

The Subprime Crisis: The Result of an Explosive Cycle in the USA

Xavier Brédart ^{a++*}

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ABSTRACT

The subprime crisis, considered by experts to be the worst since the 1930s, is mainly linked to the American mortgage policy. According to the contemporary cycle theory, the origin of the crisis lies in the manipulation of key interest rates by the Federal Reserve. This study aims to analyse the causes of the subprime mortgage crisis. It is based on a general analytical framework for the problem of crises. Drawing on the theory of financial cycles and principles of political economy, the study explores how speculative bubbles emerge and burst.

Speculative bubbles are not new in economics; the first identified as such was the "Tulip Crisis" in the 17th century. Other crises followed. This study primarily focuses on the subprime mortgage crisis, marked by the bursting of a speculative bubble in the real estate sector in the United States. This study analyses the events of this crisis and may serve as an early warning in identifying bubble patterns in the economy.

An analysis of financial cycles indicates the existence of several phases inherent in financial cycles and applicable to the subprime mortgage crisis. Analysis of the cycles in the study clearly shows that the optimistic and "sheep-like" behaviour of financial markets contributes to the formation of speculative bubbles. Moreover, while the Federal Reserve (FED) can be blamed for the subprime mortgage crisis, economists failed to mobilise existing and well-known theoretical economic principles to prevent this turbulence. This study concluded by discussing the COVID-19 crisis and the government's response.

Keywords: Crisis; financial cycle; political economy; speculative bubble.

^a Accounting and Management Department, Warocqué School of Business and Economics, University of Mons, Mons, Belgium.

⁺⁺ PhD & Teaching Assistant;

*Corresponding author: E-mail: xavier.bredart@umons.ac.be;

1. INTRODUCTION

The assessment of the causes of crises in capitalist systems is one of the core topics in economic analysis (Tori et al., 2023). The financial crisis has stimulated debates among analysts as they strive to detect and reduce the impact of recession before it undermines the global economy's development (Shuhao, 2021). As per Claessens et al. (2010), similarities can be established between the different crisis episodes (Brédart, 2014). However, Hautcoeur (2011) argues that financial crises all have their own specificities. The subprime crisis, considered by experts to be the worst since the 1930s, is mainly linked to the American mortgage policy (Myftari and Rosi, 2010). This crisis was triggered by the default of a large number of mortgages in the USA (Daniele et al., 2023). Subprime are loans to borrowers who have low credit scores. Most of them had a small initial interest rate, adjustable for future payments, which led to many home foreclosures after the rates climbed substantially. Meanwhile, the loans were transformed into pools that were then resold to interested investors. Since the returns of such investments were high, a financial bubble was created, inflating the subprime mortgage market until the defaults started to pop up (Sandoval, 2014). According to the contemporary cycle theory, the origin of the crisis lies in the manipulation of key interest rates by the Federal Reserve (Salin, 2011). In 2000, when the growth rate of the U.S. economy began to decline, the Fed decided to lower its key interest rate until 2004 (Brédart, 2014). This artificially low rate had the expected effect; growth came back. However, in late 2004, following the threat of inflation induced by rising commodity prices, the Fed raised its rate. This caused a decline in the growth rate, to finally led to a recession in the United States in 2009. Note that the rate changes made were artificial because they did not reflect changes in the propensity to save of U.S. households (Facchini, 2010). Nevertheless, as a consequence, saving and investment were disconnected; this encouraged American households to borrow (Brédart, 2014). This model was therefore based only on the assumption of a constant growth, which was inherently unsustainable and begat ultimately a speculative bubble.

If the Fed can be held responsible for the improper management of interest rates, other actors as economists, may also be implicated (Taleb, 2010). Although some of them had issued warnings between 2000 and 2006 (Krugman, 2000; Krugman, 2004; Aglietta, 2001; Stiglitz, 2003; Shiller, 2005; Bourguinat, 2006), their message seems to have been drowned in an optimism maintained by the speculative opportunities. Professional economists were particularly criticised for their dogmatic assumptions relative to the shareholder model that are the residual debt (Jensen, 2000) and market efficiency (Fama, 1970). It must be recognised that the reference to the "mainstream" has greatly influenced the acceptance of publications in academic journals (Brédart, 2014). The shareholder governance theory is so present in the academic literature that despite recent events, we still cannot say that their questioning is fully recognised (Rainelli -Le Montagner, 2009). The precepts of political economy, which had been emphasised after the 1929 crisis, also seem to have been overshadowed by many economists. Other criticisms may be made of economists; for instance, their blind faith in financial innovation to stimulate the economy and too much indulgence towards the

financial community (De Boissieu and Jacquillat, 2010). It should also be noted that the rapid changes in the financial markets have surprised some renowned economists such as Alan Greenspan, chairman of the U.S. Federal Reserve from 1987 to 2006 (Brédart, 2014). The latter, blinded for several decades by Friedman's theories (1970), will make his "mea culpa" in October 2008.

