

# The Subprime Crisis: A Systemic Failure in Financial Markets

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**Abstract.** This paper delves into an analysis of the 2008 Financial Crisis, exploring its relevance and influence on the current complex global macroeconomic landscape, including the COVID-19 economy and the Russia-Ukraine conflict. Against the backdrop of frequent uncertainty and fluctuations in the global economy, the recent recognition of the 2022 Economic Nobel Prize emphasizes the importance of studying financial crises. The article begins by examining three key factors that contributed to the 2008 Financial Crisis: the Federal Reserve's monetary policy, subprime mortgages, and credit default swaps. It then explores the far-reaching consequences of the crisis, highlighting specific examples to illustrate its impact. Furthermore, the paper explores the changes implemented in response to the crisis, focusing on two dimensions: the Dodd-Frank Act and Basel III. It discusses the implementation and effects of these regulatory measures in the post-crisis era. Lastly, the paper underscores the significance of the 2008 Financial Crisis and its application to contemporary economic challenges amidst a complex external environment. By drawing connections between past and present crises, this research aims to shed light on potential solutions and inform policy decisions in the face of ongoing economic challenges.

**Keywords:** Financial Crisis, Subprime Mortgages, Regulatory Measures.

## 1. Introduction

In the past few years, the world has been in a financial crisis, such as Covid-19, the 2022 Nobel Prize in Economic Sciences, and the SVB bankruptcy at end of March 2023. The reason that caused SVB's bankruptcy, was the first was the economy stalls, the second was the Fed's aggressive monetary policy squeezes banks from the asset side to the liability side, and the third was the failure of the U.S. government to regulate finance. The subprime mortgage crisis that erupted in the US in 2008 was what started the world's financial crisis, the root cause is that the US financial industry has created an excess of financial derivatives that cannot be cashed out based on greed. The third quarter of 2007 marked the end of the notable period in which prime fixed-rate mortgages performed well, outperforming their 10-year average. A worrying trend then started to develop as delinquency rates increased, hitting 1.3% in the second quarter of 2008 while the national delinquency rate was at 4.5%. It's critical to note that this increase took place despite the fact that banks started to tighten credit requirements for even borrowers with good credit in the fourth quarter of 2006 [1]. The reason why that caused have the 2022 Nobel Prize in Economic Sciences in recognition of their outstanding contributions to the field of banking and financial crisis research. Liquidation of the "toxic element" in the financial system, emulating "Lehman Brothers" in the US as of September 15, 2008, through an official voluntary insolvency procedure that the bank's management announced before the relevant regulatory agency. The regulation claims that large banks, savings and loans, and brokerage firms were primarily impacted and that this liquidation had a "cascading" effect on numerous other financial institutions [2].

The US real estate market displayed a deformed boom from 2003 to 2006, a large number of financial derivatives were produced, and the financial bubble grew. In 2007, the subprime mortgage crisis erupted in the US, shattering the capital chain and causing banks to keep failing while international debt increased. The effect of the world is the world economic pattern has been drastically adjusted, a new round of competition has arrived, countries have stepped up the adjustment of economic structure, the international circulation order of capital has been cleaned up, financial speculation has been suppressed, and the neoliberal economic model (Washington Consensus) has been abandoned. Even massive infusions of capital to address the issue have thus far failed to stem

the tide of the financial crisis of 2008, which is of such gigantic proportions. The Fed has allocated over \$1.3 trillion towards risky assets as part of its effort to save institutions and calm markets, in addition to the well-publicized \$700 billion granted by Congress. These investments consist of loans made to institutions that are about to go bankrupt as well as CDOs that are similar to those that are backed by subprime mortgages, which are seeing frighteningly high default rates [3].

## 2. Causes

The financial crisis's root causes include The Fed's monetary policy, Subprime Mortgages, and Credit Default Swaps. This article will explain in more detail in the next sections.

### 2.1. The Fed's Monetary Policy

The core of the Fed's monetary policy is to regulate the country's macroeconomic development through currency control, so as to serve the country's economic policy goals, which is conducive to the healthy operation of the overall US economy and reduces the economic risks of the United States. However, due to the early lack of clarity about monetary policy, improper use of monetary policy led to serious economic problems in the United States. First, Credit score: A credit score of 750 or more is best. So if people don't have a credit score, that means their creditworthiness is not high, and others can't believe them, thus they don't get the credit from others. Second, the number of loan years: 30 years, 15 years, and 5 years are common. Usually the lower the number of years, the better the interest rate, because the longer the loan years, the higher the risk of the lending bank. Third, whether the interest rate is fixed or floating: Usually the floating interest rate is better than the fixed interest rate, and the risk of fixed-rate loans is in the bank. Forth, Whether it is a large loan (more than 417,000 yuan, or even more than 625,000 yuan). Fifth, Self-occupancy, investment or commercial housing: The interest rate of self-occupation is better than that of investment or commercial housing. Sixth, buy a new house or re-loan: The interest rate of a new home purchase is better than a new loan. Independent houses or condominiums: Detached houses are generally better than condominiums because condominium loans are relatively cumbersome. Eighth, Proportion of down payment: The down payment is better than the low down payment. Ninth, Is there a fee for buying points: Buying points can also reduce the interest rate? And that's caused the Low-interest credit and loose lending standards in the United States, and then it's caused the generation of subprime loans.

