The New Paradigm for Financial Markets

By George Soros,
Public Affairs, 2008

Introduction
In this book, George Soros, the well known hedge funds trader turned philanthropist and philosopher argues that financial markets do not automatically move towards equilibrium. The biased perceptions of market participants influence not only market prices but also the fundamentals underlying those prices. Market participants not only seek to understand the situation but also attempt to change the situation. The two trends work in opposing directions. Soros calls this *reflexivity*.

The sub prime crisis
The sub prime crisis, which has had a profound impact on the global economy is a good example of reflexivity. The crisis had its origin in the Internet bubble of late 2000. To prevent deflation, the Fed cut the funds rate from 6.5% to 3.5% quickly and then to 1% where it remained for almost a year. For several months, the real interest rate remained negative, leading to a borrowing and spending boom. About half of US GDP growth in the first half of 2005 was housing related. From 2000 to mid-2005, the market value of existing homes grew by more than 50%. Between 1997 and 2006, consumers drew about $9 trillion in cash out of their home equity. A study revealed that in the 2000s, home equity withdrawals were financing 3% of all personal consumption.

The rise in house prices led to a speculative bubble. By 2005, 40% of all homes purchased were not meant to serve as permanent residences but as investments or second homes. Speculation could not happen without the availability of funds. That in turn was made possible by securitization.

Securitisation was meant to reduce risks through risk tiering and geographic diversification. But in reality, securitization increased risk by transferring the ownership of mortgages from bankers who knew their customers to investors who did not. Loans were approved by brokers, temporarily warehoused by mortgage bankers, sold en bloc to investment banks who structured CDOs and marketed to investors after getting high credit rating.

The possibility of generating fees without incurring risk encouraged lax and deceptive business practices. Enterprising investment bankers created CDOs of CDOs or CDO^2s and even CDO^3s. Credit Default Swaps (CDS) further expanded the boom. Specialised credit hedge funds effectively acted as licensed insurance companies and collected premium on the CDOs and other securities they insured. At the peak of the boom, the CDS market touched $62 trillion. Meanwhile, securitisation also gave impetus to the use of leverage. To hold ordinary bonds, a margin of 10% is typically needed. But synthetic bonds could be created by credit default swaps with a margin of 1.5%.

As long as the housing boom continued, securitization and leverage worked fine. But when the housing market flattened and then started to fall, the cat was out of the bag. Signs of trouble emerged in early 2007. On February 22, the global bank HSBC fired the head of its mortgage lending business after suffering huge losses. On March 9, D.R. Horton, the biggest US home builder warned of losses from sub prime mortgages. On April 2, New century Financial, one of the biggest sub prime lenders filed for Chapter 11 bankruptcy protection. In June, two large mortgage hedge funds created by Bear Stearns ran into trouble. In August, Bear Stearns filed for bankruptcy protection for the two hedge funds.

Once the crisis erupted and global banks started to write off mortgage positions, the financial markets unraveled with great rapidity. What started with low grade sub prime mortgages spread to CDOs. The CDOs themselves were not tradable but there were tradable indexes based on

CDO tranches. Investors trying to cover their long positions and short sellers went short on the indices. This led to sharp declines in the value of the CDOs.

Complicating this was the fact that investment banks carried large positions of CDOs of balance sheets in structured investment vehicles (SIVs). The SIVs financed their long maturity assets by borrowing in the short term asset backed commercial paper market. This is a fundamentally risky strategy that works only in the good times. When the short term market dried up, investment banks had to bail out SIVs and bring the CDOs back to their own balance sheets.

Soon market participants started distrusting each other as the exposure and consequently the credit worthiness of the counterparty was in most cases not clear. Despite the injection of liquidity by central banks, credit spreads continued to widen. Distress spread from residential real estate to credit card debt, auto debt and commercial real estate. Meanwhile, monoline insurance companies ran into trouble. They specialised in municipal bonds, relatively safe instruments. But later, they entered structured and synthetic products. And when they did so, their credit rating was downgraded. The result was that the municipal bonds themselves were perceived as being risky.

In all, the end result was a mess. It is far from clear when the financial system will be able to crawl out of this mess. Clearly the sub prime crisis is far greater and wider reaching than any financial crisis in recent times.