The objective of this paper is to analyse the causes that led to the subprime crisis. To this end, we base on a general analytical framework on the issue of crises, resting one hand on the theory of financial cycles and, secondly, on the precepts of political economy. To this end, sections 2 and 3 are respectively related to financial cycles and to fundamental economic theories. We conclude this article by identifying the various weaknesses inherent in the capitalist system of the early 21st century (Brédart, 2014).

2. FROM FINANCIAL CYCLES TO SPECULATIVE BUBBLES

The crises usually find their origin in the formation and bursting of speculative bubbles. According to historian Charles Kindleberger (1987), a bubble is defined as follows: "A sharp increase in the price of an asset or a range of assets in a continuous process where the initial rise generates expectations for speculators interested in profits from the sale rather than by profits generated by the asset itself. The increase is usually followed by a reversal of expectations and a sharp decline in prices, often leading to a financial crisis."

The first bubble of economic history is known as the "crisis of the tulip". The "tulipomania" occurred in the mid-17th century in the Northern United Provinces. Between November 1636 and February 1637, the exchange price of the tulip bulb was multiplied by twenty (Thompson, 2007). This disproportionate increase in the exchange value will be followed by the collapse of the price of the tulip bulb, which in May 1637, returns to its level of November 1636, resulting in the destruction of the wealth of thousands of families (Brédart, 2014). Throughout history, many similar episodes, marked by the swelling and then exploding bubbles, have happened. For instance, in 1720, the French market collapsed because of the rise and then the fall of the stock prices of the Mississippi Company. During the 19th century, the development of railways also caused a surge in stock prices before reaching a sharp reversal. A similar phenomenon was recorded in October 1929 on Wall Street. More recently, the momentum of the capital works program aimed at developing information technology initiated under Reagan and dubbed "Star Wars", allowed the United States to experience a period of prosperity during the nineties marked by the surge in technology stocks. While the benefits of the new economy seem sustainable, in March 2000, stock prices of companies in TMT (technology, media and telecommunications) dropped abruptly. The latest bubble is one of the housing bubbles in the United States that led to the subprime crisis. Aiming to support U.S. demand, the conditions of access to credit have been eased, resulting in an important increase in property prices. The securitised assets reflecting mortgages have suddenly raised doubts and caused the downturn in property prices (Brédart, 2014). This caused the bankruptcy of many American households. From these examples, it

appears that the process of inflation/deflation of bubbles seems to repeat itself repeatedly in the capitalist context.

From his analysis of financial crises, Kindleberger (1996) highlighted the recurrence of five phases inherent to financial cycles. The first one is the growth and usually follows a period of reduced economic activity. During this phase, the growth is fueled by real investment, which is funded by a credit that remains in line with the incomes. This growth is then considered "healthy" but is already creating optimistic behaviour, pushing up the price of some assets to rise. The second phase of the cycle is that of euphoria, in which large increases in asset prices are observed; these are accompanied by a general credit boom that is less and less in line with income growth (Brédart, 2014). This phase is characterised by over-indebtedness and an underestimation of risk. The next phase is characterised by the paroxysm and the reversal. The debt leverage is used at its peak. The system still works thanks to the speculative rise of the collateral values. At an unpredictable time, doubts regarding the valuation of these values appear, and prices fall. During the reflux stage, which is characterised by the introduction of pessimism, on the one hand, indebted agents are "obsessed" by seeking liquidity and, secondly, the liquidity providers are hesitant to lend because their risk aversion has increased (Brédart, 2014). Finally, comes the phase of balance sheet restructuring. Many entities sell their assets in panic, resulting in a fall in prices.

The "sheep-like" behaviour that is characteristic of the phase of euphoria may appear irrational because prices cannot rise without limit (Tirole, 1982). In addition, as per a study by Shiller (1989) conducted in the U.S. market before the crash of October 1987, most economic agents are aware of acting on a speculative market but do not feel threatened because they think they (and not the other agents) will come out in time. All the speculative agents, therefore, make the same bet that they will benefit from the bubble and that they will sell their assets at the right time (Brédart, 2014). This bet is based on their ability to anticipate "the average opinion" regarding the prices of the assets in the near future (Keynes, 1936); this implies the use of self-referential and mimicry behaviours rather than the use of a rational judgment. Although there are statistical tests to detect bubbles (West, 1987; Levin and Wright, 1997), it remains difficult to determine the moment of their explosion (Cutler et al., 1989).

