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Abstract:
This paper examines capital controls in two ways. First, it assesses whether capital controls have an economic justification within the context of an economy's and, in particular, its financial sector's stage of development. It concludes that capital controls can be justified in countries with an immature financial sector and macroeconomic imbalances. Second, it presents survey of current capital controls in ASEAN+3. It identifies three avenues for making controls more efficient: (i) a tax on capital inflows, or alternatively, a Tobin tax; (ii) a replacement of extensive administrative controls with stricter prudential standards for financial institutions; and (iii) a special treatment for Asian currency unit (ACU) operations, implying selective capital flow liberalization.

1. Introduction

This paper examines capital controls in two ways. First, it assesses whether capital controls have an economic justification within the context of an economy's and, in particular, its financial sector's stage of development. This is the subject of Section II, which concludes that capital controls can be justified in countries with an immature financial sector and macroeconomic imbalances. In Section III we examine what guidelines are needed for efficient institutional arrangements and instruments for the control of capital flows. Theoretical considerations and the experience of countries outside the region lead to several lessons learned. Institutional arrangements are best avoided when there is an overlap of responsibilities across several institutions. Instruments should be simple, transparent, and flexible to cope with changes in capital flows.

A survey of current capital controls in ASEAN+3 is included as an appendix. The results, also arrived at in other contributions by the ASEAN+3 Research Group—notably Daiwa Institute of Research (2006)— show that the state of capital controls in the region is extremely diverse: it is ranging from nearly free capital flows to extensive and multilayered controls involving several institutions. This paper identifies three avenues for making controls more efficient: (i) a tax on capital inflows, or alternatively, a Tobin tax; (ii) a replacement of extensive administrative controls with stricter prudential standards for financial institutions; and (iii) a special treatment for Asian currency unit (ACU) operations, implying selective capital flow liberalization. Section IV summarizes the policy conclusions of this study.

2. Costs and benefits of capital account controls

2.1 Capital account convertibility—when do the benefits outweigh the costs?

The tenet that international trade—free of tariff as well as non-tariff barriers—enhances the welfare of all countries involved lies at the very heart of international macroeconomics. Because international investment can be considered an inter-temporal form of international trade (Sachs 1981), there is an analogous case for enabling capital movements across national borders. Accordingly, capital will flow to where its contribution in increasing productivity (and thus its return) is highest, generating positive net welfare effects in both recipient and creditor countries. In addition, international financial capital movements allow for a degree of risk diversification unavailable in more restricted domestic markets.

This prescription requires that all parts of the economy are subjected to market principles. If parts of the goods markets or key service industries, in particular the financial market, are protected from competition, then no general conclusions for or against liberalization of capital flows make sense. By rule of thumb, the more market-oriented an economy is, the stronger the case for free capital flows. This is why highly developed economies eliminated all or most capital controls during the last part of the 20th century. The case is less clear for developing or emerging economies.

In addition to the argument cast in terms of allocational efficiency, there is the question of resilience to shocks. Experience shows that a financial sector must be mature and robust before exposing an economy to the potential stress of uncontrolled capital flows.

The benign view that capital account liberalization improves the general welfare of all countries is supported neither by theoretical considerations nor by empirical evidence. It was a prominent feature of the new classical approach to macroeconomics that became dominant in the mid-1970s. Yet, after a prolonged period during which economists, attracted by the appeal of the "rational expectations revolution," typically modelled financial markets as "information efficient," the past 15 years or so have witnessed a gradual rediscovery of certain insights: that (i) decisions based on future variables not only imply risk, but uncertainty as well, (ii) decision-making in the face of uncertainty is not necessarily "rational," and (iii) decisions are eventually based on information that is asymmetrically distributed and for the most part incomplete at best. Akerlof's (1970) seminal paper on "the Market for Lemons" can be considered the impetus that brought these considerations back into mainstream economics. Since then, economists have applied Akerlof's principles of "adverse selection" and "moral hazard" to a variety of economic issues, including how capital markets function (compare McKinnon [1991] and Greenwald and Stiglitz

[1993]). The results imply a classic second-best situation: in the presence of distortions (for example, due to information asymmetries), removing another distortion (capital controls) need not improve the general welfare.

While the belief in the informational and, by implication, allocational efficiency of financial markets was increasingly questioned among at least part of the economics profession during the early 1990s, it remained firmly entrenched within international institutions such as the International Monetary Fund (IMF) and the United States (US) Treasury, which were at the forefront of advocating swift liberalization of capital accounts in developing economies (DeLong and Eichengreen 2001). Prominent observers—such as Jeffrey Sachs or Joseph Stiglitz—have long criticized the narrow interests of the so-called "Treasury–Wall Street complex," which pushed with considerable zeal for opening capital markets of emerging economies, promising significantly higher returns than those from markets in industrialized countries at the time.

The Asian financial crisis, followed by banking and financial crises in Russia and Latin America, changed the general attitude among economic advisers quite drastically. With the benefit of hindsight, the broad majority of economists now agrees that many emerging economies that suffered from these crises would have been much less vulnerable had a more cautious approach to capital account liberalization been taken. Today, policy advice reflects that change. For the People's Republic of China (PRC), for instance, the IMF—unlike the US Treasury—argues for gradual capital account liberalization while strengthening the financial system and moving toward a more flexible exchange rate (Prasad, Rumbaugh, and Wang 2005). Capital flow liberalization is still deemed beneficial in the longer run. However, the crises in the late 1990s demonstrated that successful development is contingent on a broader set of institutional and macroeconomic circumstances that are a precondition to reaping the benefits of liberalization.

Indeed, the very history of capital controls in the industrialized countries plainly underscores this view. Nowhere was capital account liberalization achieved overnight. In the aftermath of the Bretton Woods era, which was grounded on the restriction of capital movements, controls were typically dismantled gradually, and only then in line with institutional developments that guaranteed capital account mobility would not generate destabilizing effects. In a number of countries in today's European Monetary Union (EMU), forms of capital flow management were in place well into the 1990s—one chief rationale for the cautious removal of capital controls was always that financial markets were not sufficiently developed to handle full capital account convertibility. Moreover, under the European Monetary System (EMS), which practically reintroduced fixed-exchange rates in much of Europe only 6 years after the end of Bretton Woods, preserving capital controls was a necessary prerequisite for maintaining monetary policy options. It is not surprising, therefore, that Germany, whose deutschmark quickly took on the role of anchor currency within the EMS, was the one country which could afford to move to capital account convertibility earlier, as it was basically free from the requirement to stabilize its exchange rate.[1]

The remainder of this section is organized as follows. After a brief clarification of terms and definitions, we analyze the benefits and costs of capital account liberalization from a theoretical and empirical point of view. We then ask whether there are safeguards that can be employed in order to avoid the kind of circumstances that precipitate a financial crisis—thus allowing the potential benefits of increased capital mobility while minimizing exposure to potential drawbacks. As the answer is "no," we consider the implications for Southeast Asia's emerging economies faced with the delicate task of sequencing reforms and liberalization. While specific advice inevitably varies for each country (Eichengreen 2005), numerous key issues can be identified and are discussed.

[1] For a comprehensive documentation of the debate in Europe leading to the creation of a common financial market with virtually free capital movement, see European Commission (1988). It is worth mentioning that a number of recent contributions deny the contingency of increasing financial integration on capital account convertibility. Most prominently, Prasad, Rogoff, et al. (2003) have demonstrated that for emerging economies, examples of both "financial integration without capital account liberalization" (the PRC) and "liberalization without integration" (Turkey) have occurred, begging the question of the intuitive chronology of events. Again, the evolution of economic and financial integration within the European Union certainly supports this view.

2.1.1 What are capital controls?

Conventional capital controls

Simply put, any measure that limits or redirects capital account transactions is a capital control (Neely 1999). By this definition, all policies influencing the volume, composition, or allocation of cross-border private capital flows that result differently from completely liberalized financial markets can be classified as *capital controls*. However, because limitations on foreign currency transactions also affect capital mobility, *exchange controls* (i.e., controls regulating the rights of residents to hold foreign currency and the rights of non-residents to hold domestic currency deposits) are alongside capital controls as measures that restrain capital account transactions (Epstein, Grabel, and Jomo 2004). Thus, exchange controls are included in our detailed description of capital controls within ASEAN+3 (Appendix).

Within this broad definition, there are a number of distinctions between forms of capital controls. The most notable and relevant are between controls on capital *inflows* and *outflows*, as well as between tax-based and quantitative controls.[2] Restrictions on capital outflows were the preferred policy tool during the first period of modern capital controls (World War I and the Great Depression of the 1930s). At the time, domestic savings were expected to create additional policy scope for reflating economies while limiting the risk of capital flight (Neely 1999). In the post-Bretton Woods era, restrictions on capital outflows continued to be used, most notably by developing countries hit by the debt crisis of the 1980s, and more recently by the Malaysian government, which imposed restrictions on capital outflows to buy time for alternative macroeconomic policy measures during the Asian crisis.

