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The Impact of Financial Crises on Financial Markets: Case Studies of Three Historical Crises

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Abstract: The recurring occurrences of financial crises have profound impacts on the global economic system. Insights gained from in-depth discussions on financial crises can effectively respond to future shocks, thereby ensuring the steady development of the world economy. This paper uses comparative analysis to examine the similar and different impacts of three financial crises on financial markets: the Dutch Tulip Mania of 1637, the Asian Financial Crisis of 1997, and the Subprime Mortgage Crisis of 2008. The research findings indicate that all three financial crises caused significant volatility in financial product trading markets. At the same time, these crises provided different lessons for the development of financial markets: the 1637 Dutch Tulip Mania underscored the importance of regulating exchanges, the 1997 Asian Financial Crisis highlighted the importance of foreign exchange reserves, and the 2008 Subprime Mortgage Crisis emphasized the necessity of controlling the banking industry, especially lending.

Keywords: financial crisis, financial market, Tulip Mania, Asian Financial Crisis, Subprime Mortgage Crisis

1. Introduction

Given the adjustments in the international economic landscape, global climate change, political conflicts, and other exogenous shocks that drive up global financial risks and uncertainties, financial instability has become a significant developmental feature. Financial crises, as a phenomenon demanding attention, primarily manifest as a series of severe issues within financial markets. These problems can lead to abnormal fluctuations in credit and liquidity within the economic system, subsequently triggering the collapse of the global economic system.

The frequent outbreaks of financial crises have substantial impacts on countries and the world at large, making the study of their effects a matter of urgency. Financial markets, as an essential component of the modern financial system, are venues for the transfer, trading, and circulation of financial products such as stocks, foreign exchange, funds, and bonds. These markets mainly include exchange markets and over-the-counter markets. More importantly, financial markets create a favorable financing environment for national economic development. However, as a risk investment market, they possess high sensitivity and volatility, making it crucial to assess the impact of financial crises on financial markets.

This paper focuses on the impact of the Dutch Tulip Mania of 1637, the Asian Financial Crisis of 1997, and the Subprime Mortgage Crisis of 2008 on financial markets. Through comparative analysis,

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it aims to provide important academic perspectives on how to mitigate the impact of financial crises on financial markets and prevent potential risks.

2. Literature Review

The literature closely related to this study focuses on the stock market under shocks. Shen Yue et al. found that under the impact of major risk events, the global stock market risk network becomes more tightly interconnected, with a more significant geographic clustering effect of risk contagion [1]. Additionally, developed markets with high levels of capital openness have a markedly increased capacity to export risks to emerging markets. Song Yuchen and Lv Jingru demonstrated that under extreme conditions, there is significant linkage and bidirectional risk spillover effects between Chinese and foreign stock markets, with the risk spillover from foreign stock markets to the Chinese stock market being more pronounced [2]. Li Yao showed that the international financial crisis triggered by the 2008 subprime mortgage crisis in the United States quickly spread worldwide, deeply affecting the Chinese stock market and resulting in a prolonged slump [3]. Xie Chi et al. found that stock market shocks have a greater impact on the market than financial crises, and neither financial crises nor stock market shocks significantly impact the robustness of network edges; the survival rate of the network remained high throughout the study period [4]. Rastogi, S. discovered that the impact of crises on the volatility and leverage effect of national stock markets is significant but varies in direction [5]. Zhang Keqin and Li Yongbo indicated that economic policy uncertainty has a high global spillover effect on stock market volatility, which increases during major international events, with the developed economies' stock markets being the most closely linked [6]. Guo Wenwei et al. showed that the impacts of the 2008 financial crisis and the 2020 COVID-19 pandemic crisis did not alter the overall dependence structure of global stock markets but caused temporary structural changes and increased the level of global systemic risk spillover [7].

On the other hand, some literature related to this study only discusses the economic and financial impacts brought by shocks. Chen Rui and Li Jinye found that flexible and moderate use of monetary policy, strengthening risk monitoring and early warning, and using macroprudential policies can effectively prevent external economic and financial risks [8]. Huang Ke et al. indicated that financial markets exhibit two major grouping relationships: stock, commodity futures, and currency markets, as well as bond and foreign exchange markets, with different types of "black swan" events having significantly different impacts on the convergence levels of financial markets [9].

Additionally, literature exploring the stock market is also relevant to this paper. Wang Yan found that herd behavior is a major driving force of market sentiment and bubbles, severely affecting market efficiency [10]. Hu Haifeng et al. found that emerging markets' stock markets generally have stronger resilience than those of developed countries, primarily due to the strong recovery and adaptability of emerging markets; however, there is significant variability in resilience among different emerging markets [11].

