

# Monetary policy in an open economy under fiscal dominance

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## Abstract

Pandemic crisis and global financial crisis resulted in sharp and deep decreases in economic activity in most economies, regardless of their level of economic development. Being driven by the lessons of the Great Depression and more recent experiences of the Japanese lost decade(s), many governments embarked on highly expansionary macroeconomic policies. These actions saved economies from stagnation and protracted recessions but also led to a massive increase in public debt and pushed central banks into the uncharted waters of unconventional monetary policy.

The serious threat of this state is that the high and/or growing public debt-to-GDP ratio may become a constraint on the conduct of monetary policy that forces the central bank to pay more attention to the sustainability of the public debt and the external debt. In the words of Watkins (2016) fiscal dominance ‘occurs when the fiscal authority is so profligate that a conscientious monetary authority is forced to accommodate the profligacy – that is, the monetary authority prints gobs of money to fund endless deficits’. The objective of the paper is to examine whether the concerns about the public and external debts have become the important drivers of monetary policy in recent years.

The set of quarterly data on interest rates, inflation rates, and output gaps is constructed for a large group of more than 60 advanced and emerging market economies. Even though the data availability is limited and therefore the panel is unbalanced, the dataset covers a relatively long span of time that ranges from 2000Q1 to 2020Q4. Unlike many other studies that estimate output gaps with the Hodrick-Prescott filter, this paper employs the method developed by Hamilton (2018).

The panel data are used to estimate the interest rate rule. The standard specification is augmented with the debt variables that include the debt-to-GDP ratio and the share of the external debt in total debt as well as the other potential determinants of interest rates that include the exchange rate and global variables. The data on external debt are obtained from the updated database developed by Arslanalp and Tsuda (2014).

Estimation is carried out with the method of the instrumental variable for large panel data models with (unobserved) common factors that was recently developed by Norkute et al. (2020). This method was built for dynamic panels in which both the cross-sectional and time-series dimensions tend to be large. Not only does this method permit estimation of panels with heterogenous coefficients, but it also allows for endogenous regressors. The stata algorithm developed by Kripfganz and Sarafidis (2021) is used to obtain the results.

Given that the linkages between monetary policy and fiscal variables can be conditional on the level of economic development and/or the monetary policy framework, the results are obtained for various subsets of countries and periods. In particular, the difference between inflation targeters and non-inflation targeters is examined.

We find that under the IT strategy both inflation and output gap have stable weights across alternative specifications. At the same time, the composition effect is important: domestic debt lowers the interest rate and foreign debt has the opposite effect. Under the non-IT strategy, both the exchange rate and output gap are more important and inflation less important than under the IT strategy. The size effect is negative and the composition effect is positive, and both are stronger than in the IT countries.

**Keywords:** fiscal dominance; monetary policy; interest rate rule; external debt; panel regressions

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