THE EVOLUTION OF FINANCIAL CRISES: A HISTORICAL PERSPECTIVE

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Abstract:
Financial crises have been a common phenomenon throughout the history, strongly related to the idea of capitalism. Despite being a complex element of analysis, the variety of forms of financial crises bring useful information for current or future possible episodes of turbulence.
The purpose of the current paper is to underline the nature and evolution of financial crises by examining their frequency, market distribution and duration.

***Key words**: financial crisis, currency crisis, banking crisis, twin crisis*

***JEL classification:** G01, F31, N20*

1. Introduction

High frequency of financial crises of the '90s, which showed strong spillover effects on developed and emerging economies, capturing more or less equally country authorities and observers, explains the intense concern of specialists for construction of models able to anticipate a financial crisis occurrence. One should stress that this effort cannot be achieved without an assessment based on historical data of the progress, in terms of expression, frequency of occurrence and distribution market, these phenomena made in time.

The interest shown by specialists in the field for the development of numerous statistical and econometric analyses (Bordo, 2008; Bordo et al., 2001; Kaminski and Reinhart, 1999) is justified in terms of important amount of information that these past episodes offer for current or future crises.

A financial crisis is a turbulence in the financial markets that affect their ability to allocate capital, and, consequently, financial intermediation and investment. Aglietta (2001) believes, based on asymmetric information theory, that a financial crisis is triggered by the simultaneous manifestation of the phenomenon of adverse selection and moral hazard to that level where available funds are not guided to the representatives of the best investment options any more.

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Boyer et al. (2004, p. 14) makes a theoretical delineation of financial crisis, in employing only that category of disturbing events that directly affect financial markets and financial intermediaries, excluding that range that does not necessarily lead to a financial crisis or turns into a such crisis when it limits access market players to liquidity.

The main links of a financial crisis consist of the appearance of a blockage in the flow of financial resources degenerated into a crisis of confidence, what attracts a crisis of liquidity and solvency. The crisis of confidence is doubled by a given risk aversion and boosts in population's preference for liquidity and economic agents that generates a phenomenon of panic, a phenomenon that leads to an obstruction of interbank market and even of the entire banking system. Crisis of confidence is felt not only in the financial sector, but also in the real sector, where, by means of contagion, consumption and investment behavior of key actors are influenced.

2. Types of Crises

Creating a typology of financial crises, allowing time and space delineation of the negative effects of these components requires tracking elements that facilitates the assessment and classification of various episodes of financial crises in the category of financial crises.

The literature differentiates banking crises, currency crises, debt crises, stock market crisis. Theoretical and empirical studies have shown that a clear separation between different types of financial crises is difficult to carry, they co-exist in the form of two separate concepts of economic theory: the twin crises, an unusual combination of two of the elements mentioned above or even triple crises, a mix of foreign exchange market failures, debt defaults, public and private, and failures in the banking system, where the key to understanding the causal elements, their depth and persistence arises from the interactions between them (Eichengreen and Portes, 1987, quoted in Portes, 1998, p.2).

But, from this wide range of financial crisis, this study aims posting only currency crises, banking crisis and twins, their historical analysis of developments and their impact on macroeconomic spaces.

Regarding currency crises, it should be noted that these arise from two express situations. The first refers to a country where the domestic currency recorded a depreciation above a threshold of 25% over a year, in comparison to a reference currency, while the second involves a consideration of a speculative pressure gauge built in combination of exchange rate variation with a variation of official reserves and that level of interest rate necessary to defend parity (Boyer et al., 2004, p. 15). Eichengreen, Rose, Wyplosz (1994), Kaminsky, Lizondo, Reinhart (1998) and Herrera and Garcia (1999) considers that extreme values of this indicator reaching the threshold value is seen as an emergence of a crisis or an attack speculative.

The first approach to construct an index of speculative pressure, developed by Eichengreen, Rose, Wyplosz (1994) consider a set threshold value to 2 times the pooled standard deviation of the calculated index plus the pooled mean value of the index.

$$ERW = \alpha_{cs}\Delta\%CS + \alpha_{rd}\Delta\%RD - \alpha_{r}\Delta\%\frac{res}{BM}$$

CS – exchange rate
RD – interest rate
res/BM – foreign currency reserves as a percentage of the monetary base.