In contrast, restrictions on capital *inflows* are designed to limit the overall volume of capital pouring into a country, or to influence the composition of these flows. Major reasons include domestic vulnerability to reversals of flows, inflationary pressures and loss of monetary control, and the fear of excessive foreign influence through ownership of domestic assets (real estate, banks, other corporations, or raw materials, for example). The most recent and widely-cited example of a policy designed to impact capital inflows is the case of Chile in the 1990s—at the same time an example of a tax-based control. The government introduced an unremunerated reserve requirement for foreign capital entering the country that effectively taxed capital inflows—the relative burden decreasing the longer the capital remained in the country.[3] A quantitative control, in contrast, involves measures such as restrictions or quotas, license requirements, or even an outright ban of a certain type of investment (for example, portfolio or property investments) for a certain type of investor—foreign investors in the case of inflow restrictions, domestic investors in the case of outflow restrictions.

Financial sector regulations as capital controls

While the cases mentioned above are examples of "traditional" capital controls, it is important to stress that various forms of financial sector regulation can equally act as restrictions on certain cross-border capital movements. For instance, a bank can be subject to limits on the ratio of foreign currency liabilities to equity. While this type of regulation clearly impacts the volume and/or composition of foreign capital flows, it is not classified as a capital control. If it were, none of today's developed economies could be said to operate under a completely liberalized capital account regime. Financial sector regulation is an integral part of financial market legislation in the industrialized world, and quite rightly so.

Consequently, it is essential to keep a broader perspective when assessing the role of restrictions on international capital movements. Epstein, Grabel, and Jomo (2004) suggest discussing the entire complex of what they term "capital management techniques," incorporating issues of "prudential financial regulation" alongside outright capital control measures. They not only argue that financial regulation can assume functions typically attributed to capital controls, but also provide evidence suggesting that there can be substantial synergies between financial regulation and forms of capital control. Therefore, we recommend in Section 3 considering the substitution of

[2] Bird and Rajan (2000) offer a discussion and systematic classification of different restraints to capital movements.

[3] The problems of a clear-cut distinction are becoming evident here. One might as well argue with some right that the Chilean measure constitutes an outflow restriction, as the implicit tax burden depends on the point in time at which the investor decides to withdraw the capital.

administrative controls, which are less transparent and more discriminatory through prudential regulation of foreign exchange exposure.

2.1.2 The case for capital account liberalization

In economic theory, the case for liberalized financial markets stands on firm ground. In fact, it is rather simple to compose a model that demonstrates how free cross-border capital movements improve economic welfare in the countries involved. Interest rate differentials between countries (or entire regions) reflect the relative scarcity of capital. Liberalizing capital accounts then generates capital movements from relatively capital abundant to relatively capital scarce areas. In an analogy to international trade in goods and services, such movements can be thought of as extending the possibility frontier of importers and exporters of capital, respectively. In capital importing countries, an investor's access to credit is no longer constrained by domestic savings. Creditors, in turn, are able to reap higher returns on financial assets than they would in their domestic markets. Capital movements thus increase the effectiveness of international resource allocation.[4] Eventually, complete capital flow liberalization between global financial markets would result in equal (risk-adjusted) rates of return everywhere, which, in terms of economic theory, characterizes a situation of perfect allocation efficiency.

This issue relating to the efficient allocation of resources also involves an inter-temporal component. Allowing capital to flow freely between countries is a means of creating opportunities for portfolio diversification and international risk sharing. As national economies are exposed to economic shocks of very different kinds and often to greatly varying degrees, international diversification of portfolios can clearly improve the ability to weather idiosyncratic shocks. Apparently, this mechanism is of particular importance to smaller countries, where production is typically less diversified and thus more vulnerable to industry-specific disruptions.

In short, pure economic theory offers a hardly surprising result with regard to the desirability of capital account openness. The reasons why increased financial intermediation is considered beneficial to domestic markets also hold at the international level. Indeed, capital allocation, and especially risk diversification, can be expected to work better the more integrated the financial markets in question. At the same time, emerging economies with relatively less developed domestic capital markets should profit in particular, since integration into a larger international market can serve to alleviate existing financial constraints.

While this covers general theoretical implications, a differentiation between different types of capital flows is required for a more detailed juxtaposition of the costs and benefits of capital account convertibility. Here, a commonly-used distinction is adequate (for example, Williamson 1999), which groups capital flows into

- foreign direct investment (FDI)
- portfolio investments
- long-term loans, and
- short-term loans.[5]

A look at the specific characteristics of each of these categories of capital flows, viewed with the events of the Asian crisis in mind, underscores the need for an individual assessment of each. Differences exist in the degree of volatility (FDI and long-term loans are generally regarded as rather stable, while portfolio investments and short-term loans can show substantial volatility), as well as the denomination of loans (domestic or foreign currency). These distinctions are crucial in the arguments developed in section 2.1.3.

Focusing for a moment on FDI, it is notable that additional benefits have been attributed to this form of capital flows when the recipient is a developing or emerging economy (see World Bank [1995]). Enhanced access to foreign technology is one potential FDI contribution that goes beyond the allocational effects described above. A second contribution associated with FDI is the acquisition of new skills by domestic employees of international corporations, which can occur directly (through training) or indirectly (through exposure to management and work processes as well as foreign co-workers. Both kinds of benefits can be grouped under spillover effects, which play

[4] In principal, this is the bottom line of standard textbooks addressing international finance, e.g., Obstfeld and Rogoff (1996).

[5] While the threshold separating short- from long-term loans is essentially arbitrary, the 5-year maturity employed in Williamson (1999) seems appropriate.

a prominent role in the literature on endogenous technological progress. As a matter of fact, favourable effects of increasing FDI are a regularly obtained result of cross-country growth regressions (for example, Borensztein, De Gregorio, and Lee, 1995; and Bradstetter, 2000).

Unfortunately, the empirical literature is more ambiguous on the question of positive growth effects from capital account liberalization.[6] Some researchers (for example, Quinn, 1996) have reported a statistically significant positive impact of a measure of capital account liberalization on growth in cross-country studies, while others (for example, Rodrik, 1998) find no such connection. In their study, Arteta, Eichengreen, and Wyplosz (2001) seek to explain this discrepancy and provide evidence that results pointing to a positive connection are not sufficiently robust, and that favourable effects of capital account liberalization are contingent on preconditions that must be fulfilled in the countries in question.[7]

It is rather safe to say that this view is now generally shared by most economists. The benefits of liberalizing the capital account are recognized, and despite the problems that free cross-border capital flows entail (discussed in the following subsection), there is little doubt that open capital accounts are desirable in the longer run. Capital controls may still exist—the PRC's example above suggests that they might yet work to a certain extent—but essentially, as one observer put it, their time is past (Dornbusch 1998). Over the past three decades, the world has become ever more integrated through the internalization of trade in goods and services, and this very development of liberalized and increasingly interdependent current accounts has contributed to a situation where capital controls are becoming less and less practicable.

From another perspective, the main argument in favour of capital account liberalization over time is that it serves to remove the specific distortions associated with maintaining capital controls. For one thing, the state has to devote resources to secure the effectiveness of established capital controls. At the same time, however, resources will also be invested by the private sector in an inevitable attempt to circumvent those very controls. The resulting overall costs (administrative costs and costs of corruption in evading controls) constitute an obvious dead-weight loss to society. And this loss can be considerable, given the fact that simple capital controls are easily avoided by using a number of well-known loopholes[8]—authorities must take substantial efforts to ensure capital controls are in fact effective. Costs to the private sector in attempting to circumvent the controls necessarily rise as well. In a related line of argument, observers like Dornbusch and Edwards (1991, with respect to Latin America) or Krugman (1998, with a focus on the Asian crisis) point to the fact that capital controls can be particularly harmful if they lead to (or are used to defend) poor or inconsistent macroeconomic policies. Other things equal, capital mobility undoubtedly contributes to the clear preference to create external market discipline for macroeconomic policymakers.

While this argument may be accurate, all other things are of course not equal. Above all, financial markets are not perfect. If they were, one would have expected the shortcomings in Asia's crisis-affected countries to be recognized and the associated risks incorporated into assessments *beforehand*, rather than "discovering" them *after* the crisis struck. Without a doubt, past crises demonstrate where capital account convertibility can hurt far more than help.

[6] Eichengreen (2001) offers a survey of the empirical literature on the link between capital account convertibility and economic performance.

[7] In Arteta, Eichengreen and Wyplosz (2001), the absence of major macroeconomic imbalances (proxied by a black market premium) is found to be a prerequisite for benefits from opening the capital account. Against the background of the Southeast Asian crisis, other preconditions spring to mind and will be discussed in due course.

[8] The most widely practiced evasion tactics involve using "leads" and "lags" in payments for traded goods (cf. Einzig, 1968) and use of financial derivatives (cf. Garber, 1998).

Box 1: Do capital controls in East Asia preclude global readjustment?

