

Global Financial Crisis: Cause, Impact and Response

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Abstract. The subprime crisis is a financial calamity brought on by subprime mortgage companies going bankrupt, investment funds being forced to close, and major stock market shocks. At the start of this century, the US stock market, real estate market, and other asset markets experienced a number of asset bubbles due to excess liquidity, house purchase policy stimulus, financial innovation, and other factors. Along with the tightening of monetary policy, the weakening of the US housing market, and particularly the rise in short-term interest rates, the interest rate for repaying subprime mortgages surged considerably. At the same time, buyers find it challenging to sell their homes or refinance utilising mortgage housing because to the ongoing cooling of the housing market. Due to the failure of many subprime borrowers to make scheduled loan repayments and the failure of banks to sell their properties at high prices, which resulted in significant losses, the subprime crisis was directly caused by these events. Most people agree that the absence of a mechanism for financial monitoring was a major factor in the crisis. The United States has accelerated the adoption of neo liberal economic policies during the past three decades, which is one of the primary causes. However, more than ten years after the United States stabilised the financial system through monetary, fiscal, financial, and other measures, the global economy has been hit considerably more severely and has not yet fully emerged from the shadow of the crisis.

Keywords: Collateralized debt obligations; subprime mortgage loan; financial crisis; asset-based security; credit default swaps.

1. Introduction

The housing purchase stimulus policy and financial market innovation created the demand for housing purchase of the poor, and the prime mortgage loan was distributed in large quantities [1, 2]. In the first few years following the purchase of the home, the buyer pays the loan at a fixed interest rate; thereafter, the loan is paid at a floating interest rate. This is how the U.S. subprime mortgage market often operates. In an effort to boost the economy and win over voters, the Bush administration implemented the "home ownership" policy to encourage low-income people to own homes and passed legislation obliging financial institutions to offer loans to the poor [3]. At the same time, mortgage company customer service representatives disregard or even assist consumers in hiding dangers in order to increase their fees, which leads to an excessive issue of subprime loans. The size of mortgage loans climbed to 2520 billion US dollars at the end of 2001–2006, an increase of 407 billion US dollars. The US subprime mortgage business expanded swiftly because of the US property market's continued performance and the country's record low interest rates in the five years prior to 2006 [4].

Following that, the US interest rate increased, and the declining demand caused the housing market to continue to decline. The pressure to repay increases as interest rates rise. Many consumers with bad credit believe that there is intense pressure to make payments and a risk of default, both of which would hurt the ability of banks to recover their loans. The bank reasoned that even though the borrowers were subprime, if they were unable to pay back the loan, the bank could still recover its losses because the mortgaged home had such a high initial value. However, because of the abrupt drop in the value of the home and the borrower's failure to make payments, the bank decided to sell the property. However, it soon became clear that the money it received would not be enough to cover the loan's principal, interest, and other costs at that time. These borrowers are subprime borrowers themselves as a result of the increase in interest rates on instalment payments, and a significant portion of borrowers are struggling to make their loan repayments. The subprime crisis was brought on by

the bank's recovery of the house but inability to sell it for a high price due to significant losses (see Figure 1) [4].

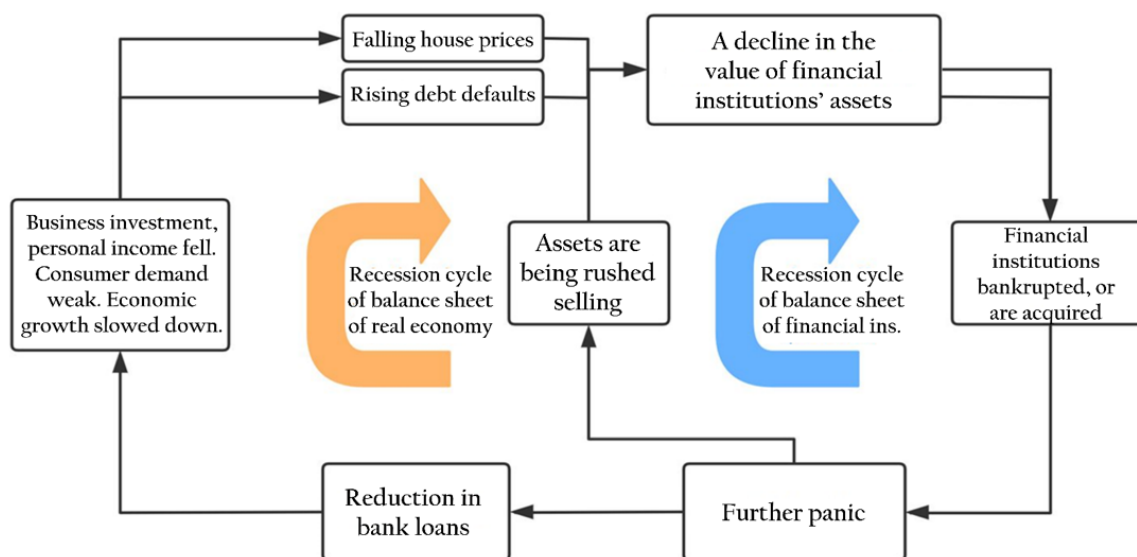


Fig. 1 Process of subprime crisis [5].

