

Essays in Macroeconomics

Vivek Sharma

November 2018

Abstract

This thesis is composed of two self-contained chapters on macroeconomic impact of volatility shocks. Recently, there has been a surge in work on this subject which seeks to identify and establish how second-moment shocks can lead to sizable economic impact. In chapter 1 which is jointly written with Edgar Silgado-Gómez, we explore whether volatility shocks to spreads on bonds issued by peripheral eurozone economies of Spain, Ireland, Portugal and Italy was responsible for decline observed in these economies during the height of eurozone debt crisis and if it played a role in subsequent economic slowdown in these countries. Using SVAR-SV techniques, we are able to show that volatility shocks indeed had significant negative economic impact. In our study, a volatility shocks to the spread on sovereign bond is followed by a decline in bank net worth which precipitates a decline in banks' credit activities. As a lot of economic activity is dependent or at least supported by bank financing, these economic activities witness a fall. To explain the results we obtain from data, we use a medium size DSGE model augmented with a banking sector where banks hold government bonds and where the spreads on these bonds are subject to stochastically evolving second moment shocks. Consistent with what we see in our SVAR-SV analysis, a volatility shocks is followed by a drop in bank net worth and a reduction in its lending activity. This is then followed by a decline in investment, employment, output and consumption. Our findings underline the role that second moment shocks can play in affecting macroeconomic variables.

In chapter 2, I show that financial frictions amplify and compound the effects of fiscal volatility shocks. Using a calibrated DSGE model where firms are constrained by the amount of capital they can raise to support their production, I demonstrate that negative impact of fiscal volatility shocks are a lot worse than they are without it. The key mechanism explaining our results is a higher surge in firm markup when financial frictions are present than in their absence. These results highlight the role of unhindered access to finance for supporting economic activities – more so during the times where the economy is buffeted by more or larger than usual fiscal volatility shocks.