Referee Report:
The Possible Trinity: Optimal interest rate, exchange rate, and taxes on capital flows in a DSGE model for a Small Open Economy

1 Introduction

The aim of the paper is to study how policy makers should optimally set interest rates, exchange rates, and taxes on foreign debt. To this end, the author lays out a model of a small open economy with incomplete asset markets in which the central bank intervenes in foreign exchange markets and domestic bond markets in order to control exchange rates and interest rates. Additionally, the government raises taxes on private foreign debt which is interpreted as (soft) capital controls. The policy makers minimize a loss function that penalizes fluctuations in inflation, GDP, and the real exchange rate, as well as the variances of the changes in interest rates and exchanges rates. The author considers four different types of policy makers. These types differ with respect to the weights attached to different policy targets. Each type of policy-maker can choose from a set of instruments or intermediate targets (the interest rate, the depreciation rate, the tax on foreign debt). The author then compares different policy regimes that differ with respect to which combination of instruments is used to minimize the loss function. In doing so, the author seeks to answer questions such as whether a managed exchange rate regime with capital controls (in which all instruments are used) outperforms a floating exchange rate regime (in which only the interest rate is set optimally). The regimes are compared under optimal simple policy rules and under optimal policy under commitment.

I am very sympathetic to the topic. Unfortunately, I am not convinced by the analysis. I will explain my concerns in what follows.

2 Major Comments

1. The way the paper is written is often confusing. The paper is hardly understandable without consulting a previous paper of the same author (Escud, 2012). The author himself is aware of this and frequently requests the reader to consult the parent paper. This would be fine for additional details but not for important parts such as, for example, the calibration. Major parts of the outline of the model are relegated to the Appendix. This is fine. However, the structure of the model should be explained (at least verbally) in the paper. Moreover, the paper should be streamlined and considerably shortened.

2. The calibration should be explained and discussed much more carefully. From reading this paper, the calibration is neither justified nor explained. For example, I am very surprised to figure out, from inspecting Table 1, that the government spending to private consumption ratio is above unity. Contrasting this paper's calibration to other papers' calibrations is not very helpful if discrepancies are not explained. Moreover, the author should convince the reader that the model is a good model by evaluating the model's capacity to fit the data (standard deviations, relative standard deviations, correlations).

3. One of the main weaknesses of the paper is that it lacks a discussion of the distortions in the economy and of the trade-offs the policy maker faces. Since the paper does not provide this, it is impossible to think about what a policy maker should do in this economy, and what he can or can not achieve. What are potential benefits or costs from intervening in the foreign exchange market? What are potential benefits or costs from adopting capital controls? The present paper just demonstrates that welfare is improved if you add an additional instrument to a restricted instrument set that is smaller than the set of policy targets. But this is well-known. Moreover, the draft does not convey much of the economics of the results. The text just writes what the reader can see in the Tables, without much added.

4. Although the model provides a reasonable welfare metric, namely the utility function of households, the author considers an ad-hoc loss function. Besides the lack of microfoundation of the loss function, the author does not even motivate and justify the choice of this specific loss function. In particular, why should policy-makers that aim to stabilize consumer price inflation (which implicitly takes account of exchange rates movements) also aim to stabilize real exchange rate movements explicitly? Why do policy-makers aim to stabilize the output level and not the deviation of the output level from the natural level that would prevail under flexible prices?

3 Minor Comments

1. It seems that GDP in the production function of the export sector is an externality. Is this true? If so, it should be explained and motivated.

2. The choice of the parameters of the simple policy rules (see Table 4 and 5) should be explained. Why is the value for the smoothing parameter in the Taylor rule larger than unity? Why does the central bank raise the interest rates in recession? Is this calibrated to Argentina?

3. I am very surprised to see that government spending is the most important driver of business cycles in the model, whereas productivity is almost unimportant. Is this in line with empirical evidence for Argentina (or any other country that the author has in mind)?

4. The author should clarify whether households really have no access to foreign assets or whether the calibration just ensures that D_t is positive. The paper claims that the former is true. But this would mean that a non-negativity constraint for D_t must be taken into account. However, with such a non-linearity the optimal policy problem is not a linear-quadratic optimal control problem anymore.

5. The author should motivate and explain more carefully the choice of the types of central bankers. Are their real world examples for type B which does not care about inflation stabilization at all?