Investment Portfolio Management

Sub-prime Mortgage Crisis

# Introduction

Financial crisis of 2008 was one of the severest crisis which engulfed the world since great depression of 1920s. The global financial crisis is believed to have been caused by the overall deregulation of the banking and financial industry of US and the same allowed many banks to use a great deal of hedge fund trading and also started to deal with financial derivatives like mortgage backed securities. Banks were seen to have demanded a large amount of these securities and demanded greater no of mortgages for supporting the profitable selling of the derivative installments and which created interest only loans for a large no of borrowers henceforth known as subprime borrowers.

# Literature Review

# 1. Describe the House Mortgage Market before the crisis:

## a. What was the funding model for house owners?

Funding was done primarily in the form of mortgages. During the period of 2001, the US economy showed signs of recession and as a result of which the US FED reduced the interest rates several times during 2000-2001 and brought it down to 1.75% and even lower. This created a deluge of liquidity in the market and as a result fo which buying house became quite easier for many. However the interest rates kept rising after a while and by2006-2007, the interest rate gradually reached 5.25%. this means those who bought houses at a variable rate mortgage of 1.25%-1.5% , saw their installments increasing drastically and they could not afford to pay. This created a large no of defaults in the market.

## b. What was the role of Credit Guarantee Agencies?

As interest rates increased , it was becoming pretty expensive for many to pay off their mortgages and lesser no of people are cooing forward to buy new houses. most of the population could not afford the higher rates. As the no of buyers in the market went down considerably the banks and the house prices began to cool down and many defaults were reported. More than one and a hlf million defaults were reported in 2008 alone.

**During these early years (2003-04) banks like Lehman Brothers bought a no of mortgage lenders to increase their mortgage business and started to provide loans to those who could not otherwise provide adequate documentation. These buyers were known as subprime borrowers or ALT-A. these early investments were looking solid as many credit providing agencies such as Lehman Brothers reported surge in earnings. Sub-prime mortgage were given at a very high growth rate till mid 2007 when the market showed signs of reverse gears and many of these sub-prime borrowers could not pay their due monthly payments as rates reached high 5.5%. House prices reached their lowest values and refinancing of loans became impossible** (ROSS and Westerfield, 2012)**.**

## c. What was the size of the US mortgage market?

The size of the mortgage market was huge. It can be gauged form the fact that by 2003, mortgage providers like Freddie Mac and Fannie Mae extended credits in excess of $3 trillion. In 2004, the total amount of mortgage credit was approximately $2 trillion. Thus it was estimated that annual mortgage credit market reached approximately $2 trillion just before the global crisis started in 2007.

# 2. Describe the change in market dynamics that led to the crisis:

## a. How the funding model changed?

The sub-prime loans made by various financial institutions precipitated the crisis. The model looked pretty profitable for the banks etc. under this model the ALT-A loans or the subprime loans were given to those who did not have enough credit rating and could not complete enough documentation. By 2003 June the rate was the lowest at 1% in the last several decades and the same spurred the less secured portion of the economy to take a home mortgage and provided he deluge of liquidity, bankers were willing to do business and make higher profits. This increased the mortgage market by huge growth and the same also led to the eventual crisis (Fabozz & Drake, 2009. ).

## b. How Credit Guarantee moved from “Originate-to-hold” to “Originate to distribute”?

from a historical perspective the banking system originated all the loans and choose to keep the same on their balance sheets which grew their financial size and strength. However gradually with the advent of loan syndication and Mortgage backed securities (MBS) , the loans were originated by the banks but instead of holding onto them the banking system tried to distribute the loans ownership to others like financial intermediaries and financial institutions. This also partly was the cause of the immense growth of non-banking financial intermediaries.

Before the financial crisis, the non-banking financial institutions like Lehman worked hugely in favor of CLOs and MBS which pooled the highly risky sub-prime mortgages and sold a portion of these securities to unsuspecting investors with a higher credit rating. During 2007 it was found that more than 75% of the CLOs were rated AAA. While before the year 2003, the issue of CLOs were quite lower at $20bn or less annually the same increased manifold to reach $180 billion by 2007. This became a major concern as these CLOS and other such instruments went down in their value as soon as housing prices went down and caused the market meltdown (Bodie, 2012).

## c. What was the role of the Investment Banks, leading to the crisis?

Investment Bank are financial institutions which creates capital through issue of various securities and undertakes underwriting . Investment banks continued to create new systems under which the mortgage lenders sold their assets to Investment banks like Lehman and these investments banks created MBS and CLOS and then sold the same to the investors. Most of the CLS were rates AAA as profits of the banks grew rapidly and the instruments were seemed foolproof. As a result of which the lenders (banks) etc. were least bothered about defaults made by buyers and hence increased more riskier loans and sold the same to investment banks. It was seen form most of the cases that the sub-prime loans or the riskier home mortgages were preferred by investment banks because they were providing them higher returns and rates. These investment banks became bolder by the day and placed more no of buyers in the riskier (sub-prime ) group and more loans to lower credit rated buyers were offered. SEC at that time did not monitor the leverage ratios of these investment banks and left them almost unregulated for their securities such as MBS and CLO’s.

