

Essays on Macroeconomics of Debt Deleveraging Synthesis

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This dissertation analyzes, in two chapters, how monetary and fiscal authorities can optimally manage debt reduction episodes. The first chapter studies what is the optimal public deleveraging speed for a fiscal authority in a closed economy context. The second chapter, written with Prof. Pierpaolo Benigno, instead, considers how a Central Bank should optimally react to an international private deleveraging episode.

More in detail, in the first chapter I study, in a context of heterogenous agents, incomplete markets and closed economy, what is the optimal deleveraging path that a fiscal authority needs to undertake when forced to reduce public debt. I consider a public deleveraging that may occur either through a public expenditure reduction or through an income taxation increase. I analyze, then, what are the consequences, on agents' welfare, of different speeds of deleveraging and different fiscal instruments. I focus, moreover, part of

my analysis on how nominal rigidities interact with public deleveraging.

I find that under taxation experiment real interest rates tend to be very high and this is helpful for the class of agents who holds savings. When, instead, government uses public expenditure to reduce debt, real interest rates are below the steady state: This situation may be beneficial, if economy do not enter a liquidity trap, for the agents who do not participate in financial markets. I also find that, in most cases, agents who do not have access to the financial markets benefit from the presence of downward wages rigidities.

In the second chapter, we study a Central Bank who faces an international private debt deleveraging episode in a context of a two-country economy. We model a country, H , as a net borrower and the other country, F , as a net saver and we shock the economy raising the cost of borrowing. Finally we assume the presence of a unique Central Bank (or equivalently two cooperative Central Banks) that maximizes the welfare of economy as a whole. The question we address is how the Central Bank can manage optimally this deleveraging episode.

We find that there are three channels through which the global economy can absorb the private deleveraging costs. The first is the reduction of the real interest rate of country H , the one who reduces his debt. The second is the expenditure-switching channel, namely a depreciation of the currency of country H in order to steal part of global demand. Unfortunately, movements in the nominal exchange rate lead to inefficient movements in the terms of trade, increasing the economy's welfare costs. The third mechanism that the

Central Bank can use is the reduction of the nominal interest rate of the country F who is a net saver. According to the degree of home bias and the elasticity of substitution between goods produced in country H and F , Central Bank mixes the three channels to react optimally to the deleveraging shock.

To summarize, I focus first on a domestic episode of public debt reduction and then on an international episode of private debt reduction. In both experiments I find that choices of Fiscal and Monetary authority have non negligible consequences on agents' welfare. Understanding how to deal with a debt deleveraging, then, carries important policy implications.