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Financial transaction taxes: An analysis of historical implications and future paths

Master thesis in Banking & Financial Services

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Executive Summary

Presentation of the problem

Since the financial crisis there has been a renewed interest in financial transaction taxes. Currently, ten countries in the European Union are pursuing the introduction of a financial transaction tax through enhanced cooperation. While the discussion is still ongoing, France and Italy recently have introduced a tax unilaterally. Proponents argue that such a tax can raise significant revenue and would stabilize financial markets. In contrast, opponents claim that an introduction of a tax on securities transactions would hurt market quality, leads to tax avoidance, and the migration of the financial industry.

This thesis aims to contribute to this discussion by reviewing the international experience with financial transaction taxes. Furthermore, the impact of the tax introduction on the financial markets in France and Italy will be quantitatively analysed. The goal of this analysis is to give estimates of how market quality parameters such as volatility, trading activity and liquidity are affected. Additionally, an agent based model will be created in order to answer the question of how the presence of untaxed traders affects volatility and mispricing.

Approach

The relevant literature is reviewed to give the reader a better picture of the problem. This includes the debate between proponents and opponents of transaction taxes. The review of the international experience is based on the existing empirical research but also includes current revenue figures. The revenue data was downloaded directly from government data bases.

A differences in differences approach is applied to investigate the impact of the financial transaction taxes in France and Italy. All calculations were carried out in R. Subject to the analysis are the stocks from the CAC40 and FTSE MIB indices. The German DAX served as a control group. The stock market data was downloaded from Bloomberg.

The agent based model is an extension of the basic model of Westerhoff (2008). This model was chosen because of its ability to mimic the behaviour of financial markets. The extension introduces taxed and untaxed traders in the same market. For the extension a few modifications of the basic model were necessary. The programming and simulation was performed with Microsoft Excel.

Results

The analysis of the international experience demonstrated that financial transaction taxes are feasible. However, the design of the tax is crucial for its performance. Too high rates may lead to tax avoidance and evasion. The revenue figures show that a tax on securities transactions can generate significant revenue. However, the numbers for Switzerland have shown that in recent years revenues are declining as compared to the nineties. A possible explanation for this might be that revisions led to more untaxed trading.

The empirical analysis found no effect of the introduction of financial transaction taxes on volatility. This contradicts the claim of proponents that taxes on securities transactions reduce volatility. The differences in differences analysis identified a significant increase in French bid-ask spreads. A negative effect on Dollar volume and liquidity was detected as well, but this effect was not robust over time. Thus, it is suggested that the impact on Dollar volume and liquidity was only temporary. The results for the Italian transaction tax were not robust. The reason for this might lie in domestic influences which makes the DAX not suitable as a control group.

The main finding of the agent based model was that the stabilizing effects of financial transaction taxes are undermined by the presence of untaxed traders. Furthermore, the optimal tax rate which minimizes mispricing and volatility seems to depend on the proportion of untaxed traders. The higher the proportion of untaxed traders, the higher the optimal tax rate. A limitation of this model is that it does not account for possible liquidity effects.