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**Track III: Innovative Finance Strategies**

**Topic: Lessons from the Global Financial Crisis**

**Title: Global Financial Crisis and Indian Economy- Interface.**

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## **Track III: Innovative Finance Strategies**

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##### *Abstract*

The financial crisis that started in the U.S. mortgage markets in 2007 which had ripple effects on the world economy resulting in deep and lengthy recession. Financial crisis has a widespread impact on the economy thus the importance of understanding of the crisis becomes crucial. Numerous debates have been lingering around the topic of global financial crisis and countries have persistently been identifying the innovative practices to overcome these turmoil's. The research aims to survey the varied literature on financial crisis firstly what are the inherent factors that lead to financial crisis, secondly what are the financial implications of these crisis on the emerging economies with specific reference to India. The paper will also assess the magnitude of impact of these global financial crises on Indian economy from a micro and macro-economic perspective at an interval prior crisis and post crisis.

The paper will comprise of three Sections, Section I will analyze the factors responsible for global financial crisis, Section II will focus on the impact of global crisis on Indian economy and Section III will study the best practices adopted to sustain and overcome such episodes. The paper tries to establish the fact that there exists integration between GDP, exports, capital inflows, consumption and global financial crisis. The global crisis linked with recessions and succeeded by financial meltdowns has triggered the government for implementing innovative strategies in sustaining such debacle.

**Keywords: Financial Crisis, Macro level, Mortgages, Innovations, Debacle.**

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##### ***Introduction:***

The world was very different in 1991 when western economies were still strong and looking outward, trying to deepen the process of economic globalization. Emerging economies like India, which managed to avoid until 2011 the negative impact of the global financial crisis, began to dramatically slowdown after 2011. Most of the BRICS economies have lost over four per cent off their peak GDP growth rates experienced until 2010.

How would we define Financial Crisis?

A financial crisis refers to a loss of self-assurance in a country's currency or other financial assets causing international investors to withdraw their money from the country. Financial crisis is applied broadly to a variety of situations in which some financial institutions or assets suddenly lose a large part of their value. In the 19<sup>th</sup> and early 20<sup>th</sup> centuries, many financial crises were associated with banking panics, and many recessions coincided with these panics. Other situations that are often called financial crises include stock market crashes and the bursting of other financial bubbles, currency crises, and sovereign defaults.

## **Bird's eye view on the history of Financial Crisis in India**

The financial crisis of 2007–2008, also known as the Global Financial Crisis and 2008 financial crisis, is considered by many economists the worst financial crisis since the Great Depression of the 1930s. It resulted in the threat of total collapse of large financial institutions, the bailout of banks by national governments, and downturns in stock markets around the world. In many areas, the housing market also suffered, resulting in evictions, foreclosures and prolonged unemployment. The crisis played a significant role in the failure of key businesses, declines in consumer wealth estimated in trillions of U.S. dollars, and a downturn in economic activity leading to the 2008–2012 global recession and contributing to the European sovereign-debt crisis. The active phase of the crisis, which manifested as a liquidity crisis, can be dated from August 9, 2007, when BNP Paribas terminated withdrawals from three hedge funds citing "a complete evaporation of liquidity"

A collapse of the US sub-prime mortgage market and the reversal of the housing boom in other industrialized economies have had a ripple effect around the world. Furthermore, other weaknesses in the global financial system have surfaced. Some financial products and instruments have become so complex and twisted, that as things start to unravel, trust in the whole system started to fail.

As part of the housing and credit booms, the number of financial agreements called mortgage-backed securities and collateralized debt obligations which derived their value from mortgage payments and housing prices, greatly increased. Such financial innovation enabled institutions and investors around the world to invest in the U.S. housing market. As housing prices declined, major global financial institutions that had borrowed and invested heavily in subprime MBS reported significant losses. Falling prices also resulted in homes worth less than the mortgage loan, providing a financial incentive to enter foreclosure. The ongoing foreclosure epidemic that began in late 2006 in the U.S. continues to drain wealth from consumers and erodes the financial strength of banking institutions. Defaults and losses on other loan types also increased significantly as the crisis expanded from the housing market to other parts of the economy. Total losses are estimated in the trillions of U.S. dollars globally.