For the fourth quarter of 2006, New Century Finance issued a profit warning on February 13, 2007. Following the release of its financial results, HSBC Holdings increased the reserves for subprime home loans in the US by an extra \$7 billion, bringing the total to \$10.573 billion, an increase of 33.6%. The Hang Seng Index dropped 777 points (or 4%) as a result of the news that day, sending the stock market drastically lower. Due to pressure from Wall Street over its \$17.4 billion in debt, New Century Financial Corp, the second-largest subprime mortgage provider in the US, announced on April 2, 2007, that it had filed for bankruptcy protection and lay off 54% of its workers. On August 2, 2007, Deutsche Industrial Bank issued a profit alert. It was ultimately determined that there was a loss of 8.2 billion euros. A "Rhineland Fund" with a scale of 12.7 billion euros and the bank itself participated in the US real estate subprime mortgage loan market activity in a small quantity. The Bundesbank gathered the national banks to talk about the overall plan to save the Industrial Bank of Germany [6].

On August 6, 2007, The American Housing Mortgage Investment Corporation, the nation's tenth largest mortgage company, formally petitioned the court for bankruptcy protection, joining New Century Financial Corporation as a prominent mortgage institution. The collapse of Bear Stearns' two funds due to the subprime mortgage crisis was revealed on August 8 by the country's fifth largest investment bank. The biggest bank in France, BNP Paribas, stated on August 9 that it was freezing three funds after investing in US subprime bonds and suffering significant losses. European stock markets fell precipitously as a result. [6]. The second largest bank in Japan, Mizuho Bank, and its parent business, Mizuho Group, disclosed a loss of 600 million yen on 13th due to US subprime loans. The US subprime mortgage crisis has caused losses for banks in Japan and Korea. According to estimates by UBS Securities Japan, nine major Japanese banks reportedly held assets backed by US subprime mortgages worth more than one trillion yen. Additionally, CDOs received a total US \$565 million investment from five Korean banks, including Woori [7, 8]. Investors are concerned that the US subprime mortgage crisis would significantly affect the world financial sector. The majority of the guaranteed creditor's rights certificates invested by Japanese banks, according to Japanese analysts, have the highest credit ratings, and the subprime crisis has had a relatively small impact. Later, Citigroup revealed that in July 2007, subprime loan losses totaled \$700 million. Its market worth decreased by 90%, and its stock price dropped from \$23 at its peak to \$3 in 2008.

2. Causes

2.1 Monetary Easing and Housing Stimulus Policies

First and foremost, monetary easing brought on a wave of liquidity. The Federal Reserve slashed interest rates 13 times in a row starting in January 2001 to encourage economic growth after the US Internet bubble burst in 2000. The federal funds rate decreased as a result, falling from 6.5% at the beginning of 2001 to 1% in June 2003. Second, asset securitization increases liquidity while concealing and transferring risks to the secondary market. Many mortgage businesses "asset securitize" their residential mortgage loans into financial innovation products including mortgage backed securities (MBS), debt guaranteed securities (DGS), credit default swaps (CDS), and other to get working capital [8]. The market has been unable to discern the risks associated with these securities products after numerous repackagings and transfers, and both domestic and international financial institutions hold a significant amount of them. A real estate bubble starts to form at the same time as there is too much liquidity and demand. US housing prices increased significantly more between 2001 and 2007 than they had during the previous 30 years. The US nominal house price index had grown by 73% in five years as of March 2006. Due to surplus liquidity and expectations of rising house values, the US real estate market continued to expand at the same period, with residential investment accounting for up to 32% of total investment. The real estate bubble has started to build as the home vacancy rate has been rising. Additionally, residents' leverage ratios are increasing and their exposure to debt is growing. Due to a combination of variables, such as excess liquidity, demand stimulation, expectations of rising home values, and financial risk concealment, the leverage ratio of the U.S. residential sector swiftly climbed from 69.6% in early 2001 to 98.0% in early 2008. The purchase power of American housing has significantly decreased as a result of growing home prices, and there have also been significant increases in debt loads, default risks, and the vulnerability of real estate loans and related derivatives [9].

2.2 New Liberalism Policy

As the primary goal of economic policy, neoliberalism seeks to decrease government intervention in the economy and society while reviving the classic liberal ideal [10]. Beginning in the early 1980s against the backdrop of the economic stagflation crisis of the 1970s, the United States adopted a neo-liberal economic policy that focused primarily on reducing government intervention in the financial, labour, and other markets, suppressing trade unions, and pursuing economic policies that encourage consumption and foster high growth with high consumption [11]. Liberal economic theory has long valued encouraging consumption-based economic growth and productivity. Consumption is the sole goal and destination of all production, according to Adam Smith. According to Schumpeter, the capitalist system of production and consumption "originated from a thoroughly secular existence defined by urban leisure"; in other words, they thought that consumption of opulence appeared to encourage output. The American economy has been growing quickly since the Reagan Administration implemented its neo-liberal policies in the early 1980s, but incomes have not increased, the social distribution of income has become significantly out of balance, and the income of the vast middle class has decreased rather than increased. There has been a really peculiar occurrence in American society during the past three decades. The American population has been living beyond their means while at the same time seeing a decline in their income. The average hourly wage in the United States is only equal to what it was 35 years ago, according to data, and the income of a man in his thirties is 12% less than that of a man of the same age 30 years ago. More of the benefits of economic growth are now in the hands of the wealthy. According to statistics, the income gap between the wealthy and the poor in the US has been growing recently [12].

