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Greed and Fear Direct the Market: A Case of Mortgage-Backed Securities

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Abstract

One of the utmost inventions in the US financial markets may be the creation of Mortgage-Backed Securities or MBS. MBS market is estimated recently to be approximately 6 times the market capitalization of Bombay Stock Exchange. MBS are securities issued by banks or housing finance institutions based on certain pool of mortgages (housing loans). The process of creating and issuing securities based on a pool of certain assets is called Securitization. A sub-prime loan is linked with weak type of credit. In US, a sophisticated system has developed for rating individual's credit worthiness in form of credit scores, based on their level of income, fixed expenses, debts, and their payment history. MBS is based on a pool of loans, which may include sub-prime loans. Financial institutions created and made significant investments in mortgage-backed securities backed by high-risk subprime mortgages out of greed, but when defaults increased, anxiety grew and the MBS market and housing bubble collapsed, igniting the global financial crisis of 2008.The housing bubble was fueled by risky loans and intricate derivatives from lenders looking to make money and investors enticed by large returns. The value of MBS crashed as home prices dropped and subprime borrowers defaulted, causing widespread fear and a credit crunch that endangered financial institutions and the world economy.

Keywords: *MBS, Sub-prime, Loan, Credit, Risk*

Introduction

In the global financial market, mortgage-backed securities (MBS) are a major type of investment. The market includes many different kinds of MBS products. Investors like hedge funds, pension funds, insurance companies, investment banks, and mutual funds buy these MBS products based on how much risk they are willing to take. Basically, when someone holds an MBS, they get a steady stream of cash flow from the issuer, who gets this money from the payments made by the homeowners who took out the mortgages. This is called a 'pass-through' security.

When banks give out mortgages, those loans become part of their assets. But when they create MBS based on those loans, they are effectively selling the loans to other investors. This frees up money for the banks to lend to new customers and spreads the risk of the mortgages to more people. Therefore, an MBS has two important purposes. Firstly, it helps match the money people have with the money that people need to borrow. Secondly, it helps spread the risk of home loans among a large number of investors.

To keep the MBS market liquid, government-backed companies like Fannie Mae, Freddie Mac, and Ginnie Mae were created. These companies act like market makers by buying and selling MBS. They also help in the primary market by issuing MBS with guarantees. These are called 'agency pass-through securities' and they are generally safer than MBS issued by private companies. There are two main risks related to MBS. One is 'prepayment risk'—homeowners may pay off their mortgages early if interest rates go down, which can reduce the cash flow for the MBS holder. The other is 'default risk'—if homeowners don't pay their loans, the investor may not get back their money.

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MBS that are based on loans from high-risk borrowers, like sub-prime loans, have a higher default risk.

Risk and Regulation

Managing risk has become a key part of modern finance. Regulations and new financial products are used together to manage these risks. Since the MBS market is so big, both regulations and innovations are important. In the US, large investors like pension funds and insurance companies are only allowed to invest in 'investment grade' MBS, which have a certain credit rating. This requirement leads to two main groups in the market: credit rating agencies and bond insurers.

Rating agencies check the cash flow of MBS and rate them based on how safe they are. If the quality of an MBS is not good enough, they can improve it through 'credit enhancement.' Bond insurers help by offering a guarantee that they will make up for any missed payments. This is called 'bond insurance' or sometimes 'insurance wrap.' If an MBS isn’t investment grade, bond insurers can wrap it with insurance to make it qualify as investment grade. Most fixed income products in the market are rated and many of these rated products are also wrapped. This is similar to how products in India were marked with an ISI certification and a guarantee.

However, the quality of these ratings and guarantees depends on the companies that do them. Hence, there is a necessity for more regulation. Rating agencies must follow strict rules, and bond insurers must have enough capital, similar to how banks in India must maintain a minimum capital adequacy ratio. One result of this regulation is that it limits competition. In the US, only three major rating agencies—S&P, Moody’s, and Fitch—exist, plus a few bond insurers like Ambac and MBIA.