## **Sector I: Dynamics Responsible For Global Crises**

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which derived their value from mortgage payments and housing prices, greatly increased. Such financial innovation enabled institutions and investors around the world to invest in the U.S. housing market. As housing prices declined, major global financial institutions that had borrowed and invested heavily in subprime MBS reported significant losses.

Falling prices also resulted in homes worth less than the mortgage loan, providing a financial incentive to enter foreclosure. The ongoing foreclosure epidemic that began in late 2006 in the U.S. continues to drain wealth from consumers and erodes the financial strength of banking institutions. Defaults and losses on other loan types also increased significantly as the crisis expanded from the housing market to other parts of the economy. Total losses are estimated in the trillions of U.S. dollars globally. The reasons for the financial crises are varied and complex. Some of them include boom in the housing market, speculation, high-risk mortgage loans and lending practices, securitization practices, inaccurate credit ratings and poor regulations.

**Speculations:** Speculations in Real Estate was a contribution factor. During 2006, 22% of houses purchased (1.65 million units) were for investment purposes with an additional 14% (1.07 million units) purchased as vacation homes. In other words, nearly 40% of houses purchases were not primary residences. Speculators left the market in 2006, which caused investment sales to fall much faster than the primary market.

**Boom in Housing Market:** Subprime borrowing was a major contributor to an increase in house ownership rates and the demand for housing. This demand helped fuel housing price increase and higher consumer spending. Some house owners used the increased property value experienced in housing bubble to re-finance their homes with lower interest rates and take second mortgages against the added value to use the funds for consumer spending. Increase in house purchases during the boom period eventually led to surplus inventory of houses, causing house prices to decline, beginning in the summer of 2006.

**Inaccurate Credit Rating:** Credit rating process was faulty. High ratings given by credit rating agencies encouraged the flow of investor funds into mortgage-backed securities

helping finance the housing boom. Risk rating agencies were unable to give proper ratings to complex instruments. Several products and financial institutions, including hedge funds, and rating agencies are largely if not completely unregulated.

**Poor Regulation:** The problem has occurred during an extreme accelerated process of financial innovation in market segment that were poorly or ambiguously regulated – mainly in the U.S. The fall of the financial institutions is a reflection of the lax internal controls and the ineffectiveness of regulatory oversight in the context of a large volume of non-transparent assets. It is indeed amazing that there were simply no checks and balances in the financial system to prevent such a crises and “not one of the so called experts” in the field has sounded a word of caution. There are doubts whether the operations of derivatives markets have been as transparent as they should have been or if they have been manipulated.

**Securitization Practices:** Securitization of housing loans for people with poor credit- not the loans themselves is also a reason behind the current global credit crises. Securitization is a structured finance process in which assets, receivables or financial instruments are acquired, pooled together as collateral for the third party investment (Investment Banks). Due to securitization, investor appetite for mortgage backed securities (MBS), and tendency of rating agencies to assign investment-grade rating to MBS, loans with high risk of default could be originated, packaged and the risk readily transferred to others.

Global imbalance have been manifested through a substantial increase in the current account deficit of the US mirrored by the substantial surplus in Asia, particularly in China and in oil exporting countries in the Middle East and Russia. The imbalances in the current account are often seen as the consequences of the relative inflexibility of the currency regimes in China and some countries. These savings-investment and consequent huge cross-border financial flows put great flaws in financial markets and instruments to generate the specific features of the crises. Such a view, however, offers only a partial analysis of the recent global economic environment. The role of monetary policy in major advanced economies particularly that in the U.S, over the same time is the major cause of the Financial Crises.

## **Section II: The impact of global crisis on Indian economy.**

The world has witnessed financial and economic crisis following the episode of sub prime mortgage in the United States which has been the resultant of excessive risk, flexible monetary policy, loose credit evaluation processes and financial irregularities. The crises pose a threat to the developing nations and erode people's faith in the international financial markets.

