

Reflections on the Great Depression and the Subprime Mortgage Crisis

-- The Birth and Response to the Crisis

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Abstract

The Great Depression and the subprime crisis in the United States were the two most severe economic crises in the history of the global economy in the twentieth century. The essence of both crises was the "credit boom" caused by excessively loose monetary and credit conditions in the early period, superimposed on an unsound regulatory system, and when monetary conditions were tightened, a large number of high-risk loans accumulated in the early period began to default, triggering the crisis. In response to the two crises, the U.S. government took a series of response measures, but on the whole, the response policy during the subprime crisis was more timely and stronger, so that the subprime crisis lasted for a shorter period and caused less damage to the economy. Lessons from the two crises include: Loose monetary policy should be accompanied by better regulation to prevent the creation of large amounts of risky credit. The tightening of loose monetary conditions should be moderate to avoid large and concentrated outbreaks of risk. In the event of a depression, active expansionary policies should be used in a timely manner to avoid further deepening of the depression. In addition, the government should also focus on communicating with the public to avoid the emergence of negative expectations that would exacerbate the economic downturn.

Keywords

Great Depression; Subprime Mortgage Crisis; Monetary Policy; Fiscal Policy.

1. Introduction

At present, China has moved from the stage of high-speed development to the stage of high-quality development, therefore the China's GDP growth speed is expected to decline, which causes the decrease in the expectation of future income by the residents. Residents' balance sheets are at risk of shrinking. Under the current situation, China's macroeconomic governance has become more challenging. Therefore, It is very important to review the two major economic crises in the United States and the implications they have brought to us in this period, especially the causes of the two economic crises, which is of great significance for helping China implement the policies that benefit the country.

2. The Cause of the Crisis

The Great Depression was a huge economic crisis that broke out after Coolidge's boom. The subprime mortgage crisis was a major economic crisis that broke out after the "American Dream" during the Bush era. Both of the two crises were quickly disillusioned after the early stages of prosperity.

2.1. Great Depression

After the WWI, the United States firmly believed in "laissez-faire" and fully relied on the The regulation effect of the market. The government had eased monetary policy while reducing its controls. From 1921 to 1928, the total money supply rose from \$45.3 billion to \$73 billion, and the rediscount rate was reduced to 4.5% in 1921 and 3.5% in 1927. With the ease of monetary policy and the lack of regulation, the financial system began to make profit by issuing large number of subprime loans, for example call loans, to the groups that were actually unable to repay. During this period, the stock market rose sharply, the whole economy seemed prosperous, and the United States entered the Coolidge boom. However, the boom was supported by a lot of credit, and when the loose monetary conditions that supported credit were tightened, it would have a huge contraction effect on the economy.

At that time, Equity was collateral for most borrowers, and Most borrowers were able to pay off their loans when the stock market rose. However, in January 1928, the Federal Reserve began tightening monetary policy in response to excessive speculation in the stock market. At the same time, the heat of the stock market caused a large amount of monetary demand. Under the combined effect of the two, the real interest rate rose sharply, and some real economy sectors sensitive to interest rates began to decline.

Right after the real economy sectors, the stock market began to collapse, Since some of the subprime loans could not be recovered, the bank chose to sell the collateral, which was stock, to recover the loan. But selling the loans also led to a further decline in the stock market, The Dow Jones industrial average fell 381 in 1929 to 36 in 1932, which was nearly 90%. After the breakdown of the stock market, the consumer market also began to crash, which eventually led to the collapse of total demand. Total consumer spending in the United States fell from \$79 billion in 1929 to \$64.6 billion in 1932, down by \$14.4 billion during the period.

