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2008 Financial Crisis: Analysis and Guidance

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Abstract: The 2008 financial crisis in the United States severely impacted the global economy. Amid an escalating crisis, the US government implemented a series of bailout policies, which stabilized the domestic market and contributed to global economic recovery. This paper aims to investigate the reasons for the crisis and analyze the advantages and disadvantages of the policies implemented to derive recommendations for preventing and managing financial risks. Studies have indicated that effective government intervention through regulatory policies can prevent bank failures and the deterioration of financial crises. This provides valuable insight for dealing with potential financial risks posed by the Ukraine crisis and the COVID-19 pandemic. The findings of this research highlight the importance of implementing effective regulatory measures to safeguard the financial sector's stability.

Keywords: Financial Crisis, Subprime Mortgage, Economic Recovery, Basel III

1. Introduction

The financial crisis in 2008, also known as the Subprime Crisis, was a catastrophic event in the global financial system that started in the United States [1]. The bursting of the housing bubble primarily triggered the crisis, the explosion of subprime mortgages, and the subsequent collapse of the mortgage-backed securities (MBS) market contributed to the crisis [2]. Its far-reaching consequences have left an indelible mark on the global economy and have served as a cautionary tale for future policy-making.

Early 2000s, when U.S. government policies intended to increase homeownership, the housing market continued to soar, and more and more people were enticed to borrow beyond their means, resulting in inflated housing prices. However, in 2007, interest rates began to rise, and borrowers could not keep up with their mortgage payments. Consequently, the MBS market collapsed, leading to significant losses for financial institutions and investors globally. In 2008, Lehman Brothers, one of the largest investment banks in the United States, filed for bankruptcy. This event sparked panic in the financial markets, causing bank failures and government interventions. Major global financial institutions faced insolvency or were acquired at significantly reduced valuations. Stock markets plummeted, credit markets froze, and layoffs hit various sectors, leading to a deep recession.

The study of the financial crisis has gained immense significance recently, especially amid the complex economic situations caused by the COVID-19 pandemic and the ongoing Ukraine conflict [3-5]. The groundbreaking research on banking and financial crises conducted by Nobel laureates Douglas W. Diamond, Ben S. Bernanke, and Philip H. Dybvig in 2022 has paved the way for a deeper exploration of these critical issues [6]. They have elucidated the mechanisms through which a crisis

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can unfold and spread within the financial system by analyzing the interplay of liquidity, risks, and depositor behavior.

By examining this crisis as a case study, it can gain crucial insights into the vulnerabilities within the financial system, the failure of regulatory frameworks, and the ripple effects on various sectors of the economy. Additionally, it can extract valuable lessons on crisis management and the development of effective policy responses to mitigate the impact of such crises in the future. Given the unprecedented challenges posed by the current combination of the COVID-19 pandemic and the Ukraine conflict, the research of the 2008 Financial Crisis holds even greater relevance. Delving deeper into their findings and applying them to the contemporary economic context, can enhance understanding of the potential risks, vulnerabilities, and necessary measures to stabilize and strengthen the financial systems.

2. Cause

The Financial Crisis in the United States was primarily caused by three factors: The Fed's loose monetary policy, the proliferation of subprime mortgages, and the widespread use of Credit Default Swaps (CDS) [7]. The Fed's low interest rates and accommodative monetary policy encouraged risky lending practices, including the issuance of subprime mortgages to borrowers with a high likelihood of default. The securitization and trading of these subprime mortgages, facilitated by CDS, further exacerbated the crisis when the underlying assets began to default.

2.1. The Fed's Monetary Policy

Government policies aimed at stimulating the economy led to inflated housing prices, resulting in a housing market bubble. Borrowing and investment in the real estate market have been encouraged by the Federal Reserve's low interest rate policy, which drove up demand and prices. This created a perception that housing prices would continue to rise indefinitely, leading to excessive borrowing and speculative investment in the real estate sector.