India has grown rapidly since globalization due to expansion in the international trade. Sub-prime mortgage market crisis originated in US in 2007 which had a devastating effect on US and European financial system through bursting of housing bubble, bankruptcies and credit crisis. The crises had a diversified effect on all the sector of the economy. The aftermath of the crises can be discussed with respect to the following segments of the economy:

### **a) Banking Sector**

The Indian banking system was not directly exposed to the sub-prime mortgage assets. Indian Banks absorbed the pressure of crisis due to regulated financial system and quality of assets. The average capital to risk-weighted assets ratio for the Indian banking system, as on 2008 was 12.6 per cent, as against the regulatory minimum of nine per cent and the Basel norm of eight per cent. A study by RBI in 2007 on the impact of the sub-prime episode on the Indian banks had revealed that none of the Indian banks had any direct exposure to the subprime markets in the USA or other markets. However certain Indian banks had invested in the collateralized debt obligations which had an insignificant effect on the credibility of banks due the sub prime exposures.

Past the bankruptcy of Lehman Brothers, all banks were advised to report the details of their exposures of Lehman Brothers and related entities both in India and abroad. Out of 77 reporting banks, 14 reported exposures to Lehman Brothers and its related entities either in India or abroad the impact was negligible as the exposures reported by banks pertained to subsidiaries of Lehman Brothers Holding Incorporations.

## **b) Export and Imports**

India's vision in the world trade is not only to earn foreign exchange but major focus is to induce growth and economic development. The industry in India however maintained its growth momentum registering a double digit growth and clocking revenues of USD 108 billion in the fiscal year 2012.

Indian services export grew at a CAGR of 17% in 1993–00 and at a much faster pace of about 24% in 2001–08. The export of services grew from US\$20.8 billion in 2002 to US\$90.1 billion in 2007–08 and then further to US\$101 billion in 2008–09. India's services sector's growth has mainly been attributed to its exports. There has been a slowdown in the rate of growth of value of exports since 1996-97. One of the reasons for this decline is the reduction in the international prices of various commodities. According to the World Economic Outlook of the IMF, May 1998, the world prices of manufactured goods have declined by nearly 14% in the years 1996-1998.

The overall effect of the global economic crisis on country's external sector can be well analyzed through the Balance of Payments position of the economy. Balance of Payment comprises current account, capital account, errors and omissions and changes in foreign exchange reserves. Under current account of the Balance of Payment, transactions are classified into merchandise (exports and imports) and invisibles. Under capital account, capital inflows can be classified by instrument (debt or equity) and maturity (short or long-term). The main components of capital account include foreign investment, loans and banking capital.

The fallout for the Indian economy has been a sharp deceleration in exports and a slowdown in GDP growth. Import demand however has remained resilient because of the continued high international oil prices that did not decline, unlike what happened after the Lehman meltdown of September, 2008. The high value of gold imports, driven mainly by the 'safe haven' demand for gold that has led to a sharp rise in prices, contributed to the high import bill and widening of the trade deficit.

The trade deficit, as a result, increased to US\$ 189.8 billion in 2011-12, which was 10.2 per cent of the GDP. With invisible surplus of US\$ 111.6 billion which is 6.0 per

