



Balance sheets, exchange rate policy, and welfare

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Abstract

We evaluate the welfare implications of fixed and flexible exchange rate regimes in a small open-economy model that incorporates the financial accelerator coupled with liability dollarization. We solve the model up to a second-order approximation which allows us to rigorously address the relationship between uncertainty and welfare. We identify leverage and debt-to-GDP ratios above which an exchange rate peg is welfare superior to a flexible exchange rate regime. The results indicate that emerging market countries with even moderate levels of foreign currency-denominated debt may find it beneficial to stabilize their exchange rates.

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1. Introduction

Understanding the welfare implications of fixed and flexible exchange rate regimes in emerging market countries (EMCs) is a challenging endeavor primarily because of two fundamental frictions that complicate the conduct of monetary policy. First, EMCs can typically borrow only in foreign currency denominations, a phenomenon

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called ‘original sin’ by Eichengreen and Hausman (1999). Second, these countries usually have imperfect access to capital markets because foreign credit is associated with a countercyclical risk premium.¹ These two frictions increase the vulnerability of EMCs to external shocks because a potential depreciation can substantially inflate the cost of borrowing – owing to currency mismatches – which would also increase the risk premium, thereby further constraining access to capital markets.

Recent theoretical studies aim at capturing these fundamental frictions. These studies often use models incorporating the financial accelerator in combination with liability dollarization (where external debt is denominated in foreign currency). For example, Cespedes et al. (2004), Devereux et al. (2006), as well as Gertler et al. (2003) build upon the framework developed by Bernanke et al. (1999). These studies use the financial accelerator to model an endogenous risk premium that is linked to balance sheets thereby capturing the friction of imperfect capital market access. Nonetheless, these papers find that even after modeling both of these frictions, the conventional wisdom embodied in the Mundell–Fleming framework promoting the implementation of flexible exchange rate regime still prevails.²

The objective of this paper is to conduct a rigorous welfare-based comparison of exchange rate regimes for EMCs. In this context, we extend the earlier literature in two important dimensions. First, we perform a more thorough welfare evaluation of exchange rate regimes by employing a second-order approximation to the equilibrium conditions of a model that incorporates the financial accelerator in combination with liability dollarization. Employing a second-order approximation is critical because it captures the important effects of uncertainty on the average level of welfare.³ Second, we consider a broad range of leverage and debt-to-GDP ratios that allows us to uncover trade-offs between increasingly harsher balance sheet vulnerabilities and the role of expenditure switching. This is important because the welfare maximizing exchange rate regime for an EMC depends on the particular nature of its balance sheet vulnerabilities.

We start by verifying that a flexible exchange rate regime is better than a fixed exchange rate in terms of welfare in a model where the financial accelerator is *not* present. This validates the policy recommendations of the standard Mundell–Fleming framework. In other words, with perfect capital markets, the presence of liability dollarization *alone* does *not* alter the classic policy prescription advocating flexible exchange rates for a small open economy.⁴

¹See, for example, Neumeier and Perri (2005) and Uribe and Yue (2006) on the link between foreign interest rates and EMC business cycles.

²Although they do not rigorously evaluate the welfare implications of exchange rate regimes, Choi and Cook (2004) as well as Cook (2004) are notable exceptions.

³In a stylized new open-economy macroeconomics model, Obstfeld and Rogoff (2003) consider some of the issues discussed here, particularly on the interplay between higher moments and welfare.

⁴Also, consistent with the previous literature, the welfare costs are higher in a model with the financial accelerator present for both exchange rate regimes. This is because the financial accelerator, by linking the risk premium and hence the demand for capital to the condition of borrower balance sheets, magnifies the effects of shocks on the economy through the impact on balance sheets.

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