### 2.2. Subprime Mortgages

The term "subprime mortgage" describes loans given by some lending organizations to customers with bad credit and little income, and the principal and interest of the loan can no longer be fully repaid through normal business income, and the arrears need to be recovered through other means. The risks of subprime mortgages have two risks. The first risk is credit risk, which means where the borrower may be unable to pay back the loan. The second is market risk, that is, investors may not get the expected return when the loan matures. And then the credit default swap appears. The early 1990s saw a substantial increase in the popularity of policies aimed at increasing the number of mortgages available for homes for those with low incomes after years of unsuccessful pursuit. The Federal Housing Safety and Soundness Act passed in 1992, was a step toward expressly supporting homeownership for low-income and minority populations. Its goals included improving agency regulation and operationalizing new low-income lending programs. In addition, the organizations were urged to set targets for affordable housing and track their success with HUD. As will be explored more below, the financial industry's lobbying appears to have been significant in influencing lawmakers to favor lending to the subprime market. Igan and Mishra investigate the relationship between financial regulation and the financial industry's political sway the years before the global financial collapse. They find convincing evidence that the financial industry's lobbying expenditures and its network connections with legislators were positively correlated with the likelihood that legislators would shift their stances in favor of deregulation [4].

### 2.3. Credit Default Swaps

Credit default swap is a kind of insurance for loans, when the bank lends money to the customer, if people are worried that the other party cannot pay the money, they can find an insurance company to buy a credit default swap, when the loan becomes a bad debt, the insurance company will lose money to the bank. One of the key factors that contributed to the financial crisis of 2008 was credit default swaps. Many attribute the current financial crisis to mortgage defaults, yet this enormous tragedy is but a part of and a symptom of the larger issue. The root of the issue is the fact that credit default swaps are not regulated and are commonly negotiated over the phone without enough paperwork. These swaps, which the SEC estimates to have a principal amount of \$55 trillion and may even exceed \$60 trillion (more than four times the value of the publicly traded corporate and mortgage U.S. debt they are intended to protect), are the root of all subsequent crises [3]. Investors found it challenging to evaluate and contest the reliability of insurers' ratings due to the lack of controls in the CDS market, which resulted in poor disclosure standards [3].

CDSs can be thought of as relatively simple instruments at their heart. In exchange for guaranteeing the obligations of a particular entity, like a specified corporation, against default during a predetermined timeframe, like five years, they entail one party paying another party on a regular basis. These products, which were cleverly named to get around the rules governing insurance contracts, basically serve as debt insurance plans. Because Congress exempted them from state gaming regulations in 2000, this uncontrolled industry had an exponential rise from \$900 billion at the beginning of the new century to over \$50 trillion in 2008 [3]. The fundamental problem stems from the fact that credit default swaps are not regulated, which is the cause of all prior crises. The SEC calculates that their principal amount is nearly four times the value of the publicly listed corporate and mortgage U.S. debt that they are meant to protect, coming in at \$55 trillion, with a possible maximum of \$60 trillion. Surprisingly, these trades are regularly agreed upon over the phone without any backing [3]. This paper will introduce the lack of regulation of CDS. That means since derivatives such as CDS are mainly traded over the counter, the trading process is opaque and market data is difficult to obtain, and regulators cannot regulate these derivatives transactions.

### 3. Consequence

The bank of Lehman Brothers bank went bankrupt on September 15, 2008, which signaled the beginning of the largest financial crisis and the most severe economic downturn since the 1930s [5]. Lehman Brothers sought possible partners or purchasers while also asking for government assistance to facilitate a deal in an effort to rescue its perilous predicament. The Treasury Department, on the other hand, refuses to become involved due to worries about "moral hazard." They were worried that preserving Lehman would serve as a model for future reckless activity by other banks, who may then turn to the government for support as a safety net [6]. While the unemployment rate decreased to 3.9 percent by 2018 when the economy began to show signs of recovery in 2009 thanks to the gradual addition of jobs, many of the newly generated jobs were characterized by poorer pay and less job security than those that were lost [7].