During that time, the availability of low-interest credit and lax lending standards in the United States further fueled the subprime crisis. The Federal Reserve's monetary policy, characterized by low interest rates, made borrowing more affordable, attracting borrowers with lower creditworthiness. Financial institutions relaxed lending standards to accommodate the increasing demand for mortgages, leading to a surge in subprime mortgage lending. These loans were granted to borrowers with poor credit histories and limited income, making them high-risk in nature.

The combination of government policies and easy credit conditions created an environment facilitating subprime mortgage production [8]. Financial institutions, driven by the desire for higher profits, began originating and securitizing subprime mortgages to meet the demand for mortgage-backed securities in the market. This further increased the availability of subprime mortgage products, fueling the unsustainable expansion of subprime lending and contributing to the eventual collapse of the housing market.

2.2. Subprime Mortgage

Subprime Mortgage is one mortgage loan extended to borrowers with a lower credit rating or a higher risk of default [9]. These borrowers usually need to meet the traditional mortgage loan criteria for various reasons such as poor credit history, low income, or limited financial resources. Subprime mortgages often have higher interest rates and less favorable terms than prime mortgages.

The risks associated with subprime mortgages played a significant role in the 2008 financial crisis. Subprime borrowers are considered high-risk borrowers, so the default rates on subprime mortgages significantly increased during the crisis. This led to a decline in the value of mortgage-backed securities held by financial institutions and a subsequent loss of confidence in the financial market. As a result, the crisis spread to other sectors of the economy, leading to a global recession. The risks of subprime mortgages were exacerbated by the practice of securitization, where these mortgages were bundled together and sold as financial products. This made it difficult to assess the quality of the underlying assets properly.

The emergence of subprime mortgages also contributed to the development of CDS. As concerns grew over the increasing default rates of subprime mortgages, investors sought ways to mitigate their exposure to potential losses. CDS provided a mechanism for transferring the risk of default to other parties. However, the opacity and complexity of these instruments, combined with the high demand for CDS protection, created a market that needed to be more robust to regulate or effectively evaluate. When defaults on subprime mortgages rose sharply, the CDS market faced significant challenges, leading to a further deterioration of the financial system.

2.3. CDS

CDS were financial instruments used to transfer credit risk from one to another party at the time of the financial crisis in 2008, and it allowed investors to speculate on the likelihood of a borrower defaulting on their debt. The CDS seller would obtain regular premium payments from the buyer, and the seller would, in turn, agree to compensate the buyer in case of a default by the borrower. This meant that if the borrower defaulted, the buyer would receive a payout equal to the value of the loan or bond. The idea behind CDS was to enable investors to hedge their credit risk exposure and minimize potential losses [10].

One of the major issues surrounding CDS during this time was the lack of regulation. The CDS market operated largely outside the purview of traditional financial regulators. Unlike other financial instruments, CDS were not subject to the same level of scrutiny, transparency, or capital requirements. This lack of oversight allowed the market to grow rapidly without proper risk management or control mechanisms. As a result, CDS were often traded without appropriate collateral, leading to significant counterparty risk.

In conclusion, CDS were financial instruments that allowed investors to transfer credit risk. They played a significant role in the build-up to the 2008 financial crisis, primarily due to their widespread adoption and lack of regulation. The rapid growth and complexity of the CDS market contributed to the overall instability of the financial system.

3. Consequences

The 2008 financial crisis, also known as the subprime mortgage crisis or the global financial meltdown, had severe consequences across various aspects of the global economy.

Banks breakdown: Such as Washington Mutual, Bear Stearns, and Lehman Brothers, the crisis resulted in the collapse and bankruptcy of several important financial institutions. In the financial system, the breakdown of these banks led to a loss of confidence and trust both domestically and internationally.

Government bailout: Considering the safety of the financial system, to prevent a complete collapse, governments around the world implemented massive bailout packages. These involved injecting enormous amounts of capital into troubled financial institutions, such as banks, which can stabilize the economy. The bailout measures aimed at restoring confidence but also brought about significant public debt burdens.

