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3-2010

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**DOI:** <https://doi.org/10.1142/S0217590810003626>

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### Citation

Chow, Hwee Kwan; KRIZ, Peter Nicholas; Mariano, Roberto S.; and TAN, Augustine H. H.. Monetary Policy Cooperation to Support Asian Economic Integration. (2010). *Singapore Economic Review*. 55, (1), 83-101. Research Collection School Of Economics.

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## MONETARY POLICY COOPERATION TO SUPPORT ASIAN ECONOMIC INTEGRATION

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This paper considers the form of monetary policy coordination and regional exchange rate arrangement that would best support economic and financial integration in East Asia. In view of the region's economic diversity, we propose a graduated program of informal policy cooperation from weak forms of cooperation to more intensive modes of cooperation such as the adoption of common monetary policy objectives. An array of informal monetary arrangements rooted to the degree of institutional development can improve the effectiveness of both sovereign and regional institutions, and promote integration in East Asia. Drawing upon the European experience with the Exchange Rate Mechanism (ERM), we conclude that East Asia should first embark on other forms of integration to aid in the development of a high degree of real and nominal convergence amongst the regional countries. Only then would an ERM-type system that employs a regional monetary unit become more sustainable and less susceptible to speculative currency attacks in the region.

*Keywords:* Regional Economic Integration; Monetary Policy Cooperation; Exchange Rate Arrangements, Sequencing.

JEL Classification: E58, F31, F33

### 1. Introduction

The East Asian economies have become more interdependent over time with rising trade and investment within the region. In particular, the establishment of cross-border production networks by transnational corporations since the early 1990s has given rise to the growing intensity in vertical intra-industry trade among the East Asian countries. More recently, the liberalization of China's economy has also led to an increasing bias towards intra-Asian trade and investment. Indeed, intra-regional trade as a share of total trade of the East Asian countries namely, the 10 ASEAN member countries, China, Hong Kong, Japan, Korea and Taiwan exceeded 50% in 2005.<sup>1</sup> Nevertheless, regional trade integration did not come at the expense of trade with the rest of the world, as evidenced by the growth of extra-regional trade as a share of GDP in the East Asian countries. Meanwhile, about one-third of all FDI inflows to the region are between Asian countries (Hattari and Rajan, 2008).

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<sup>1</sup>Data source is Asian Development Bank's Asia Regional Integration Center (ARIC) Integration Indicators Database.

Further, there has been a proliferation of bilateral and regional trade agreements focused on lowering barriers to trade and investment within East Asia.<sup>2</sup>

Turning to finance, the 1997–98 Asian crisis provided the impetus for regional financial cooperation. The first annual meeting of the finance ministers of the ASEAN+3 countries — that comprises the 10 ASEAN countries, and China, Japan and Korea — in 2000 saw the development of a system of bilateral credit arrangements known as the Chiang Mai Initiative (CMI) which is aimed at helping regional countries experiencing balance of payment difficulties. Since then, the size of these bilateral swap agreements have been enlarged and considerations made of setting up a self-managed reserve pooling arrangement governed by a single contractual agreement as a form of multilateralization. As for initiatives to integrate regional financial markets, the Executives' meeting of East Asia and Pacific central banks (EMEAP) sponsored the establishment of two Asian bond funds in 2003 and 2004 respectively. The first is to purchase US dollar-denominated bonds issued by the Asian government, while the second is to invest in local currency bonds. More recently, the focus have been on the exploration new debt instruments for infrastructure financing, promotion of securitization of loan credits and receivables and the promotion of Asian Medium Term Note (MTN) programme. A key motivation to enhance financial integration in the region is to facilitate the more efficient use of Asian surplus savings via greater regional financial intermediation between savers and investors, in place of intermediation through financial markets outside Asia.

These developments have led some to consider how the authorities in the East Asian countries could engineer monetary policy cooperation to advance economic and financial integration that fosters macroeconomic and financial stability in the region. In this paper, we address two important policy questions related to prospective East Asian monetary policy cooperation. One policy question pertains to the search for deeper monetary cooperation and is motivated by whether the European experience, whereby monetary integration spurred intra-regional trade, investment and financial flows, is relevant to East Asia.<sup>3</sup> Therefore, we ask the following question: Should East Asia push for an Asian-flavoured version of the European Monetary System (EMS) cum Exchange Rate Mechanism (ERM)? To this question, we argue that the lack of strong supranational institutions in East Asia suggests that the formal monetary coordination that reflected Europe's march from the EMS to the Euro be eschewed in favor of looser forms of monetary cooperation.

The second policy question pertains to the broader economic implications of monetary cooperation. We are motivated by theoretical and empirical evidence that economic activity endogenises and organizes around the behavior of the monetary regime in place. Therefore, we ask the following question: What regional exchange rate arrangement, if any, could best support the economic integration process in East Asia? While the experience of North American Free Trade Area (NAFTA) demonstrates that fluctuations in exchange rates are not incompatible with a free trade area, we argue that stability in currency relationships do become more advantageous with greater levels of integration.<sup>4</sup> The renewed focus on

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<sup>2</sup> See ARIC's FTA database for Asia for a comprehensive list of such agreements.

<sup>3</sup> There is, of course, a mutually reinforcing relationship between monetary integration and real integration.

<sup>4</sup> In view of the high degree of openness of the Asian countries and their dependence on exports and FDI, a key objective to avoid excessive volatility and misalignment of the currencies is to maintain competitiveness.

closer integration in East Asia thus calls for regional monetary cooperation and a common understanding with regard to exchange rates, their movement, their channels, and their sovereign and regional implications. Drawing upon the European experience with the Exchange Rate Mechanism (ERM), we conclude that East Asia should, for the moment, eschew formal exchange rate arrangements until East Asia has achieved a high degree of real and nominal convergence.