Banks are not required to limit how much risk they take, but they must follow US GAAP accounting rules. Trading securities are investments a bank buys with the plan to sell them later for a profit. The changes in value of these securities are recorded in the bank’s equity, not in the profit or loss statement. This is called 'mark to market' valuation. For example, if a bank buys AFS securities worth $10,000 and their value goes up to $11,500 by the next reporting period, the bank reports the $11,500 as its AFS assets and the $1,500 gain as an increase in equity.

This is because the gain has not been cashed out yet, so it isn’t on the profit and loss statement. This is like an individual holding stocks—who becomes richer if the stock price increases, even if they haven’t sold the stock. If the value of the securities drops and the decline is seen as long-term, banks must report it as a loss.

Innovation to manage risks in the capital markets are either based on classical theory of 'Diversification' or modern sophisticated theory of 'Hedging' using Derivative instruments. By design, MBS offers diversification – by combining one pool of local mortgages with others from different other geographic locations and by spreading the risks from the banks that originate the loans to a wide spectrum of financial investors in the market. Complex derivative products such as Collateralized Debt Obligations (CDO) and Collateralized Mortgage Obligations (CMO) have been created to re-allocate risks to different class of investors depending on their risk appetite. Conceptually, by re-allocating the underlying cash flows from the assets and their sensitivity to uncertain events 3 general classes of CDO are created - a 'Senior Tranche' (low risk/low return), 'Mezzanine Tranche' (medium risk/medium return) and an 'Equity Tranche' (high risk/high return).

Risk-averse investors like pension funds are insurance companies invest in a Senior Tranche while hedge funds may invest in Equity Tranche. Large part of US and International banks has traditionally invested in a mix of MBS that suits their risk-return strategy. This is precisely one of the reasons why investment in MBS was so wide spread among different class of investors – the customization of risk and return to meet their objectives. Also, historically the Investment grade MBS was perceived to have same level of risk as US Treasuries but with higher yields. So, even international banks and funds in Europe and Japan had invested in MBS as a substitute for US treasuries.

Sub-prime Crisis and Fall of MBS

Sub-prime crisis in the financial markets is widely believed to have its roots in the MBS market. The current crisis started as sudden decline in the value of the MBS. Fundamentally, four inter-linked phenomena seem to have caused this crisis. A possible mechanism creating this crisis is offered below:

I. **Structural Imbalance in US Economy**
II. **Predatory lending practices and unstable housing market**
III. **The corporate greed**

I. **Structural Imbalance in US Economy**

US is a consumer driven economy, that is consumer spending contributes about two-third of the demand in the economy. Innovations in credit financing have multiplied the consumers’ ability and willingness to consume. Credit cards banks, department stores, auto dealers, brokerage houses, housing finance banks and even student loans lenders have offered enticing credit terms to consumers, and in the low-savings rate environment, even the most disciplined consumer in inclined to borrow and consume than to save. Fundamentally, this induced consumption is at the cost of current savings and future earnings. The consumer demand has historically fueled the economic expansion in service and manufacturing sector in US.

One of effect of Globalization is increase in the global trade through reduction in trade barriers. China has leveraged its weak currency and low-cost resources to emerge as new manufacturing hub. Large US retailers like Wal-Mart outsourcers from China. There has been an out-cry of manufacturing jobs being exported to China, yet for businesses it a matter of competitive survival. Majority of them are directly outsourcing from China or setting up manufacturing plants in China. 'Made-in-China' has become a stamp for US consumer goods. Same factors of Globalization have caused IT and other services to be exported to India. On one hand this has increased consumer demand due to the low prices of products, on the other it has decreased the manufacturing activity in the US. This can be viewed as a structural imbalance in the economy – that the US consumption is no longer supporting US economic expansion, on the contrary causing widening Trade deficit. The overall economic impact of widening trade deficit and outsourcing is a weakening job market and reducing real disposable income. The sub-prime borrowers who thought they could afford the payments are unable to do so.

II. Predatory lending practices and unstable housing market

A mortgage is the largest value loan that US consumers borrow in their lifetime. Banks began to compete for this large value loans. Aggressive lending practices developed in the credit market to take a larger share of this business. More people were qualified to borrow larger amount of loans allowing them to achieve the 'American Dream' of owning a home. Innovative loan products such as - “low or no down payments”, “Interest only loans”, “Adjustable-rate mortgage ARM” contributed to rampant mortgage lending.

