

Study of the Global Crisis

A Question of Inevitability of the Euro Zone Crisis

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At the approach of danger there are always two voices that speak with equal force in the heart of man: one very reasonably tells the man to consider the nature of the danger and the means of avoiding it; the other even more reasonable says that it is too painful and harassing to think of the danger, since it is not a man's power to provide for everything and escape from the general march of events; and that it is therefore better to turn aside from the painful subject till it has come, and to think of what is pleasant. In solitude a man generally yields to the first voice; in society to the second.

LEO TOLSTOY, *War and Peace*

Overview

The risk of a U.S. mortgage crisis was often talked about in the past, but rebuffed by many economists. Alan Greenspan, as (USA) Federal Reserve's chairman, rejected the idea of a housing bubble in 2004. His successor, Ben Bernanke, famously said in 2007 that "at this juncture ... the impact on the broader economy and financial markets of the problems in the subprime markets seems likely to be contained." No one actually knew the extent to which the banks and financial institutions had exposure to the subprime markets directly or indirectly and hence the statement by Bernanke in 2007. It was a shocking revelation then when it became known that the triple rated securitized instruments which were considered 'safe' were deep into the subprime markets. 'How deep?' was a question nobody had bothered asking before and so global investors were consternated when these 'safe' securities collapsed due to the failure of mortgage markets.

U.S. mortgage market expanded at an unprecedented pace between 2000 and 2006, taking under its wings borrowers with diverse credit histories. Consequently, in January 2007, the US residential mortgage securities totalled to 6.5 trillion dollars, the largest pool of fixed income securities in the world. The mortgage market in USA finally exploded in 2007 with sub-prime lenders declaring bankruptcies and banks experiencing severe liquidity crunch. Eventually, the Euro Zone came under fire due to the alleged spill over effects of the crisis in U.S.A. and the economic conditions deteriorated progressively after 2009.

Numerous studies (Santis, 2012; Gambacorta & Ibanez, 2011; Wihlborg, Willett & Zhang, 2010 et alia) have been carried out to investigate the various aspects and causes of the Euro Zone crisis. Innumerable reports have looked into the matter and ascribed the raging euro zone crisis to bad fiscal conditions, financial crisis of U.S.A., speculators, extensive securitization, among others. Quite recently (18th June, 2012), Manuel Barroso, the European Union President replied to a question put by a reporter at the G-20 Summit in Mexico, "Frankly, we are not here to receive lessons in terms of democracy or in terms of how to handle the economy. This crisis was not originated in Europe ... seeing as you mention North America, this crisis originated in North America and much of our financial sector was contaminated by, how can I put it, unorthodox practices, from some sectors of the financial market." The question

therefore is that if there would have been no mortgage crisis in USA would Euro Zone have had not faced the current crisis? What was the dispersive role of the mortgage crisis in USA? Was it simply a trigger or the root cause of euro zone's current severe economic discomfort?

The euro zone economies were supposedly in a good condition. The GDP growth rate was improving and was steady. But was that the only indicator that was referred to by the policymakers? Weren't the euro zone policymakers living in a state of denial in the pre-crisis period? This paper will discuss the pre-crisis conditions in the euro zone nations to gauge the extent of vulnerability of the economies to spillover effects from U.S.A.

The paper aims to analyse following points of contention among economists and policymakers: firstly, the origin and trigger of the euro zone crisis; secondly, the pre-crisis conditions in the euro zone; and thirdly, the question of inevitability of the crisis without the trigger of 2006-09 financial crisis of U.S.A.

Section-1: Initiation and Spread of the crisis

When the first signs of an impending Financial Crisis became visible on the horizon in 2007, no one had the slightest of inkling that it would gather up such a storm. The Subprime crisis was just the tip of the iceberg. It led to a massive liquidity crunch in U.S.A., Europe and Emerging Economies. The bursting of a real estate bubble in U.S.A. rippled as a shockwave across nations in Europe (and elsewhere), accentuating and exposing the weaknesses in the Banking and Financial Sectors.

But in the aftermath of the 2007 meltdown, Euro Zone economies with three traits were at risk: (a) domestic banking systems that had huge exposure to toxic assets; (b) those who had an unsustainable debt-deficit situation; and (c) those who had a large chunk of sovereign debt held externally. These traits or conditions weren't mutually exclusive for all euro zone nations as will be seen in this paper.

1.1 Financial Crisis

In 2008, the U.S. Treasury and Federal Reserve engineered the acquisition of Bear Stearns by JPMorgan Chase and announced that it was taking over the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac). Soon after this takeover, Lehman Brothers filed for bankruptcy, which led to a more wide-spread crisis of confidence, and which, in turn, led credit markets to freeze and led to a lack of liquidity. Lehman was heavily involved in the 57 trillion dollar credit default swap (CDS) market. The fall of Lehman Brothers marked the beginning of the nightmare for nations across the world. The Lehman Brothers collapse triggered off a chain of events that brought into focus the innumerable weaknesses in the financial systems and the fiscal indicators of nations.

1.1.1. Sub Prime Crisis:

The Mortgage Backed Securities were traded along with other complex securitized assets by a Structured Investment Vehicle (SIV). In case of a downturn in the market, SIVs were supposed to be supported by liquidity facilities from highly rated, mainstream banks.

This meant that the banks stepped in to provide finance if the SIV failed to raise commercial paper in the normal way.

Between the years 2000-2005, along with very low interest rates, property prices were on a rising trend and the subprime borrowers were able to meet their obligations as they were building equity by selling the properties or getting the properties refinanced. However, in 2005, the property prices started falling and interest rates started going through the roof top. The subprime loans were given on a floating rate of interests. So as interest rates increased the rates on floating home loans went up thus effectively turning the heat on monthly installments needed to service these loans. Subprime borrowers started defaulting and as the property prices crashed around their heads, the collateral was rendered useless as they couldn't sell the property (kept as collateral) to pay for their loans. Defaults led to the stoppage of payments to the institutional investors who had bought the structured securities, resulting into a huge funding liquidity crunch.

Defaults and the inability to conduct valuation of MBSs (owing to complexity and depth of the market), the value of Mortgage backed Securities fell down rapidly, alarming investors and financial institutions. *The US market for mortgage-related securities as of 2007 accounted for over 6.5 trillion dollars, representing the largest segment of the fixed income market in the world* (to give an idea of the magnitude, the US corporate bond market accounts for 5.4 trillion dollars, while the Treasury segment accounts for USD 4.3 trillion).¹

Gradually, the whole of the Securitized Market went down taking with it the very banks which had garnered huge amount of profits 'off-balance sheet' until a few years ago.

1.1.2. Dispersion of the crisis:

But why would a crisis in a part of Secondary Market of U.S.A. effect the Euro Zone? The Sub-prime mortgages constituted only 3% of the

¹ Yener Altunbas, Leonardo Gambacorta and David Marqués, "Securitization and Bank Lending Channel", European Central Bank, Working Paper Series No. 838 (Dec 2007), 11.

U.S. financial assets. The answer probably lies in the high exposure of the Euro Zone Banks to the instruments of the Secondary Market of U.S.A.

With direct net exposures of global banks to U.S. subprime mortgage markets estimated at about 700 billion dollars, European banks held about 40 percent of this amount in 2008.² Balance sheet cash-flow collateralized debt obligations (CDOs) accounted for around 18% while consumer and corporate asset-backed securities (ABS) represented around 14% of total issuance.³ According to the Regional Economic Outlook published by IMF in 2008 (refer to Table 1), expected losses on subprime mortgage-related exposures as of March 2008 were estimated at 123 billion dollars in Europe and 144 billion dollars in the United States. Europe had a substantial problematic exposure to CDOs followed by losses incurred on ABSs and off-balance-sheet liquidity lines.

