The role of financial development in exchange rate regime choices

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Abstract
We make the first attempt in the literature to empirically investigate the role of financial development in the choice of exchange rate regimes. Using a binary choice model, we first show that financially less developed countries are more likely to adopt a fixed exchange rate. To further examine the impact of financial development on the conditional probability of exiting from an existing pegged system to a flexible one, we then employ hazard-based duration analysis. We find strong evidence that countries with higher levels of financial development are more likely to exit a pegged system, and, interestingly, financial development only matters to orderly exits but not disorderly exits. Our results are robust to controlling for endogeneity and sample selection.

1. Introduction

Foreign exchange rate policies — whether to adopt a fixed or flexible exchange rate regime — have long been at the heart of policy debates among academic researchers and policymakers.1 As the traditional Mundell–Fleming model (Fleming, 1962; Mundell, 1963) suggests, a country's exchange rate regime choice should be based on the sources of shocks, the level of capital mobility and the preference for independent monetary policies.2 According to the optimal currency area theory proposed by

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1 Bordo (2003) provides a comprehensive survey on exchange rate regime choices from a historical perspective.
2 According to the Mundell-Fleming Model, in a world with perfect capital mobility, a fixed (flexible) exchange rate regime should be selected in countries experiencing nominal (real) shocks. Meanwhile, for a country that prefers independent monetary policies, a flexible exchange rate regime would be a better choice. The argument on monetary independence and exchange rate regimes dates back to Friedman (1953).
Mundell (1961), a country’s exchange rate regime decision should also take into account its trade openness, country size and trading relationship with its pegging country, etc. Furthermore, the view (Bruno, 1990; Calvo and Végh, 1994; Mecagni, 1995) that pegging to a sound currency can provide an inflation anchor implies that a country should consider a fixed exchange rate when it intends to keep domestic inflation under control but lacks policy credibility.

While the above conventional theories of exchange rate regime determination have been quite successful in explaining many countries’ exchange rate regime choices in practice, there are certainly some exceptions. Consider the case of China. Although, based on the conventional theories, many researchers suggest that a flexible exchange rate regime would fit China better, the country has been very reluctant to exit from its de facto fixed exchange rate regime to a more flexible one. More generally, an influential study by Calvo and Reinhart (2002) find that there is an epidemic case of “fear of floating” among emerging and developing countries. Why are those countries so afraid of allowing their exchange rates to fluctuate?

Two recent studies, Bordo (2003) and Bordo and Flandreau (2003), propose a novel rationale for the above puzzling real world exchange rate arrangements by exploring the role of financial development in exchange rate regime choices. Their idea is later formalized by Aghion et al. (2009) (ABRR thereafter). In ABRR’s study, the authors first employ a monetary growth model to show that exchange rate volatility amplifies the negative investment effects of domestic credit market constraints. In their model, exchange rate volatility leads to large variations in firms’ profits. With underdeveloped financial markets, the large profit volatility would greatly reduce firms’ external financing capability, depress their investment, especially in R&D, and eventually curtail a country’s productivity growth. They then provide some convincing empirical evidence that higher levels of flexibility in exchange rate are associated with lower productivity growth when financial development is limited. Taken together, they thus conclude that financial development plays a critical role in countries’ choices of exchange rate regimes and that less flexible exchange rate regimes should be considered in countries with less developed financial markets.

Despite this theoretical prediction on the role of financial development in exchange rate regime choices, direct and formal empirical tests have yet to be done on this interesting and important issue. Does financial development really matter to a country’s exchange rate regime choice in the real world? Is a country with lower financial development more likely to adopt a fixed exchange rate regime in reality? Does financial development play a role in a country’s transition from a fixed exchange rate regime to a flexible one?

Our study makes the first attempt in the literature to address the above important questions by empirically investigating the role of financial development in the selection of exchange rate systems. We first use a conventional simple logit model to examine the effect of financial development on the unconditional probability of adopting fixed exchange rate regimes. A limitation of this approach, however, is that it considers the selection of exchange rate regimes as independent events without taking into account the existing exchange rate arrangement prior to the current choice. We then take another step forward to further examine how financial development affects the probability of switching from a fixed exchange rate regime to a flexible one, conditional on the length of time a country has been in a fixed exchange rate regime, by employing a hazard-based duration analysis. This novel approach not only allows us to explore the conditional likelihood of exiting from a fixed to a flexible exchange rate system but also sheds some light on the role of financial development in the durations of fixed exchange rate regimes. In addition, we also make efforts to distinguish orderly exits from disorderly ones in our duration analysis by incorporating a competing risks framework. In doing

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3 An informal discussion is also spotted in a study by Husain et al. (2005), implying that it would be better for countries with immature financial markets to adopt fixed exchange rate regimes.

4 Klein and Marion (1997) used a logit model to examine the determinants of the duration of pegged exchange rate regimes in Latin American countries. Detragiache et al. (2005) employs a multinomial Logit model to examine how various factors affect the exits from fixed exchange rate regimes. However, neither of these two studies examines the role of financial development. In a study by Asici and Wyplosz (2003), a probit model is used to study the determinants of a peaceful exit from a peg as compared to a troubled exit. They included financial development in their specification but found no significant effects on peaceful exits.

5 Orderly and disorderly exits are defined in Section 2.
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