The balance of this paper is organized as follows. The next section proposes a nested sequential program of informal monetary policy cooperation among East Asian countries. The applicability of the European ERM to this region is discussed in Sec. 3, while the prerequisites for formal regional monetary policy coordination are found in Sec 4. Section 5 concludes.

## **2. Phasing Informal Monetary Policy Cooperation**

The nature of regional economic and financial integration in East Asia and the continuing globalization of markets each suggest that informal monetary policy cooperation can play a significant role as either a stand alone policy pathway or as a stepping stone to formal monetary coordination.<sup>5</sup> While formal monetary coordination presents all kinds of economic, political and institutional challenges that can derail the move toward an Asian monetary system and call into question its superiority over sovereign approaches to monetary policy, informal cooperation has the ability to enhance both sovereign monetary policy and prospects for formal monetary coordination. To illustrate this twin potential, we propose a nested sequential program of informal monetary policy cooperation among East Asian countries. Our proposed program can be divided into three phases, covering (i) existing regimes; (ii) common objective variables; and (iii) common regimes. Each phase is informal in the sense that neither formal contractual commitment nor political accommodation is mandated. Rather, each phase is market-driven and structurally-driven and serves to facilitate regional economic and financial integration despite being wholly sovereign in nature.

### ***2.1. Phase I: Informal cooperation using existing policy regimes***

The simplest mode of monetary policy cooperation would be for East Asian countries to pursue non-monetary policy cooperation using their existing policy regimes. Phase I would include technical assistance, human capital training programs, and the increased availability of economic and financial information. Such cooperation will undoubtedly strengthen risk management and prudential supervision within the country. The need for regional surveillance, as underscored by the Asian crisis, has led to the establishment of the ASEAN+3 Economic and Policy Review and Dialogue (ERPD) Process for the purpose of peer review and policy dialogue amongst the finance ministers of the region.<sup>6</sup> However, the principle

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<sup>5</sup> Even if a formal approach is adopted, in practice, preconditions would need to be spelled out and a time-line for individual countries to meet these pre-conditions would need to be defined before the region is ready for integration. Essentially, this paper attempts to articulate the steps to achieve convergence in terms of monetary objectives and regimes.

<sup>6</sup> EMEAP has also been very active in regional surveillance and financial cooperation.

of non-intervention in other countries' affairs (in order to avoid conflict) could hamper candid dialogue, bringing into question the effectiveness of the process in identifying incipient risks (Wang and Woo, 2004). In order for regional surveillance to lead to sound policy-making in the region, standardized data that serve to uncover potential problems should be provided by the regional authorities in a timely manner. Looking to the process adopted by the European Union, the analyses and recommendations of a regional institution or individual countries' staff members can provide the focus for debate (Kenen and Meade, 2008). As explained in Kawai and Houser (2007), the EPRD process could be enhanced from information sharing, to peer review and peer pressure, and then to due diligence.

Further, Phase I cooperation can promote capital market integration within East Asia through financial institutional reforms that reduce costs of impediments to cross-border transactions and improve the harmonization of regional standards and regulations. An integral component of informal monetary policy cooperation is the implementation of sovereign institutional reforms and the creation of new regional institutions. Whilst many Asian countries have pushed forward with financial liberalization, many controls and restrictions remain in place at the domestic level for some countries that have hampered the development of legal, accounting, supervisory, and regulatory mechanisms essential to regional financial stability. To achieve such fundamental reform at the domestic level, the external pressure of regional financial cooperation should complement internally-driven financial reform initiatives. In this regard, a forum vested with the necessary authority could be created to take on the task of promoting and overseeing financial sector reform in Asia.<sup>7</sup> Such a forum could serve as a precursor to an independent, supranational institution with regulatory and supervisory oversight. The Asian Financial Institute proposed by Eichengreen (2002) provide an example of such an institution which can better handle more delicate and politically-charged items on behalf of the region.

Additionally, emergency crisis management mechanisms designed through an explicit regional institution can implement procedures to slow the spread of any potential financial contagion that might arise. In fact, even the simplest mode of informal monetary policy cooperation can help develop "financial circuit breakers" which can give policymakers the time to locate the specific cause of a given crisis and the opportunity to find an appropriate resolution. For instance, the ASEAN+3 finance ministers initiated a project on monitoring capital flows and an early warning system. A prototype version of the Vulnerability Indicators and Early Warning System software at the Asian Development Bank has been devised to signal future potential crises, which could potentially aid in limiting the sort of cross-country contagion experienced during the Asian crisis.

While central banks in East Asia optimize their own sovereign monetary policy regimes, intensive non-monetary policy cooperation will offer countries a great opportunity to learn about the subtleties of monetary policy cooperation. Clearly, formal arrangements are neither necessary nor sufficient conditions in the creation of an *esprit de corps* among

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<sup>7</sup>Such a forum already exists within ASEAN.

regional policymakers. Informal yet vigorous cooperation can go a long way in improving sovereign and regional institutions.

## ***2.2. Phase II: Informal cooperation using common policy objectives***

Pushing beyond policy cooperation in Phase I, informal monetary policy cooperation should deepen in order to move Asia towards recognition of a common set of objective variables and approaches to identifying those variables. Phase II essentially implies that regional central bankers adopt a common conceptual framework. National central banks would still retain discretion over regime choice. However, common objectives will help pin down expectations in the region and are compatible with deepening integration of financial markets in the region (Genberg, 2006).

