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The Comprehension of the Financial Crises

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Abstract

Financial crises had become some of the worst nightmares for a lot of politicians and economist which led a lot of researchers to analyze their implications. In this paper the authors approach fundamentally in describing the types of the financial crises, their characteristics and normally the repercussions that they left behind. If the policy decision makers have more information about the crises, they can be more careful in planning, designing, and implementing some crucial measures in the economic policy. Therefore the efficient predictions along with the experience of a lot of other countries exposed on such economic situations are essential in order to achieve success in sustaining it.

Keywords: banking crises; debt crises; bubbles; stock markets.

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1. Introduction

The financial crisis is difficult to define and they often don't have precise beginning or end. In fact, a report by the staff of the World Bank defines financial crises as financial events that impair or eliminate a significant portion of bank capital in the financial system. Financial crises have two fundamental dimensions: one is financial; the other is the panic that often is triggered by the crisis [1].

First, the weakening and massive shocks on bank liquidity, payment systems and solvency are obvious characteristics of financial crises. Namely, there may be a crisis of liquidity and cash flows, in which depositors cannot withdraw their funds from banks and companies cannot take the necessary credits for the normal functioning of their operations just because banks have worn out cash reserves. Also, there may be disruption in payment system, in which the daily settlement and clearing of consumer and business transactions can be fully terminated, where expected cash at the end of the day is exchanged with undesirable situation of unsecured creditor overnight. There is a crisis of solvency if the banks are forced to write off significant losses on assets from their balance sheets, leading to a drastic reduction or complete loss of banking capital. These problems within a bank does not necessarily form a crisis, but it just takes a couple of large, failed institutions or smaller groups (e.g. Thai-financial companies, commercial bank in Korea) to lead to systemic panics. Second, panic strikes, sudden and dramatic loss of confidence of depositors and investors are often a predictive event.

In Ecuador in 1998, the confidence of depositors reached crisis proportions when the banks were unable to meet consumer demands and when Central Bank reserves were exhausted. Deposits of bank customers were effectively frozen and confiscated, and a week after a bank holiday in which the depositaries could not withdraw their funds from their banks. Argentina faced a similar decline in confidence in 2001 and 2002, followed by awkward street riots and public demonstrations of angry savers, mixed with the fiscal and monetary problems of the state that ultimately resulted in damage to the financial sector. When these two dimensions will consolidate, they cause a chain reaction and the state begins to entertain spiral, panic and loss of confidence are increasing problems in the banking system and the real economy seen at the microeconomic level. As a result of this, infection occurs among countries with adverse consequences on the financial and real sector.

2. Types of financial crises

Namely, financial crises around the world differentiate into several types: banking, currency, debt, bubbles and downs of stock markets.

Banking crises are defined as financial distress that is severe enough to cause erosion of most or all of the capital in the banking system. As long as banks keep enough reserves to cover the withdrawals of deposits by customers who really need the money, which is much less than the total amount of deposits, the system can operate smoothly and efficiently. However, the banking system is essentially fragile and sensitive. If all depositors withdraw their money at the same time, exploiting their own personal right (a situation known as the "bank run" - abruptly withdrawing their funds from banks because of fears of loss) banks will be forced to

liquidate their assets in a short period of time, which may cause the bankruptcy of the banks themselves. Given that withdrawal of deposits is often inefficient, the closure of banks is also necessary in order to eliminate inefficient institutions [2]. Such situations correspond to what is known as a "fundamental run" - major work, where their depositors are withdrawing their funds because they found out those bank assets are invested in bad, risky investments. However, the withdrawal of deposits can arise from purely speculative reasons. A typical example of this is speculative attack of 1991 in Rhode Island in the US, where perfectly solvent bank was forced to close after the TV channel CNN published photos that illustrated story about the closure of banks, which led to the belief among depositors that the bank is insolvent, which was not the case.

In fact, today the small savers are insured in many countries, which means that the modern form of a run on the banks is what is called silent run on banks ("silent run") where professional investors cease to rebuild their large deposits or certificates of deposit, which is the case with the "Continental Illinois" bank in 1984 in the United States [3].