Current global payments imbalances—centered on the burgeoning US current account deficit—are a central feature of today's world economy. While interpretations differ to some degree, many observers agree that a deliberate correction should be attempted, the sooner the better, to avoid turmoil in financial markets that could trigger a recession in the US specifically, and on a global scale as a result.[1] Alongside recent developments in commodity markets, a significant counterpart to the US deficit can be found in the surpluses recorded by the People's Republic of China (PRC). At this point, however, a bilateral perspective is not appropriate. Rather, the PRC acts as a sort of trade hub channeling goods from all over the East Asian region to the US, and thereby runs current account deficits with its neighbors. According to this diagnosis, all East Asia bears responsibility to make major adjustments to exchange rate regimes to bring about an appreciation of domestic currencies against the US dollar and to increase absorption levels (see also Eichengreen, 2006).

In this context, existing capital controls have come under fire, whether in the PRC or in other economies in the region. The argument runs as follows: East Asian countries continue to meddle in foreign exchange markets to maintain undervalued domestic currencies and thus an unfair competitive edge. It is precisely for this reason that they have upheld or reinstated capital controls to varying degrees. Once the controls are scrapped, foreign exchange markets will have the leeway to move exchange rates in accordance with economic fundamentals—i.e. an appreciation of domestic currencies —and thus create a benign solution to global imbalances.[2]

However, there are questions whether the supposed link between capital controls and global readjustment through exchange rate flexibility holds. First, does East Asia truly need flexible exchange rates? Second, will countries concerned be obliged to abolish capital controls to enable exchange rate regime reform? While a detailed discussion of the costs and benefits of either fixed or flexible exchange rates lies beyond the scope of this paper, in the context of global readjustment the answer to the first question is simply that while appreciation against the dollar seems to be a condition *sine qua non*, freely floating exchange rates clearly are not. Substantial realignment, while keeping exchange rates generally fixed, represents a perfectly viable alternative.

As for the second question, it is hard to see why capital markets should have to be fully liberalized *prior* to floating the exchange rate. Indeed, this is the theme of a number of authors who favor flexible exchange rates over discrete readjustments for reasons related to internal equilibrium of the economies concerned.[3] Even without full capital account convertibility, a large volume of basically unrestricted trade transactions can ensure a sufficiently deep foreign exchange market. Indeed, allowing business to participate in foreign exchange transactions can offer firms the opportunity to develop hedging techniques in an environment sheltered by existing capital controls. In this way, maintaining capital controls may alleviate the "fear of floating" in line with the sequencing considerations elaborated above. Overall, full capital account liberalization is neither a necessary precondition for flexible exchange rates, nor is it needed to ensure a smooth correction of the current global imbalances. Quite the contrary, maintaining capital controls should facilitate the region's further integration into the world economy.

[1] Recent analyses such as Bergsten and Williamson (2004) as well as Mann (2004) highlighted the increasing potential for crisis. An exception to this commonly-shared view is Cooper (2005).

2.1.3 The drawbacks of capital account liberalization

In models of real trade, distortions and their implications for liberalizing capital movements have long been analyzed and interpreted in accordance with the theory of second best. To name but two examples, Brecher and Diaz-Alejandro (1977) have shown that in a situation where import-competing industries are protected (by tariff or non-tariff barriers), foreign capital inflows will be misallocated, causing comparative welfare losses. Similarly, rigid real wages can lead additional resources to be predominantly channelled into capital-intensive industries, with equally negative allocational effects (Brecher 1983, Brecher and Bhagwati 1991). In both cases, capital account liberalization serves to reinforce negative results that are already present in a situation without capital account convertibility. When this occurs, economic theory recommends that the initial distortions be eliminated first in order to then realize the benefits of removing the one under consideration, i.e., restrictions on capital movements.

The implications of distortions on financial markets remain less clearly understood than real trade distortions, which may simply be due to the difficulty in analyzing the impact of informational asymmetries in financial markets on real economic activity. As argued above, even though the belief in the information efficiency of financial markets began to crumble since the late 1980s, a significant part of the economics profession apparently deemed the destabilizing effects of this particular form of distortion insufficient to constitute a powerful counter-argument to increased capital account liberalization.

The Mexican peso crisis of 1994–95 might have served as a wakeup call, but it took the Asian financial crisis and the severe recessions that followed—in the world's most dynamic and fastest-growing economic region—to finally bring the matter of international financial market instability to the top of the agenda. To be sure, a variety of rational economic explanations for the crisis were rapidly produced, typically passing the buck to the crisis countries themselves. Most observers highlighted inadequate financial supervision of domestic borrowers as the reason for increased vulnerability to short-term capital flow reversals and/or currency devaluation. Others criticized a lack of transparency that made it difficult for foreign creditors to assess the actual risks involved in lending to crisis-affected countries. Some observers, equipped with the benefit of hindsight, questioned the strength of macroeconomic fundamentals. Finally, some agreed with Krugman, who focused on the role explicit and implicit government guarantees played in inducing excessive risk-taking and creating asset bubbles.

However, while all of these accounts certainly highlight important aspects of the crisis, none explain exactly why the crisis hit the specific countries it did, and not other economies in the region.[9] As Williamson (1999) points out, at the time bank regulation was notoriously bad in several non-crisis countries, probably better on average in crisis-affected economies and outstanding in one of them, Hong Kong, China. Almost the same can be said about lack of transparency and implicit guarantees, which were at least as common in non-crisis countries as elsewhere. Finally, as for the strength of macroeconomic fundamentals, a close look reveals that the crisis-affected economies did not display any larger imbalances on average than non-crisis economies. There is only one criterion that successfully discriminates between the two groups: crisis-affected economies had liberalized capital accounts, while non-crisis countries did not.

The implications of this observation for a cost-benefit analysis of capital account liberalization are forceful. If liberalizing international capital movements increases the danger of becoming entangled in a severe financial crisis, then the costs in terms of growth lost for an emerging economy are likely to dwarf the potential benefits realized by economies with open capital accounts. Williamson (1999) calculates that a country borrowing 1% of GNP abroad to finance projects with an annual rate-of-return of 10% in excess of its borrowing costs adds a mere 0.1% to its growth rate. Even at an extraordinary 5% of GNP in foreign borrowing, the additional growth effect is just half a percentage point.[10] In light of the massive negative growth rates recorded by Asia's crisis-affected economies in 1998, this does not stand out as a particularly good bargain.[11]

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[9] While Hong Kong, China; Indonesia; Republic of Korea; Malaysia; and Thailand recorded negative GDP growth in 1998, Bangladesh; PRC; India; Pakistan; Sri Lanka; and Taipei,China all had positive growth. For details see Steinherr and Peree (1999).

[10] The effect might be bigger if spillover effects play a role, e.g., if the FDI share is very high.

[11] The actual scope of the extremely severe recessions in South-East Asia was even bigger than the loss of GDP suggests, since – as several observers have noted – the negative repercussions fell disproportionally onto the urban poor, which created particular social problems within the countries affected by the crisis.

Indeed, there are now few economists who would deny that "market failures arising from asymmetric information, incompleteness of contingent markets, and bounded rationality (not to mention irrationality) are endemic to financial markets."[12] Moreover, what holds for financial markets in general is even more likely to be relevant to international financial flows—in addition to the informational deficiencies present in domestic financial markets, cross-border capital flows involve the bridging of cultural distances between market participants (Arteta, Eichengreen, and Wyplosz 2001). Yet, there remains the view in the economics profession that solving the main problems identified after the Asian crisis will be sufficient to deal with financial market imperfections and in ensuring capital account convertibility is beneficial. However, there is good reason to doubt this view. Dani Rodrik (1998) clearly made the point with reference to economic historian Charles Kindleberger, who

> claims that financial crises have appeared at roughly ten-year intervals for the last 400 years […]. As he puts it "the record shows displacement, euphoria, distress, panic and crisis occurring decade after decade, century after century…" Boom-and-bust cycles are hardly a side show or a minor blemish in international capital flows; they are the main story.[13]

According to Rodrik, whose view is shared by a number of prominent economists such as Jeffrey Sachs or Joseph Stiglitz, enforcing prudential financial regulation and monitoring macroeconomic fundamentals will not preclude future financial crises—with potentially large negative repercussions for economic growth in the economies affected. He suggests the need to be

> wary about statements of the form "we can make free capital flows safe for the world if we do X at the same time", where X is the currently fashionable antidote to crisis. Today's X is "strengthening the domestic financial system and improving prudential standards". Tomorrow's is anybody's guess.[14]

This is not to say that tackling problems that have been identified is not desirable. But it does say that even this may not shield emerging and developing countries with unrestricted capital account convertibility from financial crises.[15] Capital management techniques are therefore a required tool for dealing with the side effects of free international capital movements. As argued above, those techniques include measures for improved financial sector regulation, but also types of more direct capital control. In light of the high domestic savings rates in many ASEAN countries, providing necessary funds for investment—a standard argument for capital account liberalization—is less critical.[16] The focus should be on encouraging FDI and long-term loans, while discouraging volatile short-term capital flows that wreaked so much havoc during the 1997/98 crisis.