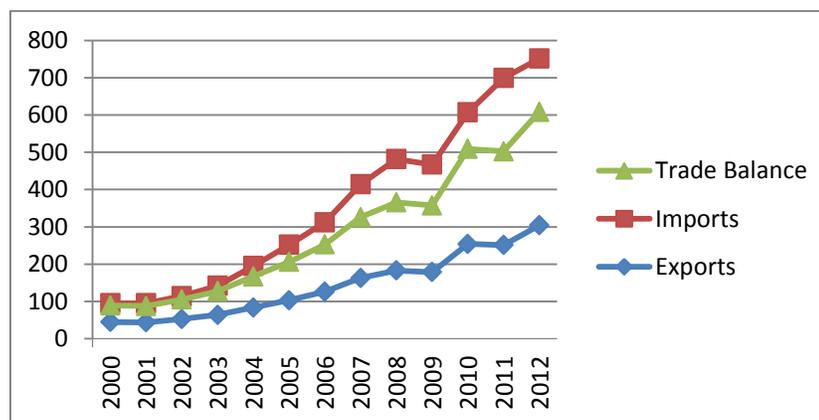
cent of GDP, the current account deficit widened to record 4.2 per cent of GDP. This is unlike the situation during the 2008 crisis, when the high trade deficit of 9.8 per cent of GDP in 2008-09, was partly offset by an invisible surplus of 7.5 per cent, lowering CAD to 2.3 per cent of GDP (Indian budget). India has fairly strong trade relationship with the U.S. and EU which account for almost 30 percent of India's exports. In 2008-09, Indian exports had actually declined 3 percent following U.S. recession which is evident from Figure:

### Performance of Imports and Exports (US \$ bn)

Table: 1

Year	Exports	%Growth	Imports	%Growth	Trade Balance
2000	44.56		50.53		-5.97
2001	43.82	-1.7	51.41	1.7	-7.59
2002	52.71	20.3	61.41	19.5	-8.7
2003	63.84	21.1	78.14	27.2	-14.3
2004	83.53	30.8	111.51	42.7	-27.98
2005	103.09	23.4	149.16	33.8	-46.07
2006	126.41	22.6	185.73	24.5	-59.32
2007	162.9	28.9	251.43	35.4	-88.53
2008	182.8	12.2	298.83	18.9	-116.03
2009	178.75	-2.2	288.37	-3.5	-109.62
2010	254.4	42.3	352.57	22.3	-98.17
2011	251.14	-1.3	448.04	27.1	-196.9
2012	304.1	21.1	446.94	-0.2	-142.84

Figure: 1



Source: DGCIS

**c) GDP**

As the crisis started deepening in 2008, it led to collapse of few global investment banks and the crisis started spreading to other countries.

The Indian economy started slowing down since the first quarter of 2008 with the growth moderating to 5.8% since crisis in 2007. Looking at the components of India's GDP from the expenditure side, it is found that in the last few years of the pre-crisis period, apart from domestic consumption, capital formation was also contributing to GDP growth in a big way.

The following facets were responsible for the growth momentum of consumption expenditure during 2008:

The loan waiver scheme in June 2008, which waived INR 600 billion of farm loans due on agricultural farmers and the welfare programmes of employment generation such as Mahatma Gandhi National Rural Employment Guarantee Scheme , Implementation of Sixth Pay Commission recommendations in September 2008.

Capital formation showed a declining trend post crises due to subdued business sentiments. Imports and exports declined followed by recession in 2008 third quarter which was also responsible for magnifying the effect of the crises on the Indian economy.

**d) Stock Market**

The Indian stock market was able to absorb the shock of financial crisis due to concrete regulatory framework and resilient financial system. The given table indicates the fluctuations in the stock market in India and US. It can be observed that there exists a high positive correlation to the extent of 0.925 in the volatility between the US markets and the Sensex and there exist a negative correlation between the stock market indices and rupee dollar rate instabilities.

*Table: 2 Performance of Stock Indices*

Year	Dow Jones	% change	Sensex	% change	Rupee-Dollar Rate	% change
2006	11413		14134		44	
2007	13178	15.5	15889	12.4	41	-6.8
2008	11243	-14.7	13580	-14.5	42	2.4
2009	8869	-21.1	10980	-19.1	47	11.9
2010	10668	20.3	16100	46.6	45	-4.3