Based on the above literature, the possible contributions of this paper are mainly threefold: First, in terms of research topic, although discussions on the impact of financial crises on financial markets are already extensive, this paper considers the 1637 Dutch Tulip Mania and the 2008 subprime mortgage crisis, which are the first and the most recent financial crises in human history, making the topic timely and representative. Second, in terms of research methodology, this paper employs comparative analysis to deeply analyze the impact of the 1637 Dutch Tulip Mania, the 1997 Asian Financial Crisis, and the 2008 Subprime Mortgage Crisis on financial markets, identifying the similarities and differences in financial market transformations at those times. Third, in terms of data, this paper uses real and authoritative data in the argumentation process, ensuring the authenticity and timeliness of the arguments, which helps to derive more accurate and objective economic conclusions.

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3. Three Major Historical Financial Crises

3.1. The First Crisis in Human History: The Dutch Tulip Mania of 1637

The Dutch Tulip Mania crisis highlights the period from 1634 to 1637 during the Dutch Golden Age, where the prices of tulip bulbs surged to abnormal levels before plummeting. In February 1637, at the peak of tulip mania, some tulip bulbs were sold for prices equivalent to a worker's annual wages or the cost of a luxurious house at the time. In this crisis, the tulip trading market resembled the stock market, with the emergence of multiple exchanges that provided loans to investors, enabling them to purchase tulip notes. The influx of frenzied investors drove tulip prices to soar, leading to the collapse of the tulip market. This collapse triggered the bankruptcy of financial institutions, causing a financial crisis.

3.2. The Global Financial Turmoil: The Asian Financial Crisis of 1997

The Asian Financial Crisis, which began on July 2, 1997, was primarily marked by the collapse of the Thai baht. At that time, the significant appreciation of the baht against the yen and the inflow of capital driving up the prices of non-tradable goods led to a sharp decline in Thailand's exports. Faced with a massive current account deficit, international investors lost confidence in Thailand, resulting in a large-scale withdrawal of foreign capital. During the crisis, Thailand abandoned its fixed exchange rate policy and adopted an inflexible exchange rate policy, depleting its foreign exchange reserves. The Thai government's actions indirectly caused the currencies of other Asian countries to depreciate, leading to a collapse in Asian stock markets. After the crisis, Asian countries began to slowly develop foreign exchange policies that required maintaining exchange rate stability while ensuring necessary flexibility in exchange rate adjustments.

3.3. The First Financial Crisis of the 21st Century: The Subprime Mortgage Crisis of 2008

The Subprime Mortgage Crisis of 2008 was directly manifested by the real estate bubble, characterized by the rapid increase in property valuations and the decline in mortgage debt higher than the value of the properties. The rise of subprime loans was the fundamental factor behind the real estate bubble. Subprime loans were the main drivers of the increased homeownership rate and housing demand during the bubble period. The homeownership rate for subprime loans in the United States continued to rise from 1994 to 2004. This demand directly fueled the increase in housing prices and consumer spending, leading to an unprecedented 124% growth in home values from 1997 to 2004. By 2007, consumer spending began to decline, the real estate market plummeted, foreclosures continued to rise, and the financial crisis erupted. During the subprime mortgage crisis, the U.S. stock market suffered a severe downturn, and liquidity nearly disappeared. Central banks issued hundreds of billions of dollars in loans to support exchange rates and maintain the operations of financial institutions. However, massive losses forced the vast majority of financial institutions to undergo capital restructuring, the capital markets froze, and financial institutions collapsed universally. Many banks, mortgage institutions, real estate investment trusts, and hedge funds suffered significant losses due to mortgage payment defaults or the depreciation of mortgaged assets.

4. Comparative Analysis of Different Financial Crises on Financial Markets

4.1. Similar Impacts

Severe Volatility in Financial Product Trading Markets: Reviewing the three crises from ancient times to the present, one common impact is the severe volatility in financial product trading markets. During the 1637 Dutch Tulip Mania, tulips, as the first financial product in human history, experienced price

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increases of up to 50 times. Subsequently, a more cautious group of investors began to exit the market, causing tulip prices to plummet. In the 1997 Asian Financial Crisis, foreign exchange reserves, an important financial product, saw a sharp decline in Thailand. During the 2008 Subprime Mortgage Crisis, real estate was the key financial product. Before the crisis, U.S. housing prices rose by 124% from 1997 to 2004, with an 80% increase from 2000 to 2006. However, from 2006 onwards, U.S. housing prices began to decline steadily.

4.2. Different Impacts

The 1637 Dutch Tulip Mania Highlighted the Importance of Regulating Exchanges: As the tulip market frenzy developed, merchants and common people from all over the Netherlands flocked to invest in this speculative venture. Exchanges that emerged at this time became key venues for investors to trade tulip notes, fueling the bubble's growth. However, the "tulip market exchanges" were immature financial markets, operating without regulation in an uncontrolled market economy. Investors, driven by speculative fervor, primarily used borrowed funds, leading to widespread bankruptcies among investors and financial institutions as tulip prices fell. After the tulip bubble burst, the Dutch government began to strictly regulate and intervene in exchanges to prevent market anomalies and crashes, promoting stability and healthy development. The tulip mania effectively led to the birth of financial regulatory laws, such as the UK's Bubble Act of 1720, marking the first governmental financial regulation in global financial history.