These crises have renewed interest of the economic researcher's cause of two issues: the causes of the fragility of banks, ability to reduce that fragility and justification and organization of public intervention. This public intervention may occur in several forms:

- prompt assistance of liquidity by the central bank, which acts as a lender of last resort;
- organization for deposit insurance in order to protect depositors from bank failures;
- minimum solvency regulations and other regulations imposed by the banking authorities; and
- supervisory systems that need to control the activities of banks and to close those banks that do not meet these regulations.

Currency crises are defined as a forced change of parity, abandonment of fixed exchange rates due to a speculative attack on the domestic currency or an international rescue. The theoretical literature on currency crises can be categorized into three "generations", each marked by the underlying mechanisms by the crisis [4]. The first generation focuses on the basics ("fundamentals") of the crisis and emphasizes the role of unsustainable government policies that are incompatible with the regime of fixed exchange rates, and that eventually led to the collapse of the regime. Namely, this canonical model was first presented in Krugman (1979) and is based on a government that finances its budget deficit through continuous monetarization. The simplest model suggests that in periods leading to speculative attack, a gradual decline in reserves is shown. This model also suggests that the budget deficit and the excessive growth of domestic credits may be potential, early indicators for speculative attacks. Here are analyzed and other factors that may force the government to abandon the peg. For example, the expansive monetary and fiscal policy can lead directly to the deterioration of the current account, through an increase in demand for imports; the same result can occur indirectly by increasing the price of goods that are not traded on the international market and consistent overestimation of the real exchange rate. Thus, the behavior of some of the external sector variables such as the trade balance, current account deficit and real exchange rate can provide some predictions regarding the country's vulnerability to speculative attacks. Furthermore other potentially useful indicators in this respect are the possible measures for "quality of existing debt," expressed mostly through participation of the bad loans in the total banking system.

Second generation models were motivated by episodes such as the crisis of the exchange rate mechanism (ERM) in 1992-93 where some countries do not appear to possess the features described in the models of the first generation. This led researchers such as Obstfeld in 1994 to enrich the existing theories of currency crises. The key element in the second generation models is the recognition that there are benefits and costs for implementing fixed exchange rate, and the belief of market participants as to whether the regime will take place or may affect the cost of state to defend the peg. Namely, in these models, government policy is influenced by expectations and expectations are influenced by government policy which leads to the possibility of multiple equilibriums and realization ("self-fulfilling") of the crisis. These models suggest that anything that affects the decisions of governments on whether to hold or not a fixed exchange rate - because of unemployment, inflation, the amount and composition of debt, the stability of the financial sector - may contain information about the probability of occurrence of a currency crisis. Also, the inflexibility of the ERM prevented potentially beneficial actions of the government. This crisis has led to conflict between the countries - members about the objectives and limitations of the system.

On the other hand, we saw later in the year 1997-98 Hong Kong's strong parity against the US dollar, allowed interest rates to rise very high, but they had large reserves that protect them from speculative attacks and make them durable on these sudden shocks.

Third generation models of currency crises focus on the issue of contagion or why the emergence of the crisis in one country seem to affect the probability of occurrence of the crisis in other countries. Masson in 1998 suggests three possible reasons why crises seem to come in clusters. First, may actually be the consequence of a common external shock (e.g. fluctuations in international interest rates) that affect all countries. Second, there may be spillover effects from one country to another, the effects of competition in the trade or portfolio rebalancing effects. Third, speculative attacks can spread from one country to another based on the sensitivity of the market and "herding" behavior. This class of models suggests that early warning systems needs to include external variables such as: the dynamics of LIBOR (London Interbank Offered Rate) or the rate of economic growth of trading partners who initiated the critical problems in the country's economy or trade partner in similar countries should be taken into account [5].

For currency crises, the index of a country's vulnerability to crisis is usually based on the weighted average of the following three variables:

- Percentage change in the nominal exchange rate;
- Percentage change in gross international reserves;
- Difference in key domestic and foreign short-term interest rates.

