What Drives Monetary Policy in Post-Crisis East Asia? Interest Rate or Exchange Rate Monetary Policy Rules[☆]

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ABSTRACT

This paper estimates a simple small open macroeconomic model to analyse the effectiveness of monetary policy rules (MPRs) where either the nominal interest rate or the nominal exchange rate is the policy instrument. The aim is to ascertain which of those MPRs are best suited for a selection of inflation targeting economies of Asia. Normally, one would associate inflation targeting with interest rate rules but it is thought that, due to fear of floating, exchange rate rules may well be more effective given the openness of these economies. It is found that interest rate rules seem to better reflect the prevailing policy regime than exchange rate rules. It is also found that stronger relationships pertaining to the interest rate rules are found in the case of Korea and Thailand than for Indonesia and the Philippines. Exchange rates appear to be very influential in determining the value of the nominal interest rate but not in a policy sense.

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1. Introduction

One of the dominant issues surrounding the choice of monetary and exchange rate policy in Asia is that of the role of the exchange rate and what policy the crisis-affected countries actually implemented after the crisis. According to many observers, the exchange rate option for developing countries boils down to one between flexibility, on the one hand, and credible pegging, on the other. Countries have, however, been advised to steer clear of arrangements that lie anywhere between these polar extremes (i.e. those in the "middle") as they were viewed as inherently unstable.[1]

Of the crisis-affected countries, we observe that Korea, Thailand, Indonesia and the Philippines opted for flexibility by instituting inflation targeting regimes. Each of these countries has passed legal and institutional legislations supporting their respective inflation targeting arrangements. These legislations so passed provide for many facets of the new monetary policy regime including the appointment of key personnel and their tenure, the independence and autonomy of the monetary authority, the stated objectives of monetary policy and the responsibilities and accountability with respect to the achievement of those objectives.[2] Malaysia chose the opposite corner and implemented a rigid fix of the ringgit to the US dollar which it subsequently forsaked in July 2005 (see Table 1).

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[1] The bipolar view draws analytical support from the "Impossible Trinity". Simply put, this states that a country cannot simultaneously conduct independent monetary policy and pursue a fixed exchange regime if it wants to remain completely open to international capital flows.

[2] See Cavoli and Rajan (2007a, in press, 2009, Chapter 2) for a discussion of the inflation targeting arrangements in East Asia.

Table 1
De jure Exchange Rate Regimes in Asia.

Country	Official policy pronouncements (direct quotes)
Indonesia	In July 2005, Bank Indonesia launched a new monetary policy framework known as the Inflation Targeting Framework, which has four basic elements as follows: (1) use of the BI rate as a reference rate in monetary control in replacement of the base money operational target, (2) forward looking monetary policymaking process, (3) more transparent communications strategy, and (4) strengthening of policy coordination with the Government. The rupiah exchange rate is determined wholly by market supply and demand. However, Bank Indonesia is able to take some actions to keep the rupiah from undergoing excessive fluctuation.
Korea	Inflation targeting is an operating framework of monetary policy in which the central bank announces an explicit inflation target and achieves its target directly. This is based on the recognition that to achieve sustainable economic growth, it is important above all else that inflation expectations, which have a great effect on wage and price decisions, should be stabilized. In this regard, inflation targeting places great emphasis on inducing inflation expectations to converge on the central bank's inflation target level by the prior public announcement and successful attainment of that target level. The exchange rate is, in principle, decided by the interplay of supply and demand in the foreign exchange markets. However, the Bank of Korea implements smoothing operations to deal with abrupt swings in the exchange rate caused by temporary imbalances between supply and demand, or radical changes in market sentiment.
Philippines	The primary objective of Bangko Sentral ng Pilipinas' monetary policy is to promote a low and stable inflation conducive to a balanced and sustainable economic growth. The adoption of inflation targeting framework for monetary policy in January 2002 is aimed at achieving this objective. The Monetary Board determines the exchange rate policy of the country, determines the rates at which the Bangko Sentral buys and sells spot exchange, and establishes deviation limits from the effective exchange rate or rates as it deems proper.
Thailand	Since July 2, 1997, Thailand has adopted the managed-float exchange rate regime, in which the value of the baht is determined by market forces, namely demand and supply in both on-shore and off-shore foreign exchange market, to let the currency move in line with economic fundamentals. The Bank of Thailand will intervene in the market only when necessary, in order to prevent excessive volatilities and achieve economic policy targets. Under the inflation targeting framework, the Bank of Thailand implements its monetary policy by influencing short-term money market rates via the selected key policy rate, currently set at the 14-day repurchase rate.

Source: Adapted from Cavoli and Rajan (2007b). Compiled from Bank of Korea, Bank Indonesia, Bank of Thailand and the Bangko Sentral ng Pilipinas website.

Under conventional wisdom regarding inflation targeting, this is potentially problematic. Inflation targeting, as a normative statement, is usually associated with floating exchange rates and is usually implemented by an interest rate monetary policy rule (MPR) (see Clarida, Gali, & Gertler, 2001; Debelle, 2001). Any involvement of the exchange rate as an objective will dilute the effectiveness of inflation as the primary target. However, there is evidence to suggest that the inflation targeting countries still held some desire to fix their respective currencies after the effects of the crisis had subsided (for instance, see Cavoli & Rajan, 2007b).[3] Furthermore, any involvement of the exchange rate as an instrument (say, a monetary conditions index, MCI) would compromise the effectiveness of the interest rate. However, some recent literature has examined the possibility of inflation targeting being implemented through an exchange rate MPR. Parrado (2004) and Cavoli and Rajan (2007a) have found that this is a feasible policy system and empirical results seem to suggest that a MPR specified in this way may actually be implemented in Singapore.

This paper expands on and contributes to the literature on this topic by investigating the behaviour of the policy variables that matter for policy making. It does this by estimating a series of monetary policy rules (MPRs) for Korea, Thailand, Indonesia and the Philippines separately. We will estimate *interest rate* MPRs versus *exchange rate* MPRs for each country. Our interest is whether, despite an interest rate based inflation targeting based policy for many Asian countries, the strength of the relationship between the exchange rate and other important macroeconomic variables is such that the exchange rate may actually be a more appropriate instrument.[4]

The key to this study is not to analyse the MPRs strictly as reaction functions. Rather, it is an opportunity to examine them as a way of providing information about 'elasticities' that are present in the MPRs. The basic premise is that if the relationship between the instrument and the target variable is strong, even if it is not currently viewed by the monetary authority as an instrument, it serves to suggest that it should possibly be an instrument—it provides a normative statement about the conduct of monetary policy. Put another way, the nature of the feedback loop between the structural model and the policy rule is sufficiently robust to suggest that the instrument to that policy rule may be effective.

The remainder of the paper is as follows: The following section presents a simple macroeconomic model and derives an optimal MPR for the interest rate and the exchange rate. Using this model and the optimal MPRs as our organising framework, Section 3 discusses the estimation technique and some data issues. Section 4 presents the results of the empirical investigation and Section 5 concludes.

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[3] This observation has led many to suggest the possibility of a single Asian currency. For a discussion of the many facets of this debate, see Chung and Eichengreen (2007).

[4] This is the argument made by the Monetary Authority of Singapore (MAS) to justify an exchange rate-based MPR (see Khor et al., 2004). Also see, Eichengreen (2002) for some insights into this argument.