Besides the huge exposure of the euro zone banks to the US securities, the overall financial structure of the euro zone had been weakened as well. *Securitization as it turned out wasn't exclusively limited to USA only it had made euro zone nations and UK as its base as well.* Focusing on the Securitization originating in Euro Zone, it can be observed in Figure 1 the total euro denominated ABSs started growing in number 1999 onwards, spiraling at a rapid pace after 2004. The annual net flow of asset-backed securities issuance in 2006 was around one fifth of total bank loans granted to households and non-financial corporations in the euro area.

Figure 3 gives a detailed breakup of instruments involved in the 'securitization' of the Derivative Market. Residential Mortgage Backed Securities (RMBS) constitutes the greater part of the Securitized Market, followed by Collateralized Debt Obligations (CDOs) and Commercial Mortgage Backed Securities (CMBSs). Figure 4 brings clarity to the picture by illustrating the extent of securitization in major countries in Euro Zone in 2005. Spain had one of the highly securitized financial markets in Europe which boosted the property

² "FINANCIAL TURBULENCE: TESTING RESILIENCE AND DAMPENING GROWTH", Regional Economic Outlook, World Economic and Financial Surveys, IMF, April 2008, 35.

³ European Central Bank (2007), "Structural Issues Report on Corporate Finance", Frankfurt.

prices in the country. According to a research report published by J.P. Morgan in February 2012, the European ABS market was close to 2 trillion dollars (1,943.8 billion euro) in size. Of that figure, the UK was by far the largest issuer with 587.3 billion euro of outstanding debt. The Dutch and Spanish markets accounted for 293.9 billion euro and 286.4 billion euro each respectively and Italy came in fourth place at 188.8 billion euro. Other markets such as Germany, Belgium, Ireland and Portugal were smaller (below 100 billion euro) and the likes of Austria and Finland less significant in terms of size.

The reasons for the spectacular growth in securitization activity in the euro area since 1999 can be linked to four main factors:

- a. The demand for asset-backed securities grew rapidly from institutional investors, who were more willing and able to invest in credit risk. Asset-backed securities (ABS) catered for the increasing number of sophisticated institutional investors seeking to buy assets that typically have a good rating and provide an extra yield over government bonds. Moreover, these securities could be constructed to offer specific, sometimes even tailor-made, risk-return trade-offs that could be segmented by rating, asset class, sector and country of origination thereby tapping into a broader investor base.
- b. Technological advancements had been instrumental in the development of securitization via dramatic improvements in the storage, processing and pricing of financial data. Technological progress therefore changed the cost structure of issuing asset-backed securities and increased the spectrum of financial products.
- c. The introduction of the euro gave a strong impulse to the corporate bond and securitization markets. The disappearance of exchange rate risk among euro-area countries, the increase in financial integration and a more market-based financial system contributed to enhance the liquidity and size of the securitization market. As a result, institutional investors increased their cross-country exposure while issuers gained

access to a broader pool of potential investors. At the same time, increased bank competition also helped by lowering underwriters' and managers' fees.

With the opening up of cross-border banking market within the Euro Zone, countries like Ireland, Spain, Greece and Portugal amassed funds from other Euro nations to fund their rising public debts. Figure 2 and its panels show the claims of European banks on counterparties in Ireland, Spain, Greece and Portugal. Germany, UK and France are the three major nations of EU funding the troubled nations.

- d. The binding regulations on Mortgage lenders in U.S.A. and Euro Zone/Europe were very different. One of the key differences is that MBS operations aren't incorporated in the preparation of the balance sheet of Banks in U.S.A. whereas in Europe these operations are included in the balance sheet. Also, in Europe the credit risk lies with the Mortgage Banks whereas in U.S.A. the credit risk is guaranteed by the US Government owned agencies (Government National Mortgage Association, Federal Home Loan Mortgage Corporation and the Federal National Mortgage Association) which may have led to a problem of 'Moral Hazard'. Further, the European mortgage lenders were required to hold own funds of between 4% and 8% for mortgages on balance sheet while in U.S.A. such requirement was absent.

These regulations consequently lead to the trading of European mortgage bonds about 20 to 30 bp (Basis Points) over government bonds while in U.S.A. the bonds traded at a lowered cost of 50 bp. *Differences in these regulations made Asset Backed Securities of U.S.A. attractive –low costs, high yield and 'risk free' (since it was guaranteed by the US government agencies).*⁴

⁴ Adrian Coles, Director General, The Building Societies Association and Judith Hardt, Secretary General, European Mortgage Federation, "Mortgage markets : why US and EU markets are so different", www.housingfinance.com

Euro Zone nations indulged in sale of short term debt to the Money Market funds of U.S.A. These nations developed a huge appetite for dollars so much so that the Euro banks were in a constant need of 1.1 trillion to 1.3 trillion dollars for short term funding.⁵ European banks had vastly expanded their accumulation of dollars in the interbank market and from official monetary authorities that had acquired dollar-denominated assets. In essence, European banks borrowed dollars short term in the interbank market in order to finance a rapid growth in investments in dollar-denominated assets with varying maturities in assets held by non-banks, such as asset-backed commercial paper, which left European banks with large short-term US dollar funding requirements. Banks usually met this growing need by borrowing domestically and then converting the amount into dollars through foreign currency swaps.

Hyun Song Shin (2012) explains the mechanism of investment owing to which the Euro Zone nations got embroiled in the financial crisis through Figure 5. It articulates how European Global Banks on account of their international operations and high degree of investment in US markets collapsed as the Shadow Banking system got hammered in 2007-09.

1.1.3. Aggressive securitization

Rapid unregulated securitization which lead to the creation of a plethora of debt instruments that made life so much easier for banks, extended an unprecedented depth and complexity to the Shadow Banking system. This high exposure spelled doom for the Euro Zone whose banks retreated into their shells leading to a shocking drop in loans-deposit ratio which was thriving in the ‘pre-crisis age’. In the pre-crisis period due to high liquidity banks were giving out more loans than they were taking in deposits. The cash flow to fund these loans came from the profits earned from investing in securitized instruments. When the securitized markets failed, the liquidity of the banks went down drastically leading to a drop in disbursement of loans.

⁵ James K. Jackson, “The Financial Crisis: Impact on and Response by the European Union”, Congressional Research Service (24 June 2009), 16.

The loan to deposit ratio which can be estimated from Figure 6 saw a drastic rise till 2001, a sustained growth thereafter and a sharp drop after September 2007. In short there was a massive liquidity crunch in the financial and inter-bank markets cutting off supply of loans to households, institutions and the governments of the nations of Euro Zone which were already in debt; but more on that later.

1.2. **Sovereign Debt Crisis**

How did the Banking Crisis turn into a Sovereign Debt crisis in the euro zone? How did countries – Spain, Italy, Ireland, Portugal and Greece end up in the present situation? These countries were growing at a steady pace and on the surface seemed very much in control of the situation and resilient to the raging Financial Crisis in U.S.A. and Europe.

The aforementioned point becomes apparent on studying Figure 7. The figure plots the long term rates of 10 year maturity government bonds of different euro zone nations. Low rates signify greater investor confidence in the ability of the specific government to pay off its debt. Higher the risk of default by the government, higher is the yield or rates of the government issued bonds. *Till 2009 the long term rates of 10 year government bonds of these countries were low and stable and in concurrence with the German Bund's yield rate implying that the investors till 2009 never bothered to attach individual risk premium to the bond yield rates of different euro zone nations.* Then on 16 October 2009, the erstwhile Greek Prime Minister George Papandreou in his first parliamentary speech disclosed the country's severe fiscal problems and immediately after on 5 November 2009 the Greek government revealed a revised budget deficit of 12.7% of GDP for 2009, which was the double of the previous estimate.⁶ This announcement changed the course of movement of Greek bond rates. The situation was further aggravated when European Commission's statistical office revealed in mid-January, 2010 that Greece had been submitting data that misrepresented its budget deficit. These events forced the long term interest rates on 10 year Greek Bonds to go berserk.

