

The us subprime problems, the 2008 international financial crisis and a possible ...

[Finance](#), [Investment](#)



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The US Subprime mortgage crisis was a banking and financial emergency situation that led to a recession not only in the US but spread to many parts of the world. The disastrous effects of a crisis in the domestic subprime market on the rest of the world beg questions about the interconnectability and interdependence of the international economy as well as the financial institutions. The international financial crisis also revealed how vulnerable the global financial system was. Not only did the subprime crisis have a direct effect on global markets and countries that held a huge number of US mortgage backed securities and were dependent on dollar funding, it also served as a trigger that indirectly affected the rest of the global market. The Subprime crisis in the US also exposed the high risk business models of banks and financial institutions around the world such as short term funding in excess, lack of transparency in balance sheets and risk aversion swing. The Subprime mortgage crisis led to a credit crunch in the financial sector and was a direct result of the financial instruments, innovations and laws that were framed around it. Foreign markets suffered a meltdown either due to direct linkages with the US markets or indirect linkages. It thus becomes

important to find out the transmission route of the crisis from the US to other parts of the world. The question is whether the international financial crisis was a result of direct or indirect contagion and how much each factor played a role. Answers to this question would help in developing frameworks and financial models that would help reduce the vulnerability of global financial institutions and markets.

The financial crisis that originated in the subprime mortgage transactions soon spread to other areas of debt such as prime mortgages, corporate junk bonds and commercial real estate. Since the mortgages were resold as securities and there were too many players in the field who had a stake in it, the crisis spread from one area to another and traversed borders quite easily. Globalization and financial liberalization of markets around the world only made the financial crisis worse as banks far away from the US were also involved in the reselling of the mortgages. A closer understanding of the Subprime mortgage crisis and its impact around the world then involves (a) a study of the monetary policies of the central banks and other financial institutions during the subprime crisis (b) a study of the causes for the subprime crisis (c) government policies (d) role of financial globalization in causing and spreading financial crises and (e) an analysis to find out if there could be a repeat of the subprime mortgage crisis in the near future.

Subprime Mortgages and Crisis

Subprime mortgages to be defined simply are housing loans given to people with low or bad credit. Subprime mortgages were a huge hit as lenders were lax about credit checks, offered attractive and adjustable payments and

interest rates and even sold loans without or negligible downpayments. Between 2005 and 2006, it has been estimated that 1.5 trillion worth of subprime mortgages were booked, this formed about 15% of housing loans and 25% of housing mortgages in the United States. By 2006, in a housing market valued at 10 trillion dollars the mortgages that were sold and distributed was valued at three trillion which was not a number that could be dismissed (Brooks and Mitchell, 2007). For long banks were the principal lenders of loans in the housing industry. But changing styles of banking meant that although most of the loans and mortgages still originated from banks, these were securitized as mortgage backed securities. Securitization meant that banks and other mortgage institutions could sell off these loans under the origination- distribution model. This also meant that banks and other mortgage providers could write off the loans from their books as they were sold off to other buyers and investors. With the MBS model, banks took a minor role and real estate developing companies and other mortgage players took on a bigger role. With the real estate companies, their primary aim was to sell all the houses that they had built and had very little interest in checking the credit ratings of the borrowers. The transfer of risk ownership meant that there was an increase in the margin of risk for all players involved. Financial innovation in the MBS sector also meant more complicated mechanisms and leverage and the beginning of collateralized debt obligations (CDOs). "CDOs are simply the bundling of a class of asset-backed securities into a special purpose vehicle and then rearranging these assets into different tranches with different credit ratings, interest rate payments, and priority of repayment (Lim, 2008)."