The vast monetary policy literature that has developed over the years points to four primary stabilization objectives of monetary policy: inflation, employment/output, exchange rate and interest rate, the latter two of which can also be considered forms of financial stability.<sup>8</sup> These stabilization objectives come directly from a welfare-theoretic understanding of the social loss function that began in earnest with the publication of Woodford (1999). While ad hoc loss functions had been around for some time, it was Woodford's work<sup>9</sup> which signaled a new approach to monetary policy research. His results confirmed a long-held rule of thumb that central banks should be concerned with the stabilization of a weighted average of the variance of inflation around its target and the variance of long-run real marginal costs. Subsequent research extends the central bank loss function to include two other objectives. Woodford (2003) himself suggests arguments based on financial market stabilization for why one might wish to stabilize the variance of the instrument itself.<sup>10</sup> While theoretical support for interest rate stabilization is weak, empirical observations suggest that central banks do move quite cautiously in a stated effort not to upset financial markets. Or, as evidenced by Fed actions in 2008, further observations suggest that central banks will intervene into financial markets should the integrity of those markets be perceived to be at risk.

Moving to the open economy, research on welfare-theoretic models based on the possibility of imperfect pass-through lend credence to efforts to stabilize in part fluctuations in the exchange rate see (Batini *et al.*, 2001; Monacelli, 2003), and (Devereux and Engel, 2003) among others. In the case of emerging markets, the presence of original sin<sup>11</sup> and possibility of currency and/or maturity mismatches, suggest that exchange rate stabilization can also serve as *de facto* financial stabilization.

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<sup>8</sup> We acknowledge that there may be intrinsic conflict between the pursuit of these various objectives, given the limited set of policy instruments. However, this does not mean the central banks should not monitor different indicators.

<sup>9</sup> In a simple closed-economy, dynamic general-equilibrium New Keynesian model, Woodford used a linear approximation to the utility function of the representative agent to derive an exact representation of the social welfare loss function.

<sup>10</sup> Interestingly enough, the sub-prime crisis in the United States in 2007–2008 and the dramatic and controversial intervention by the Federal Reserve has ignited a debate among academicians as to the risks and opportunities presented to central banks should they take on the additional burden of financial stability.

<sup>11</sup> The financial and currency crises that have occurred with such regularity and impunity for some emerging market economies with weak financial systems and regulatory institutions, institutionalized a lack of credibility that taint the countries with what Eichengreen and Hausmann (1999) have termed "original sin".

While more appealing theoretically, communicating complex operations with multiple stabilization objectives do have implicit costs to central banks who seek to manage private sector expectations. Nevertheless, we review these four objectives and discuss their pursuit within the context of informal monetary policy cooperation. The first objective and most often mandated in the charters of central banks, is the pursuit of price stability. In support of this perspective, most modern New Keynesian policy models feature an overwhelming weight on price stability in the social welfare loss function (Woodford, 2003). The reason for this is, inflation remains the single biggest threat to social welfare in most macro-economic models.

The second objective most commonly voiced involves stabilizing some measure of the real sector. Although its theoretical underpinnings are in terms of real marginal costs, stabilization of the real sector is usually stated in terms of the output gap (i.e. deviation of output from potential), the deviation of employment from its natural rate, or deviation of capacity from potential. Theoretical models tend to give this real objective far less weight than price stability. Early work assumed relative weighting of inflation and output objectives according to ad hoc determinations of revealed preference. For example, Galí and Monacelli (2005) found using an open-economy model that the weight on inflation stabilization is 43 times that of output gap stabilization! Regardless of these findings, political-economic arguments suggest that real side objectives can be quite important, economically as well as politically, particularly in countries where wage and price rigidities or other frictions are prevalent.

The third objective is less well understood theoretically but of great importance to many central bankers: financial stability. While curiously missing from many modern monetary models, explicit interest-stability objectives were at the heart of Alan Greenspan's risk management approach to monetary policy (Greenspan, 2005). The risk management approach to monetary policy argues that monetary policy management should concern itself not just with average outcomes, but with low probability outcomes. Furthermore, where possible, the Federal Reserve should move to actively neutralize threats from low probability outcomes. The risk management approach to monetary policy suggests that the manner in which central banks adjust their interest rates should take into account its impact on financial stability.

The fourth objective is also considered controversial: exchange rate stability. There is an open debate as to whether exchange rates should be stabilized directly. Since the effects of international price changes operate through CPI inflation, the reason behind placing additional weight on exchange rate stabilization must exist through other channels. The debate tends to break down in two separate discussions. For developed economies, the theoretical and empirical evidence seems weak. Most early research on welfare-theoretic monetary models have focused on the US and Europe, relatively self-contained economies with their long histories of financial market development. For these economies, empirically-calibrated models set optimal weights on the exchange rate, nominal or real, close to zero. These structurally-dependent findings suggest that dampening exchange rate fluctuations do not help or may even hurt welfare calculations.

When instead the focus shifts to emerging markets, the arguments for preventing large swings in the exchange rates have far more support among both economists and policy-makers. This support is predicated on the existence of some combination of structural and institutional realities that give economic rationale for efforts to stabilise exchange rates. Such realities include currency and maturity mismatches, extreme openness to trade and export orientation, and weak banking systems vulnerable to capital flow reversals.<sup>12</sup> The theoretical bases for these realities tend to lag the standard models that have dominated the early contributions to this literature, thus producing a bias in the literature against explicit weighting of exchange rate stabilization objectives. However, with further advances in the welfare-theoretic framework, we are starting to see more research giving economic rationale for exchange rate stabilization.<sup>13</sup>

In terms of practical policy, Taylor (2000) is among those who has long thought it prudent that the exchange rate receive non-trivial weight in the central bankers' loss function. Anecdotal evidence from the financial and currency crises in Asia and Latin America demonstrate that policymakers had grave concerns over how exchange rate fluctuations would affect net asset positions on the balance sheets of financial intermediaries and corporations. Clearly, the risks on corporate balance sheets in Indonesia in 1997–98 suggest that all prices that affect asset positions should be a cause for concern. In particular, the exchange rate plays an important role in emerging markets due to the fact that most debt in emerging markets is denominated in foreign-currency and that financial intermediaries and corporations alike face currencies mismatches on their balance sheets. Modern monetary models which have begun to incorporate institutional features endemic to emerging markets would likely reduce the disconnect between the views of academicians and policymakers on stabilizing the exchange rate. While trivial or redundant in developed economies, they are of critical importance in emerging markets whose domestic financial sectors are still developing and whose legal, financial, and regulatory institutions are undergoing fundamental transformation.