⁶ Roberto A De Santis, "THE EURO AREA SOVEREIGN DEBT CRISIS SAFE HAVEN, CREDIT RATING AGENCIES AND THE SPREAD OF THE FEVER FROM GREECE, IRELAND AND PORTUGAL", European Central Bank, Working Paper Series, No. 1419, (February 2012) 6.

The initial rises in bond yields can be largely explained by the concerns raised by the scope and possible extent of the “private sector involvement” in Greece, which was set as a condition for a second programme at the euro area summit of 21 July, 2011. In such a scenario, some investors find it rational to start shortening sovereign debt and others simply to reduce their exposures to countries in the currency union since market concerns about government debt sustainability can become self-fulfilling if not tackled. Some other investors also prefer to withdraw from some market segments in view of high volatility. Reduced demand leads to falling prices, which in turn reduces the value of bonds held by other investors. Investors prefer to reduce exposures while their positions are still in positive territory, or to take small losses early, so as not to be exposed to potentially large losses or high volatility later. Markets may then also become illiquid, which can further increase the downward pressure on bond prices. Falling bond prices translate into higher yields, which worsens debt sustainability prospects for those governments which have significant funding needs, thus validating investors’ expectations. It is sort of a vicious cycle.

The aforementioned explanation of the sequence of events that force the investors to take such brash decisions is applicable to the Greek economy. These negative market sentiments became highly contagious and spread to other peripheral nations as well. Investors’ confidence in the Greek economy was further dampened by the actions of the credit rating agencies. Moody’s downgraded the rating of Greek bonds from A1 to A2 (22nd December, 2009) and then later to A3 (22nd April, 2010). When Moody’s downgraded Portugal on 5 July, 2011, it cited, the developments in Greece one of the major influencing factors. Moody’s believed that contagion from a default of Greece made it more likely that Portugal would require a second round of official financing. By 18 July, 2011 Italian government bond yields had increased by almost 100 basis points, while Spanish ones had increased by more than 80 basis points. In October, 2011 the Credit rating agencies Fitch and Standard & Poor’s downgraded the Spanish bond rating to leave it at fourth highest investment grade.⁷ In June 2012, Moody’s downgraded the Spanish

⁷ Bloomberg, “Spain’s Credit Rating Cut by S&P amid Concern Europe Debt Crisis Worsening” (14 October 2011).

sovereign bond to rest at one notch above the Junk status. Moody's rating for Italian sovereign bonds was cut from A2 to Aa2 with a negative outlook on 4th October, 2011. Italy's borrowing cost soared and was barely kept under control by the European Central Bank's purchase of its government bonds on secondary markets. The downgrade of Portugal and, above all, the continuing fears of a Greek default apparently triggered a sell-off in Spanish and Italian government bonds. There had not been adverse data releases concerning the Spanish and Italian economies or budgetary situations around that time.

The debt in these countries especially – Greece, Portugal and Italy originated from increased aggressive government spending. Bursting of the property bubble triggered the Sovereign Debt Crisis in Ireland and Spain.

The Irish government guaranteed the six main Irish-based banks which had financed the property bubble in 2008. It could have guaranteed bank deposits and let private bondholders who had invested in the banks face losses, but instead borrowed money from the ECB to pay these bondholders, putting the burden of losses and debt on to its taxpayers, with severe negative impact on Ireland's creditworthiness. Moody's cut the credit rating of Irish bonds on 19th July, 2010 to Aa2, citing weaker growth prospects and high costs incurred while salvaging the wrecked Banking sector. That is when the bond yield started rising for Ireland. On July 12, 2011, despite all the measures taken, Moody's downgraded the banks' debt to junk status. Bond yield peaked around this date for Ireland.⁸

The rising yield rates of sovereign bonds of Spain, Portugal, Greece, Ireland and Italy spelled disaster for the governments of these nations on account of their colossal accumulated debts (Figure 8). The debt-GDP ratio of most of the Euro Zone countries exceeded the mandatory limit of 60% (as dictated by the Stability and Growth Pact). Sovereign debt was on a rise in Greece and Italy since the starting of the 21st century. As for Spain and Ireland, the ratio was stable and way below 0.6, the prescribed limit as per the Maastricht Treaty. The debt-GDP ratio for Portugal remained below 0.6 till 2003 and then it spiked. To fund their

⁸ Reuters, "Instant view: Moody's cuts Ireland to junk status" (12 July 2011).

debts they needed investors to buy the government bonds but loss of investor confidence and the eventual rise in bond yields drove the costs of borrowing higher, increasing the possibility of default on sovereign debt by Greece and others.

One important question that arises, concerning the sovereign debt crisis, is that *besides the peripheral countries and Italy there were other non-euro nations that had high Debt-GDP ratio but didn't face such a crisis.* Though indeed, Greece had unsustainable debt and deficit levels, other nations embroiled in the sovereign debt crisis were better off than the US and the UK (refer to Figure 8). The government debt increased for many European countries in period succeeding 2006. Then why were these European nations and US left unscathed by the sovereign debt crisis? Why did not bond yields increase, reacting to the high debt-GDP ratios in these countries as they did in Greece, Italy, Portugal, Spain and Ireland? An explanation to this puzzle is provided by De Grauwe and Yuemei Ji (2012). They argue that government bond markets in euro zone are more fragile and more susceptible to self-fulfilling liquidity crises than in stand-alone countries (countries not a part of euro zone). The stand alone nations while issuing bonds extend an implicit guarantee of paying off sovereign debt since issuance of currency is in their hands. But the euro zone nations can not extend such a guarantee since the issuance of currency is in the ECB's hands and not theirs. Thus the latter are more susceptible to negative market sentiments that in a self-fulfilling way can create a liquidity crisis. Investors' fear of payment difficulties by a nation can trigger off a sale of its sovereign bonds. Bond rates consequently move up and lead to a liquidity outflow as investors take out their funds and invest in safer havens. This situation of "Sudden Stop" (a large reduction in the flow of international capital) makes it impossible for the government to pay off its debt as the bond rates become prohibitive. This liquidity crisis can then turn into a solvency crisis. This is what occurred in Greece and now unfolding in other periphery nations and Italy.

Section – 2: Pre-crisis conditions

The preceding section highlighted the role of the trigger of the euro zone crisis—the collapse of the US Mortgage Market. The roots of the crisis can be better understood on analyzing the pre-crisis conditions in the euro zone.

2.1 Real Estate Bubble:

Ireland and Spain saw a housing boom in the period preceding the crisis which started shaping up in 2006. The disproportionate dependence on real estate sector led ultimately to the failure of the governments of Spain and Ireland in containing the gathering storm of the bursting of real estate bubble. Figure 10 plots the Experimental House Price Indices as percentage change compared to same quarter of previous year for Ireland, Greece, Germany and Spain. Spain and Ireland show unmistakable presence of a real estate bubble preceding 2007. Table 2 provides further evidence in this direction. Inflated Average Real House price Indices for Spain and Ireland point towards aggressive construction activity and real estate development carried out in the period 2005-07. This in turn propelled the aggregate demand (by building equity) and consequently both the countries grew at a steady rate. Such scale of activity isn't observed in Portugal and Greece for the given period.

The Banks of Spain and Ireland rushed forward to participate in the property boom fueled by low interest rates and fierce competition, rolled out millions of euro as loans and heavily procured funds from external sources. As a consequence of which by the end of 2003, net indebtedness of Irish banks to the world was over 10% of GDP.⁹ In Spain by 2007, loans to Construction and Real Estate sectors accounted for almost 45% of the Spanish GDP.¹⁰ Over the period 2002-07, private indebtedness of Spain and Ireland increased steadily (Figure 11) triggering off banking crisis and consequently aggravating fiscal woes of the governments of these economies.