Sub Prime and reflexivity

Soros argues that the global financial system has been built on false premises. Our understanding of the world in which we live is imperfect. As Soros puts it, this is because “we are part of the world we seek to understand.” We try to understand the world we live in. Soros calls this the cognitive function. On the other hand, we also seem to make an impact on the world and try to change the situation to their advantage. Soros calls this the participating function. When both functions are in operation, they may interfere with each other. As Soros mentions, “when both functions operate simultaneously, the phenomena do not consist only of facts but also of intentions and expectations about the future. The past may be uniquely determined but the future is contingent on the participants’ decisions.”

In the cognitive function, the actual state of affairs is the independent variable and the participants’ views the dependent one. In the manipulative function, it is the other way around. In reflexive situations, “each function deprives the other of the independent variable which it would need to produce determinate results.”

Social and natural phenomena

Models based on sophisticated mathematics failed during the sub prime crisis because social phenomena are quite different from natural phenomena. In natural phenomena, there is a casual chain that links one set of facts directly with the next. In social phenomena, the cause of events is more complicated. Facts and the participants’ views and the interplay between them enter the causal chain. Participants seek not only to understand but also influence the situation. The chain does not lead from one set of facts to another but reflects and affects the participants’ views. In short, there is a “Heinzberg uncertainty principle” at work in social events. Unfortunately, economists have worked hard to eliminate reflexivity from their analysis. And that is why their explanations and forecasts are far too simplistic.

Our understanding of markets is also imperfect, because of inadequate information processing capacity. The human brain cannot grasp reality directly but only through the information it receives. The capacity of the human brain to process information is limited. On the other hand, the information that needs to be processed is huge. So we reduce the available information to manageable proportions by generalization, simile, metaphor, habit, ritual and routine. In so doing, we distort the underlying information and further complicate reality. Ideas expressed in ordinary language do not constitute an exact representation of an underlying reality. They make the reality even more complex.

Why equilibrium may not be achieved

It is widely believed that financial markets trend towards equilibrium. A good example is the theory of perfect competition, which postulates that the pursuit of self interest leads to the optimal allocation of resources by equaling supply with demand. The equilibrium point is reached when price equals marginal cost for the producers and marginal utility for the consumers. This philosophy has been the underpinning for the laissez faire policies of the 19^{th} century and more recently, Reagonomics and Thatcherism. Soros argues that to think of supply and demand, as if they are determined independent of the expectations of market participants is quite misleading. Demand and supply curves are supposed to determine the market price. But if they themselves are subject to market influences, prices would not be uniquely determined. Market participants act not on the basis of their best interests but on the perception of their best interests. The two are not identical.

Financial markets operate with a prevailing bias. In normal circumstances they tend to correct their own excesses. But occasionally, the prevailing bias may actually validate itself by influencing not only market prices but also the fundamentals the prices are supposed to reflect. That is when asset bubbles build. Valuations affect the fundamentals that they are supposed to reflect. This in turn may lead to leveraging. The willingness to lend, for example, influences the value of the collateral. Often the collateral involved, consists of real estate. Bubbles result when banks treat the value of the real estate as if it were independent of their willingness to lend against it.

Why regulation failed

Regulators believed that the markets would automatically reach equilibrium. So they abdicated their responsibility, relying instead on the market mechanism to correct its own excesses. Meanwhile, due to securitization and the use of complex instruments, the regulatory authorities lost the ability to calculate the risks involved. They came to depend on the risk control methods developed by the institutions. At the same time, the risk models of the institutions were flawed, based as they were on the assumption that the system itself was stable. With unchecked credit expansion happening and the nature of risk undergoing a dramatic transformation, the past did not really reflect current conditions. Securities had been issued on the assumption that housing prices would never fall, on an average across the US. The possibility of a nationwide housing bubble was never considered. That is why the VAR models failed to work.

Conclusion

Soros argues that the most important lesson to be learned from the subprime crisis is that the monetary authorities must not only monitor inflation but also potential asset bubbles. In this context, we must remember that asset prices depend not only on the availability of money but also the willingness to lend. The principle of reflexivity strongly influences the functioning of the financial markets.

Soros sees major long term implications arising from the global meltdown. He predicts the end of a long period of relative stability based on the US as the dominant power and the dollar as the main international reserve currency. A period of political and financial instability is likely. Hopefully, this will be followed by the emergence of a new world order.