Discussion of 'External Constraints on Monetary Policy and the Financial Accelerator' by Gertler, Gilchrist, and Natalucci

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This paper is a remarkable attempt to take seriously the financial accelerator mechanism in an open economy and confront it to the data. The authors basically extend the Bernanke, Gertler, and Gilchrist (2000) model to a small open economy. The two main ingredients are financially constrained entrepreneurs, introducing a financial accelerator mechanism, and sticky prices, giving a role to monetary policy and creating real exchange rate movements. Moreover, the production and investment side are carefully modelled for quantitative evaluation. Importantly, this framework allows the authors to consider different exchange rate regimes.

In my view the paper is an important step forward in the emerging literature on credit constraints in open economies. Early contribution to this literature was made by Gertler and Rogoff (1990), but this was a real two-period model. Aghion, Bacchetta, and Banerjee (1999) developed a dynamic model showing the interaction between financial constraints and real exchange rate movements, but in that model money is neutral and the exchange rate regime does not matter. In Aghion, Bacchetta, and Banerjee (2001), we introduce foreign currency liabilities and price stickiness so that monetary policy has a role, in particular during crises; however, in that framework the exchange regime has little role for large shocks, since the central bank is not able to maintain the exchange rate fixed. Céspedes, Chang, and Velasco (2000) appear to be the first to find a different impact of fixed versus flexible exchange rate regime in a dynamic financial accelerator model. However, the robustness of their result is still to be investigated. In general, much more work is required on this issue, which is why the Gertler-Gilchrist-Natalucci paper is an important paper.

The paper has two main objectives: 1) To analyze the impact of the exchange rate regime in a financial accelerator model and 2) To reproduce the behavior of the Korean economy during the Asian crisis. The main results from the analysis are : 1) A flexible exchange rate is better than a fix with a foreign interest rate shock. This traditional result is reinforced by the financial accelerator. 2) Numerical simulations can replicate the real side of the Korean economy after the crisis, in particular GDP, investment, productivity, and utilization.

Based on a natural division of labor among discussants, my comments will focus on the first element. My first concern, however, is whether it is appropriate to use the same model to look at two relatively different issues. In my view, a simpler model would be more adequate to assess the impact of financial constraints on the ranking of exchange rate regimes. While it is eventually desirable to have a quantitative assessment, one needs first to understand precisely the mechanisms through which these constraints interact with the exchange rate regime and the various hypotheses that are crucial for the results.

Let me now focus on the main mechanism through which the exchange rate regime affects the response to a foreign interest rate shock. The basic idea is that under a fixed exchange rate, the central bank needs to increase the nominal domestic interest rate to maintain the value of the currency. Since prices are rigid, the real interest rate increases which increases the debt burden and reduces the cash flow of firms. This effect is amplified by a decrease in the value of the firm. Surprisingly, the authors show that this reasoning holds even if firms borrow entirely in foreign currency.

The crucial assumptions behind this result are the flexibility of interest rates on corporate debt and the degree of rigidity of prices, in particular the degree of pass-through of exchange rate to prices. What is important is that prices are less flexible than the interest rate on debt. For example, if prices are preset for one period only (as in Aghion, Bacchetta, and Banerjee, 2001, for example), this effect disappears. If firms borrow long term and have a fixed interest rate on their debt, the effect is also not present. In the model, it is assumed that firms only have one-period debt contract, but it would be useful to know how realistic this assumption is. In the Asian crisis it is well known that most of the debt increase in the years preceding the crisis was short term, but what matters is not new debt, but the total existing debt. In any case, the authors should give more attention to this aspect of the model.

The other element that deserves much more attention is the pass-through of exchange rate to prices. While the current model appears satisfactory around steady states, it is not appropriate to deal with large currency movements. Since the authors are interested in currency crises, they should consider this aspect more seriously. A major problem in the current specification of the model is that domestically produced goods sold both to consumers and capital producers do not react when foreign retailers change their price. From equation (30) and (31), the price set by domestic retailers P^H ignores the prices set by foreign retailers P^F. Thus, if there is a large currency depreciation, P^F increases and this will increase the demand for domestic goods. However, in the current version of the model domestic retailers ignore this change in demand. The reason for the omission seems to be that the pricing behavior is approximated around a steady state, which is not valid for large changes in the exchange rate.

Moreover, while the pass-through to domestic good prices appears incorrect, the pass-through to foreign good prices is also artificially low due to the assumption of Calvo pricing. The pricing strategy simply assumes that a given proportion of firms changes their prices each period. With large currency movements, however, this assumption does not seem very realistic. Moreover, the Calvo pricing assumption also introduces some technical complications that are not mentioned in the paper. The fact that only a proportion of firms change prices will lead to large price differences across foreign retailers when there are large currency movements; and those retailers who do not change their prices will probably go bankrupt. One way to solve these technical problems was suggested by Calvo (1983) by introducing a 'price regulation mechanism' equalizing prices among foreign retailers.

To summarize, this paper is an important contribution to the literature, but it requires a better discussion of the crucial assumptions and a more careful modelling of the international dimension of the model. These improvements would definitely make the analysis more convincing. I would also encourage the authors to explore other shocks to have a broader understanding of the impact of financial constraints on the optimal exchange rate regime.

References

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