⁹ Jerome L. Stein, “The Diversity of Debt Crises in Europe”, Cato Journal, Vol. 31, No. 2, (2011) 202.

¹⁰ Francisco Carballo-Cruz “Causes and Consequences of the Spanish Economic Crisis: Why the Recovery is Taken so Long?”, PANOECONOMICUS, pp. 309-328, (2011) 3.

Investors within the Euro Zone assumed that there was neither an exchange rate risk nor a default risk in holding assets denominated in the common currency (Euro). The capital market treated these countries at par with others in the Euro Zone by not charging any risk premium relative to the rest of the Euro Zone in the period 2000-08. Even the investors outside the Euro Zone chose to ignore the default risks and dip in the pool of profits off the markets of Spain and Ireland.

When the MFI (Monetary Financial Institutions) interest rates on housing loans to households started rising (Table 1), the prices of properties all over Spain and Ireland fell. The movement of prices was further aggravated by the collapse of Lehman Brothers in September, 2008. The property prices collapsed leading to insolvency of banks in both the countries. The banks couldn't simply pay their international creditors. A sharp fall in the property prices caused increased defaults by the issuers of securitized products (as now they were unable to pay the investors due to the fall in the value of collateral- commercial and residential properties). This resulted in the decline of household income, adversely affecting the aggregate demand.

The state then bailed out domestic banks by buying majority stakes in most of the banks. The Irish government guaranteed the six main Irish banks in September 2008 and then announced in December 2008 that Ireland's three main banks, Allied Irish Bank, Bank of Ireland and Anglo Irish Bank would be recapitalized. Under the plan the Government took 2 billion euro in preference shares in each of Bank of Ireland and Allied Irish Bank and 1.5 billion euro in preference shares in Anglo Irish Bank, giving it a 75% control of the latter.

It was then that the public debt-GDP ratio ballooned out of proportion by the end of 2008 (refer Figure 8) and led to Sovereign Debt crises in Spain and Ireland.

2.2 High Debt-GDP ratio:

Maastricht criteria¹¹ based on Article 121(1) of the European Community Treaty, prescribes following mandatory conditions for government finances:

a) **Annual government deficit:**

The ratio of the annual government deficit to gross domestic product (GDP) must not exceed 3% at the end of the preceding fiscal year. If not, it is at least required to reach a level close to 3%. Only exceptional and temporary excesses would be granted for exceptional cases.

b) **Government debt:**

The ratio of gross government debt to GDP must not exceed 60% at the end of the preceding fiscal year. Even if the target cannot be achieved due to the specific conditions, the ratio must have sufficiently diminished and must be approaching the reference value at a satisfactory pace.

Figure 8 gives a fair idea as to which of the nations were actually following the above criteria. Among the now 17 Euro Zone members, more than half had a debt ratio in excess of 60% in 2006. Greece, Portugal and Italy had the highest Debt-GDP ratios in the period 2003-07. But was the Bond Market paying attention to this growing anomaly—apparently not. Figure 9 portraying the long-term interest rate statistics for secondary market yields of government bonds with maturities of close to ten years evince that as recently as October 2009 the bond yields of all major nations of the Euro Zone moved in tandem signifying that the investors' perceived no risk and hence, the absence of any risk premium on the pricing of bonds.

The debt situation in Greece, Spain, Italy and Portugal deteriorated on account of a number of reasons. ***One of the most important reasons was the funding of current account deficit of these countries.*** As is explained in the next sub-section the external competitiveness of the peripheral nations and Italy was low when these nations joined the euro zone but it aggravated gradually over the last decade.

¹¹ Maastricht criteria, Reuters Financial Glossary.

2.3 Deteriorating Current Account Balance and Intra-Euro trade competitiveness:

The Lisbon Strategy, 2000 aimed to introduce flexibility in the Labour markets in order to achieve full employment, create a knowledge intensive labour market and raise employment rates. The peripheral countries - Greece, Portugal, Spain and Ireland – and Italy were encouraged to improve their competitiveness by first pressurizing their workers by cutting wages, increasing number of hours worked, snipping pensions etc. But they failed to do so due to two reasons:

- a. Real wages and welfare states were generally worse in the periphery than the core of the euro zone. The scope for gains in competitiveness through pressure on workers was correspondingly less.
- b. Germany had been unrelenting in squeezing its own workers throughout this period, leading to almost constant nominal labour costs over the decade.

Given that a single monetary policy is applied across the euro zone, and given also the tough constraints on fiscal policy (through the Stability Pact), labour market policy has been one of the few levers available to different countries to improve external competitiveness. Since the nations of the euro zone can't attempt to devalue currency and improve their competitiveness in International Trade they had to resort to 'Internal Devaluation'. It was therefore expected of the labour market policies to have varied profoundly among different euro zone countries. *Core countries were characterized by high real wages and strong social policies, while peripheral countries typically had low real wages and weak welfare.* Political and trade union organization also differed substantially among euro zone countries.

Germany in such a scenario is the most important country since its labour policies shaped up the economy of peripheral nations. It led the way in imposing flexibility and restraining real wages. German Parliament, Bundestag passed the labour market reforms of 2003 introduced by the Social Democratic Party and known as Agenda 2010.

Accordingly, the new labour contracts reduced social contributions and unemployment benefits. Since the early 1990s, furthermore, it became possible for German capital to take full advantage of cheaper labour in Eastern Europe. The combined effect of these factors put downward pressure on German wages, thus improving the competitiveness of the German economy and deteriorating that of others.

Peripheral countries with weak welfare states, lower real wages and well organized labour movements, such as Greece, Portugal, Italy and Spain, were unable to squeeze workers equally hard. Ireland, on the other hand, was at the forefront of imposing more liberal conditions on its workers. Unfortunately for the Irish elite, this did not spare the country from the severe impact of the crisis of 2007–2009.

Figure 12, panels (a) and (b) drive home the point of occurrence of high unit labour costs in Greece, Spain, Portugal, Italy and Ireland in comparison to low labour costs in Germany. In Germany, the costs have been practically stagnant for more than a decade. While in the Periphery countries the costs increased progressively relative to those in Germany and other nations like Netherlands and Austria.

The more rapid rise in nominal labour costs was accompanied by generally higher inflation in the periphery which could have reduced the real wages but the rise in inflation wasn't faster than the rise in nominal labour costs. Figure 13 plots the inflation rates for euro zone countries. Rates converged to a band of 2-4% in 2001 when the euro was introduced but then soon diverged. In 2004 the rates again converged, this time being restricted to a narrower band of 2-3%. The targeting of inflation by the ECB and the application of a common monetary policy took some time to produce the desired effect. The low inflation policy though harmed the peripheral countries eventually.

The European Central Bank's common monetary and low inflation policies greatly narrowed down the scope for a competitive disinflation process¹² in the presence of downward wage rigidity. Assuming that nominal wage cuts are unlikely, a country with lagging competitiveness

¹² Blanchard (2007: 7) defines **competitive disinflation** as “a period of sustained high unemployment, leading to lower nominal wage growth until relative unit labour costs have decreased, [and] competitiveness has improved”.

that holds nominal wages constant can only realize real wage cuts by means of sizeable inflation. Lower the level of inflation, the smaller will be real wage cuts and competitiveness gains against other euro area countries, and the more the re-balancing process is postponed. Seen on the whole, thus, downward wage flexibility is - given similar levels of productivity increases - crucial for balancing current account balances in the euro area via the competitiveness channel. Thus, nations - Greece, Italy, Portugal, Spain and Ireland couldn't become competitive in comparison to Germany, Austria, and Netherlands etc.