At the same time, banks faced a lot of bad debts and began to close down. In 1930 alone, 6,987 banks failed across the United States, And because of the fragility of the US financial system at the time and the Fed's reluctance to be a lender of last resort, a large number of depositors began to panic, Loss of confidence could trigger a run on banks that would threaten the entire financial system information intermediary costs rise. Some borrowers, even if they were well qualified, faced extremely high loan interest rates or even no loans due to the high information intermediary costs, In turn affected the possible production and investment activities or consumption activities, thus affecting the total supply and total demand of the whole economy. At last, The United States fell into the Great Depression. In 1932, 130,000 enterprises went bankrupt, the industrial production index fell by 46 percent, and the peak of the unemployment population reached 13.7 million.

2.2. Subprime Mortgage Crisis

The essential causes of the subprime mortgage crisis and the Great Depression in the United States are very similar, but the performance is somewhat different.

In the early 21st century, when the Internet bubble in the United States burst, the Federal Reserve adopted loose monetary policy to stimulate the economy. From early 2001 to middle 2003, the Federal Reserve cut the federal funds rate 13 consecutive times, reducing the interest rate from 6.5% to 1%. At the same time, the rapid development of emerging developing countries, especially China and oil producers, made them have a large capital surplus, a considerable part of which enter the United States, further easing its monetary conditions. In addition, the Bush administration enacted the American Dream Downpayment Act, encouraged mortgage agencies, mainly the Federal National Mortgage Association and the Federal Home Mortgage Corporation to make home loans. At this time, the United States faces easy monetary conditions and a loose credit environment.

In such an environment house prices rose rapidly, From 1996 to 2006, the US real estate price rate grew by 190%, with an average annual increase of 11.2%, during the loose monetary conditions plus loose credit conditions, A large number of poorly qualified borrowers get loans, In 2005, the total amount of US subprime loans reached \$1.4 billion, and In 2006, subprime loans accounted for 20% of national mortgages. Subprime borrowers had the ability to pay off the loan, and Even if the current cash flow was broken, they could sell the property to get cash to earn the difference between the loan amount and the house price, but when house prices started to fall and interest rates started to rise, subprime mortgages started to default.

Under the loose monetary policy and credit conditions and the backward regulatory system, financial institutions began to carry out a lot of financial innovation in the pursuit of profit maximization. MBS (Mortgage-backed securities), CDO (Collateralized debt obligation), CDS (credit default swap), and even nested CDO², CDO³ and other complex financial products were released and sold well. In 2007, the total amount of CDS in the United States alone reached \$58.24 trillion. These financial products were designed to be extremely complex, and their real value was systematically exaggerated, causing a series of domino effects when the underlying assets collapse.

In June 2004, the Fed began to raise interest rates as the US economy and inflation rebounded, and the Fed has since raised the federal funds rate 14 times, and eventually to 5.25% in June 2006. In the second quarter of 2006, the American property prices continued to fall due to the large number of previous subprime loans, finally starting to affect the financial system. Subsequently, the domino effect of a large number of financial innovative products was further amplified. After that, the transmission path was similar to the Great Depression, and the US subprime mortgage crisis broke out.

2.3. Sum up

Review the past the most major crisis in the United States, we found that although the two economic crisis is different in formation, for example, the trigger of the great depression is the stock market, the subprime crisis is the real estate market, and the derivatives market was significantly larger and played a key role in the subprime crisis, the nature of the two is similar. Both were the "credit boom" caused by the unusually loose monetary condition and the imperfect regulatory system of credit conditions. At that time, the economy was in a state of positive output gap, and the economic boom was driven by a large amount of credit or even subprime loans. When monetary conditions and credit conditions are tightened, the economy begins to cool down. At this time, the high-risk credit generated due to the early imperfect regulatory system begins to default, and a large number of defaults affect the economy. A large number of financial derivatives will increase this effect, and the economy begins to decline.

3. Cope with Crisis

3.1. Great Depression

3.1.1. Fiscal Policy

There have been different views on how the United States got out of the Great Depression. Traditional Keynesists believed that WWII helped the United States out of the Great Depression, while other scholars believe that the monetary expansion during the Roosevelt's New Deal helped the United States out of the Great Depression. But there was a consensus that America's fiscal policy did not work during the Great Depression. During the Great Depression, fiscal deficits were used quite cautiously under the influence of the idea of "budget balance".

