A Close Look Into the Financial Crisis and Financial Market Volatility-A Risk Management Perspective

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Abstract

The global financial crisis which was compared to great depression of the 1930's surfaced with the subprime mortgage sector in the US in August 2007, this metamorphosed into a global financial crisis in September 2008 followed by the collapse of Lehman Brothers. The present study brings a comparison of the present financial crisis with the great depression of 1930's and explains how the present crisis is different from great depression. Further the study ponders upon the impact of global crisis on financial markets.

Key Words: Great depression, financial markets, EME"s, CDO's, Financial Crisis

1. Introduction:

Globalization contributes to free flow of business and monetary infusions across the nations. It provides economic independence and creates competition that helps in elevating the standard of living of people in nations that participate in international trade. The world economy experienced a stable growth with moderate fluctuations and low inflation till the recent global crisis. However, globalization did lead to certain structural imbalances. There was gap between savings investment, production, and consumption which created imbalance in current account with some parts having surplus and others deficits. The global financial crisis owes its origin to the US sub-prime crisis in mid-2007. The intensity of the crisis has been the major contributor to global financial crisis.

2. Definition of Financial Crisis:

Economists have defined financial crisis as a situation in which the supply of money is outpaced by the demand for money. This implies that liquidity evaporates quickly because available money is withdrawn from banks, forcing banks to sell their investments to make up for the shortfall or to collapse. Mishkin defined financial crisis as a disruption to financial markets in which adverse selection and moral hazard problems become much worse, so that financial markets are unable to efficiently channel funds to those who have the most productive investment opportunities. As a result, a financial crisis can drive the economy away from equilibrium. The essence indicates that there will be serious liquidity crisis leading to banks selling of their investments and failure to channelize investment in most productive opportunities.

3. A Review of Related Literature

James Crotty (2009) analyzed the structural flaws in the financial system that caused the recent crisis and discussed the prospects for financial reforms.   Michael Sakbani (2010) observed that the global financial crisis of 2008 followed by a global economic recession would not have happened with the same severity if regulations were in place. Further the study highlighted the need for internationally coordinated regulatory reforms, which would incorporate macro risks and new rules for non-bank financial institutions. Robert Hudson (2010) examined the debate on the current financial crisis and stressed the need for interactions between academicians and finance

practitioners. The study also felt the need for interdisciplinary research in finance and stated that Behavourial finance should be brought under the mainstream attention.

David Floyd (2011) examined recent trends and observed that there has been a faster recovery in the emerging markets in the years just after the crisis of 2008-10. China's growth was ten percent where as western countries including UK and USA negative growth in 2009.Elio Iannuzzi, (2010) examined the main causes and perspectives of recent global crisis and suggested some measures for limiting future instability and crisis and also reducing negative consequences. Samer AM Al-Rjoub, (2012) studied the stock returns behaviour during financial crises for emerging markets from 1992 to 2009. The study observed that crises in general had negative impact on stock returns for all returns for all sectors, and that impact on banking sector was highest.

Frederic S. Mishkin (1991) highlighted that financial crises have effects over and above bank panics and felt the need for an expanded lender of last resort role by the central bank. The central banks should use the discount window to provide liquidity even to sectors outside the banking sector. Stephen G (2009) studied forty systemic banking crises since 1980 and observed that all crises coincided with sharp contraction in output which took several years to recover. The study came out with three major findings. Firstly, the recent crises unlike any other crises cover a wide range of economic factors. Second, losses of past banking crises were higher than currency crises. Thirdly, there is a tendency for systemic banking crises to have lasting negative output effects.

The review of literature revealed that there not much of elaborate work done on comparison of recent crisis with depression and its impact on global financial markets. The present study therefore focuses on these aspects.