Speculative pressure index described by Herrera and Garcia (1999) consider a set threshold value to 1.5 times the pooled standard deviation of the calculated index plus the pooled mean value of the index.

$$ISP = \Delta\%CS + \Delta\%RD - \Delta\%RI$$

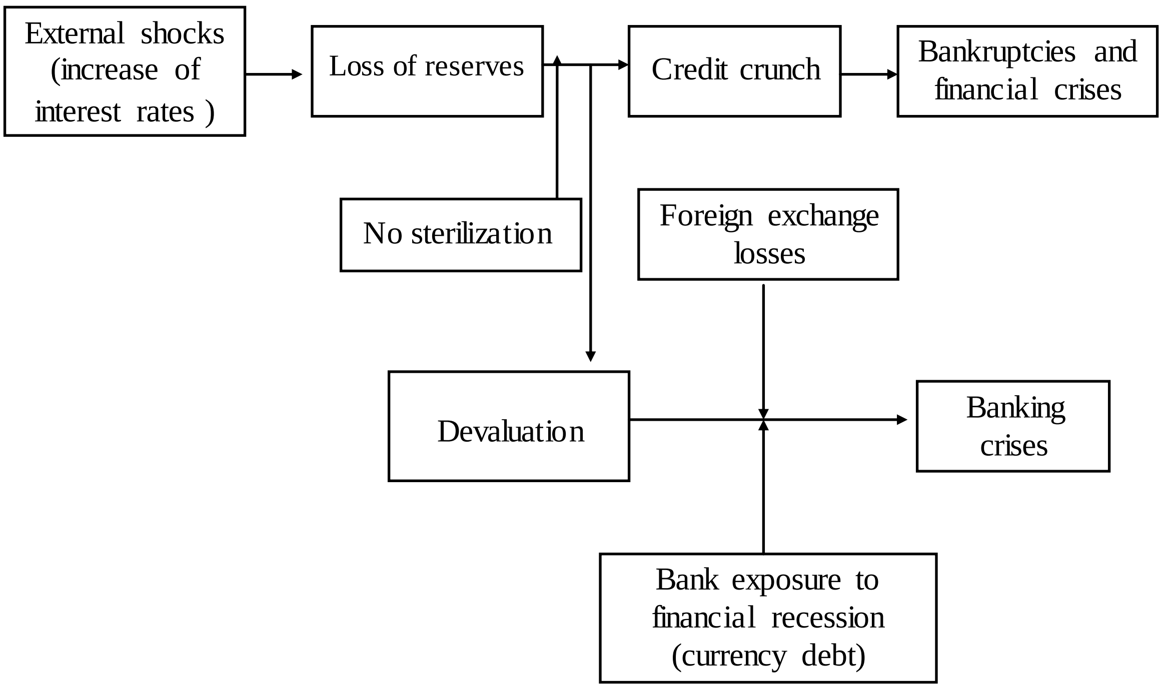
$\Delta\%CS$ - exchange rate variation
$\Delta\%RD$ - interest rate variation
$\Delta\%RI$ - foreign currency reserves variation.

A banking crisis refers to a situation in which actual or potential bank runs or failures induce banks to suspend the internal convertibility of their liabilities or which compels the government to intervene to prevent this by extending assistance on a large scale (IMF, 1998, pp. 74-75). Although it is difficult to identify banking crises due to unavailability of relevant data, financial and banking information, in particular the rates of non-performing assets, indices of panic and information from various sources can be used.

Occurrence of twin crises can be explained based on a review of three hypotheses. The first hypothesis is based on the idea that banking and currency crises have a common origin (Reinhart and Vegh, 1999), located in a stabilization program whose success leads to a degree of premature euphoria, without any sign of awareness of the negative effects of current deficits and foreign debt that will cause a speculative attack on the national currency, completed, indirectly, by triggering a banking crisis.

According to the second model, belonging to Velasco (1987), a banking crisis causes a currency crisis due a surplus of domestic currency resulting from a bail-out intervention of the central bank that seeks to stabilize the banking sector.

A third hypothesis, that sustains the idea of a simultaneous existence of two types of crisis, is based on a reverse causal relationship compared to the previous model, as currency crisis triggers banking crisis through depreciation losses of commercial banks and pressures on solvency that induce a contraction in bank credit (see the figure below).