In the early stages of the Great Depression, Hoover government introduced some stimulus bill. On November 13, 1929, Hoover proposed a temporary reduction in the income tax rate by 1%, In 1931, the federal government deficit budget was increased to 3%, and social welfare

spending was increased by about 100,000. By 1932, however, Hoover began to increase taxes, as the government was worried about the deficit budget. On June 6th Hoover signed the tax increase of the Revenue Act of 1932. After Hoover left office, Roosevelt introduced a number of fiscal policies, such as the Federal Emergency Relief Act, establishing public works administration for public engineering construction. By 1934 its policies added \$2.7 billion to annual federal spending, but the total was still a drop in the bucket compared with the fiscal stimulus the United States needed at that time, that spending was less than 3% of that year's GDP. And while the federal government increased the budget deficit, local governments tighten the deficit and increased taxes to make up for the drop in revenue.

During the Great Depression, fiscal stimulus policies were always less powerful and incoherent due to the restriction of "budget balance", and local governments even contradict their federal government policies. These two reasons together led to the smaller effect of fiscal stimulus policies throughout the Great Depression.

3.1.2. Monetary Policy

Unlike fiscal policy, Roosevelt's monetary policy was thought to have played a huge role, even ending the Great Depression.

In the early days of the Great Depression, the Fed cut interest rates by 2.5% in five months and to 3.5% in March 1930, but that was far from enough to counter the crisis, and the economy began to weaken again in the second half of 1930. By September 1931, as sterling was forced to abandon the gold standard, investors were worried that the US would also abandon the gold standard. Therefore, gold was flowing out of the US. In order to maintain its gold reserves, The United States continued to wrongly uphold the gold standard. The Federal Reserve began to raise interest rates and tighten monetary policy. On October 9, the Federal Reserve Bank of New York raised the discount rate from 1.5% to 2.5%, which was exacerbating the recession.

Monetary policy under the Roosevelt era was significant. After Roosevelt took office, he suspended gold exports on March 5, 1933. The subsequent Emergency Banking Act of 1933 gave the Fed the right not to issue money on the gold standard, and stopped the convertibility of gold in April of the same year. The US withdrew from the gold standard and began to increase the money supply, starting with an aggressive expansionary monetary policy. By 1937, the US money supply rose by nearly 47%.

After that, the US dollar started to fall, and asset prices began to rise. Deflation expectations were being replaced by inflation expectations. The exchange rate between the dollar and the British pound dropped from \$3.75 for a pound in April 1933 to \$5 for a pound. The price of dollar-denominated gold has risen rapidly. Before the US government fixed gold at \$20.67 an ounce, In 1944, only one year after the US declared the gold standard, it exceeded \$30 an ounce. Several months after leaving the gold standard, the Dow rose 96.1%, from 55.4 on March 31, 1933 to 108.67 on July 18, 1933. At the same time, the US economic data began to pick up. The GDP of the US rose from \$81.78 billion in 1933 to \$111.41 billion in 1936. Total personal revenue in the United States also rose from \$4.8 billion in 1933 to \$6.86 billion in 1936. The US year-on-year CPI rebounded from -10% in March 1933 and ended deflation in December 1933. Investment in durable consumer goods in the United States rose from \$900 million in 1933 to \$1.91 billion in 1936.

The darkest hour of America had passed, and Roosevelt's monetary policy got America off the hook.

3.1.3. Relief Policy

In the early days of the Great Depression, the rescue policy was not satisfactory. banks were left to go bankrupt, The few rescue policies are very demanding, many banks that needed capital injection could not meet the requirements and only to fail, which seriously damaged the entire financial system.