Before these matters are discussed in more detail in the sections below, we examine the issue of monetary policy independence under capital mobility and different exchange rate regimes (Box 2).

[12] Rodrik (1998), p. 4.
[13] ibid., p. 2.
[14] ibid., p. 6.
[15] As a matter of fact, it was the perception by market participants of strong macroeconomic fundamentals in Asia's "tiger economies" in the first place that left the region virtually flooded with foreign capital during the early- to mid-1990s.
[16] This is one difference between ASEAN and Eastern Europe, cf., Eichengreen and Choudhry (2005).

Box 2: Impossible Trinity or Impossible Duality?

Mundell's "Impossible Trinity" of international macroeconomics suggests that of three "goods"—stable exchange rates, independent monetary policy, and capital mobility—only two can be obtained by a country at any given time. Under the Bretton Woods regime established after WWII, stable exchange rates and relative independence of monetary authorities (given the dominant role of US monetary policy) were bought at the price of strict capital controls. In a similar way, the PRC today makes use of capital controls to maintain its quasi-fixed exchange rate while retaining a degree of maneuverability for its central bank. The countries forming the European Monetary Union (EMU) went the other way. Capital mobility and stable exchange rates also mean that the member states have to do without individual monetary policies.[1] Finally, capital mobility and independent monetary policy, the combination chosen by countries such as the US, Japan, United Kingdom, or for that matter the euro area as a whole, can be achieved by letting the currency's exchange rate fluctuate.

In this analysis, the benefits of moving to full capital mobility must be weighed against the costs of giving up either fixed-exchange rates or monetary policy independence. With most ASEAN countries now officially operate under floating-exchange rate regimes—but continue to intervene in foreign exchange markets to maintain a competitive exchange rate—it is consequently an independent monetary policy that drops out. Indeed, a goal of the Malaysian government when it imposed capital outflow controls in September 1998 was to buy time and make use of regained maneuverability in monetary policy while coping with the ongoing financial crisis. Thus, the question *seems* to be whether giving up independent monetary policy for the sake of free capital movements can be considered a good bargain for ASEAN members. The view taken in this paper, however, is that true monetary policy independence is essentially out of the question for developing and emerging economies.

To arrive at this conclusion, we start by considering the fact that to maintain a stable exchange rate that deviates from what financial markets deem "appropriate," central banks compromise their independence (Shambaugh 2004). Problems occur whenever operations required to maintain the currency peg collide with domestic economic stabilization targets requiring the use of monetary policy tools—notably when setting short-term money market interest rates. Following this line, countries may not be able to exert monetary policy independence whenever large foreign exchange market intervention is required to maintain a desired exchange rate, regardless of the degree of capital mobility.

The second, more serious challenge to the impossible trinity hypothesis comes from those observers who have argued that monetary policy independence is a fiction in a world of global capital account liberalization, irrespective of the adopted exchange rate regime (e.g., Flassbeck 2001). In a recent ECB working paper, Fratzscher (2002) finds no evidence that the move to a more flexible currency regime is systematically linked to increased monetary policy independence. Indeed, the move from quasi-fixed to floating regimes in East Asia after 1998 has typically been accompanied by an increased *dependence* on US monetary policy.

2.2 Providing information, preventing crises

In the context of a fully liberalized capital account, free access to pertinent information is key if crises are to be avoided. The question is clear: is there an easy and unambiguous way for the private sector to assess the sustainability of a country's foreign debt position? If not, leaving the foreign exchange market to its own devices might be nothing short of an invitation to balance-of-payments crises. This section begins by theoretically defining some possible indicators of sustainability. It then tests those indicators using empirical evidence from the most important regional episode—the 1997/98 Asian currency crisis. Finally, we offer a brief account on how financial innovation tends to complicate crisis prevention.

2.2.1 Warning signals for currency crises?

Possible benchmarks

There has been a considerable amount of literature attempting to discern the underlying factors of currency crises. Of course, the most direct approach to explaining an abrupt devaluation of the domestic currency might focus on the identification of the actual degree of overvaluation prior to crisis-like developments. Unfortunately, three issues muddle this logic when applied to real-world data. First, a currency's position at a given point in time must be related to some sort of equilibrium state. Establishing an adequate equilibrium concept however, has proved very difficult, leaving analysts more or less confined to intuitive guesswork. Second, as demonstrated by Chinn (1998) for the Asian crisis, a great variety of existing exchange rate models lead to differing and sometimes conflicting results.[17] And finally, in the context of investment decision-making, there is no guarantee that either public or private protagonists will consider the same criteria based on actual fundamentals. Overall, measures of exchange rate valuation do not seem to be reliable indicators for balance-of-payments problems.

As misalignment itself may not be easy to detect, research has focused on more indirect symptoms related to an overvalued domestic exchange rate. One of these symptoms, a persistent and worsening current account deficit, has been at the forefront of current discussions on the state of the global economy.[18] A number of analysts have argued that current account deficits exceeding about 5% of GDP are not sustainable over the medium term and therefore increase the risk of full-blown financial and currency crises.[19] Nevertheless, empirical support for this assumption is rather thin. Thus, the majority of reversals are not brought about by a rapid depreciation of the domestic currency, which might be characterized as a currency crisis. Rather, the improvement of the current account balance typically follows a smooth adjustment process.[20] Furthermore, while current account deficits do tend to reverse at around 5% of GDP *on average*, there are big differences in the actual value of the turning points. These complexities are not surprising as the current account reflects many differing developments in the domestic economy, not all of which call for a lower exchange-rate.[21]

Considering these difficulties, current account deficits may represent a necessary condition for currency crises yet they may by no means be sufficient. The same logic applies to other measures of debt, such as the ratio of the debt service to the volume of exports of goods and services or the ratio of total external debt to either exports or GDP. The modest performance of indicators of aggregate external debt has led analysts to take a closer look at the characteristics of the liabilities incurred. An initial approach in this vein is the Lawson-doctrine,

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[17] According to the sticky price monetary model used by Chinn, only Singapore's currency was significantly overvalued. The Korean won and the Philippine peso showed clear signs of undervaluation. For a comparison of different measures of exchange-rate misalignments in the context of the Asian crisis, see Furman and Stiglitz (1998, pp. 36–39).

[18] It is ironic that the US is causing the worries, not emerging economies.

[19] For example, Freund (2000, p.18) states that "a typical adjustment occurs after the current account deficit has grown for about four years and reaches about 5% of GDP."

[20] Consequently, Lane and Milesi-Ferretti (1998, p.36) conclude that "a comparison of currency crashes and current account reversals shows that these are, in general, distinct events."

[21] Thus, Reisen (1998, p.19) remarks: "the size of the current account deficit does not give rise to normative judgements; a deficit worth 3% of GDP may be 'excessive' in one country, while a deficit worth 12% of GDP may be justified for another country."

which discriminates between private and public sector debt.[22] While the former does not lead to balance of payments problems, the latter is considered more problematic. Of course, the assumption that there is such a phenomenon as an inherent stability of the private sector, whereas government expenditure is per se connected with irresponsible profligacy, merits some doubt at least.[23] A more satisfying rationale for fiscal indicators has been offered by the first generation models of currency crises in the tradition of the seminal articles by Krugman (1979) and Flood and Garber (1984). According to this approach, persistent and uncontrollable public deficits call for monetary alimentation. At some point, the increase in the domestic money supply will compromise the central bank's ability to maintain the official exchange rate parity.

Another way to discriminate between different categories of capital flows is not to look at the way it is being used—by the public or the private sector—but rather at the way it is being acquired. The first part of this paper detailed the logic motivating this approach: Some asset classes, such as FDI and portfolio investments with longer maturities, seem more suitable to financial market stability than others, such as the various forms of short-term capital. Moreover, this view is in accord with the fact that crises basically constitute a liquidity problem as opposed to a solvency issue. In the short run however, even the withdrawal of considerable amounts of short-term capital can be countered by central bank intervention. Therefore, it is a higher ratio of short-term liabilities to foreign exchange reserves that could act as warning signal for currency crises.

Empirical performance

As demonstrated above, there are a number of possible indicators that can be constructed for currency crises, even if theoretical drawbacks must be conceded in most cases. The real test comes when theory is matched with empirical data. Table 1 offers a rough overview. Data include actual values for the potential indicators in 1996, before the onset of the Asian crisis.

