Volatility Spillovers and Dynamic Interactions between Stock Markets and Bond Markets in the PIGS Countries

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The bursting of the U.S. housing bubble caused the values of subprime mortgage based securities to plummet, which in turn triggered the 2008 global financial crisis due to liquidity problems in the financial system. The crisis reached its peak when Lehman Brothers declared its bankruptcy on 15th of September, 2008. To avoid the risk of a financial collapse, the U.S. Federal Reserve (Fed) has taken steps to launch its quantitative easing programme (i.e., creating money and buying bonds and other financial assets from banks), On 22nd of May 2013 Chairman Bernanke signalled the first tapering and then announced its first tapering on 18th of December, 2013

In this study we investigate the effects these historical shocks on the size and persistence of the volatilities in exchange rates and interest rates, b) dynamic interactions between exchange rates and interest rates for Portugal Ireland, Greece and Spain (Henceforth PIGS). To that end, we will first estimate multivariate GARCH model and derive conditional variances and dynamic (time varying) conditional correlations with covariances. Then, we will analyse the effects of these historical shocks and also hypothetical shocks that may arise in the future on the volatilities of exchange rates and interest rates.

We will utilize volatility impulse response functions developed by Hafner and Herwartz (2006) to achieve that objective.