Examples of countries that have experienced currency crises are: Countries with Exchange Rate Mechanism (1992-93) who were forced to devalue and withdraw from the mechanism; Asian crisis (1992-93); Latin American countries were not able to pay its debt in the early 1980s and the Russian financial crisis (1998) which resulted in the devaluation of the ruble cause not covering the Russian state bonds.

Debt crisis appear when the debtor fails to repay the debt or the creditor recognizes this as a significant risk and therefore does not approve new loans or tries to liquidate the existing loans. Debt crises can be linked to commercial (private) or sovereign (public) debt. Namely, external debt crisis may reflect constant solvency problem - the current value of the potential resources of a country is insufficient to meet its external obligations - or a temporary problem of illiquidity, where lending is stopped even though the country is technically solvent. For a better understanding of debt crises several theoretical models are used for the debt crisis, which reflect the different effects of the role of fiscal policy. Many models, analyze debt as a problem of "*willingness to pay*" when the debtor is solvent, but decides not to pay after an assessment of the costs and benefits of non-payment. Although many of these models are usually (implicitly and explicitly) related to sovereign debt - whose repayment is not usually legally enforceable in terms of commercial debt-analysis does not include fiscal reasons for the rise in debt, partly because these models have intends to focus on explaining the decisions of creditors - why borrow when repayment cannot be legally enforceable? - Instead of debtors. Another approach, less favored in the theoretical literature on debt crises, reviews debt crisis as a *problem of "ability to pay"*, but seen from the point of view of the government, rather than the country as a whole. The public sector is considered to be solvent as long as it's net worth (comprehensively defined to include existing assets and liabilities and the present value of all future receipts and payments) is positive. However, such a shock increase in interest rates, slowing the growth or appearance of a new major obligation, may lead to a prompt change in the perception of solvency, which results in withdrawal of new credit or capital outflow.

Some have explained the debt crisis in the early 1980s with these conditions: period of negative real interest rates in the 1970s that encouraged governments to borrow without concern for solvency in terms of lenders, but this was changed with the sharp rise in global interest rates in the early 1980s [6]. The third class of models explains how it is possible for solvent country or government to suffer liquidity crisis as a result of "self-fulfilling" expectations on the part of creditors. Lenders will not lend because they think the government will not pay, without any possibility of a refund, the debtor ultimately fails to pay his debts, thus justifying the pessimistic expectations. In fact, this process can occur in two ways: 1) through the *risk premium*, as pessimistic expectations increase the interest rate, thus increasing the possibility of default in respect of government debt [7]; 2) through the effects of liquidity, where pessimistic expectations reduce lending, which in turn reduces investment and liquidity, and hence future output, thus increasing the chances of failure [8]. If borrowers coordinate, this bad balance will be avoided, but if lenders are numerous and uncoordinated - as is the case with funding bonds- then pulling the creditor may occur.

Namely, in this connection a series of models are referred which try to give an explanation of the composition of public debt. State debt denominated in domestic currency leads to a rise in the problem of time inconsistency for the reasons to stimulate inflation in order to reduce the real burden of government debt. Borrowing in dollars reduces this problem, but full dollarization is not optimal if there are shocks to government expenditure and therefore states cannot emit bonds because these shocks. Pursuant to this, if you perceive that the state will not pay its creditors, it will lead to a strong reduction in capital inflows due to increasing suspicion that they will not meet its obligations. In contrast, if the private sector is unable to pay its external obligations, this will not lead to a major crisis, but in practice, if the private sector fails to meet debt obligations on a large scale, then the commercial debt immediately becomes sovereign debt through guarantees, saving the banks and others. In view

of the developing countries, crisis of sovereign debt in the first row cover debts that are held by non-residents or denominated in foreign currency. Term debt crisis is applied in cases of outright default as Russia in 1998, situations of contractual "voluntary" restructuring of the prospects for real default (Ukraine in 2000) and when the inability to pay debts is avoided by using a large and exceptional financing from official creditors (Mexico, 1994-95).

