than a quarter of their collective net worth. By early November 2008, a broad U.S. stock index the S&P 500 was down 45% from its 2007 high. Housing
prices had dropped 20% from their 2006 peak, with futures markets signaling a 30-35% potential drop. Total home equity in the United States, which was valued at $13 trillion at its peak in 2006, had dropped to $8.8 trillion by mid-2008 and was still falling in late 2008. Total retirement assets, Americans’ second-largest household asset, dropped by 22%, from $10.3 trillion in 2006 to $8 trillion in mid-2008. (Regnier Pat, 2009):

- During the same period, savings and investment assets (apart from retirement savings) lost $1.2 trillion and pension assets lost $1.3 trillion. Taken together, these losses total a staggering $8.3 trillion. (Brookings.edu 2009). Since peaking in the second quarter of 2007, household wealth is down $14 trillion. (Roger C. Altman, 2008).

- The effects on the rest of the world were indeed significant. We had reduced our expectations for growth in Europe and much of the emerging world, while Japan, the second largest economy after the U.S was suffering immensely. Japan’s industrial output plummeted to record lows and its unemployment reached record highs. Japan was suffering from the global recession more than most countries.

- The economic meltdown was painful for the export-dependent country. Its economy contracted at a speed that has not been seen during the past
three decades. The country desperately tried to limit the fallout and to resuscitate its weak economy.

- By March 2009, the Arab world had lost $3 trillion due to the crisis, with an extremely high unemployment rate as well. In May 2009, the United Nations reported a drop in foreign investment in Middle-Eastern economies due to a slower rise in demand for oil. In June 2009, the World Bank predicted a tough year for Arab states. (Elnaggar Dina, 2009).

- The World Bank reported in February 2009 that the Arab World was far less severely affected by the credit crunch. With generally good balance of payments positions coming into the crisis or with alternative sources of financing for their large current account deficits, such as remittances, Foreign Direct Investment (FDI) or foreign aid, Arab countries were able to avoid going to the market in the latter part of 2008. This group is in the best position to absorb the economic shocks. They entered the crisis in exceptionally strong positions. This gives them a significant cushion against the global downturn. (Elnaggar Dina, 2009).

- The recession has clearly intensified since fall 2008 and has led to deteriorated funding conditions, a decline in the confidence of economic players, and a dramatic slump in world trade, thereby unleashing a global recession. A glimmer of hope may be seen in the fact that a number of
confidence indicators seem to have hit bottom at a low level recently, implying that the downturn may level out from the second half of 2009 and then come to an end.

- In the Euro Area, recession also deepened in the fourth quarter of 2008 due to weakening export demand and investment, while unemployment rose substantially. Their economic situation deteriorated in the first half of 2009.

- The global economic crisis also hit Austria in fall 2008, resulting in a steep slump in goods exports and industrial production in October 2008. The Austrian Economy has continued to shrink.

- Some developing countries that had seen strong economic growth saw significant slowdowns. For example, growth forecasts in Cambodia show a fall from more than 10% in 2007 to close to zero in 2009, and Kenya may achieve only 3-4% growth in 2009, down from 7% in 2007.

- According to the research by the Overseas Development Institute, reductions in growth can be attributed to falls in trade, commodity prices, investment and remittances sent from migrant workers (which reached a record $251 billion in 2007, but have fallen in many countries since). This has stark implications and has led to a dramatic rise in the number of
households living below the poverty line, be it 300,000 in Bangladesh or 230,000 in Ghana. (Baily Martin Neil & Elliott Douglas J., 2009).

Annual percentage changes in economic growth (Real GDP growth) across the world has been depicted in the chart 3.1 and chart 3.2, categorizes the fastest growing and contracting countries in 2009.

**Chart 3.1**

**ECONOMIC GROWTH ACROSS THE WORLD, REAL GDP GROWTH**

(ANNUAL % CHANGE)

3.4 IMPACT ON FINANCIAL MARKETS

The International Monetary Fund estimated that large U.S. and European banks lost more than $1 trillion on toxic assets and from bad loans from January 2007
to September 2009. These losses are expected to top $2.8 trillion from 2007-10. U.S. banks losses were forecast to hit $1 trillion and European bank losses will reach $1.6 trillion. The International Monetary Fund (IMF) estimated that U.S. banks were about 60% through their losses, but British and euro zone banks only 40%.( Norris.blogs.nytimes.com, 2009).