Lim in his paper gives a detailed account of how these CDO's are packaged and sold under a complicated system of tranches. The lowest tranche had lower interest rates but higher debt repayment priorities and different tranches had different priorities. When the housing markets fell in the US, the investors in the highest tranches took a beating as they put higher interest rates as a priority over debt repayment. Defaulting borrowers meant they lost their money in the houses that could not be sold anymore. CDO's complicated matters as it was not only local banks in the US which had bought them but also banks on other countries as well as little councils as far as Australia which wanted more returns on investment. CDO's however were like a pyramid built with cards. With one level crumbling, the whole structure collapses. Even investors at the highest tranches panicked when they suffered no actual losses and this led to a flight of capital. Funding for future CDO's also froze after the initial default of payments. Reilly and Mollenkamp explain how conduits and Structured Investment Vehicles also played a part in the crisis as well as spreading it to other sectors outside of the banks. Banks not only sold mortgages off as MBS but also formed conduits or Structured Investment Vehicles to handle the MBS and CDO's for their clients for a fee. These conduits were dependent on credit from the banks to operate. When the crunch came, banks hoarded money in anticipation of the requirement from their conduits and this was the reason for the liquidity freeze. Even with the Federal reserve and the central banks of many countries pumping money into the financial institutions, the credit crunch took a while to normalize.

The Subprime crisis in the United States started mainly as a result of greed

and the desire to make a quick profit. Banks wanted to write off their loans, real estate companies wanted to sell all the houses that they had built, investors wanted a quick return on investment and finally borrowers wanted a home with little liability. The subprime mortgage crisis was also long in the making because of the low interest rates of the federal reserve as well as the changes in the financial sector. Hedge financing of the previous decades had given place to speculative and ponzi style financing. The subprime crisis in the United states and the resultant financial crisis around the world was because the whole subprime mortgage industry resembled a ponzi scheme with different player in different levels exposed to varied risks.

Most banking crisis around the world follow a period of credit booms and an artificial price bubble for assets i. e an asset price bubble, where the prices are artificially inflated to unsustainable levels. The increase in price however is not sustained by any actual or real demand but rather by investors flocking to a particular asset like gold, oil or commodities. In the case of the 2008 Subprime mortgage crisis it was the flocking of the investors to the real estate market. Richard Herring and Susan Wachter (2003), in their paper titled “ Bubbles in Real Estate Markets” explain how the prices in real estate market acts out in a completely different way from that of other assets prices and equity. In a financial system that is dominated by big banks, there is the fast paced expansion and flooding of credit by the banks into the real estate sector. The increased credit then leads to an increase in the real estate price- with easily available credit, customers are willing to pay the inflated prices for houses. The artificial inflation of housing and real estate prices lead to an increase in the ‘ perceived’ collateral value of the assets.

Banks give out loans freely hoping to resell the house in case of a loan default. Increased prices thus mask the actual risk in giving out an indeterminate amount of loans and in reality increase the risk. Banks give out more loans with lower interest rates (at least at the beginning) to attract more customers. The banks earn a decent interest and the borrowers end up with a low cost. Herring and Wachter explain and give out many reasons as to why banks indulge in these high risk behavior. Primary of these reasons would be what they call a 'disaster myopia' or an inordinate amount of exposure to insolvency. In the US subprime crisis, the financial players expected that the housing prices would continue to rise and underwrote rules and based mortgage prices based solely on that belief. When the prices started to tank or did not go up, it came as a shock to the lenders as well as the borrowers. The banks and the other financial institutions that dealt with the mortgage were less prepared for a different situation. "Disaster myopia was especially prevalent among aggressive subprime lenders, who could make a lot of money in a very short time as long as house prices kept rising. Other subprime lenders who might not be disaster-myopic were forced to operate as if they were, to remain competitive (Guttentag 2007)."