Given the great range of institutional development in Asia, allowing economies at similar stages of economic and institutional development to find commonality first is preferred to the premature adoption of common objectives throughout the region. For a region which remains tied to the semantics of Bretton Woods, implementation of a common set of objective variables for monetary policy will require some effort. However, informal monetary policy cooperation can help sovereign policymakers craft a region-wide mandate that encourages central banks to pursue the same four objectives, albeit with considerably different emphasis given institutional and structural reasons. Such a mandate that might also specify metrics, intermediate targets, and country-specific tolerances should, of course, be voluntary and designed to be country-specific.

With the move toward inflation targeting regimes underway in a number of Asian countries, one can argue that this process is well underway and that regional policy

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<sup>12</sup>Third currency effect and competitive devaluations are also practical problems arising from intra-bloc exchange rate volatility.

<sup>13</sup>See, for example, Preston and Justiniano (2008) who base arguments for exchange rate stabilization on risk premia that are pinned down by foreign currency debt levels.



cooperation can use these institutional changes to advance closer ties with respect to monetary policy. With common objectives and a single conceptual framework for monetary policy, Asia, as a whole, will be able to accelerate key elements of regional integration. These would include the development of regional institutions, harmonization of standards, regional surveillance, adjustment protocol and mechanisms, and crisis management techniques. Each will provide added support to financial integration. Finally, successful adoption of a consistent set of policy objectives will prepare the region for deeper modes of monetary policy cooperation.

### ***2.3. Phase III: Informal cooperation using common policy regimes***

Following successful implementation of Phase II, regional policymakers have an opportunity to further accelerate regionalism through the adoption of common policy regimes throughout the region. The theoretical literature has been fairly consistent on the benefits of this deeper mode of informal monetary policy cooperation. [Benigno and Benigno \(2003\)](#) showed in a two-country model that the use of inflation targeting in both countries can achieve the same beneficial welfare effects as formal policy coordination. [Rose \(2007\)](#) echoed these results and argued that common adoption of inflation targeting provides the region-wide nominal anchor most commonly associated with nominal exchange rates.

The policy cooperation that would lead to a common monetary framework for East Asia will require some degree of negotiation and persuasion. Nonetheless, once East Asia has reached the stage in its sovereign and regional fundamentals at which it is ready to adopt a common policy regime, there are two likely alternatives. The first and most obvious is the Basket-Band-Crawl (BBC) regime promoted by [Williamson \(1999, 2001\)](#). Given regional traditions that have emphasized prominence of exchange rate management, the common adoption of a BBC framework would appear to be a natural candidate. The second alternative is one that has become increasingly popular even among emerging markets: inflation targeting.<sup>14</sup> Although more difficult institutionally to adopt than BBC regimes, inflation targeting offers institutional features that will become increasingly attractive as East Asia continues to deepen her capital markets, develop her social and political institutions, and establish more credible policy institutions.

Perhaps the most commonly referenced suggestion for a common monetary policy regime in East Asia is a BBC system with country-specific baskets see ([Williamson, 1999, 2001](#)). A BBC regime has three primary components. The basket is the central parity around which exchange rate movements are compared. For country-specific baskets, each country's currency is related to its own weighted basket of currencies of its major trading partners.<sup>15</sup> Compared to a single currency peg, using a currency basket lowers the

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<sup>14</sup>[Williamson \(1999\)](#) noted that a country's adoption of a BBC exchange rate regime does not preclude it from simultaneously operating an inflation targeting monetary regime. Indeed, [Ogawa et al. \(2004\)](#) discussed the various types of shocks which would illicit compatible responses from both regimes. Further, the use of bands around both inflation and exchange rate targets allows room for policy to maneuver ([Ito and Hayashi, 2004](#)).

<sup>15</sup>Optimal trade weights are derived by minimizing a loss function which in turn depends on the definition of optimality, such as the stabilizing domestic output or minimizing the variability of trade balance ([Yoshino et al., 2002](#)).

variability in the real effective exchange rate which confers greater stability to trade competitiveness.<sup>16</sup> The band is the amount of tolerance around the basket within which the domestic currency is allowed to float. The crawl refers to periodic adjustments in small steps in the central parity to keep in line with changes in productivity and long-term fundamentals over time. Adjustments to the crawl help avoid the buildup of a situation where the domestic currency becomes significantly misaligned. The BBC system can also be modified to suit the diversity of financial liberalization in East Asia. Changes in the band, crawl, and basket can each be shaped for a given country.

While attractive, the BBC regime does require credible political commitment from sovereign authorities. In this regard, it is not total transparency but consistent behavior that is critical. A case in point is the Monetary Authority of Singapore. Despite not disclosing the composition of its basket, the MAS enjoys considerable credibility due to its consistent behavior and excellent performance during the Asian Financial Crisis. Nevertheless, formal implementation of a BBC potentially invites the prospect of one-sided bets and speculative attacks. Policymakers can protect their domestic currencies against speculative pressures by building in such features into a BBC: eschewing a narrow band, blurring the edges of bands or not disclosing them at all. Of course, common adoption of a BBC framework under informal monetary policy cooperation does not bind countries to a particular parity matrix. However, it would presuppose that dampened exchange rate fluctuations are a revealed preference.

