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Global Financial Crises 2007-09: Implications for Indian Economy

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Abstract:
In the light of effects of US financial crisis of 2008 permeating global economies, the paper attempts to assess that effect on Indian economy. The investigation of impact of crisis entails the secondary data on India's macroeconomic and financial indicators. A comprehensive account of impact of crisis on economy was sketched which also encompassed the regulatory action taken by the government in response to the evolving crisis of 2008. The paper concludes that the channels of trade, financial and currency served in propagating the penetration of US financial crisis into the Indian economy. Three sizable arms of economy viz., industry, agricultural and the service sector suffered a severe blow from the crises' effects. The chief reason of the contagion succeeding in penetrating decoupled economies of emerging markets like India was global integration. All significant arms of the economy, such as capital flows, international trade, foreign exchange reserves, industrial production, agricultural production, employment, economic growth, etc. experienced a substantial decline in their growth rate. However, the accommodative and expansionary fiscal and monetary policy, timely facilitated, assisted the economy in circumventing the severe effects of crisis. As a result of prompt response of the regulators and government, Indian economy was back on its growth traction by the second half of 2009.

Keywords: *Global financial crises, India, economic indicators, exports, FDI, external credit, industrial production, monetary and fiscal policy.*
JEL Classification: G01, O5, N1, F5, E63

1. Introduction

The global economy was suddenly facing a shadow casted on the world's economic growth by the evolving US sub-prime financial crisis in year 2008. It was the first instance in the Great Moderation period since World War II that the world witnessed a severe contraction in its growth. Subsequently, this was also the first time that policy makers of various economies on a global scale were tasked with designing policies appropriate enough to save themselves and their subjects from the wrath of unfolding crises emerging in the form of surging foreclosures and unemployment, deteriorating earnings and economic growth and a threat of a long term deflation if the effects of crisis were contained by right policies at the right time.

This episode of crisis was distinct and exceptional from others. This crisis was not restricted to a bubble bursting in an economy and being limited to the country of its origin or adjacent countries. This heightened intensity of crisis was also attributable to the increased global integration among economies connected through the channels of finance and trade. This recession spans a far more complex tale than any preceding recession, being compared with Great Depression of 1930s. It engulfed the global economies and their institutions questioning the preparedness of their structural framework irrespective of the scale and magnitude of their participation in the bubble building in US.

The Indian economy was on the prosperous path of dramatic growth for the consecutive five years from 2003 to 2008 managing growth seamlessly along with the inflation and economic solidity. It was enjoying a comfortably envious average growth rate of 8.8%. Even though the macroeconomic conditions were robust and resilient to the global financial crisis, the global events had started penetrating the economy shaping the domestic events. The cyclical growth moderation had begun in the beginning of the year 2008-09 which subsequently exacerbated for the second half of the year stimulated by the distressing impacts of the global financial crisis. Thus illustrating the fact that when the events are global in nature (such as global financial crisis) then it could proliferate to every economy notwithstanding the degree of their integration and robustness of their structural frameworks.

The paper is divided into following sections Section 2 is about Objectives and Methodology, Section 3 is about Analyses and Interpretation and Section 4 finally concluded the paper.

2. Objective and Conceptual Framework

In the light of effects of US financial crisis of 2008 permeating global economies, the paper attempts to assess that effect on Indian economy. The investigation of impact of crisis entails the secondary data on India's macroeconomic and financial indicators. Various indicators were examined for it was believed that numerous reasons were responsible for US financial crisis permeating Indian economy with some of these variables having feedback effect on each other as well. Some of these analysed were inflation, economic growth, international trade, stock exchange,

Various sources were consulted to sketch a comprehensive account of impact of crisis on economy and following regulatory action taken by the government in response. These sources encompass reports of RBI, ministry of commerce, various research papers and reports of World Bank and Asian Development Bank

3. Analyses and Interpretation

3.1. Gross Domestic Product

After the adoption of the liberalization policies in 1991, Indian economy has been a party to the appreciating economic growth riding on the various bourgeoning sectors after the gradual opening of the economy to the foreign market. The crisis which made its entry through various channels of trade, financial and currency sectors of the economy cumulatively reflected the decline in their growth rates via a deteriorating rate of GDP**.** The three sizable arms of the GDP reflected a significant deceleration in their growth during the contagion period of the financial crisis in 2008-09, namely, the industry sector, agricultural sector and the service sector(Reserve Bank of India).Therefore, such a scenario erupted because of the increasingly consolidating linkages of India in the financial and the trade sectors with the global economy, particularly with those which were found to be at the core of the great recession of US-turned-global financial crisis of 2007-2009. Thus, even as the ties and relations were strengthening with the developed countries through globalization, so were the vulnerabilities of the developing countries becoming more and more dependent upon the developed economies (Gupta A. S., 2010).

Indicators	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
India's Real GDP Growth Rates (at Factor Cost 2004-05 prices)	3.99	8.06	6.97	9.48	9.57	9.32	6.72	8.59	9.32	6.21	4.96
Agriculture & Allied Sector Growth (% at 2004-05 prices)	-6.6	9.05	0.18	5.14	4.16	5.8	0.09	0.81	7.94	3.65	1.79
Agricultural Sector Growth (2004-2005 Prices)	-8.13631	10.83709	0.065025	5.530869	4.125083	6.341063	-0.27183	0.409224	8.809697	3.904108	na
Industry Growth (% at 2004-05 prices)	7.21	7.32	9.81	9.72	12.17	9.67	4.44	9.16	9.16	3.49	3.12
Services Growth (% at 2004-05 prices)	6.97	8.06	8.13	10.91	10.06	10.27	9.98	10.5	9.75	8.2	6.59
Consumption by Demand (%YOY)	2.3	5.4	2.3	8.6	7.9	9.3	7.6	8.1	8.1	5.4	5
Private Consumption by Demand (%YoY)	2.9	5.9	2.1	8.5	8.7	9.2	7.1	7	8.1	5.5	5
Public Consumption by Demand (% YoY)	-0.4	2.6	3.4	8.9	3.8	9.6	10.4	14.3	7.8	5.1	5

Table 1: Gross Domestic Product & Consumption by demand, 2002-2012
Source: Government of India

The economic growth of India declined from a consistent decent rate of 3 years since 2005 - 2006 hovering around 9 percent to a significant lower rate of 6.72 percent for the first time in 2008 – 2009 after its persistent ascent in the preceding years and thereby declaring the landing of the crisis in India. Its impact was profound in the year 2008-2009 with a severe decline of contribution from the agriculture and allied sector growth that itself witnessed a plummet of 98 percent from 5.8 percent in the year 2007-2008 to 0.09 percent in the year 2008-2009. Particularly, in this year of 2008-2009, the agricultural sector experienced a negative growth of 0.27 percent. In the same year, the industry growth took a plunge of more than 50 percent from 9.67 in the year 2007 – 2008 to 4.44 percent in the year 2008-2009. Though, the service sector was not seriously injured as was the industry sector with a moderate decline of 3 percent only. The most severely injured in the industry sector was the manufacturing with a steep decline of the growth rate from 18.4% in 2007-2008 to 2.5% in the year 2008-2009. Further, the contribution of manufacturing in the IIP also witnessed a decline from 92.4% contribution to IIP growth rate in 2007-2008 to 78.9% in 2008-2009 and 73.1% in the year 2009-2010. This decline in the growth rate of the manufacturing sector was attributed to the worsening global economic situation externally and escalating cost of finance consequential of the taut monetary policy[1].

Consumption by demand also contributed in the decline in the GDP of the economy for the year 2008-2009 relative to the previous year dropping from its apex performance of 9.3 percent in the year 2007-2008 to 7.6 percent in 2008-2009. Similar was the performance of the private consumption that decreased from 9.2 percent in the year 2007-2008 to 7.1 percent in the year 2008-2009.

[1] Just before the onset of the crisis, Reserve Bank of India was gradually increasing the policy rates to manage the flow of foreign capital through stock market into the economy which was contributing to the surge in money flow and thereby the inflation in the economy.