Table 1: **External debt indicators, 1996.** (%)

	government budget balance / GDP	current account / GDP	external debt / GDP	external debt / exports	debt service / exports	net short-term debt / reserves
Indonesia	1.0	-2.9	55.0	214.0	31.0	144.9
Korea, Rep. of	0.3	-4.4	31.6	126.4	7.6	316.5
Malaysia	1.1	-4.4	38.4	40.8	6.6	46.6
Philippines	0.3	-4.6	48.1	105.9	15.5	69.0
Thailand	2.7	-7.9	49.9	146.2	12.1	103.0
Bangladesh	-4.4	-2.4	37.6	246.0	9.4	33.7
China, People's Rep. of	-1.4	0.9	14.2	68.0	6.0	13.4
India	-5.5	-1.8	27.6	215.4	24.2	23.0
Pakistan	-7.8	-7.2	53.9	279.9	25.3	266.0
Sri Lanka	-9.4	-5.2	68.6	168.2	15.3	96.1

Source: IMF Article IV documentation.
Exports are exports of goods and services, exports for Korea and Malaysia include goods only.

We focus on the most affected countries—Indonesia, Republic of Korea (Korea), Malaysia, the Philippines, and Thailand. In addition, a control group of countries that eluded the crisis is presented: Bangladesh, PRC, India, Pakistan, and Sri Lanka. This control group serves two purposes. First, we expect a clearer difference between necessary and sufficient conditions. And second, as with the current account balance, the definition of precise

[22] The Lawson-doctrine is epitomized by Corden (1994, p.90ff.): "Decentralised optimal decisions on private saving and investment will lead to a net balance— the current account— which will also be optimal. … It follows that an increase in a current account deficit that results from a shift in private sector behaviour … should not be a matter of concern at all. … On the other hand, public sector behaviour… is a matter of public policy concern and the focus should be on this."

[23] For a detailed critique of the Lawson-doctrine see Reisen (1998), pp. 11–14.

critical values for crisis indicators is bound to be arbitrary, as theoretical foundations are lacking.[24] In the absence of threshold values, including countries that did not suffer from crisis may be useful. The fiscal policies of the main crisis-affected countries reveal a startling fact: none of them ran a budget deficit. Instead, they recorded surpluses ranging from a modest 0.3% of GDP in the Philippines and Korea to more vigorous 2.7% in Thailand. Moreover, all the countries unaffected by the crisis show large deficits. Therefore, while it is tempting to rely on fiscal data, empirical evidence eliminates them as warning signals of balance-of-payments problems. Indeed, this diagnosis resonates with the recent recognition that simple rules of thumb such as the Lawson-doctrine do not offer a satisfying answer when it comes to assessing the sustainability of a country's foreign debt or exposure to external crises.

A negative current account was a common feature of crisis-affected economies. It approached or clearly exceeded the 5% threshold suggested by the literature. The crisis began in Thailand, which had the highest deficit (7.9% of GDP). Nevertheless, similar deficits occurred in all control group countries except the PRC. Pakistan's 7.2% deficit did not lead to any disastrous results. Clearly, in the case of the Asian crisis, current account deficits may have represented a necessary, yet by no means sufficient, conditionality.

The same is true for indicators constructed from various ratios of external debt or debt service. If anything, countries like Pakistan or India had higher debt burdens and thus should have been susceptible to crisis contagion. The only indicator substantially differing between the two country groups is the ratio of net short-term debt to foreign exchange reserves, which was above 100% in the case of Indonesia, Korea, and Thailand, above most of the control group. Yet even this indicator was not completely accurate: Malaysia was not spared although its short-term debt ratio was relatively low. Pakistan, on the other hand, had a ratio of over 200% without being affected by the crisis.

Given these results, it would appear rather difficult to deduce warning signals from aggregate figures. Eventually, the amount of capital a country can and should acquire through international financial markets depends on its use over the long term, while in the short term contract characteristics do count—in the form of the currency and maturity structure. The only indicator that was moderately reliable was the ratio of short-term debt to official foreign exchange reserves.

2.2.2 Beyond rules of thumb: Financial sector issues

As demonstrated, it is difficult to find reliable benchmarks for currency crises. The obvious bad performance of the intuitive indicators is mainly due to the fact that absolute or even relative levels of debt do not tell us anything about whether they are appropriate. In other words: Do additional resources inflate domestic consumption or do they promote higher investment? Further, can returns on investments be accurately assessed? The latter in particular is bound to complicate any assessment of sustainability. It points to the need of a more disaggregate approach. Therefore, this section tries to identify critical aspects connected with the meso and micro levels of capital allocation as represented by a country's financial sector.

As outlined above, financial sector opacity prior to the Asian crisis has been broadly recognized. The previous section indicates the need to analyze aspects related to the maturity and currency structure of intermediaries' portfolios—the weight of short-term debt denominated in foreign currency. On the one hand, the negative impact of short-term capital tends to be understated, as accounting short-term debt is not perfect. For example, various types of implicit guarantees—that ensured immediate repayment if crisis-like developments occurred—complemented many nominal long-term contracts.[25] As the crisis began, massive liquidation of these instruments led to a downward spiral in asset prices and exchange rates. It is obvious that contracts implying conditional early repayment should be labelled short-term debt, not long-term.

[24] Thus, Williamson (1999, p.2) suggests that total foreign debt should not exceed 40% of GNP and 200% of exports, while debt service should stay below 25% of exports. Nevertheless, he concedes that these critical values merely constitute *"rules of thumb"* without *"analytical foundation."*

[25] See, for example, Islam (2000).

While the problem of short-term debt resulting from implicit repayment guarantees may be easily remedied at least in theory, there is another, more complicated aspect to consider—the wave of innovative financial derivatives developed over the past several decades. Offering substantial risk reduction, particularly in the context of cross-border transactions, derivatives generally helped increase both gross and net capital flows. While enhanced risk management shows great progress in the field of financial engineering, there are some more sinister aspects connected with these instruments. Not only do they tend to amplify the variability of asset prices and exchange-rates, but they can also be identified as the very cause of currency crises.[26]

Basically, there are two mechanisms at work. First, due to their off-balance-sheet position, derivatives may frustrate attempts by regulatory authorities to gauge financial risks using the ratio of short-term foreign debt to foreign reserves as a proxy. Second, there are deliberate attempts to destabilise a country's financial equilibrium - currency speculation. In short, a speculator sells the currency to be attacked through forward contracts to a financial intermediary at a relatively long maturity.[27] At this point, the bank's balance sheet will be subject to a currency mismatch: It is long in local currency and short in foreign currency. To alleviate the problem, the bank will first sell local currency on the spot market and then make a foreign exchange swap to eliminate the resulting maturity mismatch. In a fixed exchange-rate regime, these spot market transactions compromise the official parity. Consequently, the central bank will have to intervene in the spot market, drawing down and if unchecked, eventually exhausting its foreign-exchange reserves.[28] If and when the central bank loses the fight for the exchange-rate parity, speculators will be able to repay debt denominated in the target currency at much less expense.

The above argument indicates another problem aside from the difficulty of finding appropriate benchmarks. Well beyond the deplorable, yet unavoidable events in a less than certain world, currency crises are caused by the use—even the deliberate misuse—of financial innovations such as derivatives, theoretically designed to hedge risk. Implicitly, the initial search for warning signals surmised that, because crises create a net welfare loss, investors should be expected to shun irresponsible investments once signs of an eminent crisis appear on the capital market horizon. The question remains how private investors best use information provided by either the market or government, or even whether their interests aim to maximize social welfare at all. In short, were investors really caught by surprise when capital flows started to reverse at the end of the last decade?

An interpretation based on capital market efficiency would considerably simplify things, but it does seem somewhat naïve. Rather, there are at least two reasons explaining why foreign inflows of short-term capital continued despite the potential for crisis, or even because of it. First, the very characteristics of the inflows—the term structure—created the illusion that investors would be able to repatriate resources once the trouble began.[29] The fact that market participants significantly underestimated the individual repayment risk represents a typical fallacy of composition. While an individual investor may be able to avoid losses by withdrawing resources—given that the rest of world remains passive—things of course look very different once everyone jumps on the bandwagon. Second, foreign investors do not bear the totality of risk created by their investment behavior. As a crisis starts to unfold, it is not solely the capital market that faces turmoil, but rather the economic system as a whole, including such vital components as real growth and employment.[30]

Thus, from an aggregate perspective, excessive risk-taking, financial myopia, and deliberate speculation displayed by investors clearly represent a negative externality: economic theory suggests that the latter should be internalized to improve social welfare. To do so, policymakers may employ other instruments, such as taxes or quotas. The advantages and drawbacks of each of these instruments in the context of ensuring capital market stability are discussed in the following section.

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[26] For applications, see Steinherr (2000).

[27] Buying put options on the target currency has the same destabilizing effect. For a much more detailed analysis of the role of derivatives in the context of currency speculation, see Garber (1998) and Steinherr (2000).

[28] Alternatively, it may issue a forward contract compensating the initial transaction. Yet even in this case, the central bank will be forced to provide local currency credit.

[29] Eichengreen and Rose (1998) argue along this line, even establishing a negative link between the prevalence of short-term capital and banking crises.

[30] This argument is highlighted by the thorough analysis of Furman and Stiglitz (1998, pp. 53–56).