The above becomes clearer when Figure 14 is consulted. It gives the values of real compensation of labour¹³ over the period 1995-2008. In peripheral nations the real remuneration of labour registered a sustained climb over 2000-2008. Whereas, in Germany the changes were negligible contributing to its competitiveness in the intra-euro trade.

Productivity of labour didn't increase in Germany in the period 1996-2008 even though its competitiveness improved substantially (Figure 15). Whereas for peripheral nations (except for Spain), the labour productivity improved over the specified time period. Nonetheless, productivity didn't rise fast enough to catch up with the core euro zone countries partly due to middling levels of technology (except for Ireland).¹⁴ The peripheral countries rely on low skill, low and medium technology and labour intensive industries which usually compete through prices.¹⁵ In such a case, downward rigid wages is excessively harmful because competition with low labour cost countries such as Germany, East Asian emerging markets, is much fiercer.

Germany's sustained competitiveness in the intra-euro trade resulted in surplus in its current account. Figure 9 plots the current account balance as a percentage of GDP for various Euro Zone nations. Austria, Netherlands and Germany have consistently shown a surplus in their Current Account. While for Greece, Italy, Portugal, Spain and Ireland the current account has been running a deficit. Germany recorded a current account surplus of 6.3% of its GDP while Greece and Portugal saw their

¹³ Real compensation of labour = W/P or Wages/Price level

¹⁴ Costas Lapavistas, Annina Kaltenbrunner, Duncan Lindo, J. Michell, Juan Pablo Paineira, Eugenia Pires, Jeff Powell, Alexis Stenfors & Nuno Teles, "Eurozone crisis: beggar thyself and thy neighbour", *Journal of Balkan and Near Eastern Studies*, Routledge (2010), 324.

¹⁵ ECB, 2005

current account deficits dip to a level of 11.4% and 10.7% of their GDP, respectively in 2006. This surplus was made use by Germany in the form of capital exports to peripheral countries. Figure 16 evinces the growing capital exports of Germany to the peripheral nations. The financial account comprises fundamentally foreign direct investment (FDI), portfolio flows and 'other' flows that are heavily driven by banks.

This is how the economic competitiveness of Greece, Spain, Ireland, Portugal and Italy deteriorated contributed towards a growing deficit in their current accounts.

Section-3: Inevitability

The preceding two sections have laid down the foundation for further, more important questions regarding the present crisis raging in the euro zone. Was euro zone crisis that burst forth on the international scene in 2009, a consequence of the Financial Crisis in USA? Should the Financial Crisis of 2007-09 bear the full blame of the consequent eruption of crisis in the euro zone?

The property bubble did eventually burst in Spain and Ireland leading to a banking crisis and then the sovereign debt crisis. The following sub sections therefore, focus on the ability of the trigger – property bubble burst - to initiate the chain of events that eventually did unfold 2009 onwards. This section is an inquiry into the possibility of eruption of crisis in the euro zone had there been no Financial Crisis in USA.

3.1 The possibility of Property Bubble burst

House price Indices for Ireland and Spain (refer to Table 3) moved to alarmingly high levels in the period 2003-07. The bubble finally burst in 2006, coinciding with or (as many argue) triggered by the financial crisis in USA in 2007. But what if there had been no crisis in USA? Would the losses been great and widely dispersed in that situation?

By the end of 2006 the prices of houses started declining as the interest rates climbed higher. In December 2007, according to the Central Bank of Ireland the retail interest rate for home loans of original maturity of 1 year peaked at 6.27%.¹⁶ On comparing the interest rates of central banks (Reference Rates) of USA and Euro Zone, a similar pattern is observed. The rates dipped in 2002 and then picked up suddenly in 2005 putting the mortgage market in jeopardy (Figure 17).

But even then the mere occurrence of a sustained increase in prices of property doesn't imply that it would end in a bust in the future. A study by IMF in 2003 involving real house price cycles for 14 countries over 30 years found that only 40 per cent of house price booms ended in bust.

¹⁶ Central Bank of Ireland, "Retail Interest Rates - Loans, Outstanding Amounts", 2012.

Another similar study by ECB in the same year concluded that out of all the real house price cycles in EU countries over 20 years busts followed 55 per cent of booms. So, what makes Ireland and Spain different?

Analysis has shown that house price booms fuelled by excess credit growth tend to be most costly.¹⁷ And this is what happened in Spain and Ireland. Private debt (private sector debt is the stock of liabilities held by the sectors Non-Financial corporations, households and Non-Profit institutions serving households) as a percentage of GDP in the period 2003-07 rose rapidly (refer Figure 11).

Consider Ireland for instance; the house mortgage finance increased (refer Figure 18) steadily over the years due to low interest rates, rising property prices, growth in construction sector and the coming up of the multinational corporations. There was strong growth in credit to the Real Estate Activities sub-sector, where lending expanded by 58.2 per cent, and Construction, which grew at 46.6 per cent in 2005 according to a survey conducted by the Central Bank of Ireland. In Spain the percentage of housing loans to total credit increased from a mere 28.4% in 1997 to a high of 102.9% in 2007. Portugal also witnessed rising property prices but not to an extent observed in Spain and Ireland.

3.2 Weakened financial structure

Besides the frenzied rise in private debt over the years in these two countries, the financial structure of these economies along with the whole of euro zone weakened with increased reliance for funds through securitization. In the presence of financially sound borrowers and/or a resilient banking sector, the impact of house price declines on the real economy should be limited. But the phenomenon of securitization increased the vulnerability of the banking sector to credit risks. Structurally, securitization allowed banks to turn traditionally illiquid claims (overwhelmingly in the form of bank loans) into marketable securities. The development of securitization therefore allowed banks to off-load part of their credit exposure to other investors thereby lowering regulatory pressures on capital requirements allowing them to raise new

¹⁷ Peter Praet, "Housing cycles and financial stability – the role of the policymaker", Member of the Executive Board of the ECB, at the EMF Annual Conference 2011, Brussels, (24 November 2011), 2.

funds. Easy and quick access to funds accompanied with high returns made banks and investors throw caution to the winds. Their risk appetite expanded as they moved in to earn higher returns.

*Evidence from various studies has shown that securitization strengthened the impact of housing prices on mortgage credit.*¹⁸ Aggressive securitization activity led to laxer screening of borrowers in the years prior to the crisis. By creating – informational – distance between the loan’s originator and the ultimate bearer of the loan’s default risk, securitization reduced lenders’ incentives to carefully screen and monitor borrowers. It implies that securities were passed through from originating banks’ balance sheets to the markets so that there were incentives for financial intermediaries to devote less effort to screen borrowers. In the short-term this contributed to poor credit standards, less credit-worthy borrowers. In the long-term, this led to higher default rates.

According to ECB in a report titled “Financial Integration in Europe”, published in 2008, “Mortgage markets constitute an important part of the euro area financial system, accounting for approximately 16% of total MFI assets and 29% of total MFI loans at the end of the third quarter of 2007. At the same time, mortgages are by far the most important liability of the household sector, making up 59% of the total of its liabilities”. The report goes on to talk about the potential risk of mortgage markets exacerbating cyclical developments, in particular in asset prices, posing risks to financial stability.

The massive development of the private securitization market experienced in recent years coincided with a period of low risk aversion and scant defaults. This resulted in a number of shortcomings in firms’ risk management tools and models, which often used default figures from this period and tended to underestimate default and liquidity risks.

Figure 19 depicts the outstanding values of *MBS* and *ABS* (including *CDOs*) in Euro area countries comparing 2006 Quarter 1 and 2010 Quarter 1. Netherlands is the country with the largest outstanding

¹⁸Santiago Carbó-Valverde, David Marqués-Ibáñez and Francisco Rodríguez Fernández, “SECURITIZATION, BANK LENDING AND CREDIT QUALITY THE CASE OF SPAIN”, European Central Bank, Working Paper Series No. 1329, (April, 2011) 11.

values of *MBS* and *ABS* issued in 2010 first quarter (300.8 billion euro), followed by Spain (289.4 billion euro), Italy (211.7 billion euro) and Germany (93.7 billion euro). Ireland's mortgage market on the other hand had comparatively lower exposure to *ABS* and *MBS*.