The reason why the subprime mortgage crisis blew up into huge proportions was that the subprime mortgages were sold as subprime backed securities to investors and hence was constantly monitored by investors, rating agencies as well as the traders. High exposure meant that when news of defaults in certain locations started spilling out the value of these securities fell. This was true not only in the case of loans that were already given out but also for loans that were in the pipeline. The panic that rose in one sector

or area eventually spread to the larger financial sector. Other reasons that they give for the crisis are 'perverse incentives' -the high leverage that they get in the field, the belief that the high price would act as a comfortable insurance and herd mentality. When one bank or lender found out about the profits to be made, others too flocked to it, crowding the market and allowing free flow of credit with dubious backing. The authors also note the number of short term players who got into the fray to make a quick profit. These short term players were not the original lenders but acted as resellers of the mortgages. Other reasons involve poor data and a woefully inadequate analysis of the market and the credit situation. The loans were mostly bad loans as they were given out indiscriminately without really checking the credit background of the borrowers. There was also not many studies done to protect the financial institutions in the worst case scenario. The subprime crisis in the US largely began because of the 'ninja loans' which stood for no income, no job and no assets (Dodd & Mills 2008). These loans were risky as repayments were based on the belief that the housing prices would go on increasing (the housing prices in the US had not gone down since the 1930's). Increasing prices would help the customers refinance their loans and in case of default, the banks could always recoup their losses by selling of these houses. The loans were also marketed using initial teaser rates where the customer did not have to pay the interest for a few months or had to pay only a nominal rate. It was only when the teaser period ended and the customer had to pay the real rates that the problem started. Since these were high risk loans to begin with, a lot of defaults happened and the market was plunged into a crisis. People could not afford

to pay their interests and banks could not sell the repossessed houses. To make matters worse, these loans were also repackaged and sold again. In short, houses and loans were sold to people with very little money or no money at all.

Global financial crises such as the Asian and Russian financial crisis of 1997-98 and the Tequila Crisis of 1994-95 with the onset of neoliberalism and increasing globalization led to an emergence of literature on 'financial contagion'. The literature focuses on two broad categories of contagion- direct and indirect (Claessens, Dornbusch, and Park, 2001; Karolyi, 2003). A direct contagion is when economies of other countries suffer as a result of the bankruptcy of one country either due to trade relations or investments or common shocks such as the sudden increase or decrease in oil and raw material prices. A direct contagion brings out the real and tangible financial linkages between countries and the financial institutions. Indirect contagion on the other hand happens when there is no direct and real financial linkage but the damage is still done due to herd mentality or a panicky behavior in the stock markets that has a domino effect. The wake up call hypothesis suggests that investors fleeing from a market could possibly head to similar markets causing further losses (Goldstein 1998). Irrational panic results in panic moving of funds even where there is no serious cause for concern. In the case of the US subprime crisis, there were both direct and indirect contagion effects-spreading the crisis worldwide.

One of the reasons for the spread of the US subprime crisis globally was the fact that many countries had heavily invested US stocks. These investments were not only in stable stocks such as the US treasury but was spread over

all kinds of assets. Mostly there was heavy foreign investment in the corporate bond debt and since most of the debt included asset backed securities, the subprime crisis hit not only the local financial institutions but also anyone who had invested in it. When the housing prices fell and interest rates shot up, customers could no longer afford refinance their loans and could not pay the monthly installments which had shot up. When they defaulted, the financial institutions suffered huge losses which hurt the investors as well. Another reason for the spread of the crisis was the repackaging of the Asset Backed Securities. When the institutions bought the ABS from US banks and other financial institutions, they repackaged them for further sale to US citizens. These alone ran to billions of dollars. Such direct exposure to bad loans and repackaged ABS meant that as the crisis worsened in the US, the investors too would be badly affected. The need for dollar funding by foreign banks was also a reason for the spread of the crisis beyond the US borders. In order to finance their ABS, foreign banks increased their cross border dollar liabilities and when there was a credit crunch, these banks found it extremely difficult to manage their liabilities and had a very small scope to improve funding. While banks with US subsidiaries could manage the dollar inflow, foreign banks that were more regional could not do so and had to shell out higher interest rates to get more funding thereby placing pressure on their assets.