3. Financial sector regulation and capital controls—managing international capital flows in ASEAN

As already argued, measures aimed at prudential regulation of financial markets and traditional capital controls can be considered to some extent as two sides of the same coin. Both serve to influence the magnitude and composition of capital flows, and there is evidence of synergies between the two in an elaborate system of capital flow management. This point is made forcefully by Epstein, Grabel, and Jomo (2004), who offer seven country studies where they describe the capital management techniques employed, analyze their interplay, and assess their success in terms of achieving policy aims.

The approach taken here differs somewhat. As a detailed qualitative analysis of all ASEAN+3 countries, their macroeconomic circumstances, and respective capital management techniques is beyond the scope of this study, we focus on certain central issues in financial sector regulation and capital control imposition that constitute a kind of best practice derived essentially from historical experience. However, it is clear from the onset that a one-size-fit-all policy is not only utopian, but even undesirable. Southeast Asian nations are at different levels of state and administrative capacity, have different visions of macroeconomic policy, strive for different developmental goals. While no country wants to run an excessive risk of becoming entangled in a new financial crisis, the paths to ensuring this while pursuing various other aims diverge substantially. This paper can only hope to elucidate a number of general issues and provide some suggestions as to the benefits of increased regional cooperation, drawing on the experience in Europe and Latin America.

3.1 Prudential financial sector regulation

Improving financial sector regulation and supervision is probably the most prominent issue currently debated in mainstream economics in the context of capital flow management in emerging economies. There is a certain conviction among applied economists and in international institutions such as the IMF that liberalizing capital account transactions can benefit a country's economic performance if a number of preconditions have been met. Prudential banking and financial sector regulation in general is on top of the list.

That said, the central problem—and one that fortunately is receiving increased recognition—is that recommending an adequate regulatory and supervisory system to minimize informational deficiencies in international financial market transactions is much easier than actually implementing the system. Notably, this is also true for countries. Rodrik (1998) cites the US Comptroller of the Currency as complaining that (at the time of writing) only four out of the 64 largest North American banks practiced state-of-the-art portfolio risk management, and that the criteria for loan provision were thus considerably more lax than expected.

The example highlights the basic predicament. Regulatory legislation is one thing, supervision and enforcement of existing regulations is quite another. Brownbridge and Kirkpatrick (2000) discuss various obstacles facing developing countries when implementing prudential regulatory frameworks. Likewise, in an IMF working paper dealing with the adoption of Basel II standards in international banking Chami, Khan, and Sharma, (2003) stress the numerous problems facing emerging economies trying to improve financial regulatory and supervisory standards. One crucial difficulty springs from the divergence between private and public sector remuneration in attracting personnel for supervisory agencies able to deal with complex financial issues. At a time when expertise for strengthening regulatory and supervisory agencies is especially needed, both papers bemoan the fact that it is increasingly difficult to retain specialists or recruit new ones.

Other problems concern the structure of banking systems in many developing economies. In countries where banks are connected to—or even majority-owned by—large industrial corporations, political influence can lead to regulatory exemptions. Large state equity in financial intermediaries equally makes political interference in

public administration more likely.[31] Brownbridge and Kirkpatrick (2000) conclude that there are considerable difficulties

> in applying the developed country model of regulation, which relies heavily on accurate financial information, highly skilled technicians and an impartial bureaucracy, in an environment characterised by weak accounting and legal frameworks, acute shortage of skilled personnel and pervasive political interference in public administration.

Calomiris (1997) offers market-based proposals for improved financial regulation, suggesting that banks could be required to finance a certain minimum of their assets with subordinated, uninsured debt, with the yield capped at a maximum rate above the risk-free market rate.[32] To mobilize this debt, banks would have to convince international investors of the adequacy of the bank's capital assets in securing the credit. Monitoring is thus transferred to market-based institutions and rendered less vulnerable to political influence, particularly in countries where regulatory independence is not yet assured. In the same context, enhancing bank disclosure requirements to the private sector could be a complementary option to achieve more market-based financial sector monitoring. Beck, Demirgüç-Kunt, and Levine (2005), in a cross-country study covering 37 developed and developing countries, present evidence suggesting that "empowering private monitoring of banks by forcing banks to disclose accurate information to the private sector tends to lower the degree to which corruption of bank officials is an obstacle to firms raising external finance."

However, the authors also conclude that any improvement more or less hinges on having sound legal institutions. This is in line with major skepticism about the potential benefits from market-based financial sector monitoring. The point can be made that even in developed countries, where reliability of accounting and auditing standards is relatively high—the occasional scandal notwithstanding—disclosure requirements have a limited capability in monitoring private sector banks. After all, as Brownbridge and Kirkpatrick (2000) argue, a central rationale for the very existence of financial intermediaries is that they can acquire and process reliable information about borrowers more efficiently, and transform the respective risks. If it were possible to make this information and concomitant risk assessments publicly available and verifiable at low cost, the raison d'être for financial intermediation would largely disappear.

The problems of enforcement cited above thus essentially remains. Brownbridge and Kirkpatrick (2000) argue that government-controlled regulation and supervision must remain central, and that problems described should be tackled mainly by ensuring that unified regulatory and supervisory measures are

(i) relatively straight-forward,

(ii) preferably independent from other components of the regulatory framework, and

(iii) easily verifiable and enforceable.

There are several measures that fit this description rather well. Above all, entry requirements and capital adequacy in banking come to mind. In countries where financial sectors are less sophisticated, higher potential risks could be offset by introducing stricter legal standards. Licensing criteria should go beyond those established in Basel II in terms of minimum capital requirements and capital adequacy ratios. The same is true for standards involving professional expertise and integrity of bank owners and senior management. Furthermore, and particularly in countries without freely floating exchange rates, there is a clear case for restricting the amount of foreign currency exposure to a bank's equity.[33]

[31] Quintyn and Taylor (2003) stress the importance of political independence for regulatory and supervisory agencies in achieving financial sector stability.

[32] Argentina introduced a similar requirement in 1996, see Calomiris (1997), p. 36.

[33] See Steinherr and Peree (1999).

3.2 Capital controls

The link between prudential regulation and capital controls has been established. While a sound financial sector can be considered key to achieving greater efficiency in capital flow management, establishing prudential routines in turn is best done under favorable conditions (Epstein, Grabel, and Jomo, 2004). From a historical perspective, capital controls have proved a great help for ensuring relative financial stability. The following discussion focuses on three instruments which have drawn public attention: the Tobin tax on foreign exchange transactions, which taxes all balance-of-payments transactions but is levied more heavily on short-term capital flows; the 1990 Chilean model of unilateral restrictions on capital inflows; and the September 1998 Malaysian imposition of restrictions on capital outflows. From this analysis, lessons can be drawn for the future use of capital controls to reduce vulnerability in the face of financial volatility and currency crises.

The Tobin tax

The idea of a tax on cross-border capital flows is by no means new. Nobel Laureate James Tobin proposed it in the 1970s drawing on the remark by John Maynard Keynes that a tax should be established "with a view of mitigating the predominance of speculation over enterprise". It resurfaced in public debate in the mid-1990s after the Tequila-crisis and then again after the Asian crisis. The main argument is that if asset prices—and thus exchange-rates—change much faster than goods prices, crises can in principle be prevented by abolishing exchange-rates altogether. While Tobin perceived the introduction of a sort of world currency—echoing Keynes' proposal of a bancor—to represent the first-best solution, he thought it highly unlikely. Instead, he advocated putting "sand in the wheels of international finance" by increasing transaction costs.[34] A moderate, worldwide ad-valorem tax on foreign-exchange spot-market transactions was meant to serve this purpose. By definition, the tax burden would increase with the frequency of transactions carried out. In this way, it was hoped that short-term investment—which requires a higher velocity of foreign exchange transactions over a given period—would be discouraged, whereas trade credit, FDI, and longer-term instruments in general, would be affected only marginally.[35]

The Tobin tax concept has been criticized for several reasons. First, in the absence of significant exchange rate movements, the Tobin tax introduces a significant wedge between domestic and foreign returns. However, during periods of foreign-exchange market turmoil , the Tobin tax pales in comparison with periodic exchange rate gains/losses,[36] disappointing the major motivation for introducing the Tobin tax—prevention of currency crises. Haberer (2003) shows that investors prefer to make longer-term transactions, so long as the expected exchange rate appreciation compensates for the tax burden. Thus, in the context of an expected gradual exchange-rate appreciation sustained by capital inflows, the tax burden will discourage most heavily short-term assets. If, by contrast, investors expect a large devaluation, the tax must be extremely high to prevent capital flight.[37] A moderate tax rate even risks generating a perverse effect that penalizes long-term investment.[38] Furthermore, Bird and Rajan (2000) stress that if transaction frequency is the central determinant of the tax rate, then simple round-trip transactions will not be hit as hard as hedging current account transactions (which require four "trips").

