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Exchange rate regimes, capital controls, and currency crises: Does the bipolar view hold?

Taro Esaka

Kobe City University of Foreign Studies, 9-1, Gakuenhigashi-machi, Nishi-ku, Kobe, 651-2187, Japan

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ABSTRACT

This paper empirically examines the link between *de facto* exchange rate regimes and the incidence of currency crises in 84 countries from 1980 to 2001 using probit models. We employ the *de facto* classification of Reinhart and Rogoff (2004) that allows us to estimate the impact of relatively long-lived exchange rate regimes on currency crises with much greater precision. We find no evidence that, as the bipolar view argues, intermediate regimes have a significantly higher probability of currency crises than both hard pegs and free floats. Using the combined data of exchange rate regimes and the existence of capital controls, we also find that hard pegs with capital account liberalization have a significantly lower probability of currency crises than intermediate regimes with capital controls and free floats with capital controls. Hence, the bipolar view does not strictly hold in the sense that intermediate regimes are significantly more prone to currency crises than the two extreme regimes. However, the fact that hard pegs with capital account liberalization are substantially less prone to currency crises is worthy of note.

1. Introduction

The choice of exchange rate regimes is one of the most important topics in international economics that has been studied and debated over recent decades. This topic has gained momentum following the major currency crises in the 1990s (e.g., the European Monetary System (EMS) crisis in 1992–1993, the Mexican crisis in 1994–1995, and the Asian crisis in 1997–1998). In a world with increasingly integrated capital markets, what sort of exchange rate regime is sustainable? Which types of exchange rate regimes are more prone to crises?

E-mail addresses: tesaka@inst.kobe-cufs.ac.jp, tesaka@hotmail.com.

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To answer these questions, some researchers have suggested that in a world of increasing international capital mobility, only the two extreme exchange rate regimes (either hard pegs such as dollarization, currency boards and monetary unions, or a freely floating regime) should be adopted, in order to avoid currency crises and are likely to be sustainable (Eichengreen, 1994; Obstfeld and Rogoff, 1995; Summers, 2000; Fischer, 2001). Conversely, intermediate exchange rate regimes (such as conventional pegs, basket pegs, crawling pegs, bands, or managed floating) are likely to be vulnerable to speculative attacks and will be unsustainable. This view has come to be known as the bipolar view.

According to the bipolar view, monetary authorities need to achieve greater credibility to avoid speculative attacks on their currencies by adopting hard pegs, if they truly want to stabilize their currencies. Hard pegs can enhance credibility in their currencies because they express a commitment to abandon monetary policy autonomy and have higher verification and greater transparency for monetary and exchange rate policies than other regimes. However, since intermediate regimes have a lack of verification and transparency for exchange rate policies, they cannot sufficiently obtain credibility of currencies, thereby causing speculative attacks and currency crises.

On the other hand, Williamson (2000) has proposed the usefulness of the intermediate regimes of the BBC (basket, band, crawling) rules because the stabilization of real effective exchange rates is important for the sustainability of exchange systems. He has suggested that intermediate regimes could help prevent misalignments and provide greater flexibility to cope with shocks, while hard pegs and free floats could generate misalignments that could damage their sustainability. According to the BBC rules, intermediate regimes are substantially less prone to currency crises.

Are free floats safe from currency crises? Since free floats have the greatest degree of monetary autonomy compared with other regimes, if countries that lack the governance and credibility for monetary regimes adopt free floats, they cannot sufficiently obtain credibility of their currencies, thereby causing speculative attacks and currency crises.

Some empirical studies have investigated the links between exchange rate regimes and currency crises by using various datasets and methods. Ghosh et al. (2003), Bubula and Ötker-Robe (2003), Rogoff et al. (2004), Husain et al. (2005), and Haile and Pozo (2006) have all conducted major studies. Ghosh et al. (2003) estimate the occurrence of currency crises under alternative exchange rate regimes (e.g., pegged regimes (include hard pegs, conventional pegs, and basket pegs), intermediate regimes, and floating regimes (include managed floating and freely floating) in IMF member countries from 1972 to 1999 using the data of the International Monetary Fund (IMF) *de jure* classification, and they find that the probability of crises is the highest for floating regimes.[1]

Bubula and Ötker-Robe (2003) examine the link between exchange rate regimes and currency crises in IMF member countries from 1990 to 2001 by estimating logit models based on the data of the *de facto* Bubula and Ötker-Robe (2002) classification.[2] They find that the probability of currency crises is significantly higher for intermediate regimes than for both hard pegs and floating regimes. Hence, they indicate that the bipolar view of exchange rate regimes holds in the sense that intermediate regimes are significantly more prone to currency crises compared with both hard pegs and floating regimes.

Rogoff et al. (2004) and Husain et al. (2005) estimate the probability of currency crises under different types of exchange rate regimes (e.g., peg, limited flexibility, managed floating, and freely floating) from 1970 to 2000 using the data of the *de facto* Reinhart and Rogoff (2004) classification. According to their results, managed floating has the highest probability of currency crises for all countries.[3]

Haile and Pozo (2006) investigate whether exchange rate regimes affect the incidence of currency crises in 18 developed countries from 1974 to 1998 by estimating probit models based on the data of the IMF classification and the *de facto* Levy-Yeyati and Sturzenegger (2005)

[1] However, it is not certain whether floating regimes have a statistically significant higher probability of crises than other regimes.

[2] For the analysis of Bubula and Ötker-Robe (2003), the explanatory variables in logit models are exchange rate regime dummies and do not include control variables.

[3] However, it is not clear whether it is statistically significantly higher than other regimes, because a statistical test was not done.