Neoliberalism's central idea is deregulation, especially of the financial sector. Since the Reagan Administration took office in the early 1980s, the United States has pursued financial liberalisation and so-called financial innovation by establishing and revising laws that ease controls on the financial sector. Because there is a severe lack of oversight in the financial sector, the average person is enticed

to consume in advance and speculate on the market using borrowed money. As an illustration, in 1982, the U.S. The Gan Saint Germain Savings Institution Act, approved by Congress, offered savings institutions equal economic opportunities to banks but did not subject them to Federal Reserve regulation. Savings banks are permitted by law to buy corporate bonds and commercial paper, make consumer loans and commercial mortgages, and even buy garbage bonds. The fundamental principles of the United States were fully destroyed by the Fair Competition Banking Act of 1987, the Reform, Revival and Implementation Plan of Financial Institutions of 1989, the Financial Services Modernization Act of 1999, and countless other pieces of legislation. The Banking Act of 1933 (also dubbed the Glass Steagall Act) and limits between banking and investment businesses like securities and insurance were eliminated in order to allow so-called financial innovation and financial speculation in the financial market [13]. The aforementioned legislative reform has strengthened the speculative environment on Wall Street in the United States. Asset securitization and financial derivatives innovation speed have been increasing, particularly since the end of the 1990s as interest rates continue to decline. Ordinary people can borrow money and spend it ahead of time thanks to the culture of luxury consumerism that permeates society as a whole and naive hope about future wealth. Wall Street speculators take advantage of system flaws, commit fraud, and mislead the public. Many consumers who are unable to pay back their debt have been persuaded to borrow money from mortgage lenders by the notion that the real estate market is only rising but not decreasing [14].

2.3 Monetary Tightening and Bubble Burst

The real estate bubble was popped by monetary tightening, which also started the financial crisis. Midway through 2004, the Federal Reserve started to quickly boost interest rates in an effort to cool the economy [15]. From 1.0% to 5.25%, the federal funds rate climbed. On the one hand, inhabitants are discouraged from taking out new loans due to high interest rates, which lowers the demand for housing. On the other hand, house prices peaked in July 2006. The mortgage interest rate is still high, low-income groups are under more stress to repay their debts as a result of the currency's tightening, and the percentage of subprime loans with supply failure is beginning to increase. The bursting of the real estate and financial bubbles was eventually caused by the many derivatives based on subprime loans suffering enormous losses [16]. The burden falls primarily on financial entities that directly provide subprime loans [17]. For the subprime lending operations of its US division, HSBC Holdings upped the provision for bad debts by US \$1.8 billion in February 2007. New Century Financial Corporation, the second-largest US issuer of subprime loans, sought bankruptcy protection in April 2007. As a result, more than 30 subprime mortgage companies closed their doors. Institutional investors were later impacted, including hedge funds and investment banks. When the value of several derivatives based on subprime loans plummeted, well-known financial firm Lehman Brothers filed for bankruptcy, and Merrill Lynch was acquired in September 2008. At the same time, commercial banks, insurance firms, and other financial institutions were affected. These financial firms take part in subprime loans, on the one hand. On the other hand, the value of collateral has decreased as a result of the decline in housing values. Financial institutions' asset side is broken and bankrupt. 2009 saw the failure of 140 American banks, the nationalisation of the RBS and other significant European banks, and the takeover of the insurance business AIG by the American government. The financial institution crisis resulted in market panic, asset sales, greater asset price declines, higher levels of insolvency, and the formation of a balance sheet recession cycle. A credit crisis brought on by the financial system's collapse ultimately hurt the actual economy. Financial institutions increased their lending caution following the crisis. Following the Federal Reserve's emergency interest rate drop, the low interest rate environment was still insufficient to promote bank lending. Mortgage interest rates remained high and bank reserve loans were not fully issued, causing a credit constraint. Due to funding issues, manufacturing activities have decreased significantly, there are fissures in the real economy, and many businesses have slashed substantial numbers of employment. The real economy is experiencing a recession cycle as a result of the slowing of economic growth, which is also causing

incomes of people to drop, consumption and investment to weaken, and the economy to further contract [18].

3. Impact & Response

3.1 Impact

Because of the collapse of the financial system, global assets fell more than in previous crises. The 2008 US subprime mortgage crisis expanded across the nation and swiftly evolved into a financial and economic catastrophe with "once in a century" severity. The banking industry was primarily targeted by prior financial crises, but the current crisis has severely affected the entire financial system as well as virtually all financial institutions, including banks, hedge funds, insurance companies, pension funds, and financial businesses supported by public funding. The bursting of the American economic bubble also caused greater asset contraction than in prior crises, surpassing the "Great Depression" of the 1930s in terms of stock market, housing market, and other indicator declines. The US economy soon rebounded as a result of the Federal Reserve and the US government swiftly and significantly introducing market rescue measures. However, the recession only lasted 1.5 years, the real GDP per capita declined by just 5.25 percent as a result of the 2008 financial crisis, and in 2010 the GDP growth rate reached its 2008 level. In comparison, during the 63 financial crises that affected the industrialised economies of the globe from 1853 to 2013, the average real GDP per capita decreased by 9.6%, and the average recession lasted 2.9 years. On the other hand, the recovery was sluggish after the crisis, and the unemployment rate in the US was extremely close to reaching a record high. Only in 2016 did it reach the level of 2008. It is clear that the actual economy is still under long-term strain as a result of the subprime crisis.