Besides these critiques of the very effectiveness of the concept, the feasibility of the Tobin tax has been doubted. On one hand, a tax on spot-market transactions is clearly not enough. Rather, it has to be extended to include various forward derivatives, futures, swaps, and options in order to minimize evasion. This is not easily done as such transactions usually occur off-shore, beyond national jurisdiction. The problem of transaction displacement, however, is common to most capital control measures. Furthermore, the Tobin tax was conceived as a multilateral mechanism. Thus, were a country to introduce it unilaterally, there would be strong incentives for financial intermediaries to move offshore to avoid the loss of competitiveness resulting from the tax. Therefore, the Tobin tax, if applied by a single country, needs to be moderate.

[34] The idea was elaborated by Tobin (1978).

[35] Besides influencing the maturity structure of external debt, the introduction of a Tobin tax was also advocated to increase monetary independence in general and to generate proceeds for development projects.

[36] As was indeed the case in Dornbusch and Frankel (1987).

[37] see Williamson (1999).

[38] For detailed calculations, see Haberer (2003).

The Chilean *encaje*

After the serious balance-of-payments problems of the late 1970s and 1980s, Chile opted for a system of extensive capital controls to enable more stable growth.[39] Its aim was to reduce the share of short-term capital in external debt and thus reduce external vulnerability. Nevertheless, capital flows should not be stunted altogether. Steady, long-term capital flows were to be maintained. To achieve this, Chilean authorities introduced several measures in June 1990. At the heart was a mandatory unremunerated reserve requirement (URR), whereby a certain percentage of capital inflows had to be deposited in a non-interest bearing account at the Central Bank of Chile for a minimum of 1 year. This amounted to an implicit tax, with the tax rate *t* given by the formula

$$t = r^* \frac{\mathrm{a}}{(1-\mathrm{a})} * \frac{p}{k}$$

where r^* is the world interest rate on capital flows representing opportunity costs, α is the share of capital that has to be deposited, p is the number of months the deposit must be maintained, and k is the total number of months that capital remains in the country.[40] The tax rate embodies two obvious properties important to understand the Chilean model's success. First, as in the case with the Tobin tax, the lower the k (the maturity of the asset), the higher the tax rate. Of course, this is exactly what was intended: to deter short-term capital while encouraging long-term inflows. Second, while not negligible,[41] the tax rate is adjustable via the parameter α (the required deposit ratio), and the parameter p (the number of months the deposit must be maintained). Indeed, this flexibility is needed to compensate for changes in r^*, (the opportunity costs of the reserve requirement. The first half of the 1990s saw rather generous international financing conditions and surging capital flows to emerging markets. Consequently, the authorities initially chose a substantial 20% deposit share. This was further increased to 30% in May 1992, but was reduced to 10% in June 1996, and finally to zero when financing conditions became much tighter in September 1998. The tax flexibility, in addition to its transparency, allowed authorities to adapt changing conditions with a stroke of the pen.

There are several other features worth mentioning in the context of the Chilean *encaje*. Two instruments in particular successfully countered evasion of the capital controls. Foreign direct investment had to stay in the country for at least a year. This foiled attempts at disguising portfolio flows as direct investment flows. The reserve requirement applied to trade credits as well to close current account transaction loopholes.[42] Thus, the capital controls were clearly asymmetric, as they discriminated between capital inflows and outflows as well as between different asset maturities. Outflows were gradually liberalized while authorities maintained and even temporarily reinforced controls on inflows. This asymmetric design focused on avoiding crises rather than stopping capital flight in the event of a crisis.

How should we judge the performance of the Chilean model? Overall, the central objectives were fulfilled. As intended, the share of short-term capital inflows declined substantially.[43] Also, alimentation of capital inflows remained remarkably stable even when controls were most harsh. The share of FDI increased despite the tax. Indeed, some writers view these results as a reason for the perception of reduced external vulnerability by international investors.[44] Of course, there is no doubt that there were negative side-effects. Recent research points to the unavoidable increase in transaction costs, a dampening effect on trade due to the current account restrictions, and the adverse financial effects faced by smaller firms by way of credit rationing.[45] Nevertheless, macroeconomic gains clearly exceeded microeconomic costs. There was no contagion in Chile from either the Mexican Tequila crisis or the Asian crisis. The fact that capital controls were eventually abolished does not mean

[39] Colombia established capital controls similar to Chile's.
[40] For a detailed description of the implicit tax, see also Edwards (2000).
[41] Edwards (2000) reports a 1997 average 80 basis point tax rate .
[42] Furthermore, controls were extended to include American Deposit Receipts (ADR) in 1995, thus filling another loophole.
[43] Bird and Rajan (2000) report a decline from 20% in 1990 to 5% in 1998.
[44] See Bird and Rajan (2000).
[45] For an overview of both microeconomic and macroeconomic effects, see Cowan and De Gregorio (2005). Gallego and Hernández (2003), and Forbes (2004) for credit rationing of SMEs.

they were a failure. To the contrary, they provided a needed window of opportunity to bring about substantial financial sector reform in a stable environment. Once these reforms became institutionalized, maintaining tight capital controls became superfluous. In sum, the Chilean *encaje* is an example of a set of capital controls successfully applied and—under appropriate circumstances—offers a valuable policy option for other emerging market economies about to embrace financial sector reforms.

Malaysia's reaction to the Asian crisis

Unlike other countries affected by the Asian crisis, Malaysia rejected IMF proposals for emergency stabilization polices and instead opted for a package that included exchange controls and controls restricting capital outflow. The exchange controls—prohibiting transfers from ringgit deposits offshore and requiring rapid repatriation of export proceeds—were aimed at stabilizing the ringgit. Restricting capital outflow was simply to prevent capital flight. Authorities applied a 12-month waiting period for repatriating capital investments, complemented by a system of exit taxes levied on capital outflows—the tax was inversely proportional to the duration of stay. Together, the aim of the controls was to allow macroeconomic policies to reflate the economy—for example, maintaining lower interest rates than in the rest of the region would have been impossible without restricting capital outflows— defend the ringgit, and rebuild foreign exchange reserves.[46]

Shortly after the recovery began, restrictions on capital outflows were lifted. Exchange controls remained through July 2005. largely to prevent the re-emergence of an offshore ringgit market that could be used to speculate against the ringgit.

Observers remain divided over whether the Malaysian approach to the financial crisis worked,. Some, such as Kaplan and Rodrik (2002), claim that the controls helped Malaysia escape the crisis relatively unscathed. Opponents argue that other parts of the region showed a more pronounced recovery. While it is virtually impossible conclude definitively on questions of counterfactual history, Malaysia proved that restrictions on capital outflows can work and do not produce the catastrophic outcomes many observers predicted.[47] Thus, at the very least they can be considered a viable alternative to the emergency stabilization policies advocated by the IMF during the crisis—which were undoubtedly a safe recipe for severe recession.

The best strategy is, of course, to avoid emergencies altogether. Thus, long-term capital management—the Chilean *encaje*—appears preferable to ad-hoc measures in the hour of need. We discuss additional measures that might complement these policy options below.

3.3 Regional cooperation

We argue that capital controls can be quite useful for curtailing short-term capital flows and reducing external vulnerabilities. In the absence of effective international cooperation, regulatory authorities must rely on instruments of control unilaterally: The Chilean *encaje* is a good example of a workable and effective application of capital controls. Nevertheless, some multilateral initiatives can contribute greatly to both promoting financial sector reform in individual countries and paving the way for future regional integration. While they do not include outright capital controls, they use of a number of different approaches to avoid crisis-like vulnerabilities. Indeed, several initiatives have already been introduced in Southeast Asia following the 1997/98 crisis:[48]

- Our arguments stress that reliable information and benchmarks are essential, even if uncertainty can never be wiped out completely. Of course, this is, not merely true at the national level. Cross-border capital flows and potential contagion effects in times of crisis call for a transnational exchange of relevant data. The ongoing development of various information networks in Southeast Asia is a good example.[49]

[46] For a detailed discussion of Malaysia's crisis management and experience, see Jomo (2001).

[47] By late 1999, international rating agencies had upgraded Malaysia's credit rating . In May 2000, Morgan Stanley's Capital International indexes reinserted Malaysia (Epstein, Grabel, and Jomo 2004).

[48] For a more detailed survey see Sakakibara and Yamakawa (2004).

[49] Formal economic reviews and policy dialogues have been established in the region, along with ASEAN+3 Research Group.

- As mentioned earlier, speculative selling of assets denominated in domestic currencies can build detrimental or even debilitating momentum. In principle, this can be countered by central bank intervention as long as foreign-exchange reserves are available. Regional cooperation can bolster this reserve arsenal in different ways. Mutual assistance was provided by the Asian Swap Agreement (ASA) since 1977. In the past, these funds proved insufficient. Therefore, in the context of the Chiang Mai initiative of 2000, an intergovernmental conference agreed to expand available resources. Beyond the multilateral ASA, 16 Bilateral Swap Agreements (BSAs) are now in place worth more than $36 billion. The next logical step would be the creation of a common reserve pool placed under the authority of, say, an Asian reserve bank.