The crisis also spread to foreign markets and banks that did not hold the subprime stocks-original or repackaged. Lack of transparency in the repackaging structure of the bonds spread doubts about the actual losses of the players and the extent of the damage. This spread wide spread concern

around the world as investors were frantically taking out their money and moving it into safer havens. This led to a high demand for liquidity and banks that ran of short term funding could not meet with the demands. Although Banque Paribas was the first and one of the very few to openly admit it, many banks faced a liquidity crisis as investors wanted to move their money. This set up a contagious bank run scenario around the world. The onset of the crisis also sparked heavy selling which resulted in the prices of the stocks going down. More than everything the crisis revealed the similar high risk practices of banks and financial institutions around the world. The spread of the financial crisis was thus partly due to the direct involvement of foreign players in the US subprime sector and also due to the interconnectedness and similarity of financial institutions and banks around the world. Direct and indirect contagion played equal parts in spreading the US subprime mortgage crisis around the world.

Adrian and Shin in their 2009 report, ' Liquidity and Leverage' explain how in the financial system the balance sheets are marked to market. Changes in asset prices are then seen as changes in the net worth prompting intermediaries in the transaction to modify their balance sheets as well. This is what happened in the subprime mortgage crisis. When housing prices fell in the United States, the principal lending agents took a beating in the value of their loans. The investors who had bought these mortgage backed securities also took a fall as a result of this starting a domino effect in financial markets around the world. The policies adopted by the Federal Reserve also play an important role in the subprime mortgage crisis. The federal Reserve and other central banks primarily in the US and other

countries adopted a policy of low interest rates soon after the technology bubble burst. Around the same time there was a voracious appetite that was exhibited by the central banks in the Asian region for debt securities. This contributed to lax credit in the market. Availability of easy credit and low interest rates combined to shoot up the prices of houses in the United States and other countries such as Spain, Ireland and the United Kingdom. These inflated pricing could not sustain for long and by the end of 2006, the prices of the houses in the United States as well as the other countries started to fall. Mayer, Pence and Sherlund (2009) offer detailed accounts of the housing markets in these countries which precipitated the crisis. A fall in housing and real estate prices brings down the value of the securities and affects everyone who is remotely connected to it. When the housing prices fell and the number of defaulters rose, the interbank markets faced a massive credit crunch. This was more evident for terms that involved a little than few days. In such a scenario, the central banks in those countries were forced to inject huge liquidity into the market.

As the prices remained stagnant or started falling drastically the situation in the collateralized markets also changed to a large degree. It became increasingly difficult for anyone to borrow against collaterals of low quality unlike a few months or years ago. With the money markets in the United States and other countries failing, the Federal Reserve and other central banks came up with many measures to improve the present strained conditions. The market condition in the US became worse in the late 2007 when the subprime security prices went on a free fall and associated financial institutions started feeling the strain. The Federal Reserve through

an arranged merger in early 2008 bailed out Bear Stern. J. P. Morgan which agreed to the merger with Bear Stern has to be convinced to enter the deal with promises of guarantees by the Federal reserve as well as the use of public funds. Throughout 2007, the common scenario was such that it was only the financial institutions and the banks which showed the strain and this did not really reflect or trickle down to the real economy. What was seen as a situation that could be contained by the Federal Reserve and central banks went out of control with the collapse of Lehman Brothers in 2008. This collapse forced the entire market to take notice of the developing crisis and also pushed them to reevaluate their risks. When Lehman went down, it also led to the collapse or substantial losses in financial institutions and parties associated with it. But the most disruptive effect of the collapse was the withdrawal of the investors from the markets. Risk evaluation which was previously overlooked for short term gains suddenly came under heavy scrutiny and investors pulled out leading to the drying up of liquidity. This drying up of liquidity affected the economy as a whole and in 2008 and early 2009, the economic activity in the United States and other countries came down.