Bubbles are defined in economic research as one part of the movement in the "asset price" which is unexplainable based on what is called "fundamentals". The base in turn is a collection of variables for which there is a belief that moves the prices of assets. Namely, if in the pricing of funds through individual model serious uncertainties about the prices of the assets are set off, and then the term bubbles can be freely used. The earliest definition of bubbles in the dictionary has the political economy of Palgrave's (1926): "Any unusual (abnormal) venture accompanied with a high degree of speculation." This is actually irrational-broad definition of bubbles. With this definition we cannot know whether we have a bubble, until it bursts. Kindleberger's later defined them as: "upward movement in prices over an extended range which then exploded [9]." One of the problems that provoke the economic public was the question: "How do you determine the value of the assets? In response to this challenge the phrase "free market economy" was invented in which the cost of funds is determined by the supply and demand of the buyer and seller, one seeking the lowest cost, and others demanding the highest possible price. Both types of funds that have the greatest impact on most of us are real estate and corporate stocks. According to the classicists "the price is fair ", because it is determined by agreement between the rational buyer and rational seller in accordance with the value of the asset. Unfortunately, history shows that in short intervals, this system was seriously damaged and it's impossible to achieve real value of the assets. Real estate prices and shares are driven by "irrational exuberance". Inevitably, bubble bursts and occurs large misery throughout the country. Then the cycle repeats - again and again. What actually happens is that an event, some expectation or some development begins to move the price up. As the price increases, the vacuum is generated and attracts more investors hungry for quick profits. Up to this point, most new investors ignore the original incentive for "boom" and they buy with the sole intention of selling them at a profit on the "bigger fools" who are expected to emerge soon. In fact, in many cases there is a legitimate basis to expect significant future increases in prices (as happened with the expansion of automobiles and highways in 1920, or the production of personal computers and the Internet in 1990). This leads to investments which produce boom. The boom extends in a bubble when the original basis for investment gradually is replaced with impulsive buying by speculators who invest just because the prices of assets grow. As prices rise, speculators are increasingly drawn into the vacuum. Finally, when the price reaches epic proportions, generated bubble bursts. *Government* policies affect the formation of bubbles and their collapse. Bubbles require money. The money are being offered by the banks, which are enabled by expansionary monetary policy. Government policies include manipulation with interest rates and tax laws. Low interest rates and low income taxes (especially on capital gains and dividends) promote speculation and formation of bubbles. Asset bubbles enrich those who own the assets.

John Kenneth Galbraith described two types of participants in these upward movements in prices ("booms"). True believers (participants) who are convinced that some new improved pricing conditions are in control and they expect that the market will remain so, or that prices will move up forever. They envision a brave new

world where the rules have changed [10]. A smaller group of clever speculators are aware of occurred speculative mood at the moment and the likelihood that the boom will come to an end. The nature of speculative booms is that there will be an inevitable decline, and that the fall in prices will not occur gently and gradually. It will happen with unpredictable and decisive collapse.

In fact, according to John Kenneth Galbraith: "collapse happens because the group of participants in the speculative situation is programmed for sudden urges to escape." The growth of bubbles is not caused only by virtue of the existence of arbitrary market that is growing due to statistical fluctuations and investors who want quickly to exploit the benefits of the price increase before the train reaches its destination, but also based on external influences which led investors to believe that there is basis for the emergence of a boom. Notably, these impacts can be categorized as: new technology, domino effect, money supply and interest rates, the development of new areas with favorable characteristics and financial innovation.

The new technology or discovery of something seemingly new can provide encouragement for a new boom and bubble. Namely, there may be a belief that new technology will fundamentally improve the business image, allowing companies to make huge profits. This was a significant factor for booms that occurred in the 1920s and 1990. Cars, highways, electrification and the Internet have enormous benefits to society and increased efficiency and productivity. These booms were based primarily on rational perception, although their time, after their market launch and height, elapsed and enthusiasm extinguished. During these innovative periods, investors increased their stock price above what is considered reasonable and acceptable (well above average), although taken into account the benefits of new technologies.