During the Hoover period, although some aid policies were tried, it was too late and the aid requirements were too strict, which didn't work so well. The wave of bank failures began in 1930, the landmark event was the collapse of the United States banks at the end of the same year. The bank at that time was a systemic important bank, But the Fed and the federal government did nothing when the United States banks collapsed, only some Wall Street financiers had discussed whether to bail out the United States bank, But eventually they decided to let it go bankrupt. The collapse of the United States banks has dealt a fatal blow to public confidence in the banking system. In 1932, when the economy depressed further and bank failures intensified, the Hoover government finally introduced a rescue out. The same year on January 23, On January 23 of the same year, Hoover established a Reconstruction finance company to provide liquidity to the banks, trying to ease the bank failures, But it only loaned to banks that provide good collateral, some Banks in need of liquidity might not be able to obtain loans, And the company would publish the institution that was provided to the loan, which was equal to be announced to the world the this institution was in trouble, further aggravated the public panic.

When Roosevelt took office, he adopted a broad and thorough rescue policy. Fireside talks and communication with citizens quickly reversed people's confidence in the future, and the banking system quickly recovered. Within a week after Roosevelt took office, he enacted the emergency Banking Act of 1933, which allowed the Fed to issue money based on bank assets, and the Treasury agreed to guarantee the Fed's losses. At the same time, the auditor conducted an emergency audit of the bank, and when the bank was deemed safe, it could reopen and apply for a loan from the Federal Reserve with any asset. President Roosevelt also delivered a national speech on March 12, also known as the "Fireside Talk", explaining the state of the banking system and bailout policies. The next day, bank deposits was increased by \$1 billion. Since then, some rescue policies and measures have been introduced to consolidate the rescue achievements of financial institutions. On June 13, the property owner loan company was established to provide refinancing for the housing mortgage borrowers. On June 16, the Federal Deposit Insurance Company was formed to insure its deposit accounts to ease depositors' fears of bank bankruptcy.

3.2. Subprime Mortgage Crisis

3.2.1. Fiscal Policy

Unlike the fiscal policies during the Great Depression, the policies of the Bush and Obama administrations were consistent and coherent during the financial crisis, both implementing large-scale fiscal stimulus measures to help the United States recover from the crisis.

In the early stages of the emerging economic issues, proactive fiscal policies were already being implemented. The first set of fiscal policies was introduced on January 22, 2008, when the Senate passed a \$160 billion stimulus plan, primarily focused on tax rebates for middle and low-income individuals to stimulate consumption and investment. On October 3, an emergency Troubled Asset Relief Program (TARP) was hastily enacted, granting the Treasury Department authorization of \$700 billion. This fund could be utilized for purchasing troubled assets, preventing the crisis from escalating. Later on, these funds were not only used for acquiring troubled assets but also gave the Treasury Department the authority to inject capital into banks, allowing these funds to leverage and further stabilize the market.

By the end of 2008, the Bush administration had extended \$13.4 billion in emergency loans to avoid the bankruptcy of Chrysler and General Motors. During the administration of Bush alone, the expenditure amount of fiscal policies exceeded 800 billion dollars. The Obama administration continued to implement, massive, fiscal stimulus policies. Within a month of the presidency, the Obama administration introduced a \$787 billion Recovery and Reinvestment Act, which used \$288 billion on tax rebates and the rest on federal or local government

spending and infrastructure development. On March 23, the Ministry of Finance issued a series of policies to buy more than \$500 billion of non-performing assets at banks.

3.2.2. Monetary Policy

During the crisis period, the Federal Reserve also implemented proactive monetary policies. Despite initial concerns about inflation due to soaring oil prices drove them giving up the easy monetary, the overall approach was timely and robust.

From September 2007 to December 2008, the federal funds rate dropped from 4.5%–4.75% to an unprecedented range of 0%–0.25%. Over five quarters, the interest rates decreased by 450 basis points, and the discount rate fell from 5.75% on August 17, 2007, to 0.5% on December 16, 2008, marking a 525 basis point reduction. Concurrently, the Federal Reserve, in collaboration with the Treasury Department, employed various measures to provide liquidity to financial markets.