However, the public consumption showed a contrasting trend when compared with all other major indicators with an increase to 10.4 percent in the year 2008-2009. This contrasting figure was sponsored by the stimulus packages amounting to ₹100,000 crore in phases announced by the government on the heels of the crisis impacting the economy. Since these packages were announced in the latter part of the year 2008-2009, its effect significantly was reflected in the next fiscal year of 2009-2010. Most of the sectors accordingly showed the signs of the recovery with agriculture and allied sector posting a growth of 0.81 percent in 2009-2010 relative to the previous year figure. This growth in the agricultural and the allied sector was riding on the endowment of the farm loans waiver program[2] costing rupees 60,000 crore to the exchequer in June 2008. This loan became instrumental in giving a thrust to the private consumption particularly in the rural areas by expanding their disposable income. Likewise, industry growth appreciated to 9.16 percent from 4.44 percent of previous year and growth in the service sector recovered more than what it had lost in the fateful year of 2008-2009 at 10.50 percent. The consumption by demand also rebounded by 8.1 percent relative to the last year figure of 2008-2009 where the public consumption perceptibly increased to 14.3 percent. The execution of the sixth pay commission in September 2008 that considerably increased the earnings of the government employees played a major role in increasing the consumption by demand by abetting the expansion in the private consumption(Rajesh & Bordoloi, 2012). Thus, Indian economy had started to recuperate from the middle of 2009 riding on the domestic consumption which was rather quick as compared to the rest of the affected economies around the world. This rebounding faster than other advanced economies attests and substantiates the fact that the Indian economic growth story is less export-led and more domestically driven. The significant domestic factors fuelling the GDP growth of India are the investment and the consumption where the private consumption factors as the main contributor relative to the government consumption.

Though as per (Gupta, 2010), it was not only the external factors relating to the subprime financial crisis that played a role in the downfall of the economic growth of India in 2007-2009. It was in fact a confluence of both external and internal factors which contributed to the turbulence in the Indian economic growth. The economic growth that was rising for four straight years had started gnawing into its own growth momentum from overheating. The pillars of the Indian economy had started to shake from its own glorious pace of economic growth, lacking the support from the policymakers to sustain the growth in a planned manner. The supply side bottleneck in the form of undeveloped infrastructure, deficiency of skilled workers or even unemployable skilled workers (lacking vocational training), red tape impediments stockpiling the significant issues as unresolved, policy paralysis, electricity shortages, etc. Furthermore, the trade deficit was rising, money growth in the economy was increasing, and the credit growth was also surging in the economy with the industries operating near to their complete capacity during the year 2006. Reserve Bank of India in the bid to tame the escalating inflation in the pre-crisis level which originally was a product of excessive capital inflow into the shining Indian economy increased its policy rates which had begun its work of cooling the excited economy. The unforeseen event of the crisis in the US economy and the contradiction of the decoupling theory spreading the contagion to the Indian economy reversed the estimation of the policy maker accentuating their problems instead of resolving them. Therefore, the slowdown in the economy that begun long before the crisis had also started contributing in this slowdown. The only difference was that the initial, pre-crisis economic slowdown was prompted with a constructive aim to prevent the economy from overheating but became the cause and root origin of its own vulnerabilities in the midst of the crisis.

3.2. Inflation

India is a country which used to measure its inflation in wholesale price index (WPI) during that period unlike in the terms of consumer price index (CPI) used commonly by most of the global economies. This meant that the inflation (WPI) captured signified the trend of the prices of commodities in wholesale comprising of primary goods, raw materials, intermediate goods, manufactured intermediate goods awaiting further processing, And thus thereby, the WPI- inflation fails to seize the true price burden of the goods and services reaching the consumer. Thus, even when the WPI inflation was hovering around the zero % in some quarters of the year 2008 and even negative since June, 2009, the CPI inflation was reflecting a double digit figure. The broad consequence of the rising inflation is that it increases the disparity among the consumers and producers by swinging the purchasing power of goods and services to the producers from the common end users.

[2] The farm waiver program comprised of a number of initiatives that were instrumental in raising the disposable income in the rural sector by increasing the MSP (minimum support price) for a number of crops; initiating the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) pledging a minimum of 100 wage days to the unemployed, etc.

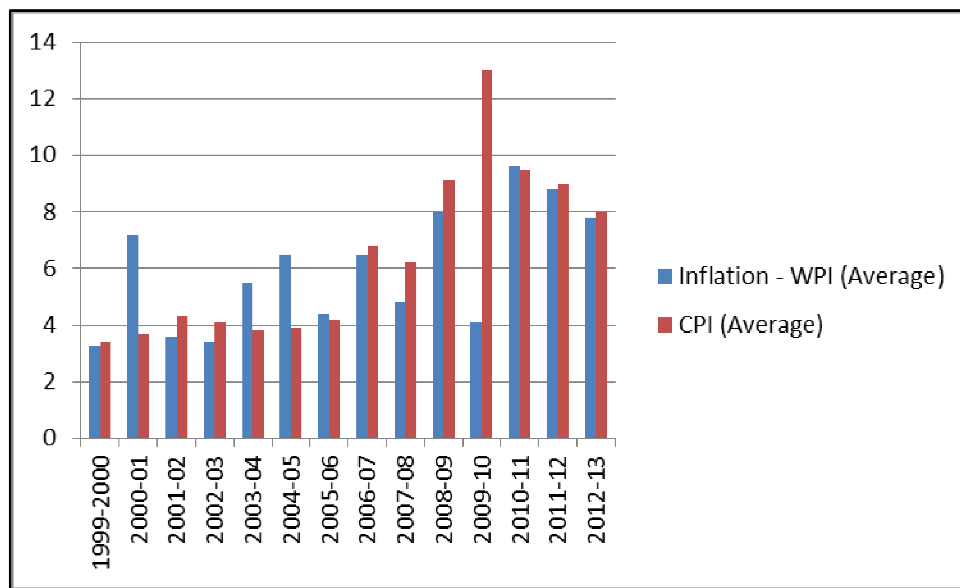

Figure 1
Source: Government of India

Before the onset of the crisis in the period of 2007-09, since 2001-02, the headline inflation (WPI based) had remained within the manageable level ranging from 3.6-6.5% average, coexisting with admirable economic growth rate. However with the arrival of the contagion impacts from the financial crisis of US in the year 2008, the headline inflation also took a leap touching 8% in 2008-09 touching 12.9% in August 2008 while 9.1% was the figure for CPI inflation. This sudden spring in WPI could be attributed to the rise in the commodity and food prices along with the spiralling oil prices in the international market triggered by the financial crisis of US. Whereas, in the case of CPI which was demonstrating high year-on-year growth, the persistently high food prices in the economy were to be blamed[3]. The trend of high and untenable inflation was maintained in the subsequent year of 2009-2010 with CPI inflation at 13%. The essential commodities within WPI prolonged with the high inflation demonstration. This period was marred by the deficient monsoon creating the supply side strain. However, the inflation of the primary commodities moderated and slowed to 4.1%, majorly contributed by the easing of the crude prices and commodity prices in the international market along with the services. But the trend of low inflation could not hold for long as the inflation on primary articles moved back to double-digit at 18.3% by March, 2010 from the single digit in October, 2009. The increase in the WPI in the latter half of the year was owing to the sharp escalation in the prices of oil and food resulting from the diminished agricultural output and amplification in the international commodity prices. Also the gap between the CPI and WPI based inflation which got widened during the crisis period, witnessed a reversal in the subsequent period from 2010-2011 tapering down to a few decimal points owing to the tightening of the key policy rates put in place through monetary policies in order to arrest the inflation. Though, this tightening had its own demerits with a significant loss in the investments owing to the discontented investment sentiments in the economy along with the underperformance of the industrial activities. The higher interest rates implemented as an anti-inflationary tool increased the borrowing expenses for the corporates having a direct impact on their profitability, compelling a review of their investment decisions. The earning from the exports was also wounded along with the injury to the export competitiveness through the appreciation of the real effective exchange rate[4]. This further directed the increase in the current account deficit. While, during the year 2007-08 to 2009-2010, the increase in the CPI based inflation was riding on the accentuated prices of the food articles and services, which in turn was contributed by the supply side bottlenecks and not as a result of demand surpassing the supply. The increase in the food prices are a stressful situation especially for the poorer section of the economy as it essentially wipes away their purchasing power particularly when they do not possess any hedging mechanism against inflation. The WPI persisted in double digit in the Quarter1, 20010-11 but got relieved owing to the recovered monsoon and dawdled effects of the accommodative monetary policy. The supply-side constraints remained to be the core factor contributing in the sturdy persistence of the WPI based inflation continuing in the year 2012-2013 from 2010-2011.

[3] The food prices forms the core part or significant weight in the index of the consumer price inde.

[4] This is to say that with rising inflation the cost of primary material increases domestically for the exporters without any increase in the worth of their products in the international market.