Majority of such products required less payment during initial years and then a drastic increase in the payments for the later years. Perception of growing economy kept the consumers confident about their income prospects and they lined up for the loans without reading too much into the fine print of such predatory offers. That created investment opportunities for short-term investors and speculators Many borrowed with low initial payments speculating that they will hold the house for a short term to make profits before the payments escalated. Affluent individuals bought 'Second homes' with a 'buy and hold' strategy. Hence, the demand and prices of the houses surged making it a self-fulfilling prophecy. Banks created more mortgages than ever. And they cared less for the consequences of loose underwriting and aggressive lending because they could eliminate the risk of holding such risky loans by creating MBS and selling to other investors.

Interest rates increase in 2005 and 2006 lead to increase in mortgage payments for Adjustable-rate loans and with passage of time principal payments on the Interest only loans were initiating, leading to significant increase in mortgage payments. This made it difficult for sub-prime borrowers to make their mortgage payments and the defaults began to rise. Banks tightened housing credit due to rising default risk and lesser customers qualified to buy a house reducing the demand further. Cost of holding real estate investment went up and in anticipation of future increases in interest rates, savvy investors who already made money by then began selling their houses. Therefore, unexpectedly the supply exceeded the demand of houses and the prices began to fall. For many who bought a house in last 2 years, the loan value exceeds the house value. So, majority of the sub-prime borrowers who are unable to afford the payment cannot even sell the house leading to more and more foreclosures.

III. The corporate greed

Underlying the decisions to lend riskier loans by the banks and the investment in riskier MBS by other investors lies the classic 'Agency problem'. Agency problem arises when interests of management does not match the interests of owners (stockholders). Executive compensation has been directly linked to the profits by means of bonuses and stock options. So, if the profits and stock price go up, the management gets a huge reward but if the profits & stock price go down, they don't have much to loose. The greed to earn more profits proliferated under this imbalanced incentive payout regime and increased the propensity of the managers to take on more risks for higher returns at the cost of shareholders’ long-term interest

Market Mechanism

Rising default caused aggressive housing finance companies like Ameriquest, New Century to go bankrupt due to large bad debts or non-performing assets (NPA). This started spreading the credit risks to other investors who were counter party to these companies. With the fall in the value of mortgage loans the values of MBS securities have also dropped. Decline in MBS value and forced 'write downs' due to defaults have caused cascading problems. Equity capital of many companies has eroded significantly forcing them to raise additional capital, sell themselves, or go bankrupt.

Financial sector stocks have declined causing decline of overall stock market. The blame game soon began, how could rating agencies rate the MBS as investment grade when there was so much inherent default risk, and so the even rating agencies have come under fire, making them more conservative in rating new issues. Bond insurers have come under pressure of demonstrating that they have adequate capital to honor the guarantees on the defaulting MBS. And it turns out that in the greed of higher fees they underestimated the default risk and over insured. After bond insurer Ambac failed to demonstrate that its capital was adequate to honor its guarantees its own rating fell below the Investment grade, meaning that the 'wrap' that it offered is no longer an investment grade. MBIA was under severe pressure too but has held up so far. Stocks of these two firms have fell 90%. Neither of them has the ability to ensure further issues nor the issuers have any trust in their 'wrapping' causing a complete breakdown in credit enhancement channel.

Conclusion

One of the biggest inventions in the US financial markets might be the creation of Mortgage-Backed Securities. The MBS market is thought to be about six times bigger than the market value of the Bombay Stock Exchange. MBS are types of securities that banks or housing finance companies create by grouping together a collection of mortgages or home loans. Securitization is the process of making and giving out securities that are based on a group of specific assets. MBS is built from a group of loans, and some of these loans might be sub-prime loans. Financial institutions made big investments in mortgage-backed securities that were supported by high-risk subprime mortgages, driven by greed. When more homeowners stopped paying their loans, fear spread and the MBS market and housing bubble burst, causing the 2008 global financial crisis. The housing bubble grew because of risky loans and complex financial products that lenders used to earn money and investors were attracted by high returns. The value of MBS fell because home prices went down and people who took out risky loans stopped paying their debts, which made everyone worried and caused a shortage of credit that put financial institutions and the global economy at risk.

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