With no money being put in the markets and businesses forced to put on hold new projects, the unemployment rate shot up. Banking crisis affected the market as liquidity dries up and sectors that are largely dependent on external infusion of money go down or shut operations. This leads to a low GDP. Also countries where the economies largely rely on foreign funds get affected as there is a stop in the money transmission. Many market observers commented that this crisis was the worst since the Great Depression.

The policies of the US government were also largely to blame for the subprime mortgage and housing crisis in the country. The Community Reinvestment Act of 1977 and affordable housing mission enabled through Freddie Mac and Fannie Mae especially caused the crisis. Although these were instituted to ensure that the banks practiced safe practices, the original mission was distorted in the later years. When it was found that the banks were partial to certain racial and income groups when it came to lending, the government mandated that the banks show more interest in the Lower income groups. Hence the banks were forced in a way to come up with new and innovative methods of lending and financing homes. The regulatory bodies that were entrusted with financial regulation were also quite lax. The federal government sponsored Freddie Mac and Fannie Mae also bought a lot of MBS' to show that they had fulfilled the government requirement of affordable housing. Government policies also ensured that underwriting standards were low and that homeowners could walk away from their mortgages without a scratch if their mortgages were higher than the value of their homes. This led to a large number of defaulters. Also the federal government bailed out these agencies when the subprime mortgage crisis blew out of proportion. Other financial institutions and banks were also bailed out by the federal government with public funds. Many argue that the Subprime crisis was not what caused the global financial crisis of 2008 but was rather something that triggered it. The problem according to them is not one specific incident but a combination of different reasons such as the global imbalance in current account, wealth and income imbalance and inequalities in the financial sector. Globalization and liberalization of the

markets have also spread the risks that the financial institutions are exposed to.

Financial globalization and financial integration are two main reasons that the subprime mortgage crisis in 2008 spread beyond the US borders.

Financial globalization refers to the increase or the surge in capital flow between developed countries or between the industrialized nations and the developing countries. It also refers to the cross border linkages developed between the different countries due to their financial transactions. Financial Globalization is not a new phenomenon but its impacts have increased and have been felt around the world in recent years owing to the advancement in technology and changes in banking practices that have made banks and other financial institutions vulnerable to shocks and crisis. Financial integration on the other hand is slightly different from financial globalization and refers to the the linkages of a country's banking and financial institutions to the world capital market. Financial flows have increased not only between the developed nations but also between the developed and the developing nations. The flow of funds into the developing nations have been due to two opposite forces and reasons. The first reason has been a result of IMF mandated liberalization process where the countries had to open up their economies as well as their stock markets. Privatization also contributes a lot to the inflow of foreign capital into the domestic markets. In such a scenario, many countries are dependent on the foreign direct investment for the running of their economies. The boom and bust cycle and the macroeconomic adjustments in the developed countries also affect the flow of funds into the developing countries. In such a scenario, many countries

are linked to the international financial market either willingly or because they have very little choice. A lot of countries depend on foreign direct investments to boost up their economy and when there is a financial crisis in the country that invests heavily it affects the economy of these countries thus triggering other related crises. In the case of the US subprime mortgage crisis, financial globalization and financial integration played important roles in precipitating the crisis around the world. To begin with, the European Banks played an important role in increasing the asset-based securities market in the US. Large scale buying of these securities by foreign banks not only accelerated the growth and caused an artificial inflation of housing prices but they also led to the eventual panic in the financial markets. In addition to buying the asset based securities in the country, the European banks also participated and got in dollar funding within the US market. This not only exposed them to any problems in the US market but also ensured that they would be directly affected in case of a credit flight or a credit crunch. And that is exactly what happened during the subprime crisis. The european banks lost a lot of money having invested heavily in the subprime mortgages. many European banks had to be bailed out by their respective countries.