### 3.5 GOVERNMENT RESPONSES

**A) EMERGENCY AND SHORT-TERM RESPONSES**

- The U.S. Federal Reserve and central banks around the world have taken steps to expand money supplies to avoid the risk of a deflationary spiral, in which lower wages and higher unemployment lead to a self-reinforcing decline in global consumption. In addition, governments have enacted large fiscal stimulus packages, by borrowing and spending to offset the reduction in private sector demand caused by the crisis. The U.S. executed two stimulus packages, totaling nearly $1 trillion during 2008 and 2009(Minutes of the FOMC, 2009).

- This credit freeze brought the global financial system to the brink of collapse. The response of the U.S. Federal Reserve, the European Central Bank, and other central banks was immediate and dramatic. During the last quarter of 2008, these central banks purchased
US$2.5 trillion of government debt and troubled private assets from banks. This was the largest liquidity injection into the credit market, and the largest monetary policy action, in world history. (Roger C. Altman, 2009).

- The governments of European nations and the USA also raised the capital of their national banking systems by $1.5 trillion, by purchasing newly issued preferred stock in their major banks. In October 2010, Nobel laureate Joseph Stiglitz explained how the U.S. Federal Reserve was implementing another monetary policy creating currency as a method to combat the liquidity trap (BBC News 2009). By creating $600,000,000,000 and inserting this directly into banks the Federal Reserve intended to spur banks to finance more domestic loans and refinance mortgages. However, banks instead were spending the money in more profitable areas by investing internationally in emerging markets. (Wheatley Jonathan and Peter Garnham, 2010).

- Governments have also bailed out a variety of firms as discussed above, incurring large financial obligations. To date, various U.S. government agencies have committed or spent trillions of dollars in loans, asset purchases, guarantees, and direct spending. Significant controversy has accompanied the bailout, leading to the development of a variety of "decision making frameworks", to help balance competing policy interests.
during times of financial crisis (Wheatley Jonathan and Peter Garnham, 2010).

(B) REGULATORY PROPOSALS AND LONG-TERM RESPONSES

- U.S. President Barack Obama and key advisers introduced a series of regulatory proposals in June 2009. The proposals address consumer protection, executive pay, bank financial cushions or capital requirements, expanded regulation of the shadow banking system and derivatives, and enhanced authority for the Federal Reserve to safely wind-down systemically important institutions, among others (Tim Wafa, 2010 and Geithner & Summers, 2009). In January 2010, Obama proposed additional regulations limiting the ability of banks to engage in proprietary trading (Treasury Department Report, 2010).

- European regulators introduced Basel III regulations for banks (The New York Times, May 2010). It increased capital ratios, limits on leverage, narrow definition of capital (to exclude subordinated debt), limit counter-party risk, and new liquidity requirements. Critics argue that Basel III doesn’t address the problem of faulty risk-weightings. Major banks suffered losses from AAA-rated created by financial engineering (which creates apparently risk-free assets out of high risk collateral) that required less capital according to Basil II (The Economist, 2012).
(C) UNITED STATES CONGRESS RESPONSES


3.6 CURRENT GLOBAL SCENARIO: FEAR OF DOUBLE DIP

The policy response in Advanced Economies to the financial crisis consisted mostly of governments taking over large amounts of unsustainable private debt. As a result, public debt has increased sharply .Recent downgrade of the US long-term sovereign rating and the sovereign debt crisis in the peripheral euro has highlighted the dangers of a double dip recession in the Advanced Economies spilling over to the world economy. As fiscal stimulus have receded in the absence of any corresponding picking up private demand, unemployment still hovers at above 9 per cent in the US and around 10 per cent in the Euro area which are much higher than in 2007. In the EMEs, overheating pressures have
necessitated countervailing policy action that is causing growth to slow. With inflation pressures persisting, further loss of momentum can be expected. EMEs also face the risk of a slowdown of output growth if developed-world export demand falls down. Secular decline in the competitiveness in the euro periphery economies was at the root of the sovereign debt problem in the monetary union.

The adoption of euro was accompanied by a large fall in interest rates in the periphery. Incomes were expected to converge to core economies which led to surge in domestic demand bidding up prices and wages. Growth accelerated initially led by services while exports stagnated- CAD soared- Also due to low domestic saving rate, public debt has to be financed from foreign sources.