So, the phenomenon of swelling/explosion of bubbles is part of the financial system and is endogenous to the capitalist system (Brédart, 2014). According to Schumpeter (1943), crises are necessary in the capitalist system (Schumpeter, 1911). As per his cyclical analysis in four phases (recovery, prosperity, recession and depression), Schumpeter considers the crises as a necessary phenomenon. He names this the "creative destruction". At the origin of these cycles, there is invariably an innovation that is particularly attractive in terms of profit. Irresistibly attracted by the hopes of gains, new companies emerge and borrow a lot in order to make profits, thanks to innovation as soon as possible. In doing so, they induce a phase of expansion, boosted by the speculation. The expansion

continues until some revaluations of profit outlook cause a reversal of the economic activity (Boyer, 2010).

In the vein of Schumpeter, Sauvy (1980) shows that the disorder caused by a major discovery should not, however, lead to renounce to innovation because, in a second time, the crisis allows to purge the system and prepares the ground for a new wave of innovations and therefore for a new growth. Different types of cycles have been developed. The Russian statistician Kondratieff (1926) highlights long cycles of 40-60 years. Schumpeter notes that these periods correspond to major technological developments that are the steam engine, the railway, electricity, the car, and finally the new technologies. This "sinusoidal" representation (see Fig. 1) of capitalism illustrates the idea that history is made of bullish and bearish periods and that innovation is the cause of crises.

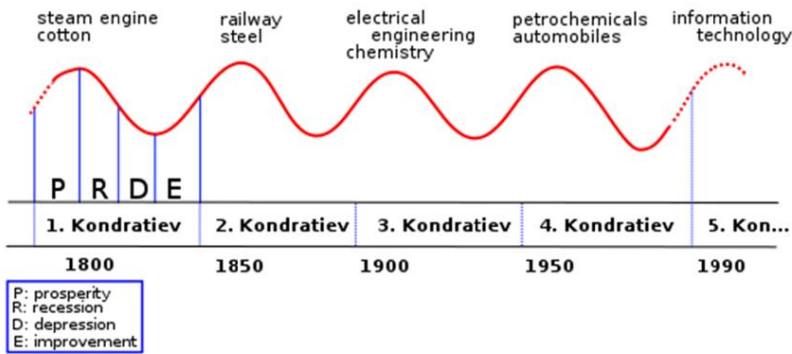


Fig. 1. Kondratieff cycles and technological innovations

Source: Tonglet, B. (2003). *La déflation: Qu'en dites-vous Nikolai Kondratieff?*. Paris, L'Harmattan.

When the turning point is reached, companies are left with excess inventory, which tends to lower prices. Some heavily exposed banks and firms must declare bankruptcy. The situation ends up being stabilised, optimism and investment are back, and a new cycle begins. During the technological euphoria of the late nineties, some have announced the "end of the cycle"; in other words, the advent of perpetual growth. This belief was quickly denied by the successive explosions of the Internet and of the housing bubbles.

3. THE PRECEPTS OF POLITICAL ECONOMY

The violence and the extent of the subprime crisis have forced many analysts to reconsider the importance of basic economic theories. The process of financial deregulation, which has been accelerated in the nineties, has conferred to finance an increasingly important role in the economy (Boyer, 2010). Finance now dominates the economy and imposes its torrid pace. Financial innovations based on cheap credit have helped to consolidate the financial supremacy that is more

and more disconnected from the rest of the economy. At the origin of the subprime crisis, there is the phenomenon of deregulation of finance initiated in the 80s. This phenomenon was supported by the dominant ideology. That said, the failure of the "invisible hand" leads many experts to reconsider the Keynesian assumptions about crises.

Lessons learned from past crises and from analyses of economists such as Keynes, Minsky, Schumpeter, or Fisher seem to have been overshadowed by the mirage of a relentless uptrend. Keynes (1936) contends that: "We cannot say that speculation always prevails over the company. However, the risk of a predominance of speculation tends to grow as the organisation of financial markets increases". In other words, a strong market development and an intense sophistication of financial instruments lead to the encouragement of speculation. The speculative appeal has the effect of encouraging excessive debt. As per Fisher (1933), "Easy money is the major cause of indebtedness. When an investor believes he can make more than 10% profit per annum by borrowing at 6%, he will be tempted to borrow and invest or speculate with borrowed money". Minsky (1992) develops the "financial instability" hypothesis. The first step of his theory is to provide a typology of balance sheets into three categories:

- Prudent structures within which the income of the investment covers all financial commitments;
- Speculative structures in which profits do cover the payments of interests, but not the payments in capital;
- "Ponzi" structures in which profits do not cover the payments at all.

