SYSTEMIC RISK OF TUNISIAN FINANCIAL SYSTEM: MEASURING AND PREDICTING FUTURE UNEMPLOYMENT RATE

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ABSTRACT

Purpose- The purpose of this study is to measure the systemic risk of the Tunisian financial system around the revolution period by the use of covar method and to test its ability to predict the future unemployment rate in the economy.

Methodology- Our empirical study aims to measure the systemic risk of the Tunisian banking system over the period going from 2008 to 2015. Our study period is marked by the 2011 Tunisian revolution and goes from June 2008 to December 2015. Our research sample consists of the eleven Tunisian listed banks on the Tunisian stock exchange. We calculate monthly bank returns that are calculated as the arithmetic mean of the daily data of the month. We use daily closing pricing data of the eleven listed banks and the stock market index TUNINDEX from 2 January 2008 to 31 December 2015. The variable to explain: Tunindex: the benchmark index of the Tunis Stock Exchange. It is composed of the country's fifty largest capitalizations. It allows an assessment of the market trend. The explanatory variables are the returns of the eleven banks listed on the Tunisian stock exchange. For the measurement of Covar, we approach the bank risk by its historical volatility based on the GARCH (1.1) model developed by Belerselv (1986). We then sum quarterly bank Covars to obtain the Covar of the whole banking system and integrate it into a model, to test empirically the relationship between the calculated "CoVaR and the future unemployment rate in Tunisia during the post-revolution period (2011 – 2014). We apply the OLS least squares and corrected least squares method. To check for the robustness of obtained results, we then adopt the "VAR" called the Autoregressive Vector (Sims, 1980), which highlights interdependencies between several time series.

Findings- Results show that ATTIJARI BANK is the largest contributor to the TUNINDEX systemic risk before revolution, while BT is the least influent one. Private banks rankings are reversed during post revolution period, against public banks which maintained their ranks. Globally, many private banks that floundered at the bottom of the rankings before revolution rank very high during the following period. Moreover, the top 5 of Tunisian systemic banks after revolution is composed of two public banks and three private ones. Public banks are risky because of the bad governance they suffer due to state intervention. Regards to the most systemic private banks (BT, BIAT et ATB), they seem to be the biggest on the financial place and with the highest performances and outstanding's loans to the economy. Finally, the regressions' results show that the future unemployment rate depends only on the preceding one and not on the systemic risk index (COVAR).

Conclusion- Finally, our research aims to add a broader perspective to establish and ensure compliance with good governance principles within public banks, particularly in terms of independence. Moreover, it encourages for the strengthening of the large private bank prudential supervision, the latters being considered as the most efficient and the most active on markets. Also, our research should be completed by a study of bank's systemic risk determinants in order to better control et prevent any slippages

Keywords: Systemic risk, Tunisian banking sector, covar, unemployment rate
JEL Codes: G01, G21, J6

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