World Academy of Science, Engineering and Technology
International Journal of Economics and Management Engineering
Vol:10, No:01, 2016

Existence of Systemic Risk in Turkish Banking Sector: An Evidence from Return Distributions

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Abstract : As its well-known definitions; systemic risk refers to whole economic system down-turn movement even collapse together in very severe cases. In fact, it points out the contagion effects of the defaults. Such a risk is can be depicted with the famous Chinese game of falling domino stones. During and after the Bear & Sterns and Lehman Brothers cases, it was well understood that there is a very strong effect of systemic risk in financial services sector. In this study, we concentrate on the existence of systemic risk in Turkish Banking Sector based upon the Halkbank Case during the end month of 2013; there was a political turmoil in Turkey in which the close relatives of the upper politicians were involved in illegal trading activities. In that operation, the CEO of Halkbank was also arrested and in investigation, Halkbank was considered as part of such illegal actions. That operation had an impact on Halkbanks stock value. The Halkbank stock value during that time interval decreased remarkably, the distributional profile of stock return changed and became more volatile as well as more skewed. In this study, the daily returns of 5 leading banks in Turkish banking sector were used to obtain 48 return distributions (for each month, 90-days-back stock value returns are used) of 5 banks for the period 12/2011-12/2013 (pre operation period) and 12/2013-12/2015 (post operation period). When those distributions are compared with timely manner, interestingly; the distribution of the 5 other leading banks in Turkey, public or private, had also distribution profiles which was different from the past 2011-2013 period just like Halkbank. Those 5 big banks, whose stock values are monitored with sub index in Istanbul stock exchange (BIST) as BN10, had more skewed distribution just following the Halkbank stock return movement during the post operation period, with lover mean value and as well higher volatility. In addition, the correlation between the stock value return distributions of the leading banks after Halkbank case, where the returns are more skewed to the left, increased (which is measured in monthly base before and after the operation). The dependence between those banks was stronger under the case where the stock values were falling compared with the normal market condition. Such distributional effect of stock returns between the leading banks in Turkey, which is valid for down sub-market (financial/banking sector) condition, can be evaluated as an evidence for the existence of contagious effect and systemic risk.

Keywords : financial risk, systemic risk, banking sector, return distribution, dependency structure
Conference Title : ICRFSB 2016 : International Conference on Risk, Financial Stability and Banking
Conference Location : Zurich, Switzerland
Conference Dates : January 12-13, 2016