With this typology, Minsky can classify economies according to the funding structure of entities. If the proportion of speculative and Ponzi structures is high, then the economy is weak and vice versa (Brédart, 2014). He then remarks that "during prolonged periods of prosperity, capitalist economies evolve from one financial structure dominated by prudent units towards a structure in which speculative and Ponzi units are important" (Minsky, 1992). Echoing the work of Schumpeter, he postulates the endogenous and cyclical nature of crises. He says that crises are caused by the financial fragility that occurs during upswings in the economy. When the financial fragility reaches a certain level, the interest rate is necessarily student (Nasica, 1997), and the most fragile entities disappear. Other dependent entities then fall; this initiates a spiral. According to Minsky, the pursuits of profit and of innovation are incentives to speculation. This must be controlled through public interventions tailored to discipline the behaviour of agents and thus to maintain a degree of financial robustness.

Minsky's recommendations were not followed, although the collapse could have been prevented through anticipative regulation. For the Internet crisis, investors had anticipated high returns thanks to the advent of new technologies (Brédart, 2014). In the subprime crisis, an infinite rise of mortgage prices had been assumed, and the enrichment made possible by the financial omnipotence seems to have been pushed to the extreme. In either case, the state intervention seems inevitable (Brédart, 2014). Finally, the pursuit of profit disconnected from

reality and a severe lack of supervision have contributed to the emergence of the subprime crisis.

Boyer (2010) summarises the different steps of a financial cycle in which each loop ends with the intervention of public authorities in order to restore confidence and to introduce new rules to prevent the occurrence of new episodes of crisis (Brédart, 2014). On 20 September 2008, Paulson's USD 700 billion plan (Cormier, 2010) to bail out the financial system kept the US economy from collapsing. Once the crisis is over, the good intentions are quickly replaced by opportunism, and any significant innovation is likely to initiate a new cycle. Also, many experts predicted the next speculative episode in the renewable energy sector. However, the unexpected arrival of an unprecedented health crisis has, since 2020, put national economies to the test. Indeed, due to the health context of COVID-19, the economic sector of many countries has been weakened, and many countries undertook measures (Armoun, 2021). The states have, once again, been forced to come to the aid of this economy in order to help avoid many bankruptcies. In the United States, the Paycheck Protection Program of USD 700 billion was used in 2021 (Autor et al., 2022) to help firms overcome the crisis. During this crisis, those responsible were neither the banks nor the speculators. However, once again the solution came from the states, which, it seems, remain the only ones capable of resolving crises.

4. CONCLUSION

This article, that focuses on the subprime crisis, allowed us to identify various weaknesses inherent in the capitalist system of the early 21st century, among which are the cyclic and endogenous characters of crises. The American system, characterised by cheap credit and that has faith in self-regulated markets, seems to have staked all its hopes in maintaining an upward trend in the economy. Nevertheless, the recent economic crises have contradicted this hope (Brédart, 2014).

The seizure of power by the financial elite and the development of complex and opaque financial instruments have led to an acute informational asymmetry. As a consequence, investors have been misled about the risks of securitised assets and the market value of these assets has deviated from their real value (Brédart, 2014). Consequently, decisions to buy or sell assets were heavily based on a mimetic process rather than on an informed estimate. In other words, prices were determined by speculation. Lenders and borrowers have indeed been encouraged to participate in a game whose rules have been enacted by the financial sector. The securitisation mechanisms have so "muddied the waters" and have also disconnected prices and the real value of the assets. As a consequence, the market turned into a speculative casino that is self-persuaded of its heresy of infinite growth. In mid-2007, the housing bubble exploded. One year later, the financial sector collapsed and, finally, the rest of the economy, involving a generalised recession phenomenon (Brédart, 2014).

In terms of regulation, a repositioning of the financial sector in the capitalist economic landscape seems necessary in order to limit the incentives for systematic use of "speculative strategy". This strategy is indeed interesting during the early phases of financial cycles, but it inexorably leads to a weakening of the economy.

Finally, note that the crises are endogenous and cyclic and therefore make an integral part of the capitalist system (Brédart, 2014). Accordingly, the use of regulations can help avoid falling into the traps of the past but will not eradicate the crisis episodes because, once established, the regulation will inevitably be bypassed by one or more of the economic actors (Shachmurove, 2010).

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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