High unemployment: The financial crisis caused a global recession, resulting in a sharp increase in unemployment rates. As businesses faced financial instability, they laid off workers to cut costs. Many industries, including construction, manufacturing, and financial services, were severely

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impacted. For example, the average unemployment rate in the Eurozone reached its peak of 12.2% in 2013 [11].

Foreign investment: The crisis had a major impact on foreign investment due to the uncertainty and risk associated with the financial markets. Foreign direct investment (FDI) declined significantly as companies became reluctant to invest in a volatile economic environment. Emerging economies especially experienced a reduction in FDI, as investors shifted their focus towards more stable regions.

Housing market collapse: The crisis originated in the US housing market, where risky loans and dubious lending practices led to a bubble that burst. As a result, home values plummeted, and many homeowners found themselves facing foreclosure.

Stock market crash: Stock markets worldwide experienced a significant decline. Almost half of the value fell in the Standard & Poor's 500 Index and the Dow Jones Industrial Average, eroding both individual and institutional wealth [12].

Economic contraction: The crisis led to a contraction in economic growth globally. Countries experienced a decline in GDP growth, decreased consumer spending, and reduced business investment, leading to a slowdown in economic activities.

Austerity measures: Such as spending cuts and tax increases, many austerity measures implemented by governments to tackle the economic downturn and rising public debt. These measures aimed to reduce budget deficits but also caused social unrest and economic hardships for many individuals and businesses.

In summary, the 2008 financial crisis had far-reaching consequences. It led to the breakdown of banks, government bailouts, high unemployment rates, a decline in foreign investment, a housing market collapse, a stock market crash, economic contraction, and the implementation of austerity measures. These repercussions persisted for years, highlighting the need for stronger financial regulation and oversight to prevent future crises.

4. Changes

4.1. Dodd-Frank Act

The Dodd-Frank Act was enacted in the United States to deal with the financial crisis, called the Dodd-Frank Wall Street Reform and Consumer Protection Act officially [13]. The crisis was largely attributed to big banks' risky and irresponsible behavior, lack of regulatory oversight, and predatory lending practices. In response to this crisis, the Dodd-Frank Act was passed to stabilize the financial system and prevent a similar crisis from happening again. By President Barack Obama, it was signed into law on July 21, 2010.

The main components of the Dodd-Frank Act are (1) Financial Stability: To identify and monitor risks to the financial stability of the United States, the Financial Stability Oversight Council (FSOC) was created. It also established new regulations for Systemically Important Financial Institutions (SIFIs) to mitigate the risk of their failure. (2) Consumer Protection: As an independent agency responsible for protecting consumers from unfair and deceptive financial practices, the Consumer Financial Protection Bureau (CFPB) was established. It aimed to improve the transparency and accountability of financial products and services, such as mortgages and credit cards. (3) Volcker Rule: The rule restricts banks from engaging in proprietary trading and certain types of speculative investments, named after Paul Volcker, the former Federal Reserve Chairman. It effort to prevent banks from taking excessive risks that could put the financial system at risk. (4) Derivatives Regulation: The Act introduced regulations for the derivatives market, aiming to increase transparency, reduce risk, and prevent market manipulation. Most derivatives were required to be traded through central clearinghouses on regulated exchanges and cleared.

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The Dodd-Frank Act is significant for several reasons: (1) Enhanced Financial Stability: The regulations and oversight introduced by the Act aimed to prevent another financial crisis by holding financial institutions accountable, reducing systemic risks, and improving the financial system's resilience. (2) Consumer Protection: The creation of the CFPB and the regulations introduced under the Act sought to protect consumers from abusive and predatory financial practices, promoting fairness and transparency in the financial industry. (3) Increased Regulation and Supervision: The Act aimed to close regulatory loopholes, strengthen oversight, and improve risk management practices within the financial industry. It sought to ensure that banks and other financial institutions operate responsibly and sustainably. (4) Global Influence: The Dodd-Frank Act has inspired regulatory reform efforts in other countries, as the financial crisis had global repercussions. It became a model for financial reform, with similar regulatory measures being adopted in other jurisdictions.