Below this paper will explain the stock market's reaction to the financial crisis<sup>1</sup>. The listed corporations that strongly rely on exports and the financial institutions that extensively invest abroad are directly impacted by the global financial crisis. The listed corporations that strongly rely on exports and the financial institutions that extensively invest abroad are directly impacted by the global financial crisis. Despite the fact that banking sector was immediately impacted by the global crisis, China's tight financial controls meant that losses were minimal and that the wading was not particularly deep. Although China is anticipated to continue lower interest rates over the medium and long term, more money will momentarily return to the short term due to shifts in consumer psychological expectations, and the subsequent course of events will rely on how banks react. Due to the overheating of fixed asset investments, inflation, and the strengthening of the Chinese currency since the start of the industry's winter, industrial real estate has produced a lot of bubbles in recent

years. As steel prices continued to fall and production capacity shrunk, the steel sector started to feel the effects of the crisis. However, in the case of China's steel industry, the country will inevitably have to give more public goods and run the risk of returning to inflation as it hopes to increase domestic demand. The long-term effects of energy-related businesses like coal and oil suggest that energy costs will keep dropping (due to decreased demand) and that future threats are of medium intensity. The forecast for luxury items and precious metals like gold over the next few years is not promising. Because gold's price has historically exceeded its capacity to store value, winter is on the way for both gold and the luxury goods sector.

## 4. Changes

### 4.1. Dodd-Frank Act

The Financial Oversight Council and the Orderly Liquidation Authority are tasked by the Dodd-Frank Act's provisions with maintaining the financial stability of major financial institutions. These institutions, which are considered "too big to fail," could have a negative impact on the American economy. The Orderly Liquidation Fund, which acts as a vehicle for facilitating the liquidation or reorganization of such organizations, is a mechanism created by the law to solve this issue. Its goal is to stop government money from being used to subsidize these entities. Banks that are thought to represent a systemic danger may be shut down by the Financial Oversight Council. For certain banks, it may also impose stricter reserve requirements. Similar to this, the newly created Federal Insurance Office is in charge of locating and supervising insurance providers that are likewise deemed to be "too big to fail" [8]. The Dodd-Frank Act makes an effort to cover a lot of ground, but because it takes an institution-by-institution approach rather than one that is based on universally applicable principles for financial firms, it has some significant gaps [9].

### 4.2. Basel III

Basel III is a global regulatory agreement that required banks to maintain specified leverage ratios and carry specific levels of reserve capital on hand. It brought about a number of changes aimed at reducing risk in the global banking industry. It started in 2009 and is still in use as of 2022 [10]. The capital adequacy ratio will be introduced in this essay. It measures the capitalization to risk-weighted asset ratio of a bank. The CAR is a metric that assesses how much capital is readily available in relation to a bank's risk-weighted credit exposures [11]. It represents the ratio of a bank's own capital to its weighted risk assets and measures the bank's capacity to meet its financial obligations. In order to handle a large number of debt assets efficiently and achieve a high return on investment, banks must follow the "leverage principle." However, this technique has greatly increased systemic risk in the banking industry. The Basel Committee on Banking Supervision adopted an 8% capital adequacy ratio rule at its 1988 meeting in Basel, Switzerland. In the late 1990s, when China was reforming its financial sector, it also implemented this risk management strategy. These measures attempted to lessen civil unrest brought on by financial industry upheaval and increase the financial sector's resilience against various hazards. Basel III is the third iteration of a series of global banking reforms known as the Basel Accords. Basel III mandates boosting bank capital adequacy ratios, paying attention to bank credit default risk, raising systemic importance supervision, and finally enhancing bank liquidity management and lower liquidity risks. What impact has the epidemic had on the banking sector? Business scale is the first, followed by asset quality in second place, profitability in third place, liquidity in fourth place, and capital adequacy level in last place. The COVID-19 crisis is a collective term for a number of crises brought on by COVID-19, including those related to medicine, health, public safety, and the economy.

## 5. Conclusion

This paper extends systemic risk. The special close link between banks comes first. There are interbank loans and deposits, for instance. Interbank deposits are mostly produced as a result of bank credit or the formation of appropriate accounts to handle payment operations. Through interbank lending facilities, there is a significant amount of debt between financial organizations in China. Second, imitative runs and contagion are two ways that financial systemic concerns might develop. As an illustration, when one bank fails, depositors at other banks may fear that their bank will follow suit and withdraw their funds, causing other banks to experience a liquidity crisis and ultimately fail. Third, there is generally high leverage in financial enterprises. Banks and non-bank financial institutions are typically highly leveraged in comparison to the majority of non-financial enterprises, which means that the majority of their assets come from debt rather than equity. Last but not least, dealing in financial derivatives may expose one to systemic risks in the financial system. Consider credit default swaps, which were significant in the US financial crisis. Both financial institutions A and B will fail if they are unable to liquidate a derivative position, they have with one another. Throughout history, the mid-forties to fifties of the last century should be the most difficult and tragic period in Japanese history. Due to the numerous crimes committed in World War II, Japan, as a defeated country, had to pay reparations to other countries, and together with Nagasaki and Hiroshima, which were destroyed by atomic bombs, and Tokyo, which was set on fire by the US military, Japan's economy suffered an unimaginable fatal blow, the national economy completely collapsed, and inflation was very serious. In fact, Japan was already in a desperate situation, and if the situation did not improve, the people would only face death.

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