The above analysis doesn't imply that the securitization of the financial markets was the sole cause that would have led to the subsequent crisis in the euro zone. The preceding discussion implies that what with rising property prices and interest rates and massive securitization, a trigger was already in making to kick start the crisis in euro zone when USA's mortgage security market collapsed. It can be put this way then that what happened in USA in 2006-09 was to happen in euro zone anyway.

3.3 Banking Crisis

According to the Bank of Spain, in 2010, problematic exposure of the Spanish banks totaled 100 billion euro, comprising 28 billion euro of doubtful loans (which include loans more than 90 days past due), 28 billion euro of substandard loans (performing but under surveillance because of their risky characteristics), and the 44 billion euro of foreclosed real estate. The overall real estate exposure of the Spanish banks stood at 217 billion euro.¹⁹ As for Ireland, the property related lending soared between 2002 and 2008. Domestic property related lending increased by almost 200 billion euro which represented 80 percent growth in credit.²⁰

Eventually with the bursting of the property bubble there would have been an upsurge in the number of defaults by the households. It has already been highlighted that the amount of household debt in both Spain and Ireland was huge. The households did eventually default on their debts and the domestic banks realized that they wouldn't be able to pay back the holders of *ABS* and *MBS* as well as the foreign investors who had loaned them the funds. When banks failed in Ireland the Irish government rushed forward to guarantee the 440 billion euro worth liabilities of six domestic banks and one foreign owned financial

¹⁹ "Spain's Savings Banks' Exposure to Real Estate Sector Is Credit Negative", Extract from 'Moody's Weekly Credit Outlook', February 28, 2011, 1.

²⁰ Peter Nyberg, "MISJUDGING RISK: CAUSES OF THE SYSTEMIC BANKING CRISIS IN IRELAND" Report of the Commission of investigation into the banking sector in Ireland, Central Bank of Ireland, April 2011, 31.

institution in September, 2008. The state started pumping in funds to prop up the six domestic banks by the end of 2009.²¹ In March 2009, Spanish government launched a 9 billion euro bailout to rescue the domestic savings bank – Caja Castilla La Mancha (CCM).²² Credit rating agencies moved in swiftly downgrading the credit ratings of banks in these countries.

Due to high degree of financial integration, banks in UK, Germany, France, Portugal, Belgium, Sweden and Netherlands started experiencing liquidity shortage. EU equity markets and Bond markets had achieved a considerable degree of integration before entering the financial turmoil (ECB, 2011). As can be gauged from Figures 20 (a) and (b), the average sensitivity of local equity markets of euro zone nations to EU shocks has increased much more than the corresponding rise in sensitivity to US shock spill-overs. The sensitivity to EU shocks has become more pronounced according to the figure in the previous decade. Countries with particularly high exposure to EU shocks are France, Germany, Spain, Italy and Portugal.

Figure 2 gives a rough idea of the amount of exposure banks of countries like UK, Germany, France etc had to the private debt of Ireland, Spain, Portugal and Greece. Figures 20 and 2 demonstrate that all the euro zone nations are connected intricately so that when one gets hit the others fall eventually; *it's a domino effect*.

3.4 Bank-sovereign interdependence

Though the euro zone is integrated monetarily, nations are individually responsible to bail-out the distressed domestic banks or banks within their purview according to the Maastricht Treaty. Nations therefore are vulnerable to the costs of banking crisis. Figure 21 helps to comprehend the extent of asset accumulation by banks with respect to government tax receipts (giving a rough idea of government earnings). In 2010, the total bank assets amounted to 45 times the government tax receipts in Ireland. Spain recorded a high ratio as well. The consequences of the

²¹ "Ireland's banking crisis", The Telegraph, 31 March, 2011.

²² Elena Moya, "Spain launches an 8.4bn euro bailout to rescue a stricken savings bank", The Guardian, 29 March, 2009.

above became apparent in 2008, when Ireland had to bail out its banks which resulted in a high debt-GDP ratio. Heavy losses on account of bail-out of domestic banks were suffered by Spain and Portugal as well.

Another aspect of the bank-sovereign interdependence is the *holding of sovereign debt by the domestic banks*. If the nation tips towards falling into a fiscal abyss, domestic banks having high exposure to the sovereign debt weaken. This is what happened in Greece. Italy's domestic banks held a high percentage of sovereign debt and so did the domestic banks of Spain, Portugal and Germany (Figure 22). Irish banks on the other hand held negligible sovereign debt as a percentage of GDP. *The exposure of governments to 'their' banks and of banks to 'their' governments made public finances in the euro area particularly prone to liquidity and solvency crises.*²³

3.5 Final stroke: Sovereign Debt Crisis

As discussed earlier when the Banking crisis would have transpired it would have been succeeded by a wave of loss of investors' confidence and liquidity crunch, which did eventually happen. The liquidity crunch froze the global markets into a state of inaction. Banks were wary of lending money to each other on account of uncertainties over exposure to toxic assets (certain securitized and structured instruments). Besides the interbank market in the euro zone the sovereign bond markets were adversely affected as well. There was no liquidity available to fund the huge fiscal deficits in some of the euro zone nations. On analyzing Figure 8 (Debt-GDP ratio), it becomes clear that the sovereign debt was on a rise in Greece and Italy since the starting of the 21st century. As for Spain and Ireland, the ratio was stable and way below 0.6, the prescribed limit as per the Maastricht Treaty. The debt-GDP ratio for Portugal remained below 0.6 till 2003 and then it spiked. Ireland, Portugal and Spain recorded high levels of private debt in the time period 2002-06 due to the unfolding property boom in the respective period. Thus, the conditions were fertile for a sovereign debt crisis to occur accompanied by a banking crisis.

²³ Jean Pisani – Ferry, "The euro crisis and the new impossible trinity", Bruegel Policy contribution, January 2012, 7.

Banking crises most often either precede or coincide with sovereign debt crises (Reinhart and Rogoff, 2010). The two crises were almost contemporaneous in the euro zone. For Ireland and Spain it was the superfluity in private debt while for Greece, Italy and Portugal it was the public debt that did the deed.

On connecting these aforementioned observations it becomes clear that as the private along with the public debt or either of the two would have surged there would have been an imminent situation of Sovereign debt crisis erupting not only in Spain and Ireland but spreading to nations having unsustainable debt-GDP ratios. Section 1.2 has already analyzed the sequence of events that eventually led to the sovereign debt crisis. The explanation is suffice for understanding the mechanism of occurrence of possible banking as well as sovereign debt crises in the euro zone in the absence of 2007-09 Financial Crisis in USA.

Section-4: Impact on India

A flawed assumption was that emerging Asia would be protected by their: low exposure to US subprime loans and securities; ample international reserves; current-account surpluses; low dependence on commodity exports; high share of interregional trade; improved banking systems; and ability to implement countercyclical macroeconomic policies. But when the crisis struck the global markets experienced a major episode of liquidity freeze and this adversely affected the Asian economies as well. In the (April 2009) World Economic Outlook, IMF downgraded its 2009 forecast for developing Asia to 4.8 percent (versus of forecast of 8.4 percent in the April 2008 WEO). Emerging Asia's exports fell at an annualized rate of 70 percent between September 2008 and February 2009.