Source: Boyer et al. (2004)

Figure no. 1 Currency Crises Entail Banking Crises
Stoker's Model (1994)

3. Crises of the Last Centuries

A substantial literature on various episodes of crisis of the late 19th century, 20th century and early 21st century exists. See, for example, Kindleberger (1996), Bordo and Schwartz (1996), Bordo et al. (2001), Bordo (2003), Eichengreen (2003), Isard (2005), Reinhart and Rogoff (2009) or Dungey, M. Jacobs, J. P.A.M, Lestano L. (2010).

In this context of an abundant concern for analyzing this phenomenon, a question may refer to the extent where elements likely to create prerequisites for development of a financial crisis, like increasing financialization and financial liberalization, can be countered by experienced agents or innovations in financial products with a role in risk restriction. We are interested, in fact, in changes in frequency of financial crises and their incidence on event markets.

To address this question, we will consider the analysis of Bordo et al. (2001) over several emerging and industrial economies and we will compare it to other recent studies with a larger sample of markets. The trend rate of growth of GDP and duration of crises were used to describe episodes of turbulences over the four periods of analysis: gold standard period, the period between the two World Wars, the Bretton Woods period and the years after.

Duration and Depth of Financial Crises

Table no. 1

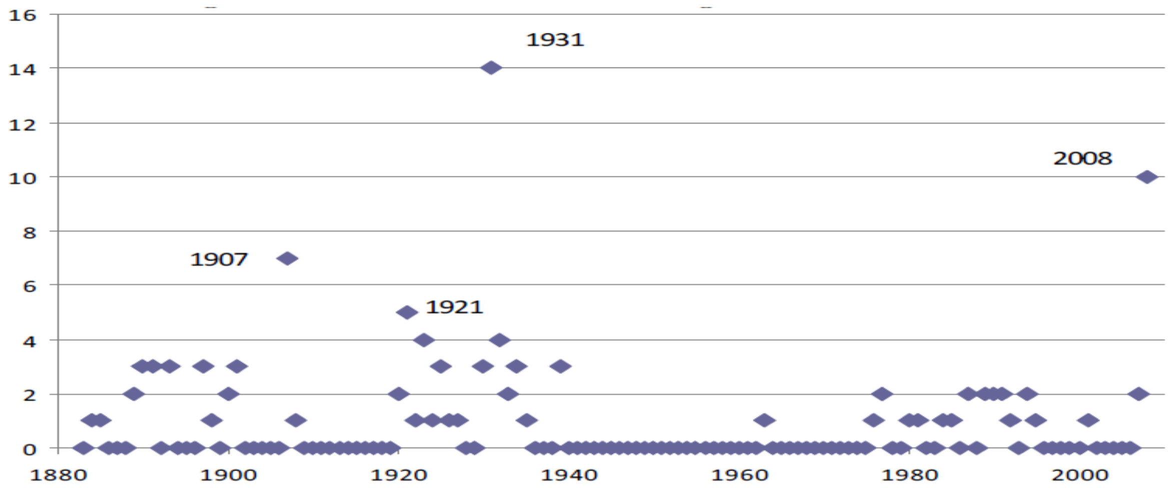
	1880-1913	1919-1939	1945-1971	1973-1997 21 countries	1973-1997 56countries
Average duration of crises (in years)					
• Currency crises	2,6	1,9	1,8	1,9	2,1
• Banking crises	2,3	2,4	-	3,1	2,6
• Twin crises	2,2	2,7	1,0	3,7	3,8
• All crises	2,4	2,4	1,8	2,6	2,5
Average depth of crises (cumulative losses of GDP)					
• Currency crises	8,3	14,2	5,2	3,8	5,9
• Banking crises	8,4	10,5	-	7,0	6,2
• Twin crises	14,5	15,8	1,7	15,7	18,6

Source: Bordo et *al.* (2001)

Table 1 shows that banking crises register constant evolution of rising or falling duration. At the opposite side, twin crises show consistent depth quantified in representative percents of losses of GDP. Though nonexistent during the Bretton Woods age, twin crises experienced, after this period, a higher frequency than during 1880-1913, representing a dominant type of financial crisis that affected Asian countries during 1973-1997 (8).

The overall impression left by this comparison of the duration of crises is how little they have changed in time. Also, depth considered as the difference between pre-crisis trend growth and actual growth, does not suggest that the crisis problem is growing more severe for any of the periods considered.