Domino effect is a phenomenon which, according Galbraith is named as "bubble contagion". In fact, the Japanese real estate bubble and actions provided funds for expansion of bubbles in real estate markets and stock exchanges in Finland, Norway and Sweden. After the Japanese bubble in 1990, the inflow of funds from Tokyo in the next few years after the explosion of the bubble stimulated bubbles in Thailand, Malaysia and Indonesia and their neighbors in the mid-1990s. This eventually resulted in the flow of funds from Eastern Asia to the US that helped boost dot.com bubble of the late 1990s in the United States.

Money supply and interest rates. There is a widely accepted opinion that the actions of central banks through monetary policy and interest rates setting have a major impact on the economy. For example, always when the US Federal Reserve will hold notice to lower interest rates, stock prices have an upward trend, and vice versa in the absence of the prospect of reducing interest rates, other financial problems pull stock prices down. Namely, the reduction of interest rates and increase in the money supply enhances prosperity, but increases the risk of inflation on the long run.

Kindelberg and Aliber led discussion whether monetary authorities should tighten monetary policy in order to increase the cost of speculation during prosperity (boom). They argue that when prices of goods and assets move together up or down, the direction of monetary policy is clear (opposite extremes in both directions). According to them, when stock prices or real estate prices, or both are rising, while prices of goods are stable or falling, the authorities face a dilemma. If they stifle the inflation it is likely that economic growth will slow.

However, if they support the economy with low interest rates, speculation may be uncontrolled. US authorities in the 1920s, Japan in the late 1980s and again in the United States 1990s were faced by this dilemma. Artur Greenspan was concerned about the high prices of shares and the rapidly rising of the prices, after which he made his famous remark "irrational exuberance" in December 1996. Despite Arthurs comment, Fed did not rise the interest rates to choke off the boom in the stock market because they were worried that their contractile measure will slow down the economic growth. In addition, the Fed had worries regarding Y2 problem, the likelihood that the US computer system would collapse due to insufficient equipment with software programs to support the transition in 2000. As a consequence, the Fed increased the money supply in the banking system and thus increased liquidity in the late 1999's. As K & A noted "... the money had to go somewhere with Fed fueling speculation in stock markets."

The development of new areas with favorable climate conditions can provide an incentive for investment bubbles. For example, over the years, there were bubbles of land (real estate) in the Southern Seas, Florida, California and South-west part of United States.

Financial innovation according to Galbraith are one of the causes of booms and bubbles. One example is the establishment of holding companies (investment funds) in the 1920s. Shareholders broadcast bonds and preferred shares, taking advantage of the collected funds to purchase other shares, thus increasing the leverage, the increased amount of money invested in the stock market compared to investments made by the joint shareholders in the holding company. These investment funds were predecessors of modern mutual funds. The meaning of these funds is that they allow their citizens to invest based on leverage in the broader aggregate of common shares, which would not be able to buy directly on an individual basis. Another example is the emition of high-risk bonds, known as "junk bonds" in the late 1980s with high interest rates with a view to take over legal companies. A third example was the deregulation of the S & L in the 1980s when there was a mistaken belief that deregulation would allow them to solve the problem of high current interest rates paid on deposits in return for low interest rates on long-term real estate. Fourth example was the deregulation of services that lead to crime by manipulating the service provided by the company "Enron". All financial innovation include, in one form or another, the creation of debt secured in greater or lesser amount of real estate. Bubbles are causally connected with falls of stock markets.

3. Conclusions

Financial crisis currently are one of the most interested subject in the economic policy, exactly, because of the wide range of impact on the economy. This paper enlightened several areas in which the financial crisis could be demonstrated such as banking, public debt, real estate sector, capital market. It analyzes the core subject of every crises starting from their initial phases until there impact on the economy. Therefore every economy must implement prudent and disciplined monetary and fiscal policy so in the future to be able to adjust their expectations on the current movement of the essential variables. Also we saw here the channels through which the crises are transferred and spilled over on other economies. However, the fundamental aim of this paper was to detect the several types of crises and to get to know with their characteristics and finally implications so in the future every government to be able to know what she could expect from the upcoming economic fluctuations.

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