S. No.	PRICES	Average2000-01 to2009-10(10 years)	Average 2003-04 to2007-08(5 years)	2008-09	2009-10	2010-11	2011-12
A	**Wholesale Price Index Annual Average (% change)**						
1.	All Commodities	5.4	5.5	8.1	3.8	9.6	8.9
2.	All Commodities-Point to Point	-	-	1.6	10.4	9.7	7.7
3.	Primary Articles	6.4	6.0	11.0	12.7	17.7	9.8
3.1	of which : Food Articles	5.8	5.2	9.1	15.3	15.6	7.3
3.2	Non-food Articles	6.1	5.5	12.9	5.5	22.3	9.6
4	Fuel Group	8.9	7.3	11.6	-2.1	12.3	14.0
5	Manufactured Products	4.1	5.0	6.2	2.2	5.7	7.3
5.1	of which: Food Products	4.7	4.8	8.7	13.5	3.7	7.1
5.2	Non-Food Products	4.0	5.0	5.7	0.2	6.1	7.3
B	**Consumer Price Index (CPI) (Average % Change)**						
1.	CPI- Industrial Workers	5.9	5.0	9.1	12.4	10.4	8.4
1.1	Of which: CPI- Industrial Workers Food	6.2	5.5	12.3	15.2	9.9	6.3
2.	CPI- Agricultural Labourers	5.4	5.1	10.2	13.9	10.0	8.2

Table 2: Inflation: Consumer Prices & Wholesale Prices
Source: Reserve Bank of India

3.3. Interest Rate

The year of 2008-2009 was a very eccentric year for the Indian economy for this was the year in which both dawn and twilight, boom and gloom was witnessed in the same year that vaulted from one phase to another with the meteoric velocity. Similar was the experience of the policymakers that had to contend two opposing different phases of the economy and its swinging variables. The policymakers were obliged to increase the interest rate in the first part of the financial year with the snowballing commodity and food prices in the global market. These international prices were the driving force behind the rising inflation in the Indian economy. Whereas in contrast in the same year of 2008-2009, the second part came about with the threat of not only derailing the economic growth affected by the contagion from the global financial crisis seeping into the economy but also a long term paralysis if not managed in time. Thus, compelling a reversal of the monetary policy adopted in the first part with the lowering of the interest rates. This provision facilitated bounteous liquidity in the financial market in response to the shrinking global credit market and plunging domestic stock market which had tentatively suffocated the domestic financial system, had not been for the acclimatizing monetary and fiscal stimulus. This was reflected in the reduction of the cash reserve ratio post the collapse of Lehman Brothers in September, 2008 to 5% from the one prevailing during the first part of the year 2008-2009 at 9%, thereby discharging the liquidity amounting Rs.1,60,000 crore to the banking system. Subsequently, the other liquidity controlling gears of the monetary policy also witnessed the respective changes. The 425 basis points[5] were reduced in the repo rate while the discount of 275 basis points was dispensed in the reverse repo rate along with the decrease of the SLR from 25% to 24% for the FY2008-2009. These reductions in the interest rates by the RBI since October, 2008 released over Rs 4 lakh crore into the financial system. The policy rates were moderated by the RBI in order to induce the banking system to lower their rates for the retail, housing and personal loans which could stimulate consumption, employment generation and development investment activities in the economy.

However, the risk perception kept on escalating playing the pivotal role in the implantation of long lags in the transmission of the benefits of the reduction in the policy rates[6]. Consequently, the end users did not witnessed any fall in the cost of funds in parallel to the steep reduction in the policy rates for a significant period of time. It was only by the Quarter4, 2008-2009, that the moderation in the lending and the deposit rates extended by the banks to the final customers had begun. Compared to the global scenario, specifically the advanced economies, the transmission channel in India encountered minimal impairment which had nominally limited the effectiveness of the monetary policy reductions. Successively, in the year 2009-2010, the Reserve bank was able to maintain the abundant liquidity provision in the financial system riding on the back of low inflation and weak credit demand from the market. Nevertheless, the implementation of the accommodative monetary policies was executed at its own peril for it had the potential to accelerate inflation in the economy necessitating a cautious approach to its timely and orderly phase out. Thus with the economy well back on the path to recovery, inflation started solidifying and the credit demand from the private sector began intensifying in the

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[5] 100 basis points is one percentage.

[6] The risk premium enlarges whenever there is the rise in the risk perception within an economy. This rise in the risk premium sometimes intensifies to the extent of counterbalancing the reduction in the key policy rates viz., CRR, repo rate, SLR and reverse repo rates.

second half of the 2009-10. Henceforth, the path for the rollback of the fiscal stimulus was laid to circumvent the multiplier effects of the extended fiscal imbalances[7].

3.4. Capital Flows

The chief risk which is also incidentally of paramount importance arises from the financial crises of international nature is the potential ceasing of the capital flows that in earlier times were abundant and financing the growth story of the Indian economy. This fear arises from the fact that the Indian economy is harnessed with the global economy through both the current and capital account which innately becomes the common channel of transmission of both good and adverse effects. In the year 2008-09, the year of the onset of the global financial crisis, Indian economy witnessed a sharp contraction in its capital flows relative to the previous year at USD 6.8 billion from a whooping three digit figure of USD 106.6 billion for the year 2007-2008. While FDI exhibited a growth even in the year when the financial crisis struck the Indian economy and other indicators tumbled from its effects[8]. From USD 34843 million in the year 2007-2008, it increased to USD 41873 million in 2008-2009. However, the actual decline in FDI was experienced subsequently, to the tune of 55% dropping in one year from USD 4.4 billion in March 2008 to under USD 2 billion in March 2009 (Siddiqui, 2009). Further correction in parallel with the depreciating global economy embroiling the Indian economy was exhibited by the portfolio investments with the intense depreciation in FII parading a net outflow of USD 15.017 billion in the year 2008-2009 from the equity market compared with the previous year 2007-2008, net inflow of USD 20.328 billion. This sudden withdrawal of the FIIs from the Indian equities sent the stock exchanges, particularly BSE tumbling down to about 8000 in October-November 2008 from its zenith of over 20000 in January, 2008, thereby becoming the first indicator in the list of those impacted by the contagion of the global financial crisis incited by the collapse of the Lehman Brothers, a significant investment bank of United States in September 2008. The FIIs made a U-turn from the Indian equity market owing to two reasons, namely, the gloomy global outlook threatening their investments security compelling them to find new safe haven in a highly uncertain global milieu. Secondly, their heightened funds requirements arising from their need to cover their losses in their domestic markets. Lastly, the unpromising outlook on earnings of the Indian corporates in the grip of financial crisis did not help much in improvising the sentiments of the portfolio investors any further at that time. Nevertheless, it was in the subsequent year of 2009-2010 that the trend was reversed with FDI exhibiting a decline to USD 37745 million, while FII recuperating at USD 29048 million. The recuperating trend of the FII was fuelled by the policy measures implemented by the Indian government in order to tide over the recessionary effects of the global financial crisis.

	2005-06	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**
FDI inflows (In US$ million)	8961	22826	34843	41783	37745	34847	46556	36860
Net FII (In US$ million)	9926	3225	20328	-15017	29048	29422	16812	27583

Table 3: Capital Flows into India
Source: Government of India

The massive and sudden withdrawal of the portfolio investments by FIIs further led to the sharp depreciation of the domestic currency INR. The decline in the currency valuation was exacerbated with the actions of the Indian corporates trying to raise foreign currency through the conversion of the funds that were raised from the domestic avenues leading to the appreciation of the foreign currency against the depreciation of domestic currency INR loosing almost 25% within 7 months from April to November 2008 closing at ₹49 per USD. It was ultimately the foreign exchange market and the domestic market facing the liquidity constraints which bore the imprint of the crash of the equity market.

The capital inflows in terms of external commercial borrowings (ECB) were also impacted by the financial crisis of 2007-2009. Post reforms, the companies in India have been generally dependent upon the international institutions for the access to the cheap sources of funds for their investment projects of medium and long incubation periods[9]. With the collapse of the international trade following the US financial crisis in 2007-2009, the industries suspending their investment plans drastically revised their external commercial borrowings leading to the fall in the capital inflows during that period. In addition, the crashing of the general confidence with the financial crisis impacted the international credit market leading to the vigilant approach and exhaustive scrutiny of the application while increasing the interest rates to their peaks. Such a distrustful and guarded environment squeezed the liquidity from the market

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[7] If fiscal imbalance in an economy continues for a longer duration then the risk of increased inflation owing to the rise in the demand or with the competing low interest rates hovers over the economy. The consequences of the prolonged persistent fiscal imbalance could not be better gauged than from the illustration of Euro-zone financial crisis that throttled both its growth and financial stability.

[8] The attraction for the foreign investors to invest through the FDI route was created with the liberalization of the economy that opened up the investment avenues in services, construction, telecommunication, power, etc.