Growth in Asia slowed markedly in the last quarter of 2011, mainly due to weakening external demand. Export growth lost momentum across the region, for both electronics and non electronic goods. The level of exports to the European Union fell increasingly below trend even as exports to the United States recovered to their long-run trend after the global financial crisis.²⁴

Besides the marked decline in exports there has been a sudden reversal of investors' sentiments. Before 2006-07, capital flowed into India and other emerging economies freely but when the crisis struck USA there was a global liquidity freeze which led to a free fall in the capital inflows. Due to negative market sentiments which were further dampened by the euro zone crisis the investors have more or less steered clear of emerging markets and have instead moved towards safe haven assets like US gold, US treasury bills, German and Austrian bonds etc.

India's growth story was abruptly cut short in 2007. Its GDP growth rate which was hovering at 8-9% and the forecasts raising it to around 10% was brought down to 5.5% by the end of 2008 with a negative outlook.

Indian Prime Minister Manmohan Singh recently voiced concern that continuing problems in the euro zone will further dampen global markets and

²⁴ "Asia and Pacific Managing Spillovers and Advancing Economic Rebalancing", Regional Economic Outlook, World Economic and Financial Survey, IMF, April 2012, 11.

adversely impact India's own economic growth. He also said that the need to revive global growth should be an issue of immediate concern which must be addressed by world leaders. He gave this statement before he left for the G-20 meeting in Mexico held on June 18, 2012. How does India get affected by the events unfolding in Europe? What have been the effects till now? These are the questions that will be addressed in this section.

4.1. Growth in GDP and Exports:

Every emerging economy suffered in the 2007-09 crisis and went into recession with GDP falling to record levels. Emerging Asia saw its average economic growth slowing down by 8.6% in the period 2007-09 (Table 4). India by comparison experienced a smaller growth decline (4.8%). Figure 23 plots the GDP growth rate for World, India, euro zone and China. It reinforces the point that the GDP growth rate dropped in the period 2007-09 globally. It picked up in India by the starting of 2010.

Figure 24 gives the movement of the Indian exports as a percentage of GDP till 2010. They dipped in the period 2009 but started rising in 2010 according to the graph. It can also be observed that as the Euro Zone contracted so did the world GDP in 2009 (when the first signs of sovereign debt crisis appeared with Greek government's startling revelation of realization of high fiscal deficit in the year 2009-10) and accordingly the Indian exports registered a decline in exports as well.

Exports which grew at 25 per cent during 2005-08 decelerated to 13.6 per cent in the crisis year (2008-09) and registered a negative growth of 3.5 per cent in 2009-10. *According to the recent Press Release by the Department of Commerce, India the export growth contracted by 4.16% in May, 2012-13 over May, 2011-12.*²⁵

Europe accounted for around 20.2% of Indian exports in 2009-10 while USA accounted for 10.2% of the total exports (Table 5). The share declined to 18.6% for EU countries in FY 2011. The euro zone crisis has eliminated the benefits of a weak rupee for Indian exporters as the

²⁵ Press Release, "INDIA'S FOREIGN TRADE: MAY, 2012", Government of India, Ministry of Commerce and Industry, Department of Commerce, Economic Division, 2nd July 2012.

European consumers do something they are not used to in three decades - save. The slump in spending by the Europeans will aggravate the Indian economic slowdown.

As can be observed from Table 5, India is slowly diversifying its export portfolio. Though the exports to EU and North America have declined, exports to countries in Asia and Africa have increased.

4.2. Capital Inflows

With the collapse of Lehman Brothers in 2008, a massive portfolio equity outflow was recorded for India to the tune of 15,030 million US dollars (Figure 25). It peaked in 2009-10 at 32, 376 million US dollars and has been on a decline thereafter. Though, in February 2012, portfolio equity did register an inflow of 9,228 million US dollars. In the beginning of the period 2010-11, the FDI net inflow declined as well. FDI inflows in India during 2011-12 (April-September) increased by 74% to 19,136 million dollars from 11,005 million dollars for the same period in 2010-11. FDI inflows peaked at 5,656 million dollars in June 2011 and have been registering positive flows albeit small.

According to Figure 26, around 28% of the FDI flowing into India originates in UK, US and the euro zone. Therefore, occurrence of recession and incessant presence of bearish market sentiments in these nations have resulted in a rapid descent in FDI inflows to India.

Figure 27 (a) plots the movement of FIIs (Foreign Institutional Investors) for India. It is observed that there was a high FII outflow due to global liquidity crunch and negative market sentiments in the period 2008-09. While the capital outflows led to decline in the domestic FOREX liquidity, the Reserve Bank's intervention in the FOREX market resulted in tightening of Rupee liquidity. The inter-bank call money (overnight) rates firmed up during the period from second half of September 2008 to end October 2008 (high of 19.70 per cent on October 10, 2008) signifying massive liquidity freeze in the Indian markets.²⁶ After attaining the peak

²⁶Anand Sinha, "Changing Contours of Global Crisis – Impact on Indian Economy", RBI Monthly Bulletin, April 2012, 7.

of 28, 630 million US dollars in October, 2010, FIIs drained out the next month by 19, 921 million US dollars [Figure 27 (b)]. Since then the flow has either been negative or negligible inflows have been recorded. This has resulted due to large net sales by FIIs in the backdrop of worsening macroeconomic environment and bearish outlook on earning growth of Indian corporate sector.

The reason behind this sudden reversal of capital flows to India is the loss of investors' confidence. Due to huge losses suffered in the financial crisis (2007-09) and then the euro zone crisis, the investors are moving towards 'safer assets' from the riskier emerging market assets. They are investing in German, Austrian, Belgian and Dutch bonds as well as in US treasury bills. There is an increased expectation of sustained outflow of FII, FDI and Portfolio as the conditions in the euro zone worsen.

Though certain policy measures aimed at improving the FII flows were implemented in January 2012, nothing much could be achieved through them. For instance the lock-in period of long-term infrastructure bonds for FIIs (up to 5 billion dollars within the overall ceiling of 25 billion dollars) was reduced to one year, and ceilings for FIIs in government securities and corporate bonds were raised by 5 billion dollars each. Capital flows under these segments responded positively to the policy measures in January 2012. But this temporary spike in the trend couldn't sustain itself thereafter.

4.3. Exchange Rate Movement

It is common knowledge that when there is an increased outflow of capital from the country, the domestic assets and currency become unattractive to investors globally. This leads to depreciation of the currency and this is what occurred in India. As the outflow of capital spiraled up in frenzy the exchange rate depreciated from 39.37 per dollar in January 2008 to 51.23 per dollar in March 2009 (Figure 28). Speculative trades reinforced this trend. On 29th June 2012, it was recorded at 56.309 per dollar. Depreciation of currency makes domestic

exports become more competitive improving the trade flow and reviving the economy. But in the Indian scenario, such an event is yet to occur. The Indian current account deficit has been widening for quite some time due to more expensive imports and draining out of capital by foreign investors (Figure 29). The rupee after slipping to an all time low of 54.3 per US dollar on December 15, 2011, reversed to 50.3 on January 20, 2012. The reversal followed measures to boost capital inflows.

The depreciating rupee is likely to add further pressure on domestic inflation and India's import bills. The rupee depreciation will particularly hit the industrial sector by putting higher pressure on their costs as items like oil, imported coal, metals and minerals would get affected. *However, it is believed that the IT services sector, textile sector and other such export-oriented industries in India are likely to benefit from the depreciating rupee.* There hasn't been much effect on the IT services sector (Figure 30). The earnings in this sector of Indian economy increased even during the period 2008-09.

