THE ROLE OF FINANCIAL STRESS IN DEBT AND RECOVERY


INTRODUCTION

Since the outbreak of the euro area crisis, the link between a country’s macroeconomic performance and the level of its sovereign debt has become a central topic in the economic debate. The recent showdown in the U.S. Congress over raising the country’s debt ceiling made this issue central once again, not only for the U.S., but also for the world’s economic prospects, particularly because it is likely to happen again in the first months of the coming year.

However, in contrast to previous episodes where the policy recommendations were drawn from linear theoretical models and estimation techniques such as Blanchard and Perotti (2002), the majority of the profession now acknowledges the complexity of this linkage and have begun to analyze the macroeconomic impact of fiscal policy and sovereign debt and their subsequent feedback mechanisms from a state- or regime-dependent perspective.

In this context, and primarily on the basis of Reinhart and Rogoff (2010), most of the debate focused on the existence of a certain debt-to-GDP ratio beyond which a country would likely experience a severe economic downturn. However, it is now widely acknowledged that the Reinhart and Rogoff (2010) hypothesis is not strongly supported by empirical data, see e.g. Herndorn et al. (2013). In contrast, the recent literature has focused on financial market stress as an alternative threshold variable affecting the link between a country’s fiscal stance and its macroeconomic performance. Afonso et al. (2011) and Mittnik and Semmler (2013) argue that the main factor determining the effectiveness of fiscal policy and sustainability of fiscal debt is not the extent of public indebtedness as postulated by Reinhart and Rogoff (2010), but the state of the financial markets.

Given the crucial role of sovereign bond spreads – and their spillover to the private sector credit costs – in the effect of sovereign debt on economic growth, an additional aspect of the non-linear nexus between these two variables is whether or not a country is in a monetary union. As argued by De Grauwe and Ji (2013), this is of particular relevance for the EMU, since bond spreads may be more prone to investors’ sentiments in countries of a monetary union than in stand-alone countries. According to these authors’ findings, the explanatory power of the debt-to-GDP ratio for bond spreads in EMU countries is significantly higher during times of economic distress than during times of economic stability, for non-EMU countries, however, this empirical regularity cannot be corroborated by statistical tests. A similar result is obtained by Schoder (2013), who argues that investors’ sentiments are more volatile in the EMU countries of the periphery than in the core EMU countries. According to these findings, the non-linearity in the sovereign debt-economic growth relation should be expected to be more pronounced in EMU countries, especially in the peripheral countries than in stand-alone countries.

In a recent paper (Proaño et al. 2013), we estimate the effects of sovereign debt and financial stress on economic growth through an econometric, regime-dependent framework where the regimes depend on the debt to-GDP ratio and the level of financial stress. We investigate this relationship empirically for thirteen OECD countries from 1980 to 2010, employing quarterly data and using dynamic country-specific and dynamic panel threshold regression analysis. We pay special attention to the differences between EMU and stand-alone countries as well as between northern EMU and southern EMU countries. Our sample includes Australia, Austria, Belgium, Canada, Denmark, Germany, Spain, France, the United Kingdom, Italy, Japan, the Netherlands and the United States.

MAJOR FINDINGS

After controlling for other macroeconomic variables which may affect the growth rate of real GDP, such as the long-term real interest rate, the economy’s relative competitiveness and the growth rate of the population, we find empirical evidence supporting the following hypotheses through our dynamic panel threshold regressions. On the one hand, there is no evidence for a universally valid negative impact of government debt on economic growth in the countries considered in our econometric analysis, independently of whether we use country-specific or panel estimation methods, and independently of the different country-grouping schemes we may use (all countries, EMU and non-EMU countries and north-EMU and south-EMU countries). The notion that larger government indebtedness by itself may reduce economic growth, put forward by proponents of the expansionary austerity hypothesis, is simply not supported by macroeconomic data of industrialized countries over the last thirty years. In contrast, we identify the IMF financial stress index (unfortunately, a rough and imperfect measurement for the uncertainty and volatility in the financial markets) as a crucial source of the nonlinearity between sovereign debt and economic activity. Only at high levels of financial stress does it appear possible for the debt-GDP ratio to negatively affect growth. However, our fourth finding makes this unlikely; we find evidence that debt reduces growth during high financial stress only for countries within a monetary union, i.e. the European Monetary Union.

Further, we find that the direct influence of higher financial stress on public debt levels is significantly smaller in EMU countries than in stand-alone countries. In EMU countries, however, the non-linearity in the sovereign debt-economic growth relation is significantly higher during times of economic distress than during times of economic stability, for non-EMU countries.
on economic growth is also nonlinear and depends itself on the level of the financial stress. The table above comprises our estimation results of the threshold regression

\[ y_t = \alpha_y y_{t-1} + \alpha_r r_{t-1} + \alpha_b b_{t-1} + \beta_1 f_{t-1} I(f_{t-1} \leq \gamma) + \beta_2 f_{t-1} I(f_{t-1} > \gamma) + \delta I(f_{t-1} \leq \gamma) + \mu_t + \varepsilon_{t} \]

where \( y_{(i,t)} \) is the quarter-to-quarter growth rate of real GDP, \( r_{(i,t)} \) is the interest rate on long-term government bonds deflated with the GDP deflator, \( f_{(i,t)} \) is the financial stress index and \( b_{(i,t)} \) is the sovereign debt-GDP ratio. The regressors \( y_{(i,t-1)} \) and \( r_{(i,t-1)} \) are assumed to be endogenous. Their lags are available as instruments due to the orthogonal forward transformation of the variables. The regressor \( f_{(i,t-1)} \) and the regime-dependent regressor \( b_{(i,t-1)} \) are assumed to be exogenous.

As the results summarized in Table 1 show, the effect of financial stress on economic growth is not only negative and statistically significant in both regimes (high and low financial stress), but in all panel regressions considered even after controlling for other indirect effects. In all specifications, the direct negative effect of greater financial stress on economic activity is significantly larger in absolute values when financial stress is high.

In the context of the recurrent debate on the U.S. debt ceiling, these findings not only provide further evidence against the suggested arguments for expansionary fiscal consolidations, but also stress the importance of avoiding financial havoc resulting from a possible U.S. default. Indeed, as we outline in a theoretical model in our paper, financial stress depresses macroeconomic activity not only through its effects on the risk premium on government and private bond yields, but also through the direct effect that a greater degree of uncertainty and nervousness may have on consumption and investment decisions.

**CONCLUSION**

The world economy continues to struggle with the economic and social consequences of the 2007-08 recession. With the majority of industrialized countries still experiencing a fragile fiscal position, a new global crisis would be unlikely to elicit the same breadth and depth of fiscal programs that were implemented as a response to the recent economic crisis. Unfortunately, the ongoing ideological political struggle in the U.S. over the debt ceiling increases the likelihood of a new worldwide recession due to the significant uncertainty it created in the financial markets. Too much is at stake to take chances now.

**REFERENCES**