[9] After the independence, the financial institutions were established to assist the development of industries in India with the extension of credits at subsidized rates and that too for longer time period. However, this model underwent a major transformation with the induction of the financial sector reforms that decontrolled the interest rates and enhanced the competition in the banking sector. Consequently, the majority of these financial institutions which were losing to the competition were necessarily converted into banks seizing the access to economical finance for their core client viz., industries. Thus, the industries were abandoned to fend themselves for the avenues of cheap and subsidized credit that eventually opened into a form of external commercial borrowing from the global financiers.

while cascading of the borrowings by the industries[10]. Therefore, it was not only ECB that underwent deterioration during the period of 2008-2009, but also included the short-term trade credit, adding to the inventory contributing in the relapse of the capital inflows. The cumulative effect of the decreasing capital inflows emerged to be a harried experience for both the businesses and the economy with declining investments and depreciating national currency spreading the contagion to the real economy via financial channel.

3.5. International Trade

The impact on the export sector of the economy is inevitable with any major incident occurring on a global scale in this small globalized village that had significantly altered the meaning of the boundaries of the nations. Also is true that the suffering of the emerging economies, many of which are heavy reliant on primary commodity exports, multiplies with the financial crisis, occurring particularly in the industrial nations, as demand for the primary commodities plummets lowering its prices in the international market which incidentally figures as their core exporting item. However, India being a manufactured product - oriented exporter emerged to be relatively screened in the event of the global financial crisis. India with exports contributing 20-24% to the GDP annually was impacted, marginally from the US financial crisis. Still the adverse effect on the export growth always has a negative impact on the economy's GDP where India stands at no exceptional vantage point. Thus, before the crisis, both the export and the GDP were appreciating at a fairly robust pace with GDP growth rate between 7-10% while export witnessing a growth rate between 20-29% riding on the financial reforms introduced in 1991. The export in India grew at 29% when the US economy alone was grappling with the facts and figures of the rapidly unfolding financial crisis in the year 2007-2008. Subsequently, when the domestic affair of US converted into a global event, the export sector in India too was impacted with a downward revision of 52.6% from 28.9% in 2007-2008 to 13.7% in the year 2008-2009 followed by altogether a negative growth of 3.5% in the subsequent year of 2009-10. Since it was the collapse of the Lehman Brothers in 2008, September (latter half of the fiscal year) in US which triggered the recessionary wave throughout the world, its effect on the economies effectively appeared in the next fiscal year of 2009-2010. Still it was the combination of two factors that contributed in the declining exports of India- one being the reduced demand from its trading companions and the other being the shrilling voice of the protectionism menace from the advanced economies. Remarkably, on one hand the export exhibited a negative growth rate in the run up to the year 2009-10 while on the other hand, the earnings made by the export sectors were reflecting an appreciating trend with the USD 128.9 billion accounting for the year 2007 – 2008 which increased to USD 166.2 billion for the year2008-2009 and USD 189.0 billion in the year 2009 – 2010. The reason behind this intriguing behaviour was the fact that it was the depreciation of the Indian currency against the USD which had appreciated the registered earnings made by the exporters despite the waning export from India. The depreciated currency valuation had resulted in the increase in the receipt amount of the exporters after the conversion.

Indicators	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Exports (US$bn)	53.8	66.3	85.2	105.2	128.9	166.2	189.0	182.4	250.5	309.8	291.2
Export % YoY	20.3	23.3	28.5	23.4	22.6	28.9	13.7	-3.5	40.4	20.9	-6.0
Imports (US$bn)	64.5	80.0	118.9	157.1	190.7	257.6	308.5	300.6	381.1	499.5	479.6
Imports %YoY	14.5	24.1	48.6	32.1	21.4	35.1	19.8	-2.6	27.6	30.3	-4.0
Trade deficit (US$bn)	-10.7	-13.7	-33.7	-51.9	-61.8	-91.5	-119.5	-118.2	-130.6	-189.8	-188.4

Table 4: International Trade, 2002-2012
Source: Government of India

The manufactured products maintaining the majority share of the exports w.r.t commodity wise bifurcation of the data was followed by the petroleum products, primary products and others in the same order. Amid the manufactured products section, the export of the leather, chemicals and related products, textile products and handicrafts suffered from the impact of the declining international demand for the exports, along with the gems and jewellery sector that witnessed a severe decline in the year 2008-2009. In contrast, riding on the buoyant export of electronic goods and transport equipment, the engineering goods section exhibited an elevated growth. The major impact of the declining exports was felt by the labour intensive units of exports, namely the textile and textile products which includes SME engaged in the manufacturing of textiles, handlooms, etc. The cancelled orders translated into layoffs which resulted in the impaired the livelihood of numerous workers associated with the export sector of the economy. It was the loss to the SME sector which was significant because they generate employment for numerous unskilled labourers. Furthermore, declining export meant widening current account deficit for the country which further added to the retrenchment of the employment as being joined by the declining domestic demand. The deteriorating domestic demand was the direct consequence of the rising inflation along with the tightening liquidity in the economy. And the rising unemployment along with the reduced exports transformed into reduction in the direct and indirect revenue collection for the government.

[10] The ECB was extensively being used by the Indian corporates to finance their investment plans instead of the domestic funding facilities. With the contraction of the international credit market owing to the global financial crisis, the burden of credit provision got shifted to the domestic avenues. This huge diversion of raised demand for the domestic funds led to the increase in the growth of the non-food and bank credit followed by the escalation in the interest rates reaching their peak surpassing the lending rate ceilings advocated by the Indian central bank.

(US $ million)

Exports of principal commodities				
Commodity/Group	April - March			
	2008-09	2009-10R	2010-11R	2011-12P
1	2	3	4	5
I. Primary Products	**25,335.4**	**26,396.5**	**32,844.7**	**45,574.0**
A. Agricultural & Allied Products	17,534.9	17,734.1	24,207.6	37,420.8
B. Ores & Minerals	7,800.5	8,662.5	8,637.1	8,153.3
II. Manufactured Goods	**123,148.9**	**115,180.7**	**157,993.9**	**186,784.2**
A. Leather & Manufactures	3,556.0	3,361.1	3,910.6	4788.5
B. Chemicals & Related Products	22,708.1	22,908.8	28,871.0	37,190.5
C. Engineering Goods	47,285.6	38,271.3	58,137.4	6,7093.1
D. Textiles & Textile Products	20,016.4	19,853.0	24,225.0	27,998.0
E. Gems & Jewellery	27,955.2	28,996.3	40,476.1	46,900.8
F. Handicrafts	301.0	224.8	256.9	233.5
III. Petroleum Products	**27,547.0**	**28,192.0**	**41,480.0**	**55,603.5**
IV. Others	**9,263.7**	**8,982.2**	**18,817.7**	**16,661.7**
Total Exports (I+II+III+IV)	**185,295.0**	**178,751.4**	**251,136.2**	**304,623.5**
Imports of principal commodities				
I. Bulk Imports	**138,791.0**	**125,315.1**	**151,167.1**	**214,754.6**
A. Petroleum, Petroleum Products & Related Material	93,671.7	87,135.9	105,964.4	154,905.9
B. Bulk Consumption Goods	4,975.3	9,012.7	8,854.8	11,614.4
C. Other Bulk Items	40,144.0	29,166.5	36,347.9	48,234.3
II. Non-Bulk Imports	**164,905.3**	**163,057.7**	**218,602.0**	**274,662.8**
A. Capital Goods	71,833.1	65,865.0	78,546.1	99,364.7
B. Mainly Export Related Items	31,930.8	31,270.0	53,608.3	54,478.9
C. Others	61,141.4	65,922.8	86,447.6	120,819.3
Total Imports (I+II)	**303,696.3**	**288,372.9**	**369,769.1**	**489,417.4**

P : Provisional. R : Revised.

Table 5: Principal Export commodities of India
Source: Reserve Bank of India

While on the other hand, the fall in the imports from 35.1% in the year 2007-08 to 19.8% in the year 2008-09 marked by the global financial crisis was less relative to the respective fall in the exports in the same year. It would be appropriate to attribute the spirited domestic demand as the underlying factor contributing to a lesser import demand. Since the economy was effectively impacted with the collapse of the Lehman Brothers in September 2008, the demand for the imports also witnessed a revision and moderation in the second half of the financial year only. The latter half of the FY 2008-09 registered the moderation in growth of the merchandise sector, oil imports, non-oil imports with the weakening import demand for the gold, silver and capital goods. The decay reflected in the oil imports are also attributed to the corresponding decrease in the oil prices during the second half of the FY2008-09[11]. Consequently, a significant extension in the trade deficit was observed from USD 91.5 billion in the year 2007-08 to 119.5 billion in 2008-09 which moderated to an insignificant level at USD 118.2 billion in the subsequent year 2009-10. This was owing to the fact that the exports was more severely impacted with the dawn of the global financial crisis particularly in the advanced economies compared to the import demand which was essentially domestically driven and thus not as severely impacted.