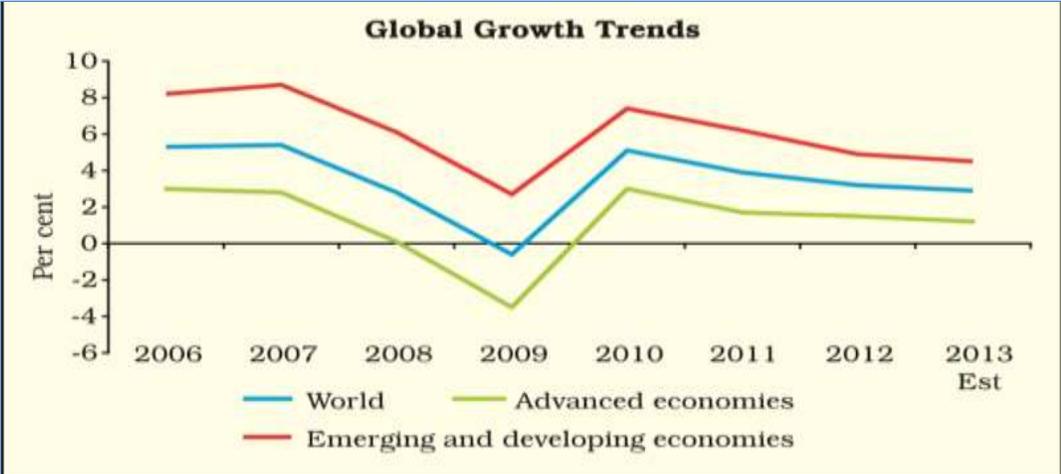
**e) Inflows and Outflows**

Of the total capital flows, net foreign direct investment represents the largest share of private capital flows in the emerging markets. Net portfolio investment is also an important source of finance in the emerging markets. Capital flows expose the potential vulnerability of the economy to sudden withdrawals of foreign investor from the financial market, which will affect liquidity and contribute to financial market volatility of the economy. US crisis was the end result of sub prime lending resulting to bankruptcy of leading banks and financial institutions whereas the European crisis in 2009 made the European countries to refinance its debt. These crises had a crucial outcome on the Indian economy. Indian stock market was touching new heights prior the crisis, because of heavy investments by Foreign Institutional Investors, however, when the parent companies from US and Europe found themselves in a severe credit crunch as a result of sub-prime crisis, the only option left with these investors was to withdraw their money from Indian stock market which lead to volatility in the equity market.

**f) Global Growth Rate:**

The asset quality of the banks has deteriorated following the crisis. There has been a contraction in the international banking business. It can be observed from Figure: 2 that there has been a steep fall in the overall growth rate of the advanced economies post crisis whereas emerging and developing economies show a moderate decline in the overall global growth rate.

*Figure 2: Global growth trends*



Source: Trends and Progress 2012-2013

## **Section III Practices followed to Sustain Financial Crises**

### **Steps taken by RBI and GOI to Sustain Financial Crises:**

Let me now turn to how RBI and GOI responded to the crisis. The failure of Lehman Brothers in mid-September was followed in quick succession by several other large financial institutions coming under severe stress. This made financial markets around the world uncertain and unsettled. This contagion, as I explained above, spread to emerging economies, and to India too. Both the government and the Reserve Bank of India responded to the challenge in close coordination and consultation. The main plank of the government response was fiscal stimulus while the Reserve Bank's action comprised monetary accommodation and counter cyclical regulatory forbearance.

### **Monetary policy response:**

The Reserve Bank's policy response was aimed at containing the contagion from the outside - to keep the domestic money and credit markets functioning normally and see that the liquidity stress did not trigger solvency cascades. In particular, Reserve Bank targeted three objectives: first, to maintain a comfortable rupee liquidity position; second, to augment foreign exchange liquidity; and third, to maintain a policy framework that would keep credit delivery on track so as to arrest the moderation in growth. This marked a reversal of Reserve Bank's policy stance from monetary tightening in response to heightened inflationary pressures of the previous period to monetary easing in response to easing inflationary pressures and moderation in growth in the current cycle. RBI's measures to meet the above objectives came in several policy packages starting mid-September 2008, on occasion in response to unanticipated global developments and at other times in anticipation of the impact of potential global developments on the Indian markets.