On March 10, 2008, the Federal Reserve launched a \$200 billion regular securities lending facility that allows the collateral to be risky assets to provide liquidity to the market. On September 14, 2008, the Federal Reserve unprecedentedly expanded its primary dealer credit facilities, accepting any form of collateral, including subprime mortgages and junk bonds. In contrast to the Reconstruction Finance Corporation established during the Great Depression, which only accepted high-quality collateral, this approach differed significantly and proved more effective than the Reconstruction Finance Corporation in the Hoover era.

By the end of the year on November 25th, the Federal Reserve and the Treasury Department initiated the first round of quantitative easing policy, with the Fed committing to purchasing \$600 billion in mortgage-backed securities. In February 2009, the Fed introduced a total of up to \$1 trillion in term asset-backed securities loan facilities, providing non-recourse loans to AAA-rated asset holders. On March 18, the Federal Reserve further expanded its quantitative easing policy, with the purchase volume for mortgage-backed securities alone reaching \$750 billion, bringing the total increase to over \$1 trillion.

3.2.3. Relief Policy

When the crisis spread to financial institutions, the federal government and the Federal Reserve introduced a series of policies to maintain the stability of the financial system. Although the failure to rescue Lehman Brothers led to its bankruptcy, the stability of the financial system was effectively maintained.

The Fed acted quickly when Belden Lake faced bankruptcy. On March 10, 2008, the Federal Reserve gave JPMorgan Chase a \$30 billion non-recourse loan to help it acquire Belden Lake. The Federal Reserve and the Treasury Department provided timely assistance to Fannie and Freddie in a time of its crisis. In the middle of July 2008, the Fed limited Fannie and Freddie to do short selling in the stock market, and announced that Fannie and Freddie could use public funds when they went bankrupt. By July 23 the Treasury persuaded Congress to pass a bill that could use "unlimited" funds to bail out Fannie and Freddie. The following year on February 18, the government unveiled a \$275 billion plan, of which \$200 billion was used to finance Fannie and Freddie. On September 16, 2008, the Federal Reserve gave American International Group (AIG) an emergency loan of us \$85 billion, and acquired 80% of its equity, basically nationalizing it. On November 10 of the same year, the Federal Reserve provided another US \$150 billion to AIG. When the money fund market faced a collapse, the Treasury used \$45 billion on September 19, 2008 to guarantee investors' losses. In mid-October 2008, the Ministry of Finance expanded the use of bad assets and began to inject capital into banks to avoid problems in the banking system. This time, the Treasury learned from the experience of Reconstruction Finance Corporation during the Great Depression and injected capital into all banks to avoid public panic.

3.3. Sum up

The response policy during the Great Depression was very immature compared with the subprime crisis. During the Great Depression, except for the monetary policy and rescue policy of the Roosevelt period, the other policies had little effect on the economic recovery. During the subprime crisis, fiscal policies, monetary policies and rescue policies were very timely and large-scale, so compared with the Great Depression, the time to get out of the crisis was short, and the damage caused by the crisis to the economy was less and more controllable.

4. Inspiration

4.1. The Implementation of Extremely Loose Monetary and Credit Policies Should Be Accompanied with Perfect Supervision

Reviewing the two most important economic crises in the history of the United States, we can find that these two crises have a common reason, both of which have experienced the extremely loose monetary and credit conditions in the early stage. Under such conditions, The economy saw a false boom driven by massive debt, and due to lack of regulation, the debt or financial derivatives had a number of high risk, such as the great depression call loans, and a lot of risky loans that could not be recovered if the stock market fell. The financial crisis involved large issuance of subprime mortgages and extremely large amounts of derivatives around risky loans. The lack of regulation also makes financial institutions vulnerable, for example, in 2007, the reserve requirement ratio of Fannie and Freddie was less than 0.5%, while more than half of its earnings came from risky mortgage-backed securities and had \$1.7 trillion unpaid debt. These economic booms, driven by large amounts of risky subordinated debt and vulnerable financial institutions, have huge risks.