The alternative to common BBC regimes would be the common adoption of inflation targeting although these two regimes are not necessarily mutually exclusive. Inflation targeting offers economies with more sound institutions and larger internally-driven demand a nominal anchor without the need to make exchange rate management *de facto* monetary policy. As [Rose \(2007\)](#) points out, common adoption of inflation targeting can be considered to be an informal substitute for formal monetary coordination. Given the regional emphasis on market-driven rather than politically-driven integration, the ability to deliver a nominal anchor within informal monetary policy cooperation makes inflation targeting particularly attractive. Quite clearly, inflation targeting is the current trend for open economy monetary regimes. It is widely accepted that inflation targeting would be ideally suited for countries with a modern research infrastructure, sound legal and political institutions, and more technically-proficient human capital. However, whether inflation targeting would be as effective in emerging markets remains an open debate.<sup>17</sup>

Several authors are quick to point out that efficient and credible operation of inflation targeting requires that a number of conditions be addressed. These requirements include: central bank independence, freedom from fiscal dominance, policy transparency, sufficiently developed financial markets, and a modernized research infrastructure ([Mishkin, 2000](#)). More specifically, [Bernanke \(2004\)](#) argues that a sufficiently sophisticated research staff, sufficiently sophisticated models and forecasting techniques, and sufficiently fine data are

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<sup>16</sup> Various East Asian countries such as China, Korea, Malaysia, Thailand and Singapore are known to have ever pegged to or are currently targeting broad baskets of currencies, not least because of their geographically diversified trade patterns.

<sup>17</sup> See [Amato and Gerlach \(2001\)](#) for an early review on inflation targeting in emerging markets.

required to realize the potential stabilization benefits of inflation targeting. However, few emerging markets, including those which have adopted inflation targeting, meet the majority of these criteria. Furthermore, the global trend toward lower inflation from 1982–2005 and the deflationary impact of emerging market integration to the global economy masks to, a large degree, the extent to which the emerging market monetary policies themselves are responsible for the significant reduction in inflation in these countries. Nevertheless, it is clear that inflation targeting in emerging markets has become an institutional goal of sorts, irrespective of whether preconditions have been strictly satisfied.

It is, of course, difficult to compare the efficacy of both regimes for the purpose of moving towards a common adoption of monetary policy regime in East Asia. Optimal monetary policy is endogenous to underlying economic structure and the level of institutional development (financial, legal, and political). Moreover, it is not inconceivable that a given developed country could operate just as well under different regimes. The key to settling this debate should depend on the countries themselves rather than on economic ideology. To a large degree, the BBC system can be operated to achieve the same objectives as inflation targeting. For example, Singapore operates its monetary policy in a manner as sort of a hybrid between the two: using a BBC and inflation targeting. In practice, an adjustable band is used to track the movement of its instrument, while setting its value in such a way as to hit intermediate targets, control inflation and achieve non-inflationary growth (Khor *et al.*, 2004). Likewise, a common adoption of an inflation targeting regime provides a nominal anchor in a manner similar to that under an exchange-rate based monetary system.

Even though the adoption of inflation targeting regime does not rule out intervention in the foreign exchange markets, the BBC regime places explicit focus on currency movements. It is easier to communicate the BBC framework to the public, particularly in a region driven by exports. Private agents understand the exchange rate, widths of the band, the edges of bands, and shifts in the band. Those same agents are not as clear on the elements of inflation targeting such as the output gap, weighting matrices, the “natural” rate of unemployment (related to “potential” output), intermediate targets, and forecasts. A common BBC regime would also appear to be easier to use for cooperation, owing to its tangibility, particularly on an informal basis.

Over time, East Asia will begin to wean itself off its reliance on export-driven growth. Already, increases in intra-Asian demand and investment, rapid development of domestic financial sectors, and upgrades to research infrastructure are taking place quite dramatically and leading to an embrace of inflation targeting. Even if East Asia proceeds in Phase III with the common adoption of BBC regimes, domestic developments suggest that the region could very rapidly sequence to the common adoption of flexible inflation targeting, perhaps with an explicit exchange rate directive. In fact, various Asian countries in the post-crisis period, namely, Indonesia, Korea, Philippines and Thailand have already adopted inflation targeting as their monetary policy framework.<sup>18</sup> Hence, it is not unreasonable to expect that cooperation might coordinate on both of these regimes, with inflation targeting for more developed economies and BBC for emerging markets.

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<sup>18</sup> Ito and Hayashi (2004) gave an assessment of their experience with the inflation targeting regime.

### 3. Regional Exchange Rate Policy Coordination<sup>19</sup>

Despite trade patterns that at times suggested otherwise, post-war monetary policy regimes in the export-oriented economies of East Asia have consistently placed disproportionate emphasis on exchange rate stability with the US dollar.<sup>20</sup> However, the region's experience with rapid nominal appreciation in the early 1990s and the subsequent (although not consequent) financial currency crisis in 1997–1998, led many Asian policymakers to reestablish rigidity vis-à-vis the US dollar as central to strategic macroeconomic management. Therefore, soon after the crisis, regional central banks returned to exchange rate policies that would not only stimulate exports via outsource manufacturing and export orientation, but limited bilateral volatility with the US dollar. Deemed “Bretton Woods II” by many keen observers, most notably Dooley *et al.* (2003), Asia's twin pursuit of limiting nominal appreciation and stabilizing the US dollar rate of their currency resulted in a period in which the spectacular economic recovery of East Asia was worryingly accompanied by a massive build-up of USD-denominated reserves, large trade surpluses with the US, and the effective freezing of intra-Asian investment. Since 2006, we have seen the end of Bretton Woods II, as East Asian currencies (with the exceptions of the Chinese yuan and the Hong Kong dollar) have not only appreciated sharply against the USD but have seen more volatility in their bilateral USD rates.