[11] A thorough analysis of the decline of the components of the importing items has been reflected in the following chart.

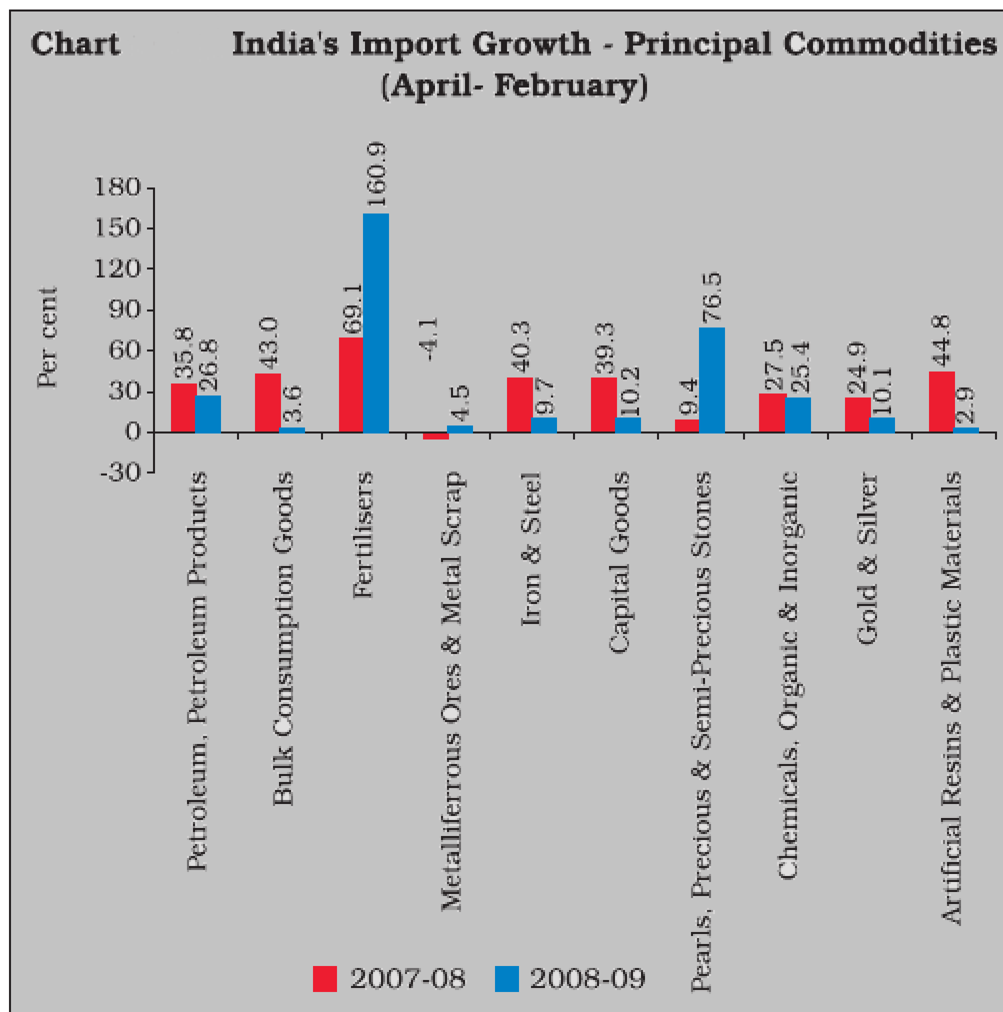

Figure 2: Principal Import Commodities of India
Source: Reserve Bank of India

3.6. Impact on Stock and Equity Market

The Indian equity market with the implementation of the financial reforms witnessed a peculiar interest of the foreign portfolio investors. BSE Sensex working around 3000 mark till 2003 witnessed a strong interest and thereby appreciation to over 20000 mark by 2008. The year 2007 and 2008 particularly experienced a sizeable volatility in the portfolio funds inflow with BSE Sensex registering a bounce of 7801 points within 10 months. In March-end, 2007, the Sensex was at 13,072 which covered a long distance trail to peak in January-start, 2008 with Sensex at 20,873 and back to a low of 8160 on March9, 2009 declining by 61% from its acme point in January, 2008.Congruently, a depreciation of 63% was registered in the market capitalization value. Initially, the Sensex rally was driven by the commendable growth progress and the promising prospects of the Indian corporate sector. Later, it was the contagion effects from the US financial crisis which initiated the gradual outflow of foreign equity funds in the starting followed by a sudden, heavy duty outflow of the funds from the Sensex by the FIIs. Henceforth, a decline of 38% and 36% was experienced by BSE Sensex and S&P Nifty for the FY 2008-2009. This sudden outflow of the funds was triggered by the collapse of the Lehman Brothers in September 2008 sparking the turmoil in the international market by spreading the fear of the safety of the investor's capital invested across the globe in various stock markets. Post the collapse of the stock market, the stock market being sensitive to the movements of its principal participants particularly in the free float section of the listed entities of the stock exchange reacted to the FIIs withdrawal. Thus, when the FIIs withdrew their investments from the Indian equity market, the shock wave was transmitted across the stock market creating panic among the domestic investors as well. It led to the erosion of the capital of many of the corporates along with numerous retail investors. It so happened because a considerable number of the stocks have lost more than seventy percent of the values from their acme valuations with some were even staring at more than ninety percent erosion. The dilemma of the continuous outflow of wealth from the stock market was exacerbated by the domestic events revealing the financial irregularities of the stock market listed IT Sector firm – Satyam. This specific episode aggravated the speed of the capital outflow by the FII riding on the apprehensions about the truthfulness and exactitude of the reporting practices of the Indian listed firms along with the regulatory effectiveness of its watchdog, SEBI.

Year	Bombay Stock Exchange					National Stock Exchange				
	Coefficient of Variation	Dispersion Range	Price /Earning Ratio	Market Capitalization (Rs crore)	Turnover (Rs crore)	Coefficient of Variation	Dispersion Range	Price /Earning Ratio	Market Capitalization (Rs crore)	Turnover (Rs crore)
2003-04	23	3270.08	16.19	1201207	502618	22.3	1057.85	15.24	1120976	1099535
2004-05	11.2	2409.93	16.56	1698428	518716	11.3	780	14.79	1585585	1140071
2005-06	16.7	5172.18	16.98	3022191	816074	15.6	1516.45	15.69	2813201	1569556
2006-07	11.1	5722.65	20.73	3545041	956185	10.4	1591.45	19.51	3367350	1945285
2007-08	13.7	8417.96	22.65	5138015	1578856	14.4	2654.25	19.12	4858122	3351038
2008-09	24.2	9439.72	15.67	1100074	1100074	23.2	2704	16.25	2896194	2752023

Table 6: Major Indicators of Indian Equity Markets
Source: RBI, 2008-09

This particular period was a very difficult era in the chronicle of Indian stock market with the repercussions being borne not only by the investors but also by the corporates and the economy as a whole. Both the retail and the institutional investors lost a safe avenue of parking their funds and earning returns from them. On the other hand, the corporates were staring at the shrunken liquidity from the market with dislocated and almost padlocked primary market along with the dispirited condition of the secondary market. Consequently, the companies in the expansion mode had to defer their investment and expansion plans to be financed through the procurement of the capital from the primary and secondary market which had virtually been abandoned by the investors. Furthermore, the domestic financial system had to face the increased demand for the credit in addition to their existing creditors, from the corporate sector which was redirected from the dysfunction stock market to fulfil their funds requirement and honour their imminent professional obligations. The crashing of the stock markets had eroded the confidence of the investors besides their investments leading to the relocation of their funds into the fixed return deposits substituting the high risk-return equity outlays and that too into the public banks instead of the private banks. In addition, the concoction of the personal colossal loss arising from stock market crash, the massive withdrawal from the depositors owing to the panic run after the stock market crash and the demand withdrawal by the corporates amassing funds for their operating expenditure post their capital erosion in the stock market collapse had put the maximum pressure on the mutual funds and NBFCs (Non-banking financial institutions)[12]. Besides, the Indian currency also found itself under the assault of the dollar demand from both the outgoing FII together with the corporates - limited by the shrinking of the international and the domestic credit markets, leading to its steep depreciation.