4.2. Tighten the Loose Monetary Conditions with Moderation. The Stress Test is Also One of the Feasible Options

In addition to these two facts(wide credit, wide currency, lack of regulation), the two major US crises also have a common reason, which is the rapid tightening of the previous easing conditions. The pre-Depression discount rate increased from 3.5% in early 1928 to 6% in September 1929, an increase of 250 basis points, and the pre-crisis federal funds rate ceiling increased by 400 basis points from 1.25% in July 2004 to 5.25% in June 2006. In the face of rapidly tightening monetary conditions, a large number of risky credit accumulated in the early stage began to default and triggered a crisis. Therefore, when facing a large number of risks in the early stage, monetary conditions should be moderate to avoid large-scale concentrated outbreak of risks.

Secondly, the financial market stress test is also one of the feasible options. Through the stress test, the decision makers can better understand the stability of the financial market to help the decision-making. Another benefit of passing stress tests is that the risks of financial innovation can be measured to some extent, under the condition of the early "two wide a lack", even if the financial regulation has been very perfect, there are always financial innovation will bypass the regulation, at this time, some traditional regulatory indicators will be in the "distortion" situation. Through large-scale stress test we can know the real situation of the financial market. For example, in 2023, the Bank of Japan conducted a large stress test when it considered ending the YCC (yield curve control).

4.3. Use Positive Expansionary Policies to Avoid Further Expansion of the Depression

Compared with the policy intensity and recession during the Great Depression and the subprime crisis, it is obvious that the timely adoption of expansionary monetary policy and

fiscal policy is more conducive to the recovery. One of the reasons for the long recession of the Great Depression was the adoption of tight monetary and fiscal policies in the early years of the Great Depression, and the inadequate rescue of the financial system, which led to a further recession. By contrast, the 2008 financial crisis took only about a year to get out of the recession. During the Great Depression, GDP declined from \$10.46 billion in 1929 to \$5.572 billion in 1933, and GDP decreased by 46.7%. It was not until 1941 that its GDP returned to 1929 levels. By contrast, the GDP of the US fell by only 1.9% between 2008 and 2009 during the subprime crisis, and returned to 2008 levels in 2010. The excellent expansionary monetary and fiscal policies and timely rescue policies during the subprime crisis contributed greatly.

For emerging market countries, the recession may be due to externalities, such as the global liquidity squeeze leading to concerns about their own exchange rates and thus restricting the implementation of aggressive expansionary policies. In this case, adopting an austerity policy is not a sensible choice. First of all, the Great Depression in the United States has given us a lesson, tightening the policy will only deepen the recession. Secondly, the currency of emerging market countries is not the international reserve currency, the tightening policy will not necessarily lead to the appreciation of the exchange rate, but will lead to further domestic recession and further depreciation of the exchange rate.

Therefore, under these conditions, emerging market countries should avoid adopting tightening policies, adopt appropriate expansionary policies to "support" the economy, and then release large-scale expansionary policies when the external environment is improving.

4.4. Pay Attention to the Government's Credibility and the Public's Expectations

During the Great Depression in the United States, people were disappointed with the Hoover government, and their expectations for the economy were very negative. This negative expectations increased the uncertainty, thus leading to people's hedge behavior, reduced investment and consumption, and a large number of deposits withdrew from banks, leading to further economic recession and the collapse of the financial market. After Roosevelt took power, he paid attention to communicating with the public, and explained the current situation to the public and informed the public of the efforts of the government to reverse the public's expectations, especially the first "Fireside talk", which reversed the public's negative expectations for the bank. A large number of deposits entered the bank again, and the banking industry was revitalized again. Therefore, in the period of economic downturn, great attention should be paid to the management of people's expectations, which requires the government to maintain good credibility and effective communication with the public.

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