#### 3.1. *Alternative currency baskets*

We first note at the outset that studies on the feasibility of a full monetary union in East Asia have invariably deemed it a distant prospect see (Watanabe and Ogura, 2006) for a survey. Such a conclusion is not in the least surprising in view of the region's economic and institutional diversity, as well as the lack (as of yet) of demonstrable political will to commit credibly to a pathway leading to Asian monetary union. Therefore, if monetary union cannot serve as the terminal policy focus, policymakers have no choice but to turn next to formal monetary coordination. They must examine the merits and limitations of formal coordination. We first consider whether it would be feasible for East Asia to pursue formal coordination.

Among the most popular ideas considered for formal Asian monetary coordination is for participating economies to adopt common BBC regimes that use the same currency basket, i.e., one with identical weights and component currencies. The latter only requires the coordination of exchange rates amongst countries that still retain their monetary sovereignty. On the one hand, using country-specific baskets would seem more suitable

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<sup>19</sup>Historical reflection seems to indicate that East Asia's economic development and integration have required exchange rate policies on both sovereign and regional grounds that are evolutionary in nature. As we discuss various dimensions of and possibilities for regional exchange rate policy coordination, we do so without relinquishing the idea that a strictly sovereign approach may still remain the best strategy for East Asia.

<sup>20</sup>McKinnon and Schnabl (2004) have termed this regional emphasis on the US dollar as the “East Asian Dollar Standard.” In the words of Frankel (p. 26, 2003): “The fact that the (US) dollar had occupied a larger role in their monetary arrangements than the US played in their economies made an eventual mismatch inevitable.” Many prominent economists, most notably Takatoshi Ito and Seiji Ogawa, have suggested that trade fundamentals in the 1980s warranted yen-focused exchange rate policies.

than a common currency basket for exchange rate management in countries with different trade patterns (de Brouwer, 2004). On the other, the adoption of a common basket might help reinforce intra-regional exchange rate stability. Ogawa and Ito (2002) argue that a coordinated move by the Asian countries to the adoption of a common basket would be better than a non-cooperative equilibrium with country-specific baskets.

Should the East Asian countries agree to adhere to an identical basket, they would have the difficult task of agreeing on the weights of the common basket. More fundamentally, a choice would have to be made between using an external basket containing only extra-regional currencies and an internal basket that also includes only currencies of the participating countries.<sup>21</sup> Arguments for an external focus posit that adopting a common external basket will not only stabilize the regional currencies in terms of the external reference currencies, but will also confer a degree of stability to the cross rates between the participating countries as well. Obviously, extra-regional reference countries would not be required to carry out intervention to sustain the peg. Additionally, Asian countries will need access to sufficient reference currencies such as the US dollar to meet intervention obligations. In comparison, adopting an internal basket would mean that participating countries could either rely on national currencies to honor obligations (provided liquid foreign exchange markets exist for the Asian currencies) or concerted interventions.

An advantage of using an internal basket over an external one is that it could facilitate adjustments to global imbalances since the regional currencies could then float jointly against the external currencies (Ito, 2008). To this end, both a common loose arrangement such as an EMS-type system see, *inter alia*, (Wyplosz, 2004) and the creation of an official basket of Asian currencies referred to as an Asian Currency Unit (ACU) that is analogous to European Currency Unit (ECU) (Ogawa and Shimizu, 2005) have been considered. Following (Ogawa and Shimizu, 2005), the proposed ACU follows the construction of the ECU with the weights of each component currency computed based on the relative size of the country as measured by average trade volume and GDP at PPP.<sup>22</sup> Building on the role the ECU notionally played in specifying exchange rate targets and divergence indicators in the exchange rate mechanism of the European Monetary System (EMS), the proposal is to use the ACU as a benchmark for monitoring regional exchange rates. As pointed out by Park (2008), the ACU would not be useful as a surveillance indicator for benchmarking regional currencies should there be no agreement on a set of rules governing intragroup exchange rate adjustments. This leads us to assess the feasibility of implementing an ERM-type system as a regional exchange rate arrangement in East Asia.

### **3.2. Is an ERM-type system feasible for East Asia?**

Drawing on the European experience,<sup>23</sup> what are the chances of success for sustainable and politically feasible ERM-type system in East Asia? To answer this question, one needs to

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<sup>21</sup> Yet another alternative is to use a currency basket that has both internal and external currencies.

<sup>22</sup> See REITI website <http://www.rieti.go.jp/users/amu/en/index.html> for details.

<sup>23</sup> For a review of the European experience with the ERM, see Buiter *et al.* (1998); Tietmeyer (1998) and Chow *et al.* (2008), amongst others.

consider both the systemic integrity of the arrangement itself, as well as the context of both the economic structure and political institutional environment that shapes the applicability and implementation of such a system. Quite clearly, the region needs the correct array of features, within some reasonable degree of tolerance, in order to operate a regional exchange rate arrangement that is both credible and sustainable. First, the exchange rate system must incorporate flexibility in terms of allowing for adjustments in the reference rates. Indeed, an important lesson from the European experience is that realignments of the central rates within the regional exchange rate system are necessary, as pointed out by [Jochimsen \(1993\)](#): "... during the second half of the 1980s, where one mistook the goal of keeping exchange rates stable as already constituting the result of actually holding them stable, without regard to the corresponding exigencies of adjusting domestic fiscal policies and collective bargaining accordingly." After all, according to the literature on exit strategies, the credibility of the system should not be undermined by parity changes if they are undertaken only when the cause can be directly observed or independently verified. However, the rules of the system have to be well-defined and compromises arising from conflicting interests of member countries should be ruled out ([Volz, 2006](#)).