The growth in size of the banks in different countries and the sheer scale of their business operations around the world has made it difficult for the financial regulators in a country to effectively manage and police the risk factors associated with international exposure. Financial integration has also resulted in the increased ability of the local banks in a country to get hold of funds in the international market. This funding in many instances had led to

the credit boom in a country. The financial linkages between the countries and the increased presence of foreign investors is what led to the increase in the securitization of mortgages in the United States. The growth of the Asset based securities and the Mortgage Based security industry would have never been this huge without the active participation of foreign investors, especially the European banks. Financial globalization also meant that there was widespread credit growth and also current account imbalances in various countries. These current account imbalances played a central role in how much the financial crisis spread to different countries and how it affected each of it individually. Financial globalization however not only spread the financial crisis around the world but it also helped some of the economies of the developing countries to insulate themselves against the crisis. Ever since the Asian crisis of the late nineties the South East Asian countries have exercised caution when it came to exposure of their financial markets to the global markets and have gone against the IMF dictates by increasing their savings and investing heavily within their borders. This cautious approach not only saved their economies but the infusion of funds from these countries also saved the developed nations from falling into a spiralling financial setback. it could be said that these economies helped sustain the economies of the developed nations during the crisis.

Conclusion

When it lasted, the mortgage industry was good to many people across different sectors. There were the millions made by the traders, wall street bankers and mortgage bankers. People could not own homes earlier because

of their low credit rating could not afford to buy a house with low deposits and lower interest rates. The boom in the housing prices saw an increase in wealth of the homeowners who could now borrow more against their assets. The Price rise was such that the median house price to the median household income in the country shot up to a ratio of five time which was not sustainable. Eventually greed and bad short term financial planning caught up leading to the financial crisis. Tiding over the financial crisis or the subprime mortgage crisis does not mean that a repeat of the same would not happen in the future. The US rode over the crisis mainly because of the federal government bailouts and not because any structural changes were made to the financial system of the country. The basic income versus spending inequality has not changed and this applies to both the individual and the country as a whole. Personal debt of the individual as well as the international debt of the country has increased. Other countries too share in the burden as most of their foreign currency reserves are in the US bonds. Until the government makes some serious changes in the credit system as well as regulatory changes in the financial sector, the chances of another subprime mortgage crisis remain high. Transparency in financial institutions are also lacking leading to more trouble in the future. Unless banks and countries take adequate prevention mechanisms to protect their markets against a crisis in a far off country, a repeat of the 2008 crisis is very much on the horizon.

A likely repeat of the mortgage crisis is possible in the near future as the financial crisis of eight years ago was not solved but was deferred for the time being. To begin with people who had taken second mortgages on their

homes during the price boom will now have to start paying the principal and not just the interest. This will shoot up their monthly payments and could lead to many defaults and possible foreclosures in many instances. The resetting of the home equity and changes in the payment will also be focused on areas where the boom was at its peak. It has to be noted that it was also these areas that suffered the most during the crisis. There was not only a slowing of economy in these areas but there was also large scale unemployment. An increase in the payments and debt restructuring would only force these areas to feel the pinch again and fall into further economic depression. The Home Affordable Modification program of the government only provided temporary relief to the homeowners with huge mortgages. The government had expected the economy to pick up and grow this time. Although the economy has bounced back it is not anywhere as close to what the government had expected. This could mean that the homeowners could face difficult times ahead and would be faced with increased payments even before they are completely prepared for it. Foreclosures not only affect the prices of the homes but also affect the spending habits of the people and have other economic effects. Write downs could have worked as a better option to prevent the crisis from recurring but the only action that was taken was the reduction of interest rates. Income levels have not increased with the adjustment of interest rates and this will bring in a repeat of the crisis although not at the scale of the previous one. Unless the government and the financial institutions come up with a permanent plan and financial restructuring strategy to prevent artificial increase in prices or inflated prices, financial crises like the 2008 crisis will keep repeating themselves.

Home prices and Subprime Delinquencies

Source: Seekingalpha. com

As the above figure shows, the subprime credit is inverse to the prices of the houses and this led to the subprime mortgage crisis and the bankruptcy of many financial institutions.

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