In conclusion, to deal with the global financial crisis, the Dodd-Frank Act was enacted. It aimed to address the root causes of the crisis and promote responsible financial practices. It introduced regulatory reforms to protect consumers, enhance financial stability, and prevent a similar crisis from occurring in the future.

4.2. Basel III

On December 16, 2010, the Basel Committee on Banking Supervision (BCBS) released the third edition of Basel after the outbreak of the subprime crisis. As BCBS realized, under the Basel II system, there were still significant institutional loopholes in the international financial system and financial supervision. The global financial regulatory system was upgraded and reformed to close the gaps and improve the general stability of the banking sector by the BCBS and pertinent organizations fundamentally [14]. The new framework for international financial regulatory reform has established the consensus on the assessment methods and additional capital requirements for G-SIFIs subsequently. The most significant change in the Basel III framework was the enhancement of capital and liquidity requirements, as well as the introduction of macroprudential tools to mitigate systemic risks [15].

Increasing the minimum capital requirements for banks was one of the main responses of the Basel Committee. Under Basel III, banks were required to maintain a total capital ratio of at least 8%, and a Tier 1 capital ratio of at least 6%, a Common Equity Tier 1 (CET1) capital ratio of at least 4.5%. Additionally, A Capital Conservation Buffer (CCB) of 2.5% was required for banks to hold to withstand future economic downturns. These stricter capital requirements aimed to ensure that banks had sufficient buffers to absorb losses and maintain stability during periods of financial stress.

Basel III also introduced stricter liquidity requirements to address the funding liquidity risk that emerged during the crisis. To cover net cash outflows over a 30-day stress period, a Liquidity Coverage Ratio (LCR) of at least 100% was required to maintain with banks, which meant that banks had to hold enough high-quality liquid assets. This was intended to enhance banks' ability to withstand short-term liquidity shocks.

Considering liquidity and capital requirements, Basel III also introduced macroprudential tools to mitigate systemic risks. The countercyclical capital buffer (CCyB) was one such tool, with this tool, banks were required to hold additional capital by regulators to prevent the build-up of systemic risks during periods of excessive credit growth. This buffer was intended to be released during economic downturns to support banks and the broader economy.

Furthermore, the Basel Committee introduced stricter regulations for systemically important banks (SIBs). These banks had to maintain higher capital ratios and face additional capital surcharges based on their global systemic importance. This was aimed at reducing the too-big-to-fail problem and protecting the broader financial system from potential failures of SIBs.

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Overall, by strengthening liquidity and capital requirements, the framework of Basel III is devoted to enhancing the resilience and stability of the global banking system, introducing macroprudential tools, and addressing the risks associated with systemically important banks. These measures were designed to prevent a recurrence of the financial crisis and promote a safer and more sustainable banking sector.

5. Conclusion

The causes of the 2008 subprime mortgage crisis in the United States can be attributed to several factors. Firstly, an excessive demand for mortgage-backed securities led to reckless lending practices by financial institutions. Additionally, the easy availability of credit and low interest rates encouraged borrowers to take on more debt than they could afford. Furthermore, the securitization of mortgages and the lack of transparency in complex financial products contributed to the crisis. The consequences of the crisis were severe and far-reaching. The crisis also triggered a global financial market meltdown, causing stock markets to plummet and a severe recession that affected economies worldwide.

The aftermath of the crisis revealed the need for a comprehensive understanding of the factors that contribute to the occurrence of financial crises and the measures that can be taken to prevent or mitigate their impact. The research carried out by the 2022 Nobel laureates in economics, highlights the significance of studying financial crises, particularly in light of the 2008 financial crisis. Their contributions shed light on the causes, consequences, and potential prevention of such crises, and also shed light on the effects of policy interventions and regulations in preventing and managing financial crises. Continual research in this field is crucial to ensure the stability and resilience of the global economy.

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