Second, the incidence of speculative currency assault can be reduced by choosing sufficiently wide exchange rate bands, such as allowing constituent currencies to fluctuate within a  $\pm X\%$  band.<sup>24</sup> The idea of a narrow band was to demonstrate to speculators the seriousness of the commitment. However, narrow bands tend to encourage one way bets by currency speculators. They also tend to force upon central banks the need to take inter-marginal interventions more frequently and publicly in the face of various macroeconomic, financial and political shocks, thus increasing the pressure to remain credibly committed to the central parity. Conversely, wider fluctuation margins that allow for reversal of exchange rate movements make currency speculation more risk-prone. Wide bands become more attractive as monetary coordination moves away from the management of the exchange rate system as the be-all-end-all goal of the system and towards more broadly defined monetary policy. Wider bands also present the monetary authorities with more options and more time to handle unforeseen shocks. Finally, wider bands enable central banks to exploit any value inherent in a lack of transparency. In a cooperative arrangement, a wide band provides the impetus for discussion and joint moves. In a true monetary policy system where exchange rate stability is but one facet, the wide band gives that same impetus of discussion but without the grave risks of system collapse and the costs of realignment as in the EMS. However, we note that in a pure exchange rate management system, bands that are too wide can promote poor discipline and excessive volatility.

What then constitutes the optimal width of a band? Practically speaking, the band should be wide enough to maximize the benefits of adjustment flexibility, the anchor of commitment, and the flexibility of policy options given the economic and institutional realities of the member countries, without the need for frequent intervention or resetting of the band. Such an approach, determined by a combination of research and political

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<sup>24</sup> We can also consider bands of varying width, narrower ones for the "center" or "core" countries and wider ones for the less financially developed countries, as discussed in [Chow et al. \(2006\)](#).

agreement, would improve upon rule-of-thumb guidelines that fixates on a specific bandwidth independent of the relevant political economy.

Third, support mechanisms such as common support funds for the defense of exchange rate parities are required to increase the credibility of a regional exchange rate system. To this end, the enlargement and institutionalization of the CMI swap arrangements as well as the pooling of the reserves of the East Asian countries have been suggested (Chaipravat, 2004). While the design of the EMS was to offer unlimited financial support to the integrity of the system, this cost was too much to bear in the end and the realism over the non-sustainability of the system prevailed. Despite the availability of huge foreign reserves in this region, a strong currency country would not have the incentive to support weak currencies as it risks losses due to the hazardous behavior of weak currency partners (Volz, 2006). This underlines the need for a regional institution with regulatory and supervisory oversight. As explained by Eichengreen (2001), a regional analogue to the International Monetary Fund is needed to monitor policies and push for adjustments. The absence of such an institution meant that the strong currency countries cannot be assured that their weak currency counterparts would take policy adjustments. Therefore, the foreign support they were willing to provide was necessarily limited. There is a need for participating countries to redirect their sovereign policies to be consistent with the requirements of the Asian Monetary System. If member countries do not, (a) clean house and, (b) subjugate their sovereign policies to the regional system, then, as demonstrated by the EMS, the system will fall apart.<sup>25</sup>

Fourth, the credibility of an ERM-type system in this region depends critically on the effective regional cooperation on monetary policy amongst the East Asian countries. Unlike the adoption of a common external basket which means Asian countries would be importing to some extent the monetary policies of the reference extra-regional countries, they would not have an obvious anchor for their monetary policies should they use an internal basket instead. Although the ERM parity grid system provided a neutral framework for monetary cooperation, it quickly anchored on the German mark which also served as the indicator variable, rendering only a minor role for the ECU. Similarly, an Asian monetary system will need some kind of anchor, most likely an anchor currency, to provide a target for calibrating regional monetary policy. The anchor of the system may mean one currency, or it can mean some linear combination of several currencies.

Germany became the anchor for Europe for three reasons. One, its economy, the largest in Europe, was clearly the leading, regional engine for economic growth. Two, the Bundesbank was the pillar for credibility monetary policy in Europe, if not the world. Three, the direction of the German economic and political policies became the foundation for pan-European vision and development. Presently in East Asia, there is no one country that is yet playing the role of Germany in regional policy cooperation. Most importantly, Asia lacks a clear economic vision to anchor its development going forward. If a truly regional

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<sup>25</sup> For this reason, it is vital that regional options represent an attractive alternative to sovereign monetary policy. If the political-economic calculus is such that sovereign monetary policy remains optimal for a given country, than not only should entry into a formal system of coordination be considered premature or inappropriate, but any such entry may led to a collapse for the entire monetary system.

monetary effort is forthcoming in Asia, it seems essential that China and Japan work together just as France and Germany wedded their futures together.<sup>26</sup>

#### 4. Pre-Requisites for Formal Monetary Policy Coordination

Unlike informal monetary policy cooperation, the constraints of formal monetary policy cooperation presuppose binding obligations. Formal monetary policy coordination only makes sense if participating countries have the capacity to credibly commit to both the success of the monetary arrangement and the implicit regional ideals therein. Importantly, this capacity can be in the form of expectations. The continued fluidity of economic development in East Asia suggests that as long as private expectations believe in the ability of political commitment to formal regional monetary coordination, a formal system can sustain itself. To earn these expectations, regional policymakers must accelerate their own domestic financial and institutional reforms, deepen regionalism, and ensure fiscal discipline. Furthermore, regional policymakers must provide demonstrable evidence that they are serious about the political dimensions of formal coordination. This is particularly important amongst key countries, whose leadership in formal systems is absolutely essential. For instance, Bretton Woods broke down precisely because the United States actively undermined the fiscal discipline necessary for the center country in a center-periphery system.<sup>27</sup> In contrast, Germany successfully anchored the EMS, in part by massive transfers, even at a time of great fiscal challenges.