These investment banks often were found to have sold and pushed the MBS and CLO’s to investors saying that they were highly rated but withholding the fact that these investments were only speculative and lured customers through insurance cover from AIG. Those investors who bought these securities were also required to pay AIG a premium periodically and if the CLOs turnout to be and then AIG guaranteed them the payment. However the market turnover upside down as house prices went down quickly and defaults emerged form almost all quarters leaving the investment banking institutions in high default situation. institutions like Bear sterns and Lehman failed and the market were exposed to huge counterparty risk and led to demise of AIG and a few other insurers. The failure of the institutions to pay for the losses suffered by investors led to market paralysis and recession. After the collapse of the investment banks what came was the systemic failure of securitization market which was triggered by the huge housing sector bubble. If seen from this perspective the greed and unregulated Investment banking sector of US led to market collapse of a gigantic scale and called for huge measures on the part of the FED to arrest the collapsing economy (Petersen, 2014).

# 3. Describe how the crisis started and its effects on the US economy:

## a. What caused the acceleration of House Owners’ default?

**During these early years (2003-04) banks like Lehman Brothers bought a no of mortgage lenders to increase their mortgage business and started to provide loans to those who could not otherwise provide adequate documentation. As the lenders were not concerned about defaults made by borrowers , they started to offer sub-prime loans and sold them to investment banks. These buyers were known as subprime borrowers or ALT-A and they tried to buy homes at a much discounted price and without having to pay a down payment. these early investments were looking solid as many credit providing agencies such as Lehman Brothers reported surge in earnings. Sub-prime mortgage were given at a very high growth rate till mid 2007 when the market showed signs of reverse gears and many of these sub-prime borrowers could not pay their due monthly payments as rates reached high 5.5%. House prices reached their lowest values and refinancing of loans became impossible. This started the deluge of defaults on the part of the large no of home buyers as interest rates increased and subprime borrowers could not afford the new and hiked installments** (ROSS and Westerfield, 2012)**. .**

## b. How the acceleration of default affected capital markets?

A low general level of interest % charged by lenders made houses affordable and demand surged. However the demand slides more rapidly as the interest rates rose to highest 5.5z5 in 2007. The same caused the payments to rise and most of the borrowers could not pay them. This caused them to default.

To complicate the matters as defaults rise , demand for houses came down and the same reduced market value of hosing which reduced the possibility of good refinancing and led to foreclosure by large no of borrowers.

As investment banks lost huge amount of money and value of mortgage backed securities and CLOs lost value rapidly the same caused a stock market crash. Recession followed and complicated the return of investments made in CLO;s ad MBS and CDS securities. The entire spectrum of the market was in shambles and people lost their jobs further eroding their chances of paying off their loans and liabilities (Krugman, 2010).

## c. How the US government responded to the melt-down in the economy?

After the financial crisis unfolded which threatened the market the US Fed became extremely active and it lowered the federal funding rates for providing more credit to the market and the banks etc. the FED also increased the type of securities and collaterals it would received an accept for loans to these institutions and also started to provide a number direct credit lines ot a large no of credit institutions. It also went on to guarantee a portion of the lability of the Bear sterns before the was taken over by JP Morgan chase. Several actions taken by the US Fed helped in increasing market liquidity and partially increasing consumer confidence.

The US treasury department also agreed to infuse more than $100 billion into the Federal Housing Finance Agency (FHFA) and also agreed to bail out the mortgagee lenders like of Fannie Mae and Freddie Mac. These steps helped the market regain confidence and restore liquidity and also helped in protecting the investors from significant further losses. As the whole system was on the verge of a collapse the treasury department of the US government came into and agreed to invest a further $700 bn for acquiring the assets form suffering banks which were impaired. These impaired assets were agreed to be held by the treasury for a no of years until the same regains their value and when the treasury can sell them off at a profit.

## d. What were the reform actions the US government took after the crisis?

The primary piece of reform which was undertaken was the enactment of Dodd Frank Reforms Act . under the provisions of the Act , a new systemic risk council of regulators called the Financial Stability Oversight Council was created for the purpose of serving to identify and providing an early warning to the market about issues and risk which needs to considered systemic and enhance the oversight of the market regulators (Eugene Brigham & Michael Ehrhardt, 2010).

Further reforms includes the enhanced power of the US Fed to cover the banking sector holding companies and oversee the activities of the banking and non-baking financial institutions which were designated as systemic by the Financial Stability Oversight Council.

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