Fiscal Problem - A large part of the fragile fiscal position in these economies is attributable to a low domestic saving rate and bloated public sector structure in the countries. Result was surge in both private and public sector debt.

The problem of Euro debt crisis first came to the surface in 2009 when Greece slipped into recession with GDP contracting by 2 per cent and unemployment rate rising to 9.5 per cent. The debt crisis deepened in October 2009 and further in mid April 2010 when it became clear that budget deficit has blown up to unsustainably high levels. In early 2010, concern started to build about all the heavily indebted countries in Europe - Portugal, Ireland, Greece and Spain. On May 2, 2010 the euro zone members and the IMF agreed a 110bn-euro bailout
package to rescue Greece. The EU and IMF – bailout package to the Irish Republic totaling 85 billion Euros.

In February this year, Eurozone finance ministers set up a permanent bailout fund, called the European Stability Mechanism, worth about 500 billion Euros. Further, in May the Eurozone and the IMF approved a 78 bn-euro bailout for Portugal. On 26 October European leaders reached a "three-pronged" agreement described as vital to solve the region's huge debt crisis. (1) Private banks holding Greek debt will accept a write-off of 50 per cent of their returns - a move expected to cut the nation's debt load to 120 per cent of its GDP in 2020 from the expected 180 per cent. (2) The EFSF would be boosted from the 440 bn euros set up earlier this year to 1 tn euros by (i) offering insurance to purchasers of Eurozone members' debt; and (ii) setting up a special investment vehicle. (3) Additionally, European banks would be required to rise about 106bn euros in new capital by June 2012.

Nouriel Roubini has suggested some of the policy options to save the European Monetary Union:

- Restoration of growth and competitiveness through aggressive monetary easing, a weaker euro and stimulatory policies in the core, while the periphery undertakes austerity and reform.
• A deflationary adjustment in the periphery alone, together with structural reforms, to force down nominal wages.

• Permanent financing by the core of an uncompetitive periphery.

• Widespread debt restructuring and partial break-up of the euro-zone.

But there are some political obstacles to each of the options suggested. For example, Martin Wolf says; the first is the most likely to work economically, but is unacceptable to Germany; the second is politically acceptable to Germany (despite the bad effects on its economy), but would be unacceptable in the periphery; the third is politically unacceptable to Germany and is even likely to prove unacceptable in the periphery, too; the fourth is unacceptable to all.

3.7 CURRENT GLOBAL SCENARIO: DIFFERENCE BETWEEN 2008 CRISIS AND THE PRESENT SLOWDOWN

• In the years before the crisis, the world enjoyed the so called ‘Great Moderation’ with steady growth in Advanced Economies and accelerated growth in the EMEs, and low inflation all around. So there was a lot of scope for of monetary and fiscal stimulus. Sadly, the policy space for stimulus is much less today.
• In 2008, the world responded to the crisis in coordination. Governments and central banks acted firmly, decisively and where required creatively. A similar perception of coordination is lacking today.

• In 2008, both AEs and EMEs were at the same phase of the business cycle. Today, they are at different phases of the business cycle.

• In 2008, the crisis originated in the financial sector and transmitted to the real sector, but the rescue was by the public sector. In 2011, it is the other way round. The crisis is originating in the public sector and hitting the financial sector, and undermining the confidence of the private sector.

The Major Effects Of Euro Debt Crisis Have Been Enumerated As Follows:

• Trade channel - external demand is slowing and affecting the exports of EMEs.

• Capital flows - increasing risk aversion among investors and deleveraging resulting in volatility in capital flows and in financial markets.

• Commodity prices - spikes of volatility in the already elevated levels of commodity prices are stoking inflationary pressures in some of the EMEs.
• **Confidence channel** - when confidence is hit, even strong fundamentals do not matter.

The recession has lasted and since unemployment is forecasted to continue to rise until new jobs are created, the recession will also continue. This recession has resulted in a significant rise in unemployment and the poverty rate along with a significant decrease in the employment rate and the median family income. These effects will be felt long after financial markets begin to recover with workers feeling the negative effects of the recession for the next three to four years. Most importantly, this recession has had a major impact on the global economy and has hurt other countries as well. The effects on the rest of the world are indeed significant and will continue to have negative impacts as long as this recession continues.
References