Without this capacity for disciplined leadership, participating countries will continue to place value on the option to exit the arrangement. Without this ability to convince private expectations, formal monetary arrangements would not advance regional stability beyond informal cooperation. In fact, attempts to push forward formal coordination prematurely may end up generating a far more insidious instability than would ever be under a region of strictly sovereign regimes. A withdrawal from formal coordination would risk the gains won through informal monetary policy cooperation.

If a regional consensus does develop in such a way to convince private expectations of the desirability of an East Asian monetary policy, then formal monetary coordination has the possibility of advancing regional stability beyond informal cooperation. However, the challenges for formal monetary arrangements in East Asia promise to be considerably more challenging than the European experience. [Wyplosz \(2001\)](#) identified the lack of regional institutions as a key factor pointing to the non-viability of a single currency area in East Asia in the near future.<sup>28</sup> Indeed, the economic and political diversity of East Asia will literally require a set of new regional economic and political institutions. Thus, it remains imperative that East Asia consider formal monetary coordination with due caution and

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<sup>26</sup>Notwithstanding China's remarkable economic growth, "the People's Bank of China is far from being the dominant central bank in Asia in the way that the Bundesbank was the dominant central bank in the EMS" p. 170, ([Kenen and Meade, 2008](#)).

<sup>27</sup>Similarly, the Gold Standard broke down due to the onset of World War I, when the demands of war financing made fiscal discipline at the center (and elsewhere) impossible to commit to credibly.

<sup>28</sup>In fact, [Wyplosz \(2001\)](#) argues that the necessary political commitment and institution would not be forthcoming unless governments in the region take the plunge and commit to common arrangements.



avoid premature actions that eschew the immediate benefits of the phased approach to informal monetary cooperation. Domestic and regional reforms that offer stabilization and efficiency benefits regardless of whether formal monetary policy coordination is pursued would provide invaluable boosts in confidence. It would also solidify private expectations that formal coordination is political priority.

Note that the above considerations suggest that the adoption of formally coordinated regional policies, if desired, should proceed gradually. As we have emphasized, economic theory suggests that while it is a given that optimal monetary policy is endogenous to economic structure, it is also the case that economic structure itself is endogenous to the choice of monetary policy regime (Corsetti and Pesenti, 2005). This literature suggests that, provided there is credible and firm policy commitment, the construction of an Asian monetary system or monetary union may itself generate the regionalism necessary for its maintenance. Yet even this perspective requires that Asian political leaders must, at a minimum, begin to define economic successes along regional lines. The uncertainty regarding regionalism in Asian policy circles supports arguments in favor of a gradualist approach to regionalism, such as “learning to coordinate” or “learning to regionalize”. This approach will leave room for independence toward sovereign objectives until sufficient consensus and commitment towards regionalism warrants formal coordination.<sup>29</sup>

## 5. Conclusion

In order for regional policy coordination to foster macroeconomic and financial stability in the region, we are of the view that the most effective approach is a nested sequence that would take East Asia through increasingly intensive informal modes of monetary policy cooperation. Central to our policy prescription is the remarkable structural and institutional heterogeneity within the region, an economic landscape that necessarily implies a diversity of optimal sovereign monetary policy regimes. We suggest that informal modes of cooperation can be employed to help support the market-based integration that is already well underway. Only when the East Asian countries could credibly commit to a path of future monetary union, then should formal monetary arrangements be considered to advance regional stability. Even if monetary union were deemed undesirable and formal monetary arrangements then unnecessary, informal monetary policy cooperation should greatly benefit East Asia. Through its sequencing, informal monetary policy cooperation can bring about a new era of understanding within the region of the interplay between policy regimes, agent behavior and spillover. Informal yet vigorous cooperation can go a long way in improving sovereign and regional institutions and promote regional integration.

Similarly, the optimal approach to regional exchange rate cooperation should be a gradual and incremental one, albeit one that recognizes the historical window of opportunity that Asian diversification now presents to advocates of regionalism. There is a need

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<sup>29</sup> An example of “loose” coordination would be the ERM after the 1992–93 crisis in which exchange rate bands were widened to  $\pm 15\%$ . While one can argue that at such tolerances, the economic rationale behind the EMS no longer applied, the mere existence of the ERM permitted the regional monetary policy dialogue to continue.

to strike a balance between the conflicting objectives of exchange rate flexibility and exchange rate stability. The fluidity of the economic environment in East Asia suggests the former is relatively more important than the latter at the current juncture. Indeed, frequent adjustments to the ERM-type system arising from variations in the equilibrium exchange rates due to structural changes will generate a cost in terms of regime credibility. Embarking on an ERM-type system in the short-term will also constrain the East Asian countries from having individual country exchange rate responses to asymmetric shocks that hit the region. Rather, the East Asian countries should initially engage in a less demanding form of exchange rate cooperation before moving on to restrictive exchange rate arrangements. Importantly, the regional economies should develop stronger regional institutions; enhance regional surveillance; strengthen financing facilities under the CMI; develop well-functioning financial markets and cross-border settlement systems; and proceed with other forms of regional integration before moving on to formal exchange rate arrangements. As these other forms of integration aid in the development of a high degree of real and nominal convergence amongst the East Asian countries, an ERM-type system would then become more sustainable and less susceptible to speculative currency attack.

## Acknowledgements

The content of this paper is partly drawn from research consultancy reports by the same authors commissioned by the ASEAN+3 Secretariat in 2006 and 2007. We thank participants of the High-Level Symposium on Asian Economic Integration who provided useful feedback. We also deeply appreciate the helpful comments and suggestions made by two anonymous referees.

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