Research Objective: The research objective is to understand the differences between recent financial crisis and great depression. The study attempts to identify the parameters on the basis of which the recent global crisis is different from the great depression. Further, the study examines the impact of the recent crisis on financial markets

4. **Causes for Global Financial Crisis:**

The following could be the causes for global financial crisis

▪ **Easy Global Money and Credit Conditions**

▪ **US Sub-prime Mortgage Crisis:** Earlier till the 1990's loans in US were given to prime borrowers. This shifted to sub-prime lending. The mortgaged loans were bought by Fannie Mae which was later on privatized. Federal Home Loan Mortgage Corporation was set up as a competitor to Fannie Mae. These institutions started buying sub-prime loans and issued securities against it. In turn collateralized debt obligations were issued. The information on risk exposure was not transparent and investors believed on credit ratings. This continued till concerns were raised about the ratings. Credit rating agencies were under scrutiny and they slowly started lowering the ratings. This impacted on the prices of the securities underlying these mortgage loans.

▪ **US Fed's Low rate of interest:** The low rate of interest encouraged investors to take housing mortgage loans leading to huge rise in the prices of houses as well as demand for houses.

▪ **Global Imbalances:** There were differences in global balances. While US had the highest deficit China had the highest surplus. The large current account imbalances led to capital flow from poor countries to capital rich industrial economies. There was a significant rise in savings rates of emerging market economies. The EME's could not find investment opportunities in domestic countries. This contributed for capital flows from EME's to capital rich economies.

▪ **Inadequate Exchange Rate Flexibility:** Several emerging economies have undervalued their currencies. Exports become lucrative and EME's share in exports began to increase. China exports increased from 23 percent of GDP during 1992-95 to 43 percent during 2007. India's exports also increased from 10 percent during 1992-95 to 24 percent in 2008.While US exports were 10 percent and 12.9 percent during the same period.

▪ **Easing of Monetary Policy:** The global imbalances were basically due to loose monetary policy followed by developed nations especially the US. The US Fed funds real rate of interest was consistently below 1 percent.

▪ **Use of Complex Derivatives and structured Financial Products:** The housing boom in US generated enormous interest in market for MBS (Mortgaged based securities) and CDO's (Collateral debt obligations) and other complex derivative instruments. Therefore the fall in housing prices had dwindling effect on financial market.

▪ **Regulatory Weakness:** The sub-prime crisis can be viewed as the best example of several weaknesses in the regulatory structure. There was oversight of normal standards of prudent lending, inability to recognize systematic risk, non-recognition of off balance sheet items of bank and operation of non-banks beyond the regulatory purview

▪ **Basel Norm I:** The Basel I minimum capital adequacy requirement forced the banks to shift risk from their balance sheets through securitization.

5. History of Financial Crisis

The traces of financial crisis can be seen from 1873. The number of crisis from 1875 to 2007 is shown in the following table.

Table No: 1   Frequency of Financial Crisis

Period	Number of Crisis
1873-1913	58
1919-1939	51
1945-1971	17
1973-2007	399

Source: Michael D. Bordo, Globalization in Historical Perspective, 2001, Global financial   crisis and the. Indian Economy, RBI, 2010.

The analysis of the above table indicates that the maximum number of crisis is noticed during 1973-2007. The major reasons for crisis during the period have been liberalization of capital account in advanced countries, Latin America debt crisis, breaking up of fixed exchange rate, sharp increase of oil prices, collapse of global commodity prices, volatile interest rates, and banking crisis all contributed to the financial crisis.

6. Major Financial Crisis

German and Austria Stock Market Collapse 1873: French war indemnity to Prussia led to speculation in Germany and Austria. This was followed by stock market collapse in the countries. There was also large infusion of money in the US rail road industry. The German crisis created a fall in capital flows to US. The failure of Jay Cooke's investment banking firm created further panic.

Barings Crisis: The tightening of Central bank policy by England, France, and Germany followed by Argentina stopping payment of dividends led to bank runs. The major lender to   Argentina House of Baring, declared itself insolvent. The crisis soon spread to Latin America.

USA 1907: This period was marked by Mergers & Acquisitions, and rapid industrial growth. The San Francisco earth quake made the financial markets to tighten their policies. During this period there was expansion was trust companies. A speculative attempt in stock market collapsed and there was panic.

USA 1929: Stock market boom, significant innovations in industrial organization and corporate finance were the features prior to the great depression. There was lot of speculation in the market. The federal bank tightened its policy followed by the starting of financial crisis. Many US banks failed and the crisis was spread to Germany. Germany failed to pay its foreign debt and created more pressure on US.