The global extension of the US crisis has had an effect on global economic expansion. In the wake of the crisis, major economies throughout the globe implemented low interest rates for an extended period of time, setting off the next crisis. One way or another, there was a strong connection between the US housing market, financial markets, and international financial markets since the US home loan assets were extracted into different financial instruments by investment banks and then resold to international investors. On the other side, the US crisis hampered global economic growth by spreading via the international financial system to the real economies of numerous nations. All countries in the globe experienced a "trough" in GDP growth between 2008 and 2009. Later, the debt issue contributed to the euro area's second recession. The economies of resource-rich countries like Latin America and Australia saw a sharp decrease and a long-term slump, while the Japanese economy continued to be at a long-term low even after the deployment of QE and negative interest rates. However, the world's major economies adopted ultra-low interest rates and liquidity easing measures for an extended period of time to address the subprime crisis, which constrained the scope for monetary policy and increased financial risk exposure, setting the stage for the subsequent global financial crisis. Some academics noted that the United States was technically long overdue for bankruptcy because it owed too much money to other nations. Since these nations' creditors did not want to see the United States declare bankruptcy, they were forced to continue buying more U.S. government bonds in order to prevent this from happening.

3.2 Response

The United States uses the coordination of currency, finance and finance to turn the tide. In order to prevent a run on the currency and financial markets, the government implemented a methodical financial policy, deployed several guarantees, and recapitalized the banking system twice with the help of insurance firms. In addition, the Federal Reserve uses its authority as the "lender of last resort" over the entire banking system to enact monetary policy and maintain the financial market. Strong fiscal policies were adopted by the ministry of finance to boost demand and advance economic expansion. Additionally, it will slow down the rate of price decrease in the housing market, lower mortgage interest rates, and offer refinancing aid through a number of housing policy combinations.

In addition, The Keynesian stimulus plan and international cooperation will enable the extension of US dollar liquidity to the global financial system.

The Wall Street rescue plan was authorised in the first week of October 2008. The proposal calls for a number of actions, including significant investments in bank stocks, a large government purchase of "toxic assets," and the supply of financial lifelines for Freddie Mac and Fannie Mae. When the assets acquired during the crisis were successfully transferred to after-sales, \$442.6 billion was made. The general population is upset about this because bankers appear to have received rewards for carelessly wrecking the economy. However, it restores economic activity; it is also important to point out that the government fully recouped its investment in banks and paid interest. The stock market was stabilised when the rescue plan was approved. After reaching its lowest point in March 2009, the stock market entered the longest bull run in history. However, there were significant financial losses and suffering: the jobless rate rose to 10%, and over 3.8 million Americans experienced house foreclosure.

The Federal Reserve quickly lowered interest rates, developed financing options, started three rounds of quantitative easing, and traded currencies with other central banks across the world. Between September 2007 and December 2008, the Federal Reserve quickly lowered the federal funds interest rate target range from 5-5.25% to 0-0.25%. Between December 2007 and November 2008, the Federal Reserve created a number of new financing mechanisms, most notably the Commercial Paper Financing Facility, to enhance market liquidity (CPFF). Over the following six years, the Federal Reserve carried out three rounds of quantitative easing (QE) to further increase liquidity and lower long-term interest rates. Additionally, it acquired a sizeable sum of institutional MBS as well as long-term government bonds. Additionally, the Federal Reserve has established currency exchange agreements with 14 central banks in Europe, the United Kingdom, Switzerland, Japan, Canada, etc., as well as a low interest rate dollar swap deal that has been continuously extended through 2014.

The government started a budget plan to help the economy grow and the housing market stay stable. In February 2008, the Bush Administration released a "bundle of economic stimulus laws" that cost 168 billion dollars in total. The "Housing and Economic Recovery Act," which was introduced in July, put a 400 billion dollar limit on the amount of money that may be invested in Freddie Mac and Fannie Mae. 75 billion in direct owner subsidies and 200 billion in refinancing from Fannie Mae and Freddie Mac make up the 275 billion dollar Owner Affordability and Stability Plan. The Obama administration unveiled a \$787 billion US fiscal stimulus plan in February 2009, with the main goals of tax reduction, infrastructure improvement, and assistance for local governments.

