Financial Crises and Derivatives Market: An Application of Factor Analysis

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Countries that come even closer with each other every passing day, both economically and socially, went through and have been going through various financial crises in the past and present centuries. The close relationships of countries cause a crisis suffered by one country to expand within a short time and infect other countries.

With the collapse of the Bretton Woods system and the transition from fixed rate policy to floating rate policy, the risk involved in inflation and interest rates increased, and derivatives were brought forward as one of the protection methods against the increasing risk ratio. The derivatives markets, which expanded by means of structured products used in 1990s, reached huge sizes, leading to a more risky financial structure. Although protection against risks is the main objective, derivatives offer speculative profit and arbitrage opportunity to their users. Intensely used for investment purposes, derivatives create bubble economies when they reach high volumes and influence crises by expanding the financial risk environment.

The purpose of this study is to analyze financial crises, the effective factors on the emergence of crises and the derivatives market, and to reveal their inter-relations. In this study, firstly, the financial crises suffered throughout history will be mentioned, and, then, the financial crises that broke out since the periods when derivatives were started to be used will be addressed. To this end, focus will be on derivatives risks and the five most significant financial crises experienced in late history will be emphasized by analyzing the trading volumes realized in the derivatives market during the crisis periods; the 2008 global financial crisis, the 2001 economic crisis in Turkey, the 2001 crisis in Argentine, the 1997 East Asian Financial crisis and the 1994 economic crisis in Mexico. Data will be gathered from online

reports of the related countries, public records, Central Banks, IMF and World Bank reports and previous studies carried out on the same subjects.

The study will start with a literature review that involves examining the financial crises and identifying the variables accepted as the leading indicators of these crises. Then these variables will be converted into less number of groups of variables, by using factor analysis which is a quantitative data reduction method. This new leading indicator factor groups will be compared for each crisis, and a model will be suggested on the basis of possible differences and similarities. Finally, focus will be on how derivative instruments affect crises and their effects on the created model.

This study aims at uncovering similar or different aspects of leading indicators during each crisis period, by examining the five most significant financial crises suffered recently, and determining whether derivatives are a preventive or triggering factor on the same crises.

Keywords: Financial Crisis, Bretton Woods System, Leading Indicators, Derivatives, Factor Analysis.