Securities Transaction Taxes: Macroeconomic Implications in a General-Equilibrium Model*

Extended Abstract

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The banking and financial crisis of recent years has been followed by calls (yet, less action) to reform the financial regulation in order to prevent the replay of events and improve the resilience of the financial sector. Given the massive costs that bank rescues have inflicted on taxpayers, the demand to make the financial sector contribute to the financing of crisis-intervention costs has also gained political voice and support (IMF, 2010). The political debate suggests financial sector taxation as a toolbox to address the preventive dimension and cost recovery. In contrast to the public discussion, however, there is little public finance literature on financial sector taxation, its regulatory merits and drawbacks, and its potential to generate government revenue. Furthermore, the existing empirical work looks fairly inconclusive. Consequently, the governments that have taken action have been largely unguided by academic research (Keen, 2011).

Against this background, we aim at contributing to this literature and provide an analysis of the securities transaction tax (STT) in a dynamic stochastic general-equilibrium (DSGE) model. The main questions our model specification addresses are: (1) What is the STT’s long-term impact on financing costs, investment and economic activity? (2) Does the STT succeed in reducing (non-fundamental) volatility of asset prices and real economic variables?

The model we use to address these questions is an RBC model featuring two types of financial frictions. First, we incorporate short-term financial trade and allow for the presence of not fully rational traders, so-called ‘noise traders’ whose trading behaviour is a source of economic fluctuations in the model. Second, we introduce a financing constraint which links firms’ investment spending to their outstanding share value. The structure of the model allows imposing a tax on

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securities transactions (STT). We calibrate our model to match some stylised facts about financial markets and firms’ financing.

While the adverse impact on the financing costs for companies’ real investment is generally seen as the major potential drawback of an STT, the reduction of non-fundamental volatility is usually regarded to be its principal regulatory merit. The model-based analysis in this paper makes an attempt to quantify both effects and their macroeconomic implications. The exercise also discusses the parameters that shape their relative importance.

The contribution and novelty of discussing the STT in a DSGE framework is the emphasis on the STT’s macroeconomic impact and the exposition of relevant transmission channels. The approach contrasts with partial equilibrium approaches (e.g. Kupiec, 1996; Song and Zhang, 2005) that exclude feedback effects across different markets and over time and conjecture the impact of STTs on the real economy off-model.

The main results of our simulations suggest that STT is highly distortive – similarly to a capital income tax. At the same time, STT may allow to somewhat reduce economic volatility. This gain seems, however, to be quantitatively rather small.

Section 2 of the paper reviews STT debate, listing the main arguments for and against STTs to place our analysis in context. Section 3 develops a DSGE model with noise trading and STT as the paper’s analytical framework. Section 4 presents the parameterisation of the model. Section 5 presents the scenarios and simulation results and compares them to related findings in the literature. Section 6 summarises and concludes.