In the short term, the government will save banking institutions, and in the long run, it will improve financial system oversight. President Bush announced the deployment of 250 billion yuan to inject capital into the banking sector when he signed the Emergency Economic Stability Act in October 2008, which includes non-performing asset relief initiatives totaling over 700 billion dollars. The Obama administration passed the Dodd Frank Wall Street Reform and Consumer Protection Act in July 2010, which is regarded as the most major and far-reaching financial regulation reform since 1933 as well as the most ambitious and divisive attempt to prevent a repetition of comparable events. These regulations aim to protect the interests of consumers and taxpayers, advance financial stability in the US, deal with the problem of "big but not failing," and prevent another crisis like the one that occurred in 2007–2008. Financially, the Act restricted some of the biggest banks' high-risk activities, strengthened government control of their operations, and required them to maintain bigger cash reserves. It made an effort to reduce consumer access to predatory lending. The "Volcker Rule," which prohibits banks from engaging in speculative transactions unrelated to financial services offered to consumers, such as MBS, CDO, CDS, etc., is one of these. The US financial industry has been subject to widespread leverage limitations since the financial regulatory reform, and the trend of "deleveraging" has so far persisted. Leverage restrictions applied to only 41% of all US financial assets before the end of 2007, but by the end of 2017, this percentage had risen to 92%. By 2018, some parts of the bill had been repealed by the Trump government, although the US Senate failed in its attempt to repeal new regulations on a larger scale.

Implementation of the Troubled Asset Relief Plan and the Financial Crises Liability Fee. TARP is a proposed tax legislation proposed by President Obama in 2010 and created and operated by the US Treasury Department, aiming to recover the funds used to rescue Wall Street companies during the 2008 financial crisis (see Figure 2). It attempts to stabilise the nation's financial system, promote economic development, and resolve the subprime problem as a method to reinstate the government's involvement in the financial sector. In reaction to the worldwide financial crisis, it was enacted as part of the Emergency Economic Stability Act in October 2008. In the beginning, it gave the government permission to spend \$700 billion to buy insolvent companies' assets and shares from important institutions, including illiquid MBS and other assets. The Dodd Frank Act of 2010 nevertheless limited this amount to \$475 billion. JPMorgan Chase, Morgan Stanley, Bank of New York Mellon, Bank of America Merrill Lynch, Citigroup, Goldman Sachs, State Street, and Wells Fargo Bank were among the companies whose shares the government reportedly bought, according to TARP. It spent 245 billion dollars to stabilize the bank, 80 billion dollars for the American automobile industry, 68 billion dollars for stabilizing AIG, 31 billion dollars for other expenditures, and 19 billion dollars for purchasing toxic assets. At the same time, the rule makes the companies participating in the plan lose certain tax preferences. It also does not allow recipients to pay bonuses to the highest paid executives and, in some cases, limits their remuneration. However, the assistance provided by Freddie Mac and Fannie Mae does not belong to TARP. According to the proposed tax, the government will tax the largest financial company that is considered to be the root cause of the financial crisis in 2007-2008. The goal is to prevent taxpayers from having to provide assistance to Wall Street companies and avoid increasing the government's deficit. The funds generated by the tax will be collected by the Internal Revenue Service (IRS) and distributed to the government's budget deficit [19].

Cost of the 2008 Financial Crisis

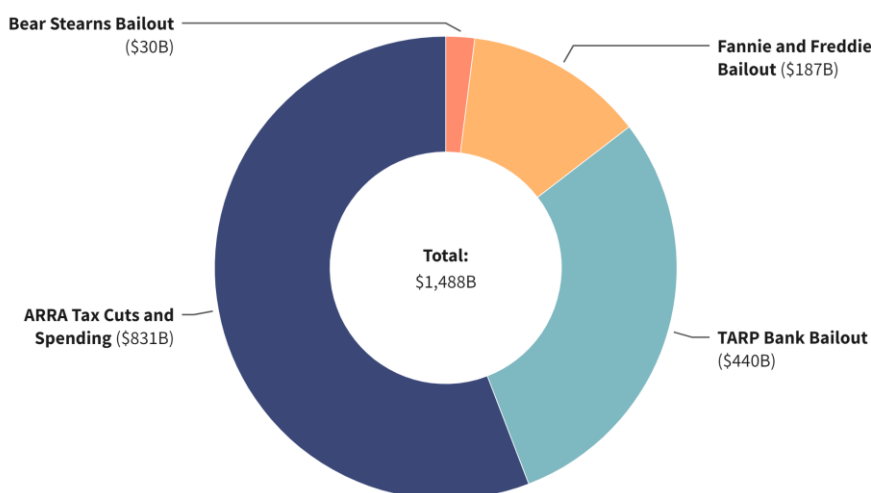


Fig. 2 Amount of government expenditure through the TARP [20].

4. US Liquidity Crisis in 2020

A fresh cycle of the financial and economic crisis hits every ten years. The long-term currency excesses are the core cause of the economic, financial, and social vulnerability that is the epidemic situation's trigger. Twelve years have passed since the global financial crisis in 2008. The major foundations of policy in the United States and Europe have been quantitative easing and extraordinarily low interest rates, which have led to asset price bubbles, increased debt leverage, a widening wealth disparity between individuals, social and political polarisation, and a surge in trade protectionism. Two connected powder kegs among these are the US stock market bubble and high

corporate debt leverage. This is a general settlement from a financial cycle standpoint, and what should come will come sooner or later.

