FISCAL POLICY ANALYSIS OF HIGHLY INDEBTED ECONOMIES

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The financial crisis of 2007-2009 led to a large increase in the government debt of all advanced economies. In the United States, the debt burden reached levels not seen since the Second World War. In Europe, high fiscal stress evolved into a sovereign debt crisis. My thesis focuses on debt dynamics in advanced economies and the design of policies that can stabilize their fiscal burden. In the first chapter, I provide new evidence and theory on US debt dynamics and their relation with long-term growth forecasts. In the second chapter, I document a novel dataset on the maturity structure of sovereign debt of Euro Area (EA) countries and study the effect of the maturity composition on debt dynamics. Finally, in the third chapter, I analyze empirically the role of debt management in stabilizing the fiscal burden of countries in the EA.

The first chapter, entitled “Sovereign Debt in the US and Growth Expectations”, studies the effect of changes in expectations of long-term GDP growth on US government debt and deficits. Long-term growth expectations are an essential determinant of expected future revenue growth and fiscal solvency. I present evidence that US government debt and deficits are positively correlated with long-term GDP (and revenue) growth forecasts from the Congressional Budget Office between 1984 and 2012. This is robust to controlling for current growth and to using à-la-Kalman estimated forecasts for a longer time span. This stylized fact is novel in the macroeconomics literature and I develop a new model of government behavior that explains it.

My model features endogenous (forward-looking) purchasing behavior for the government. This distinguishes my model from standard macro theories that assume exogenous government purchases, or ad-hoc backward looking policy rules for government purchases. It builds on the recent “long-run risks” literature by assuming shocks to the trend growth rate of total factor productivity. The model matches the observed positive correlation between fiscal deficits and the trend growth rate, based on the government’s desire to smooth public consumption over periods of higher (or lower) long-run productivity growth.

The second chapter, entitled “Government Debt Maturity and Debt Dynamics in EA Countries” presents a new comprehensive database on sovereign debt stocks and yields, at all maturities, for six EA countries: Belgium, Finland, France, Germany, Italy and Spain between 1991 and 2013. I constructed this database by combining information from different sources (treasuries, national central banks and statistical offices), on a security-by-security basis. A recent literature has shown the importance of debt maturity management in the US - e.g. Hall and Sargent (2011) - however, due to lack of data, this
key issue remained unstudied for the EA. Thus, I use my database to study the effect of debt maturity management on the evolution of government debt in EA countries.

My main finding is that debt maturity also had an important effect in debt dynamics of the EA. The debt maturity structure affects debt dynamics because longer maturity shields the government budget from changes in interest rates. In general, interest rates in the EA have fallen since 1991 while treasuries in the region extended debt maturity. Thus, an increasing number of long-term bondholders experienced large capital gains. Counterfactual simulations show the impact of a different maturity structure on the evolution of debt and suggest that extending debt maturity in 2014 and 2015 would result in lower debt ratios by 2022. I also estimate the debt-to-GDP erosion induced by higher current and future inflation and find that inflation would lower the fiscal burden in EA countries much more than in the US.

The third and last chapter of the thesis, entitled “Quantifying the Role of Debt Management for Fiscal Self-Insurance in the EA” provides evidence of debt management being an effective tool for protecting the government budget from fiscal spending shocks in the EA. In particular, I document that sovereign bonds of EA countries had a significantly lower real return in response to government spending shocks between 1991 and 2013. Importantly, longer bond maturity generally implied a larger drop in returns. This is in line with theories claiming that long-term debt provides fiscal self-insurance. However, my finding suggests that medium-term debt is more effective in hedging against spending shocks.

I identify government spending shocks in a Structural VAR model estimated with both aggregated quarterly fiscal data for the EA and stacked data from individual countries. I also use a simple FAVAR model to distinguish between common and idiosyncratic (country-specific) shocks and document that the former risk was hedged more effectively. The introduction of the Euro reduced the absorption of idiosyncratic shocks (relative to common shocks) by bond returns. However, the European debt crisis brought the degree of fiscal self-insurance against country-specific shocks back to pre-Euro levels. Finally, debt maturity seems to play a minor role in the absorption of country-specific shocks by the return on sovereign bonds.