Latin American Debt Crisis1980: Prior to the crisis many Latin American countries borrowed huge sums from international creditors for industrialization. The world economy crisis created a liquidity crunch. The interest rates increased making it difficult for the borrowing countries to pay back the debt. Mexico defaulted in paying back the debt. This led to Latin American Debt Crisis.

UK 1991: The huge speculation in hedge funds forced UK to with draw from European exchange rate mechanism (ERM). Germany increased its interest rates as strategy to control inflation. This created huge stress on ERM. Italy and UK suffered both from ERM collapse and depreciation of US dollar.

Russia 1998: The political turmoil in Russian brought certain facts to surface. There were weaknesses in banking system and foreign exchange risk was high. The ruble denominated treasury bills were restructured and ruble was devalued.

Dot.com Bubble 2000: During this period there was huge investment in internet sector companies popularly known as dot.com companies. Investors invested with confidence even ignoring the fundamentals like price to earnings ratio. The federal bank increased interest rates six times. The speed of economy has slow down. Investors began to execute sale orders in stock market. The NASDAQ lost by 9 percent in six days.

7.   Comparison of Recent crisis with Great depression

The comparison of recent crisis with great depression have shown certain similarities they are

- In both the cases US has been centre for Crisis
- Both crisis had global impact
- There was asset and credit boom preceding the crisis
- Banks and financial intermediaries had liquidity and funding problems.
- Rapid credit expansion and financial innovations contributed to boom preceding the crisis.
- Banking and financial sector crisis turned into economic crisis
- The crisis posed the importance of public policy.
- Despite the similarities, there are certain differences. The following table indicates the same.

Table No: 2 Comparison of Recent Crisis with Great Depression

Parameter	Great Depression	Recent Crisis
GDP Decline	13 in 1932	6
Unemployment Rate	3 in 1929 25 in 1933	4.6 in 2007 9 in 2009 10 Projected 2010
Decline in Prices	24	4
Stock Price Decline	85	43
Increase In Fiscal Deficit	1.5	3

Source: Globalization in Historical Perspective, 2001, Global financial crisis and the. Indian Economy, RBI, 2010. Figures indicated in percentages to peak period Percentage

The decline in GDP is as high as 13 percent in 1932 where as it was 6 percent during the recent crisis. The unemployment rate was 29 percent during great depression while it was 10 percent as projected in the recent crisis. The price fall was 24 percent while it is 4 percent in the recent crisis. The stock prices fall was 85 percent in great depression and 43 percent during 2007 crisis. The fiscal deficit increase was 1.5 percent where as it was 3 percent during recent financial crisis. The analysis of the above table indicates that the crisis of recent times is not as severe as great depression.

8. Global Crisis its Impact on Financial Markets:

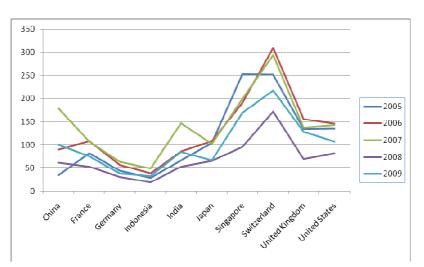**Market Capitalization:** The market capitalization as a percentage of GDP is depicted in the following table

Table No: 3 Market Capitalizations as a Percentage of GDP

Country	2005	2006	2007	2008	2009
China	34.6	89.4	178.2	61.8	100.3
France	82.3	107.7	107.3	52.7	75.1
Germany	43.8	56.1	63.2	30.5	39
Indonesia	28.5	38.1	49	19.4	33
India	66.3	86.1	146.4	53.2	85.4
Japan	104	108.3	101.7	66	67.1
Singapore	252.5	190.1	199.3	95.1	169.5
Switzerland	252	309.9	293.6	171.7	217.7
United Kingdom	134.1	155.2	137.3	69.7	128.7
United States	134.9	145.7	142.5	82.1	107.4

Source: World Development Indicators Available on http://data.worldbank.org/topic/financial-sector

The analyses of the above table indicate that there was steady growth in the market capitalization throughout the period till the down fall started. During 2008 the market capitalization of all countries has declined. India's market capitalization fell to almost one-third. United Kingdom and United States also showed a decline by almost fifty percent. The above information is also represented in diagrammatic form as follows.