4.1 Origin

Risk stems from leverage. There are risks and vulnerabilities in high leverage situations. The massive corporate debt caused by low interest rates and the stock market bubble could be the breaking point in this wave of financial disaster. The stock market bubble was inflated due to a combination of factors, including the issuance of bonds by listed corporations to repurchase shares and pay dividends and a growth in the number of financial transactions in the market due to low interest rates. On the one hand, stock repurchase and dividend distribution are important reasons for the continuous rise of American stocks. In addition to companies with large amounts of cash, some companies, for the purpose of market value management or speculative arbitrage, raise funds to buy back stocks by issuing bonds to increase earnings per share and boost stock prices. On the other hand, institutional investors like pension funds and insurance firms have been forced to put their money in the stock market due to the long-term low interest rates that have reduced their return on assets. The prevalence of passive investments like index funds and quantitative trading is steadily increasing the homogeneity of market activity. In a bull market, the stock price rises swiftly due to the uniform trading activity. Driven by multiple factors, since 2009, the U.S. stock market has continued the longest bull market in history for more than ten years. The leverage ratio of the enterprise sector has risen rapidly, the solvency has continued to decline, and the proportion of high-risk corporate debt has expanded, brewing risks. The enterprise sector's leverage ratio quickly increased. After the financial crisis of 2008, the leverage ratio (debt/GDP) of the US residential sector fell; that of government departments increased quickly but remained stable after 2014; and that of non-financial enterprises, which was initially forced to deleverage but then quickly recovered, surpassing the pre-crisis level and even exceeding that of the residential sector. The enterprise sector's solvency continued to deteriorate. In the United States, the non-financial corporate sector has a debt service ratio (current payable principal and interest/current income) that is substantially higher than both the residential sector and the non-financial private sector as a whole, and it is still increasing, which is at a relatively high historical level. The proportion of high-risk corporate bonds has increased in the US. Between 2008 and 2018, the quantity of non-financial corporate bonds increased significantly, from 2.2 trillion to 5.7 trillion US dollars, with BBB corporate bonds making up about 2 trillion of the sum, up from 36.4% to 47.4%.

4.2 Fuse

The epidemic of COVID-19 has spread rapidly around the world, impacting the global economy and igniting the fuse of the crisis. As of April 30, there were more than 3.15 million confirmed cases and nearly 220000 deaths worldwide. The United States is the worst hit area, with more than 1 million confirmed cases and more than 60000 deaths. The global economy is facing recession under the impact of the epidemic. From the supply side, enterprises are faced with business interruption, production stoppage, and industrial chain rupture. From the demand side, epidemic prevention and control have led to a sharp drop in demand. The IMF predicted that the global economy will fall by 3% in 2020, with declines in the GDP of the United States, the euro area, and Japan of 5.9%, 7.5%, and 5.2%, respectively. This prediction was made in its World Economic Outlook report, which was released on April 14. The business operations and cash flow of businesses, as well as resident employment and income, will all be put at risk by the economic slowdown. It will also have an impact on business solvency and the smooth operation of the financial system, and it will ignite the crisis in the context of the stock market bubble and high corporate leverage. Since February 20, US stocks have continued to fall, and the interest rate of high-yield bonds has risen rapidly. From February 20 to March 9, the three major U.S. stock indexes fell by as much as 20% within 20 days, and the yield of Bank of America's high-yield corporate bonds rose by more than 200BP.

4.3 Conduction

Homogeneous trading, margin and redemption pressure intensified asset selling, and the market panicked in pursuit of liquidity. On the one hand, quantitative trading, index funds and other passive investments are prevalent, and market transactions are highly homogeneous. Once it turns into a bear market, passive stop loss causes large-scale selling, market liquidity dries up and falls into a downward spiral. On the other hand, the stock market continued to fall, the net value of the fund was significantly withdrawn, and the broad fund was faced with margin additions and a large number of redemptions by investors, resulting in a significant increase in capital pressure. The fund panicked to pursue liquidity and sold assets with strong liquidity, further exacerbating the market decline. Under the dual impact of supply and demand, crude oil prices plummeted, increasing the market's concern about a broader debt default. The epidemic hit the global economy and oil demand. Additionally, Saudi Arabia boosted output at the beginning of March, OPEC+ did not strike a production cut deal, and the price of oil fell globally. The price of crude oil futures hit a negative number in April. By 2023, the North American oil and gas sector will have 240 billion US dollars of debt maturing, of which B-rated bonds will make up more than 15% by 2020, according to Moody's statistics. The current price of oil is below its cost of production, and in the United States, the average shale oil breakeven price is above \$40 per barrel. If the price of oil stays low in the future, the US shale oil industry, which is under intense pressure to repay its debt, is likely to file for bankruptcy and stop making loan payments. This will put the bond market in jeopardy. The market's worry over the risk of default has grown as a result of the conflict over oil prices, and the rate of high-yield bonds has continued to rise quickly.