In addition to the table above, figure 2 offers an explicit time distribution of each of the banking and currency crises (see also the distribution of currency crises during the same period of analysis), suggesting an apparently infrequency of these events (Dungey, M. Jacobs, J. P.A.M, Lestano L., 2010, p.8) given the high frequency of non-crisis years than crisis years.



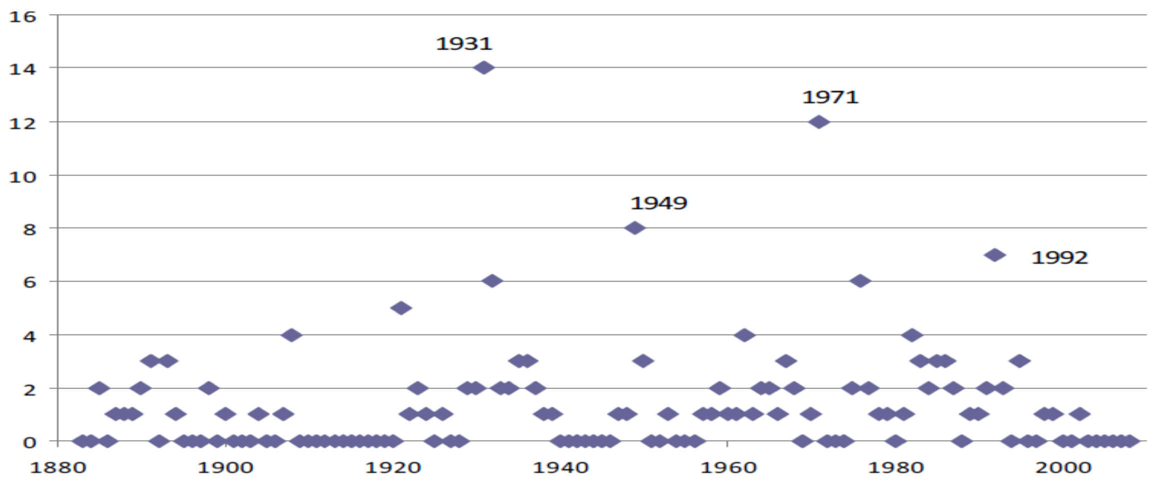
Source: Dungey, M. Jacobs, J. P.A.M, Lestano (2010)

Figure 2: Distribution of Banking Crises over 1883- 2008

For example, in 1907 a banking crisis occurred in seven of the 21 countries in the sample, while both banking and currency crises are common in 1931 (13 banking crises), a period associated with the Great Depression.

As one can notice a second highest set of simultaneous banking crises will be affecting 10 of the countries of the sample taken in consideration in 2008, due to the subprime crisis.

Table 1 also shows a significant longer duration of currency crises prior to 1913 and no important differences for the rest of the periods taken into consideration. The other periods are basically indistinguishable.



Source: Dungey, M. Jacobs, J. P.A.M, Lestano L. (2010)

Figure 3: Distribution of Currency Crises over 1883- 2008

A major period of disruption in the sample is the currency crises associated with the breakdown of Bretton Woods (see Figure 3), in 1971, when 12 countries observed currency crises (but not banking crises). A second cluster of currency crises is obvious in the period following decisions of United Kingdom and Italy to exit the Exchange Rate Mechanism in 1992, affecting seven European countries.

The occurrence of contemporaneous currency crises (1921, 1931, 1932, 1949, 1971, 1976, and 1992) or banking crises (1907, 1921, 1923, 1931, 1932, 2008) can bring significant information to the analysis.

4. Conclusions

This study aimed at achieving a review of the main results obtained in assessing historical development of crises, made after a brief clarification, on conceptual and methodological line, of the subject under discussion.

Being a vast subject treated in a limited space, many issues and models have remained valuable for next analysis. Space did not allow us to do more work or ideas and references to other authors who have made important contributions in the field, or even set up extensive research and great complexity and technicality.

The current financial crisis has generated a wide range of new studies, but there are still many issues to be raised, of which the need for better understanding of market failures, that is an essential element in the emergence of financial crises, must be taken into consideration.

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This article is a result of the project POSDRU/88/1.5./S/55287 „Doctoral Programme in Economics at European Knowledge Standards (DOESEC)". This project is co-funded by the European Social Fund through The Sectorial Operational Programme for Human Resources Development 2007-2013, coordinated by The Bucharest Academy of Economic Studies in partnership with West University of Timisoara.