3.7. Fluctuations in the Exchange Rate and Foreign Exchange Reserves

3.7.1. Foreign Exchange Rate (Forex) Market

The unique feature of the Indian rupee exchange rate is that it is inspired more by the capital flow received or departed from the economy as compared to performance of the real economy. This is distinctly evident when the attention is focussed upon the factors contributing to the accumulation of foreign exchange reserves driven more by the foreign capital inflow or capital account excesses as opposed to the strongly performing macroeconomic factors as had been the case with the Chinese-Yuan movements. Thus, analogously when sparked by the confidence crash with the collapse of the behemoth of the US investment bank in September 2008, the INR exchange rate depreciated against the sudden rising global demand of the US dollar. This depreciation of INR had occurred following its appreciation during the unfolding of the crisis in the US in 2007 up to 2008 till it had transmuted into worldwide crisis engulfing both the developed and developing economies.

Indicators	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Exchange Rate US$/Rs. – average	45.9	45.0	44.3	45.2	40.2	46.0	47.4	45.6	48.1	54.0	54.5

Table 7: Exchange Rate of INR
Source: Government of India

Subsequently, the investors worldwide in order to park their fund in safe havens engaged in the deleveraging process. The global deleveraging process resulted in the massive capital outflows from the equity markets which in turn impacted the exchange markets throughout the world, including that of India's as well. At the same time, the domestic businesses which required the foreign currency to honour their financial commitments were in the search for some conduit which could substitute the frozen international credit

[12] A large chunk of the fund base of the mutual fund houses is contributed by the money market plans with principal investor being the corporates. The mutual fund in turn extend finance to other arms of the financial system such as NBFC Thus, with stock market and confidence crash, the mutual funds had to struggle with the pressure of the redemption demand which meant the same for the NBFC. Thus, it was the banking institutions which had to answer the cumulative demand of the funds from the corporates, mutual funds and NBFCs, being the pillar of the financial system.

market. Consequently, the foreign currency was accessed through the conversion of the domestic currency raised via internal resources. Both of these components created a sinking pressure on the domestic currency i.e., INR leading to its depreciation from ₹40 per USD to ₹49 per USD within 7 months. Subsequently, the depreciating currency led to the mounting expenditure of the sovereign debt service adding burden to already declining foreign exchange. The story continued to display colours in 2011 touching an all-time low of 2011 with exchange rate of ₹54.30 on December 2011 riding on the same broadening trade deficit along with the moderated capital flows into the country. The reason for this overwhelming turn of exchange rate was attributed to cooling-off of the economy after the stimulus package facilitated during the crisis period had exhausted its designated role of boosting the economic growth and sustaining the confidence in the economy.

3.7.2. International Reserves

The reverse capital flows in the year 2008-2009 led to the depreciation of the INR currency prompting the Indian corporates to raise the foreign currency by transforming locally raised finances into the foreign currency which created the pressure on the Indian foreign reserves. Concurrently, in its effort to contain the depreciating INR valuation against the US dollar (USD), the RBI engaged itself in the vending of the USD which added momentum to the lessening foreign exchange reserves of India. Thus, ensued a decline of the international reserves from USD 309.7 billion in the year 2007-2008 to USD 252 billion in 2008-2009 in the foreign exchange reserves of India.

Rubbing salt on the wound was the impact of and on the "valuation effect". The reserves of foreign exchange maintained by any central bank retain the foreign currency as its chief element. The combination of USD – the global currency of trade along with other popular and tradable currencies like yen, British pound and euro frame this foreign currency asset. With the onset of the global financial crisis that followed the US financial crisis, the confidence throughout the world took a plunge leading to the depreciating US dollar to appreciate against the otherwise strengthening global currencies in the absence of strong US currency demand with euro was at the foremost gaining the might. This appreciation of US dollar against all other global currencies led to their depreciation and a cumulative devaluation effect on the foreign exchange reserves of India (Arora, Rathinam, & Khan, 2010). The loss incurred in this manner appeared to be substantial to the tune of USD 30 billion in addition to the disparity in the amount of US dollar sold and purchased by the RBI in open market during that period.

3.8. Industrial Sector

Similar to the economic growth performance, the industrial growth was also registering adecent average rate of 8.7% for the pre-crisis period of 2003-2008. However, while the economy started contracting in the latter half of the year 2008-2009 i.e., Quarter3, 2008-2009, the industrial sector reflected the negative performance in the last quarter of the year only[13]. Whereas, since November, 2008, the Index for Industrial Production (IIP) staged with dampening spirit registered a dismal performance with even a negative growth rate in one month. Overall for the year 2008-2009, the IIP clocked a dismal growth of only 2.5% being lowest since after the unsealing of the economy i.e., 1992-93.

Sl. No.	**Index of Industrial Production** (Base : 2004-05=100)	**Average 2000-01 to 2009-10 (10 years)**	**Average 2003-04 to 2007-08 (5 years)**	**2008-09**	**2009-10**	**2010-11**	**2011-12**
1.	**Overall (% change)**	7.4	12.4	2.5	5.3	8.2	2.9
2.	**SECTORAL**						
a.	Mining	4.3	4.0	2.6	7.9	5.2	-2.0
b.	Manufacturing	8.0	14.5	2.5	4.8	8.9	3.0
c.	Electricity	4.8	6.3	2.7	6.1	5.5	8.2
3.	**USE-BASED**						
d.	Basic Goods	5.6	8.0	1.7	4.7	6.0	5.5
e.	Capital Goods	13.3	30.3	11.3	1.0	14.8	-4.0
f.	Intermediate Goods	6.2	8.5	0.0	6.0	7.4	-0.6
g.	Consumer Goods	8.2	14.8	0.9	7.7	8.6	4.4

Table 8: Index of Industrial Production
Source: Reserve Bank of India

With our restrained ability to resist the contagion effects of the US recession of 2007, the concoction of the diminished demand for the export from the domestic market of the advanced economies, stifled business confidence along with the waning demand from the domestic sector owing to the multiplier-effects of the rising unemployment (a direct consequence of the recession hitting the Indian economy) ruinously impacted the nation's progress of the industry and service sectors. This is to suggest that the industrial sector has

[13] Since independence industrial sector has witnessed three phases of slowdown viz., 1996-1997, 2000-2001 and 2008-2009 fuelled by the adverse domestic influences such as infrastructural bottlenecks, technological backwardness but which also inadvertently corresponded with the global slowdowns.

such a strong nexus with the export sector such that its bleak performance in the wake of the diminishing external demand had emerged as a significant contributing factor in the decelerating or even negative growth of industrial sector in the crisis year of 2008-09. The impact of the blow on the industrial sector was magnified by the declining economic growth of India, especially in the sectors of construction, manufacturing, transport, communication and infrastructure. It was the manufacturing sector that suffered the greatest hit resulting from the contracting global demand and rising threats of protectionism worldwide in addition to the tightened monetary policy stance adopted domestically by the RBI to manage the inflation in the pre-crisis period. The manufacturing sector that contributes more than 75% to the index of industrial production was marred by the conditions of rigid monetary policy in the period prior to the crisis period implemented to manage the heated capital inflows which subsequently increased the cost of capital for the industry combining with the adverse global economic situation. Consequently, the manufacturing sector plummeted from the virtuous two digit growth rate figure of 18.4% in 2007-2008 to an abysmally low single digit growth rate of 2.5% in 2008-2009. This figure subsequently improved to some extent to 4.8% in 2009-2010 followed by a healthy rate of 8.9% in 2010-2011 but still remained below the pre-crisis level. Corresponding to the performance of the registered manufacturing sector was an equally quelled performance of the parallel unregistered manufacturing sector. This latitudinal movement of unregistered manufacturing sector with the registered sector was owing to the fact that the unregistered manufacturing sector (such as MSME) is often contingent upon the involvement of the registered manufacturing sector (big organizations) for forward and backward linkages.

Henceforth complementing the fluctuation in the manufacturing growth rate was the IIP growth rate as it formed the dominant fragment of industrial production index weight-wise. The growth rate of IIP nose-dived to 2.5% in the crisis year of 2008-2009 from 15.5% in 2007-2008 which was followed by an improved performance with 5.3% in the year 2009-2010 similar to the manufacturing sector'sebb and flow. Likewise, the mining and electricity sub-segments of IIP also mirrored the erosion in the growth rate. This degradation in mining growth stemmed from the decelerated growth of the crude petroleum and its derivatives, while downward revision of the thermal and hydro-power base electricity generation became the cause and effect leading to the deceleration of the electricity generation. The moderation was observed in the IIP sectoral variables uniformly with the variation in its degree. The diminutive consumption demand from the private sector led to the middling reduction in the consumer goods sector. Nevertheless, riding on the robust rural demand, the moderation in the consumer demand was relatively less. However, the capital goods and intermediated goods sector were on a shoddier platform with intermediate goods reporting a negative figure of -1.9 for the year 2008-09. While, the growth trajectory of the basic goods sector lost its altitude in the succeeding half of the year 2008-2009. Subsequently, the improvement in the industrial sector was registered for the year 2009-2010 clocking the growth of 5.2% augmented by a decent double digit growth from October, 2009 onwards along with the sturdy performance of the manufacturing performance. This was followed by a remarkable performance at 8.2% in the next year of 2010-2011.