4.4 Impact

The US financial system has been experiencing a severe liquidity crisis since March 9. Bonds, gold, and stocks all dropped significantly at once. The market went into a panic in search of liquidity. As the dollar index quickly increased, a liquidity crisis developed. The crisis struck the international financial markets at the same time because of the spread of financial markets and their importance. In a span of ten days, four circuit breakers caused the US stock market to crash. The panic index spiked above the 2008 financial crisis' apex, and the world stock market plummeted. On March 9, 12, 16 and 18, the circuit was broken four times, setting a historical record. Between their lowest and highest points, the S&P 500, NASDAQ, and Dow Jones Industrial Average all had declines of more than 30%. The fear index VIX even surpassed the 2008 financial crisis top of 80.86 on March 16 when it reached 82.69. Major global stock indices plunged by more than 30% in a month as European nations including Germany, France, Italy, and Britain entered the bear market, as did Asian nations like Japan and South Korea.

Bonds and stocks were both destroyed. The yield on US government bonds increased quickly, while the prices of all investment-grade and speculative-grade bonds dropped. In terms of US interest rate bonds, the yield on long-term treasury bonds should have decreased due to the rapid decline in the stock market, investors seeking safe assets, and the "seesaw effect" between stocks and bonds. The market, however, was in desperate need of liquidity after March 9, as seen by the "double slaughter of equities and bonds." To recoup their losses, investors sold long-term government bonds, raising their yield. Investment grade and speculative grade bonds both decreased overall in terms of credit quality, and during a 10-day period, the rates of return increased by more than 150 and 350 BP, respectively. The 10-year government bond yields of the UK, France, Germany, and medium-sized large countries all suffered a spike of up to 50BP within ten days of the suspension of the earlier downward trend on March 9.

When the price of gold fell, safe-haven investments lost their safety. Gold, a traditional hedging asset, can have some influence on risk hedging when large risk occurrences occur. However, when there is a market liquidity crisis, gold will also be sold off. 2008 had the largest drop in gold prices, which was close to 30%. Bonds and equities will both collapse after March 9, 2020, and the price of gold will plunge by more than 10% in just eight trading days. All hazardous assets decline

simultaneously during a liquidity crisis, the correlation decreases, and the risk parity strategy and portfolio theory are invalidated. No egg is safe when all the baskets are flipped over. The demand for capital increased quickly as a result of the market's panicky search for liquidity, but the capital supply was more conservative. The dollar index rose sharply. The dollar index increased 7% between March 9 and March 23, going from 95 to 102.

4.5 Response

With the US government's strong support, the liquidity problem was somewhat mitigated, but it was merely delayed. The US government has swiftly responded to the crisis, put forth significant rescue measures, and given its all in terms of monetary and fiscal policies. The US dollar index dropped back after March 24, US markets recovered, gold increased, and the liquidity situation was eased. However, the financial crisis has only been postponed, the deep-seated economic and financial vulnerability has not been eliminated, and the impact and impact of the global pandemic have not yet fully emerged.

In order to stop the liquidity crisis from turning into a financial disaster, the Federal Reserve serves as the market's lender of last resort and provides extensive liquidity support. On March 3 and March 15, the Federal Reserve implemented its emergency rate reduction, bringing the benchmark interest rate and the statutory deposit reserve ratio to zero in two weeks. On March 23, "Unlimited QE" was then established. The Federal Reserve introduced mechanisms like CPFF, MMLF, PDCF, PMCCF, SMCCF, and TALF in the middle and end of March to directly inject liquidity into banks, primary dealers, money market funds, enterprises, residents, foreign central banks, and other departments.

At the same time, the US Congress passed a US \$2.3 trillion stimulus plan to start the "helicopter money" mode. It will give tax relief to the enterprise sector, lend and guarantee loans totaling roughly \$500 billion to major businesses, and set up a small enterprise fund of about \$350 billion. If small enterprises do not lay off workers, they will have the opportunity not to repay the loans; Direct cash payments to residents exceeded 250 billion dollars, and unemployment insurance expanded by about 250 billion dollars; At the same time, local governments will receive financial assistance of about 150 billion dollars, and the federal government will make direct expenditures of more than 300 billion dollars.

5. Discussion

The onset and spread of the financial crisis in 2008 and 2020 have forced us to once again confront a persistent and unsolved issue: what type of international reserve currency can uphold financial stability on a worldwide scale and support the expansion of the world economy. The Bretton Woods system, the gold exchange standard, the silver standard, and the gold standard were all historical institutional frameworks to address this issue, which is also one of the goals of the IMF. Due to the underlying flaws of the existing global monetary system, the financial crisis illustrates that this issue is far from being resolved and that it is only growing worse. According to theory, in order to provide an orderly supply of international reserve currencies, they should first have a stable benchmark and distinct issuance guidelines. Then, their overall supply should be able to be timely and adaptable in response to variations in demand. Third, any change made must go beyond the economic circumstances and national interests of any given nation. At this time in history, the dominant international reserve currency is a sovereign credit currency. This crisis serves as a reminder that innovative reforms and improvements to the current international monetary system are required in order to fundamentally maintain global economic and financial stability. It is also important to encourage the advancement of international reserve currencies in the direction of stable currency value, orderly supply, and adjustable aggregate.