Figure No: 1   Market Capitalization as a Percentage of GDP

Spreads in Advanced Countries: The liquidity pressure in the interbank market is measured by the spread between the interest in the London interbank rate and overnight indexed spread. The following table shows the spreads before and after the crisis.
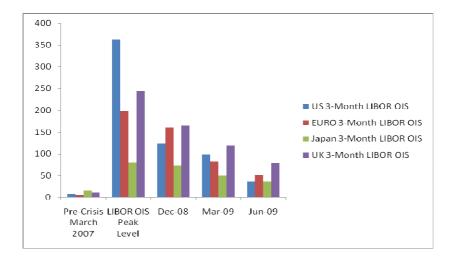
Table No: 4 Movements in Interbank Spreads

Indicator	Pre-Crisis March 2007	LIBOR OIS Peak Level	December 2008	March 2009	June 2009
US 3-Month LIBOR OIS	8	361	123	99	37
EURO 3-Month LIBOR OIS	6	199	160	82	50
Japan 3-Month LIBOR OIS	16	80	73	49	37
UK 3-Month LIBOR OIS	11	244	165	120	78

Source: IMF, Global Financial Stability Report (GFSR), October 2009

The US 3-month LIBOR OIS During the pre-crisis was 8 and during the peak of the crisis it was 361. This reduced to 123 in 2008 and 99 at the end of March 2009. This further reduced to 37 by the end of June 2009 after the recovery started. The EURO market 3-month LIBOR OIS was 6 this reached 199 at the peak level of crisis. By end of June 2009 it reduced to 50. Japan was relatively less affected by the crisis standing at 80. This reduced to 37 at the end of June 2009. UK interbank spread during the peak was 244. After recovery UK had the highest spread of 78 at the end of June 2009. The same is represented in the following diagram.

Figure No: 2 Interbank Spreads

Impact on Foreign Exchange Market: The global crisis had serious impact on exchange market. The increase in volatilities in foreign exchange markets reduced the attractiveness of carry forward trade positions. The following table indicates the fluctuations in exchange rate against dollar during and post crisis period.

Table No: 5 Exchange Rates: Appreciation & Depreciation Against Dollar

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Currency	End March 2007	End March 2008	End March 2009	End February 2010
Euro	10.7	19.0	-16.0	1.4
Pound	13.7	2.0	-28.6	6.1
Japanese Yen	-.02	17.5	2.0	9.9
Chinese Yuan	3.8	10.1	2.6	.01
Russian Ruble	6.7	10.6	-30.8	13.6
Indian Rupee	2.3	9.0	-21.5	10.2
Indonesia Rupiah	-0.5	-1.1	-20.4	24
Malaysian Ringgit	6.6	8.5	-12.6	7.0
South Korea Won	3.3	-5.0	-28.4	19.4

Source: Global financial crisis and the. Indian Economy, RBI, 2010.

The end of crisis has seen depreciation of exchange rates against dollar.

9. Risk Management Perspective :

The global financial crisis of 2008 followed by a global economic recession would not have happened with the same severity if there were up to date financial regulations and vigilant oversight in place. The crisis calls for internationally coordinated reforms in the regulatory system, which fully incorporates macro risks and reconsiders some of the products of financial engineering as well as new resolution rules for big non-bank financial institutions, Michael Sakbani, (2010). The measurement of risk must have macro as well as micro risk evaluations. There should

be also common international standards of bank examination and supervision as well as best practice examples of prudent bank management.

10. Conclusion:

The main reasons for current global crisis have been easy credit, low rates of interest in US; sub-prime lending, global imbalances, inadequate exchange rate flexibility, complex derivatives and regulatory weaknesses. Though there are some similarities in recent crisis and great depression, the impact of recent crisis was less when compared with the great depression. The observation of various crises indicate that there will be rapid industrial expansion and boom in stock market before the crisis. The recent global crisis has shown serious impact on the market capitalization. The market capitalization of the select countries showed a decline in crisis period. The interbank spreads were highest during the period. Most of the currencies depreciated after the year 2008 crisis.

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