The regulatory response to the adverse impact on the industrial sector in the year 2008-2009 was formulated in the form of reduction in the key policy rates, facilitation of abundant liquidity aimed at extension of credit at easy terms, indirect tax reductions and the surge in the government spending towards the infrastructure. The measures were aiming at reviving the sluggish domestic demand and thereby industrial growth rate. Simultaneously, the infrastructure segment of the IIP received the stimulus in the form of deletion of the ECB interest ceiling, tax-free bond procurement authorisation to IIFCL (India Infrastructure Financing Company), establishment of the SPVs for the purpose of credit extension to the NBFC. Since the part of the industrial sector that suffered a relatively vaster blow such as the manufacturing sector was the labour intensive industry, therefore the unemployment in huge number was its direct consequence.

Sector (Base: 2004-05=100)	**Mining & Quarrying**		**Manufacturing**		**Electricity**		**General**	
Weight	**14.2**		**75.5**		**10.3**		**100.0**	
Period	**Index**	**Growth Rate (percent)**	**Index**	**Growth Rate (percent)**	**Index**	**Growth Rate (percent)**	**Index**	**Growth Rate (percent)**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
2007-08	112.5	4.6	150.1	18.4	120.0	6.3	141.7	15.5
		(3.7)		(92.4)		(3.9)		(100.0)
2008-09	115.4	2.6	153.8	2.5	123.3	2.7	145.2	2.5
		(11.5)		(78.9)		(9.6)		(100.0)
2009-10	124.5	7.9	161.3	4.8	130.8	6.1	152.9	5.3
		(16.8)		(73.1)		(10.1)		(100.0)
2010-11	131.0	5.2	175.7	8.9	138.0	5.5	165.5	8.2
		(7.3)		(86.7)		(5.9)		(100.0)
2011-12 P	128.5	-2.0	181.0	3.0	149.3	8.2	170.3	2.9
		(-7.6)		(83.2)		(24.3)		(100.0)
P: Provisional.								
Note : Figures in parentheses are relative contributions, computed as the ratio (in percentage terms) of the change in the index of the respective industry group to the change in the overall index adjusted for the weight of the relevant industry group.								

Table 9: Composition of Index of Industrial Production of India
Source: Government of India

The construction industry was also hurt by the slowdown in the economic activities in 2008-2009. The obstruction in this case was contributed by the real sector that was grappling with the reduction in the investment and the withering liquidity owing to the difficult economic environment in India and abroad.

3.9. Impact on Employment

With the adoption of the economic and financial reforms in the year 1991, a significant transmission has been observed in the pattern of the employment. The voyage of this transmission is currently dwelling in the service sector after moving from the agriculture as its core engagement to hop onto the bandwagon of the manufacturing sector subsequently[14]. With the growing economy, the employment was increasingly being generated by construction, transport and communication segments of the manufacturing sectors, where 62% increase in employment was reported from the construction segment during the period of 2004-2009. Thus when the recession disembarked on the Indian economic territory, the employment ratiocame under a great stress as the investment activities witnessed aplunge impacting the manufacturing sector, specifically the construction sector was the one experiencing the pinching cautious approach of the investors.

The slowdown in the global as well as the domestic economy impacted the businesses which in return resorted to ways that affected the employment. That is to say that the unemployment was a consequence of direct and indirect or rather multiplier effect from impact on other sectors of the economy, such as the declining exports bearing down upon the prevailing and potential employment foundation. The worst impacted were the transport, gems & jewellery and automobiles amongst the units of the export sector reporting the largest laying-off of the workers during the 3rd quarter of 2008-2009. This specific period narrated a loss of employment for half a million workers as described by the Labour ministry of India. Therefore, the employment was affected by the weak performance of the trade in parallel with the reigning conditions throughout the world which was gripped with the fever of global financial crisis. Furthermore, the wages of the remaining workers suffered the attrition in their real effective wages owing to the concoction of the retarded economic growth impacted by the global financial crisis along with the high volatility exhibited by the commodity and the energy prices in the international and thereby the domestic markets. Consequently, the family income depreciated and so does the consumer spending becoming a source of social distress. The reduced demand led to the decrease in the market expectations which impacted the confidence of the investors adversely further creating negative ripples within the economy. In contrast to the exporting sector which was supplementing to the list of unemployed owing to the contracting purses of its clients abroad with contracting economies and cancellation of the orders, the non-exporting sector appeared to be better-off which was absorbing the workers generating employment. The non-exporting sector benefitted from the demand of their products from the domestic market which was not as severely impacted as was the global economies. This came to be specifically true for the Quarter1, 2009-2010. During the same period, where on the one hand, the recruitment of the direct workers witnessed a decline in almost all the sectors, the casual workers on the other hand were experiencing the increase in the enrolment by the units. The decline in the direct worker's employment was compensated by the increase in the employment of the casual and temporary workers. This development emerged from the convenience offered to the employers in the contractual employment compared to the direct employment where the obligations on both the parties were more making the termination a complicated detailed process. The same could be verified by the following table sector wise for the Quarter1, 2009-2010 where the direct employment was less declining by 1.71 lakhs compared to the contractual employment.

S. No.	**Industry/Group** (2009-2010)	**Direct (In lakhs)**	**Contract (In lakhs)**
1	Textiles	-1.52	-0.02
2	Leather	0.04	0.02
3	Metals	-0.26	0.25
4	Automobiles	0.06	0.17
5	Gems & Jewellery	-0.21	0.01
6	Transport	-0.02	0.01
7	IT/BPO	-0.38	0.04
8	Handloom/Powerloom	0.57	-0.08
Overall		**0.40**	

Table 10: Employment Situation in India, Quarter1, 2009-2010
Source: Ministry of Labour & Employment; Labour Bureau[15]

Moreover, the economic crisis impacted not only the quantity of the workers employed during the period, but also the employment quality which experienced a downhill glide. The crisis period tweaks the otherwise available perks, allowances, overtime, etc. However, the stimulus packages introduced by the government helped in increasing the dwindling employment rate and the outcome

[14] While on one hand, 53.2% of the workforce was engaged by the agricultural sector, rest of the workforce was divided between the industrial and the service sector employing 11.9% and 35% respectively.

[15] These surveys conducted by the Labour Bureau on the directives of the Ministry of Labour & Employment to gauge the impact of the financial crisis on the employment condition in India were limited to the analysis of eight sectors viz. textiles, leather, metals, automobiles, gems & jewellery, transport, IT/BPO and handloom/power-loom.

became visible by the last quarter of 2008-2009 which posted an improvement in most of the sectors surveyed by the ministry in recovering half of the lost jobs. Though non-exporting units reported a swift recovery in terms of the employment, the exporting sector gradually exhibited correction until September 2009 i.e., Quarter2, 2009-2010. In the Quarter3, 2009-2010, the employment in the exporting sector exhibited a swifter recovery relative to the previously star performer, non-exporting sector. The economy was on the path of recovery by the end of the Quarter3, 2009-2010 when the net employment changes during the past one year had attained an increase of 7.91 lakhs (for the period of Oct-Dec, 2008 to Oct-Dec 2009). Thereby, the employment only witnessed a skyward ascent registering a further addition of 12.54 lakhs of people in the employed workforce for the period from Quarter4, 20010-2011 to Quarter1, 2011-2012.