The global financial crises that broke out in 2008 and 2020 spread quickly throughout the world, highlighting the systemic risks and inherent flaws in the current international monetary system. For issuers of reserve currencies, domestic monetary policy goals and national requirements for reserve

currencies frequently conflict. The monetary authority cannot simultaneously evaluate the various goals domestically and internationally, nor can it disregard the international function of its currency and only focus on domestic objectives. Due to payment demand domestically being restrained, it might not be able to adequately fulfil the expanding demand of the global economy, or excessive domestic demand stimulation might result in a global liquidity flood. The Triffin dilemma, which states that the issuing nation of reserve currency cannot offer liquidity to the world while maintaining the stability of currency value, still exists theoretically. Because most currencies refer to their own currencies, the country's exchange rate adjustment for economic imbalances is worthless when its currency becomes the major product pricing currency, trade settlement currency, and reserve currency for the entire world. A widely used reserve currency is advantageous to economic globalisation, but it also has institutional flaws that make it difficult to issue. The cost of the existing monetary system to the globe may surpass its benefits, as seen by the frequency and severity of financial crises following the breakdown of the Bretton Woods system. Not only the users of reserve currencies have to pay a heavy price, but also the issuing countries are paying an increasing price. Although the reserve currency issuing body may not have intended to cause the crisis, institutional flaws made it inevitable.

In order to eliminate the disadvantages of using sovereign credit currencies as reserves, the ideal outcome of the reform of the international monetary system is the creation of an international reserve currency that is unrelated to sovereign states and can maintain long-term currency value stability. Despite the long history of the idea of a super sovereign reserve currency, there hasn't been much advancement. Keynes proposed creating the "Bancor" international monetary unit in the 1940s on the basis of 30 representative commodities. Sadly, it was never put into practise. The failure of the Bretton Woods system, which was based on the White plan, however, indicated that Keynes's strategy might be more long-term. The IMF established the Special Drawing Right (SDR) in 1969 to reduce the inherent risks of using sovereign currencies as reserve currencies as soon as the flaws in the Bretton Woods system were made clear. Unfortunately, the role of SDR has not been fully utilised because of the limitations of the allocation process and breadth of use. The existence of SDR offers a ray of hope for the reform of the global monetary system, nonetheless. In addition to reducing the dangers associated with sovereign credit currency, the super sovereign reserve currency also offers the chance to control global liquidity. The management of the international reserve currency by the global institution will make it possible to develop and regulate global liquidity. When a country's sovereign currency is no longer used as a benchmark and point of reference for international trade, the adjustment effect of its exchange rate policy on imbalances will be greatly amplified. These can significantly lower the likelihood of upcoming crises and improve our capacity to handle them.

6. Conclusion

Looking back in time, the subprime crisis brought about the foam in the US housing and stock markets by combining excess liquidity, governmental stimuli, and financial innovation. The financial crisis started as monetary policy became more restrictive. However, the US liquidity crisis in 2020 was only a general liquidation due to the aggravation of economic and financial fragility, the accumulation of foam in the US stock market, and the high leverage of enterprises under the long-term monetary overload.

The soil of the crisis is excessive currency, financial liberalization, lack of supervision, out of control bank lending, and excessive speculation. External shocks including tightening policy, tighter oversight, and dwindling liquidity set off the crisis. Through balance sheet recession, the financial crisis is transferred to the banking crisis and the economic crisis, and the domestic crisis is transmitted to the rest of the world through commerce, foreign demand, the financial market, and other chains. Stop the risk spread early, restore solvency, and mitigate the liquidity problem. The speed and efficacy of the policy reaction will have an impact on how much damage the crisis causes.

The rapid buildup of debt and leverage, which is unsustainable, is the basic logic behind all significant global financial crises. High leverage is the source of risk. In the early stages of leverage growth, hedging financing played a significant role, and economic growth and increased leverage interacted favourably. Speculative financing is prevalent in the medium term, and asset prices steadily deviate from fundamentals. At the end of the period, speculative financing and Ponzi financing accounted for too much, the economic and financial system was extremely fragile, and the crisis was on the horizon, bringing about the "Minsky moment."

Different schools of economics are centred on whether and how the government should intervene in the market in reaction to the crisis. During the 1930s Great Depression, Keynes and Marx opposed laissez-faire and favoured active fiscal and monetary policies to increase demand and equalise the income distribution. Neoliberalism emerged during the "stagflation" of the 1970s, challenging Keynesianism as it rejected excessive government intervention and reverted back to classicism. After considering laissez-faire and the resurgence of New Keynesianism after the 2008 financial crisis, Bernanke oversaw the Federal Reserve's adoption of unconventional quantitative easing programmes. According to MMT theory, monetizing fiscal deficits would maximise the use of monetary policy and fiscal policy intervention.

It has been demonstrated through experience with other crises that quick policy action can effectively break the transmission chain and stop the crisis from spreading and getting worse, as opposed to careless laissez-faire, which will only prolong the crisis and increase the amount of harm it causes. While fiscal policy has a more pronounced influence on increasing effective demand than monetary policy does in terms of "pulling the rope," the latter has a more visible impact on easing short-term liquidity crises. The proper course of action is to first use monetary policy to ameliorate the liquidity issue, and then use fiscal policy to increase demand in order to exit the recession. Regardless of whether monetary or fiscal policy aims to increase debt or boost currency supply, the crucial concern is whether the current, rising debt can generate future income. Pure consumption-stimulating policies will instead result in debt overhang rather than capital formation. To encourage a positive economic cycle, effective investment will boost capital formation, future income, and consumption.

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