The 1997 Asian Financial Crisis Highlighted the Importance of Foreign Exchange Reserves: In the 1990s, the U.S. dollar regained dominance, and economic and financial globalization surged. Under the strong dollar, an unadjusted exchange rate system with numerous flaws became a prime target for international speculative capital. Thailand's foreign debt ratio rose from 38% in 1992 to 75% in 1997. In July 1997, under speculative attack, the Thai baht plummeted, leading to a sharp depletion of foreign exchange reserves and triggering a financial crisis. Subsequently, countries like South Korea and Singapore suffered varying degrees of impact, and the Asian Financial Crisis unfolded. For example, after the crisis, foreign investors withdrew from South Korea, depreciating assets and depleting foreign reserves, leading to a severe financial crisis and a shift in Korea's exchange rate regime. The Asian Financial Crisis revealed that foreign exchange reserves could buffer against adverse effects from international speculative capital. Post-crisis, several Asian economies increased their foreign exchange reserves, leading to significant global growth in reserves, particularly in emerging markets, to self-insure against potential financial shocks.

The 2008 Subprime Mortgage Crisis Highlighted the Importance of Controlling the Banking Sector, Especially Lending: The subprime mortgage crisis was directly linked to regulatory failures in overseeing financial institutions. For example, between 2001 and 2005, subprime mortgage lending in the U.S. expanded rapidly. Driven by huge profits, financial institutions lowered lending standards and procedures, attracting numerous customers with poor creditworthiness, increasing default risks. Poor regulation of credit rating agencies was another significant factor in the crisis. From 2002 to 2007, the combined profits of the three major rating agencies doubled from $3 billion to $6 billion. These agencies irresponsibly awarded approximately 75% of bonds with AAA ratings and 10% with AA ratings. Before the crisis, regulators did not strictly monitor these ratings, nor did they establish regulatory guidelines or punishment mechanisms for rating agencies, setting the stage for the crisis. However, JPMorgan Chase, known for its risk management capabilities, was the only major U.S. bank that did not incur losses during the subprime crisis. The subprime mortgage crisis underscored the perils of excessive lending without proper risk control, leading to an accumulation of problematic loans. After the crisis, financial regulators worldwide strengthened oversight of banking risks, and commercial banks enhanced their financial risk management.

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5. Conclusions

This paper describes and analyzes the impact of three historical financial crises on financial markets: the Dutch Tulip Mania of 1637, the Asian Financial Crisis of 1997, and the U.S. Subprime Mortgage Crisis of 2008. From the perspective of similar impacts, all three crises led to severe volatility in financial product trading markets. From the perspective of different impacts, the Dutch Tulip Mania of 1637 highlighted the importance of regulating exchanges, the Asian Financial Crisis of 1997 emphasized the importance of foreign exchange reserves, and the Subprime Mortgage Crisis of 2008 underscored the importance of controlling the banking sector, especially lending.

This paper makes the following policy recommendations for financial markets:

The importance of monitoring exchanges was highlighted by the Dutch Tulip Bubble of 1637, then the policy recommendations for regulating exchanges are as follows:Financial exchanges are required to strengthen the supervision and management of the industry authorities responsible for trading operations.The government can plan the number and size of exchanges and their regional distribution, and prudently approve the establishment of trading venues in accordance with the principles of "serving entities, controlling the total number of exchanges, rationalising their distribution, and prudently approving their establishment".Financial regulators, for their part, need to strengthen the management of exchange business licences and develop risk management systems that can be adapted to the nature of different businesses.

The 1997 Asian financial crisis highlighted the importance of foreign exchange reserves. Then for the foreign exchange market, this paper can get the following suggestions: the government can expand the trade foreign exchange balance facilitation, encourage foreign-invested enterprises to carry out domestic investment, but also need to focus on preventing the risk of cross-border capital flow, to maintain financial stability.Ultimately, by increasing the supply of foreign exchange facilitation policies and services, and supporting the standardised development of new trade forms and modes, it will be possible to achieve the expansion of a high level of opening up in the field of foreign exchange.

The subprime crisis of 2008 highlighted the importance of controlling the banking sector, especially lending. The policy recommendations of this paper for the development of the banking sector are as follows: to assess the risks of banking financial institutions on a regular basis and to require banking institutions to submit an overall plan for financial risks within a specified time frame and to rectify the situation within that time frame. For banking financial institutions that are not expected to make corrections at the end of the day or that cause significant losses, the banking supervisory and regulatory authorities may take relevant measures in accordance with the law.

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