Sl. No.	Industry/Group	Changes In Employment During		
		Mar, 09 over Dec, 08	**Jun,09 over Mar, 09**	**Sep, 09 over June, 09**
1	Textiles including Apparels	2.08	-1.54	3.18
2	Leather	-0.33	0.07	-0.08
3	Metals	-0.29	-0.01	0.65
4	Automobiles	0.02	0.23	0.24
5	Gems & Jewellery	0.33	-0.20	0.58
6	Transport	-0.04	-0.01	0.00
7	IT/BPO	0.92	-0.34	0.26
8	Handloom/ Powerloom	0.07	0.49	0.15
Overall		**2.76**	**-1.31**	**4.97**

Table 11: Sector wise change in the employment during the crisis period before the recovery was becoming apparent
Source: Ministry of Labour & Employment; Labour Bureau

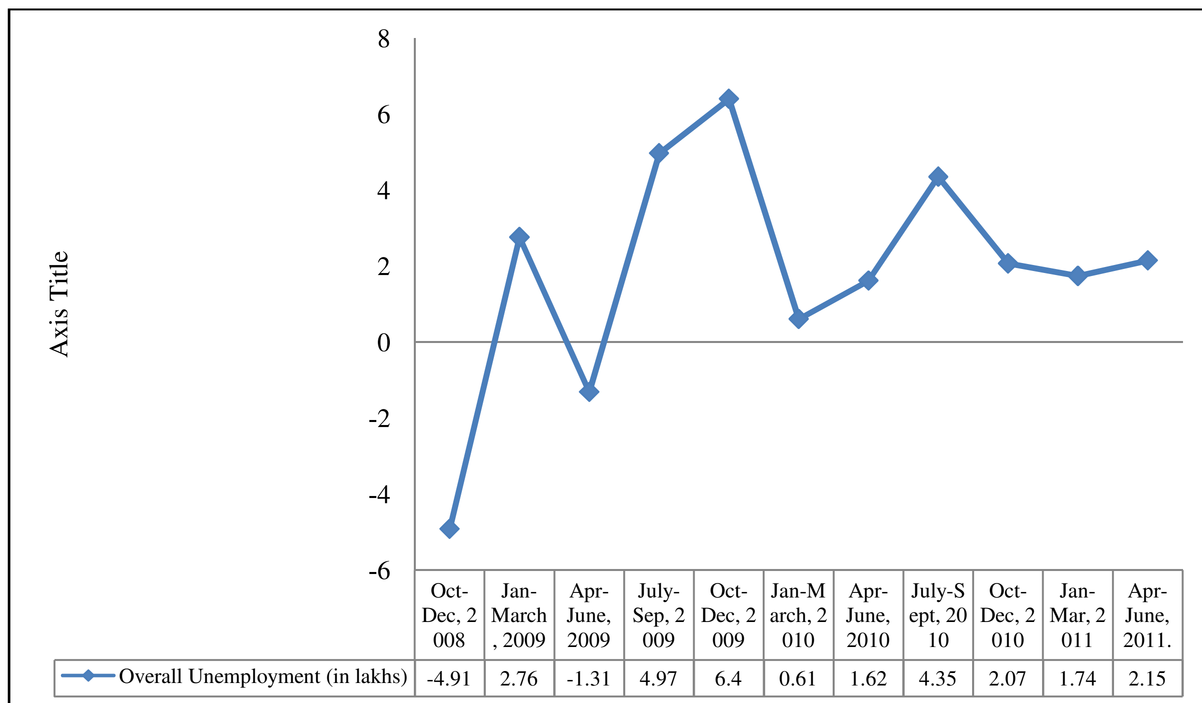

Figure 3: Changes in Overall Employment (in lakh) from Quarter4, 2008 – Quarter2, 2010
Source: Ministry of Labour & Employment; Labour Bureau

3.10. Banking Sector

Regardless of the fact that strong fundamentals, stringent vigilance of the monetary authorities together with their austere directives girds the Indian banking sector that helped in their strong and resilient emergence in the event of the US financial crisis, certain banks still found themselves facing the exposure to the contagion of the financial crisis. However, this exposure was an inevitable event given our habitation in the globalized world where the banking institutions form the core part of the financial system of the economy. Thus, there was a variance even though small in the operation of few private and the public sector banks arising from the collapse of the financial system of US besides being confronted by domestic complications of rising funding costs impacting their bottom line, sagging economy challenging the asset quality and fair asset value of investment portfolio.Nevertheless, the Indian banking sector sailing on the low NPA ratios, strong progression,

Even though, certain banks of the Indian banking sector had a direct exposure to the US financial system and its distressed assets, the overall banking sector was sufficiently capitalized and regulated to tide over the financial crisis stalwartly. In total there were seven banks comprising of one private sector bank and six nationalized banks having direct exposure of about ₹6400 million to the erstwhile financial institutions of the United States in the grip of major losses. In this, the private sector bank's exposure formed the 62.5 percent of the total exposure and the rest belong to the six nationalized banks re-affirming the fact that Indian banks, particularly, the nationalized banks were suitably regulated possessing a sturdy balance sheet. And whatever the exposure the banks had towards the subprime toxic assets of the US financial system were adequately provisioned for domestically as per the policies of the Indian Central Bank. The banks were having a strong ratio of CRAR (capital to risk-weighted asset ratio) that was gauged to remain more than the minimum regulatory requirement even in the worst case scenario, enabling them to cover their damages. The banks were maintaining an average of 12.6 percent as the CRAR till the culmination of the year 2008 which was way above the Basel standard of 8 percent and the Indian regulatory requirement of 9 percent. The solvency margins with the Indian financial institutions were also adequate owing to the limited exposure of FDI in their equities, capped by the Indian regulators[16]. Furthermore, it was the contracting liquidity in the international credit market that resulted in the increase in the credit spreads leading to losses to the banking institutions on their mark-to-market valuations. The contracting liquidity in the international market also compelled the Indian corporate sector to look inwards, i.e., for the funds arrangement at the domestic front. This inward looking approach resulted in a sudden strain on the finances of the mutual funds houses and non-banking financial companies (NBFCs) with the requests of redemptions from the corporates. Additionally, the crashing stock market was no help to the already cash-strapped mutual funds houses either, and in turn supplementing their liquidity issues.

The strong position of the banks during the financial crisis also emerges from the regulatory constraint imposed by RBI in March 2007 mandating limits on their interbank liability to 200% of their net worth. Similarly, the regulation also observed and supervised their lending and borrowing from the inter-bank call money market. The RBI focussing its efforts on strengthening the financial system not only encompassed the banking institutions, but also the non-banking financial institutions.

4. Conclusion

The crisis made its entry into Indian economy through trade, financial and currency channels of the economy together transpiring into a deteriorating rate of GDP. Three sizable arms of the economy reflected a significant deceleration in 2008-09 due to the contagion of US sub-prime crisis, namely, industry sector, agricultural sector and the service sector. The chief reason for this crisis was not the direct involvement of India, but the integration with the global economy and US where the crisis originated. Thus, even as the ties and relations were strengthening with the developed countries through globalization, so were the vulnerabilities of the developing countries becoming more and more integrated with the developed economies.

The impact of crisis resulted in the dwindling of economic growth from its highs of over 9% to 6.7% in 2008. The deteriorating global and domestic demand concomitant with escalating cost of finance added to the stress of struggling industrial sector of India during crisis. The increasing cost of finance was a consequence of confidence crisis resulting in the credit freeze in the international market and also the tight monetary policy. The crisis period of 2008 witnessed a substantial weakening of demand resulting in decreased private consumption. Further, rise in the commodity and food prices along with spiraling global oil prices triggered by US financial crisis sparked swelling inflation in 2008 and 2009. The inflation situation was aggravated by the deficient monsoon creating the supply side strain. Alternatively, economy witnessed a sharp contraction in its capital flows owing to the crisis. The stock markets crashed post the collapse of Lehman Brothers. Both FDI and FII exhibited a fathomless plunge as foreign investors worried about the security of their investments took a capital flight from Indian securities. Consequently, sharp depreciation of the domestic currency INR transpired owing to massive and sudden withdrawal of the portfolio investments by FIIs. Additionally, external commercial borrowings, short-term trade credit and remittances from abroad were also impacted discouraging investments. These all culminated into plummeting foreign exchange reserves of India.

Indian exports were wounded by the amalgamation of two factors, plummeting demand from its trading companions and shrilling voice of the protectionism menace from the advanced economies. Both of these factors were a consequence of global financial crisis. Also transpired was the fall in imports that reduced the current account deficit for the economy, working in its favor.

Interestingly on the other hand, public consumption, however, exhibited an appreciation as they were sponsored by a largesse stimulus package worth rupees one lakh crores and implementation of sixth pay commission. This stimulus of farm loan waiver strengthened the declining state of agriculture and allied sector, which in turn fuelled private consumption in rural India in subsequent year 2009. The pay commission in turn increased the purchasing power of government employees, triggering an increase in private consumption. Subsequently, bounteous liquidity in the financial market in response to the shrinking global credit and plunging domestic stock market was facilitated through expansionary monetary policy. The policy rates were moderated in order to stimulate consumption, employment generation and development investment activities in the economy.

Thus, Indian economy had started to recuperate from the middle of 2009 riding on the domestic consumption. This rebounding faster than other advanced economies substantiating that Indian economic growth story is less export-led and more domestically driven. The significant domestic factors fuelling the GDP growth of India are the investment and the consumption.

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[16] For instance, the FDI in the banking sector was completely restricted with No Entry approach for the foreign banks in India. On the other hand, the investment of the foreign institutions in the insurance sector was limited to 26 percent which played a greater role in redeeming the Indian institutions from the fall of behemoths of US like AIG facilitating sufficient solvency margins.

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