Overall the exchange rate movement of Indian rupee has been volatile and disappointing. As explained by Easwar Prasad of Brookings in a *Financial Times* report, "The dropping value of the Indian rupee essentially reflects the economic malaise in India as well as the sense about the economy's vulnerability to external shocks".²⁷

4.4. Growth in Output

The US economy expanded 3.0 per cent in the fourth quarter of 2011 – the highest pace since second quarter of 2010. The US manufacturing PMI for March 2012 indicates expansion in the manufacturing sector for the 32nd consecutive month. According to the interim forecast of the European Commission, the euro area will undergo a mild recession in 2012 with output contracting by 0.3 per cent. The composite PMI for the euro area, which combines services and manufacturing, fell steadily from 50.4 in January to 49.3 in February and 49.1 in March 2012, indicating contraction. While a small contraction in the euro area would have

²⁷Easwar Prasad, "Battered Rupee Highlights India Woes", *Financial Times*, 17 May 2012.

significant spillover effects onto India, its fall out could be contained if the US continues to recover.

Indian GDP is estimated to decelerate sharply to 6.9 per cent in 2011-12, with a marked slowdown in agriculture, mining and quarrying, manufacturing and construction sectors. Data relating to third quarter of 2011-12 shows that growth moderated for the fourth successive quarter to 6.1 per cent, recording the lowest rate in the last eleven quarters (Table 6). Industry recorded a dismal growth rate of 0.8 % in the third quarter of 2011-12. The over-all yearly Industrial growth came down from 7 % in 2010-11 to 3.3% in 2011-12. Only services saw a sustained growth over the period 2010-12 at 8.8%.

Recent surveys conducted by different agencies indicated mixed trends in business climate. The latest NCAER survey shows a noticeable pick up in business confidence from the previous period of survey. However, the Dun & Bradstreet index for first quarter of 2012-13 points to declining business optimism. The recently released seasonally adjusted HSBC *Purchasing Managers' Index* – a headline index designed to measure the overall health of the manufacturing sector – registered 57.5 in January, up from 54.2 in December (Figure 31).²⁸ The reading pointed to the strongest improvement in business conditions since May 2011. General improvement in demand and market conditions is responsible for this rise. Input prices faced by Indian manufacturers increased substantially during January. Higher raw material costs were cited as the main driver of input price inflation which increased production costs substantially (Figure 32).

On the contrary the Index for Industrial Production (IIP) for Capital goods recorded a contraction of 1.8% in (April-February) 2011-12 while that for Intermediate goods contracted by 0.9% (Table 7). The industrial activity in the period 2011-12 was disappointing on account of weak demand for consumer durables, reflecting interest rate sensitivity, deceleration in external demand and subdued investment demand due to decline in business confidence. Industrial growth exhibited high volatility due to sharp fluctuations in the growth of capital goods (Figure 33). Volatility was calculated to be 3.3 for IIP excluding capital goods compared with

²⁸ HSBC India PMI, 1 February, 2012.

4.7 for the overall IIP during the period April 2009 to February 2012.²⁹ Therefore, volatility in growth was primarily on account of a few items which contributed to the unevenness in the overall IIP growth.

With slow-paced global economic recovery extending into 2012, barring in the euro area, there could be a positive impact on domestic industrial growth. This is corroborated by the strong co-movement between the domestic and the global IIP series, reflected in terms of a correlation coefficient of 0.8 for the period April 2008 to January 2012 (Figure 34). A drop in global IIP is mirrored by a sharp dip of the Indian IIP in October 2011. Any sign of recovery globally as well as in the advanced economies will certainly give a boost to the industrial sector in India.

4.5. Erosion of reserves

As a measure to attract more capital flows in order to improve the sluggish growth in the FDI and FII inflows, implemented a number of measures (some of which have already been mentioned in section 4.3). This is the most concerning feature of Indian economic policy. Excessive reliance on short-term debt to fill the current account deficit isn't what many call a 'prudent policy'. Many researchers like Reinhart, Rogoff, Calvo etc have extensively researched on the considerable risks attached to capital flows and 'sudden stops'. In an economically uncertain global environment the risks attached with short term capital flows become significant.

Figure 35 evinces the need to impose regulations on capital flows to stop the erosion of India's foreign exchange reserves. As is clearly observable, the gross total debt exceeded the Indian foreign exchange reserves in 2011-12. The short-term debt has been on a rise since 2005-06 except for the drop in 2009-10. India's reliance on such flows has created double jeopardy. At one level it has weakened the RBI's ability to intervene in the market to iron out the volatility in the exchange rate; at

²⁹ "Source: Macroeconomic and Monetary Developments in 2011-12", RBI, Monetary Policy Statement, 16 April 2012, 6.

another it is robbing the country of foreign exchange reserves by creating excessive short-term liabilities through currency borrowing, etc.³⁰

4.6. Future: Bleak or Bright?

Is Indian economy's future bleak or bright? This is a tough question to answer. Preceding sub-sections have focussed on a few selected indicators, plotting their movements through the pre-crisis period to the present times. Certainly, capital inflows and the industrial production index would need time to strengthen as the investors' confidence remain ebbed due to the raging euro zone crisis.

Moreover, the future of Indian exports does not look bright as of now. The growing uncertainties over the euro zone peripheral nations and Italy – will some of them leave the euro zone? Will anyone of them default on their debt; has put the Indian trade balance in a precarious position. If any of the much speculated events (Greece or other peripheral nation/nations leave the euro zone or default by any euro zone nation on its debt) does occur, not only will the euro zone and Europe come under fire but US markets would react negatively as well (due to its high exposure to private and sovereign debt of the euro zone). India along with other emerging nations, in that situation would experience unprecedented dip in GDP growth rate, capital flows and exports. As it was observed India has accumulated a sizeable external debt. This feature poses considerable risks to Indian bond markets, exchange rate and the foreign exchange reserves.

India has become highly vulnerable to external shocks and its fundamentals have been weakened in the recent decade. *In such a scenario, India will be easily sucked in by the contagion erupting anywhere in the world, especially in the euro zone.*

³⁰K Subramanian, "Rupee's Travails, Blame It on Greece", Economic and Political Weekly, Vol No. xlviI No. 23, June 9 2012, 15.

Concluding Remarks

In a preliminary report to the Irish Government on Banking Crisis in Ireland, the author writes in clear words, **“Serious stress in the financial system was almost unavoidable – even if the Lehman Brothers event had not administered a huge shock to liquidity. This is the key point that virtually all parties (including the 2006 IMF Financial System Stability Assessment) basically missed”**.³¹ The hypothesis considered in this paper – crisis in euro zone was inevitable even without the trigger of (2006-09) Financial Crisis in USA – is corroborated by this statement. Findings of Section 3 indicate that euro zone nations were capable of kick starting a crisis on their own. The trigger provided by USA in 2008 with the fall of Lehman Brothers and the massive liquidity crunch that spread out to advanced, developing and emerging economies overshadowed the insidious roots of property bubble spreading out in Ireland, Spain and Portugal. World attention was fixed on USA in this period (2007-09) and the euro zone and Europe were ‘comparatively safe’. In a way therefore, US Financial Crisis was the tool through which Hegel’s ‘cunning of reason’ achieved its way. Now it rests upon the policymakers to acknowledge the cunning (of) reason or choose to ignore it.

Emerging and developing markets like India have a long way to go, to get out of this quagmire. Persistence of Bearish market sentiments and growing uncertainties in the euro zone is hampering growth in Indian economy. If the euro zone crisis is not averted, India which has about a sixth of its total exports to the European Union will face unemployment in the lower income category, such as textiles, which is one of the biggest employers. Moreover the Business Confidence in India is falling rapidly reflecting negative investors’ sentiments about the performance of Indian economy (Figure 36). *Lack of capital funds, volatility in Industrial sector, declining exports, rising costs of imports, erosion of reserves and erratic exchange rate movement are all contributing to make the economy vulnerable to external shocks and contagion from euro zone.*

³¹ Klaus Regling and Max Watson, ‘A Preliminary Report on the sources of Ireland’s Banking Crisis’, Government Publications, 31 May 2010.

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Appendices

- **Appendix I: Figures and Tables**
- **Appendix II: Definitions**
- **Appendix III: Abbreviations**