Reserve Bank's policy packages included, like in the case of other central banks, both conventional and unconventional measures. On the conventional side, it reduced the policy interest rates aggressively and rapidly, reduced the quantum of

bank reserves impounded by the central bank and expanded and liberalized the refinance facilities for export credit. Measures aimed at managing foreign exchange liquidity included an upward adjustment of the interest rate ceiling on the foreign currency deposits by non-resident Indians, substantially relaxing the external commercial borrowings (ECB) regime for corporates, and allowing non-banking financial companies and housing finance companies access to foreign borrowing.

The important among the many unconventional measures taken by the Reserve Bank of India are a rupee-dollar swap facility for Indian banks to give them comfort in managing their short-term foreign funding requirements, an exclusive refinance window as also a special purpose vehicle for supporting non-banking financial companies, and expanding the lendable resources available to apex finance institutions for refinancing credit extended to small industries, housing and exports.

### **Government's fiscal stimulus:**

Over the last five years, both the central and state governments in India have made a serious effort to reverse the fiscal excesses of the past. At the heart of these efforts was the Fiscal Responsibility and Budget Management (FRBM) Act which mandated a calibrated road map to fiscal sustainability. However, recognizing the depth and extraordinary impact of this crisis, the central government invoked the emergency provisions of the FRBM Act to seek relaxation from the fiscal targets and launched two fiscal stimulus packages in December 2008 and January 2009. These fiscal stimulus packages, together amounting to about 3 per cent of GDP, included additional public spending, particularly capital expenditure, government guaranteed funds for infrastructure spending, cuts in indirect taxes, expanded guarantee cover for credit to micro and small enterprises, and additional support to exporters. These stimulus packages came on top of an already announced expanded safety-net for rural poor, a farm loan waiver package and salary increases for government staff, all of which too should stimulate demand.

### **Impact of monetary measures:**

Taken together, the measures put in place since mid-September 2008 have ensured that the Indian financial markets continue to function in an orderly manner. The cumulative amount of primary liquidity potentially available to the financial system through these measures is over US\$ 75 billion or 7 per cent of GDP. This sizeable easing has ensured a comfortable liquidity position starting mid-November 2008 as evidenced by a number of indicators including the weighted-average call money rate, the overnight money market rate and the yield on the 10-year benchmark government security. Taking the signal from the policy rate cut, many of the big banks have reduced their benchmark prime lending rates. Bank credit has expanded too, faster than it did last year. However, Reserve Bank's rough calculations show that the overall flow of resources to the commercial sector is less than what it was last year. This is because, even though bank credit has expanded, it has not fully offset the decline in non-bank flow of resources to the commercial sector.

### **Innovative Steps Which Government Should Have Taken:**

The government can easily generate \$20 billion or one per cent of GDP by allowing higher coal and iron ore production from its large reserves. The annual coal imports have gone up from approximately \$7 billion five years ago to about \$18 billion now. The increased dollar outflow was largely avoidable because India has among the largest coal reserves in Asia. India could have saved \$10 billion simply by producing more domestic coal.

The government must, under a specially regulated privilege, maybe under the Supreme Court's watch, revive the export of iron ore from Karnataka and Goa where much of the mining has stopped following judicial intervention. Prime Minister Manmohan Singh spoke about making a special plea to the Supreme Court to restart mining and exports from here. This could add another \$7 to \$8 billion to the foreign exchange reserves.

If the gold imports are brought down by about \$20 billion, to the levels that existed before 2011, the CAD should be back to the comfort zone of less than three per cent of GDP. The moment CAD comes below three per cent of GDP, the overall sentiment would definitely change for the better.

World economies have been adopting reforms to their economic policies and have implemented several fiscal and monetary stimulus initiatives to recover from the crisis.

While the developed world, including the U.S and Euro Zone has leaped into downturn, the Indian Economy is being affected by the spill-over effects of the global financial crisis. FIIs can be increased by providing easy access to Foreign Investor by simplifying the approval procedure and industrial license.

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