- The development of an Asian bond market has accelerated over the past decade. One significant step was the creation of the Asian Bond Fund (ABF) on the initiative of the Executives' Meeting of East Asia Pacific Central Banks (EMEAP). While the $1 billion in ABF1 assets were to build a basket of US dollar-denominated bonds issued by Asian sovereign and quasi-sovereign issuers, ABF2 focuses on establishing a market for assets denominated in local currencies. ABF2 consists of two components, a Pan-Asian Bond Index Fund (PAIF) and a Fund of Bond Funds (FoBF) a two-tiered structure with a parent fund investing in eight Single-market Funds, which in turn invest in local-currency sovereign and quasi-sovereign issues. At some point in the future, this could lead to the development of tradable Asian currency units (ACU). These innovations are important steps toward building a regional environment with better and safer fundamentals—with the means to better prevent or effectively manage any future financial crisis.

In the past, both the US and the IMF criticised the introduction of similar measures. They suspect bolstering foreign-exchange reserves could generate moral-hazard effects. Sceptics stress that double-standards might emerge. Yet, the fear that IMF leadership might be compromised obviously weighs most heavily on the minds of many skeptics.[50] While the establishment of regional institutions may indeed render IMF support obsolete, this should be seen as a positive development. Overall, the measures described above represent an important contribution to reduced external vulnerability in East Asia and can be expected to further the goal of deepening regional integration over the longer run.

3.4 Creating an Asian Currency Unit (ACU): an opportunity for progressive liberalization

The future creation of a regional currency, the ACU, provides an historic opportunity for progressive capital control liberalization. In its initial stage, an ACU could provide a gauge of exchange rate stability and monetary policy cooperation. Later, an ACU could develop into a store of value—for the denomination of bonds and bank accounts, for example. Success naturally requires promoting the ACU by governments, central banks, and other official agencies across the region. One thing governments could do for the development of an ACU would be to exempt all ACU transactions from exchange controls. This would require that residents can purchase bonds denominated in ACU, are allowed to open bank accounts in ACU, and that foreign residents can purchase domestic bonds denominated in ACU. Obviously, this would only mark a major liberalization for economies with strict controls. It would also take time to create and build investor confidence in the necessary ACU instruments. Only as a second step could controls be lifted on all foreign exchange transactions.

The first question that arises is whether it is possible to discriminate in favor of one currency, which breaches the basic WTO principle of non-discrimination. But the fact is that an ACU will start off as a special currency—neither official tender nor foreign exchange. And will be special because each regional currency will be part of the basket definition. The European experience with its basket currency, the ECU, is instructive. Several European countries awarded preferential treatment to the ECU. For example, Belgium operated a two-tier exchange market where current account transactions passed through the first tier with fixed exchange rates, while capital account transactions passed through the second-tier with flexible rates. The two-tier exchange market is a capital control mechanism, as inflows will give rise to exchange rate appreciation in the second-tier

[50] One might recall the 1997 Japanese proposal to create an Asian Monetary Fund, which was abandoned after fierce opposition from the US and the IMF, cf. Lipscy (2003).

and gradually reduce incentives for inflows.[51] Belgium decided that all ECU transactions, independent of the underlying purpose of the transaction, had the benefit of first-tier treatment. Similarly, Ireland suspended capital controls for ECU transactions while Italy exempted ECU securities from a tax on interest rate receipts on foreign currency instruments.

Several implications of liberalizing capital flows with respect to ACU transactions are noteworthy. First, one of the reasons for restricting inflows is that they may render domestic monetary controls difficult, and that in the case of precipitous outflows an exchange crisis could develop. But, as long as inflows remain denominated in ACU and not converted into national currency, the exchange rate remains unaffected. Countries with already stable fundamentals would not be affected very much. By contrast, a country with high and volatile inflation typically experiences a shift out of domestic currency into foreign currency, frequently the US dollar. Although not allowed in principle, when a certain level of parallel currency holdings exists, authorities are forced to acquiesce and tolerate the holdings. If residents can legally shift into ACU, then transaction costs will be lower and the flight from domestic currency will accelerate. But this should not be deemed negatively as it would lead to a desirable and necessary corrective action to the disequilibrium. Second, capital controls also prevent domestic savings from being invested abroad, keeping it available for domestic investments to develop the economy. With efficient domestic resource allocation, the risk of losing capital abroad is small and offers useful diversification, particularly for small economies. However, an investment in ACU is not necessarily a loss for the domestic economy if, for example, local investors buy bonds issued by domestic issuers for local investments. However, an investment in ACU would be lost to the domestic economy if local investors buy ACU bonds of foreign issuers investing abroad. Nonetheless, compared with US dollar investments, the advantage remains that the money remains invested within the region.

To successfully implement an ACU strategy, liberalizing ACU transactions is in fact unavoidable. ACU debt payments can in principle be carried out either directly in ACU or in the basket itself. For the latter option the purchase of component currencies must be possible—capital controls on such transactions would make basket delivery difficult or impossible. Furthermore, hedging ACU transactions must be allowed. For instance, a local bank that borrows in ACU must be able to make loans in ACU, buy ACU securities, or hedge with the basket. Developing an ACU without liberalizing capital controls on ACU transactions would be illogical and possibly counterproductive.

Finally, the successful development of ACU financial instruments would positively contribute to the correction of global imbalances. As argued by Eichengreen (2006), imbalances affect the region as a whole. Several countries in the region have large current account surpluses, and as the region is increasingly interconnected by regional trade flows—many are suppliers to the PRC and hold bilateral trade surpluses. Furthermore, as members of the region are also competitors on world markets, reduction of an ACU surplus in one country would increase the ACU surplus of other countries in the region. If governments in the region used the ACU for financing part of their fiscal deficits and central banks would purchase ACU securities instead of US Treasuries, then the value of the dollar would fall independently of any country with accumulated ACU reserves rather than dollar reserves. Also, Asian currencies would not appreciate against the euro. As current account transactions of the region are in surplus with the US, but less so with Europe, a general appreciation of Asian currencies is not necessary nor desirable global imbalances adjust.

To conclude, a general elimination of capital controls in ASEAN+3 is not necessary for making an ACU a success. However, it is necessary to liberalize flows in and out of ACU. This, in fact, provides the opportunity to limit liberalizing capital controls to ACU transactions. This is less risky and easier than general liberalization, and benefits each country and the region.

[51] For details, see Decaluwe and Steinherr (1976).

IV. Conclusions

Several conclusions emerge from this paper:

1. Some form of capital controls exist in most, but not all, economies in ASEAN+3. There are solid justifications for controls in general, particularly in countries where the domestic financial system is fragile and macroeconomic imbalances exist. Theory and empirical evidence demonstrate that financial crises occur more frequently in countries with an immature financial sectors and macroeconomic disequilibria, and without capital controls. Most of the time, crises result from the interplay of the exchange market and the financial market. Hence, countries would be well advised not to liberalize capital transactions hastily, before the two basic conditions—robustness of the macroeconomic situation and of the financial sector—are fulfilled.

2. Capital controls exist in various forms. The most prevalent are administrative controls, where efficiency may be questioned. Experience in many economies suggests that controls create fewer distortions when they are administered by one rather than several institutions, and when they are simple, transparent, and responsive to changing market conditions. The ideal form of control is designed to have its greatest influence when problems arise but remains benign when things are working well. Typically, administrative controls are neither easily eliminated nor reignited. As was demonstrated during the Asian crisis, among others, the most volatile form of capital flows are short-term bank credits, followed by other forms of short-term capital flows. A tax on short-term capital inflows, for example in Chile, has the advantage of being simple and transparent, targets the most problematic form of capital inflows, and can easily be adjusted as the situation warrants.

3. Because crises usually comprise twin problems—originating in the foreign exchange market and spilling over into the domestic financial market or vice versa— regulating the domestic financial market (which does not even qualify as capital controls) is best at preventing crises. For example, a regulatory measure applied in many countries limits net foreign asset positions of banks to below equity. Of course this rule would not apply to equity holdings by foreigners so FDI and foreign purchases of domestic stock would not be restricted. Domestic firms would still be able to borrow in foreign currency, so long as they have matching (by amount and maturity) foreign assets or hedge the foreign exchange risk.

4. For countries with extensive administrative capital controls the recommendation is to liberalize prudently and slowly. For efficiency, complex administrative controls should be replaced with simple, transparent, and easily enforceable instruments such as a tax on short-term capital inflows and/or a restriction of net foreign liabilities.

5. The eventual development of a tradable ACU would allow the partial liberalization of capital controls by eliminating all restrictions on ACU instruments. This would increase the transparency and clarity of the rules applying to ACU transactions and contribute to developing a regional market. It would be an historic opportunity to gradually advance economic integration by initially liberalizing ACU transactions, moving toward free cross-border capital flows at a later stage.

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Appendix

An Overview of Controls of Cross-Border Capital Flows in ASEAN+3

This appendix presents a detailed description of the capitals control systems in ASEAN+3 countries. Information came from the IMF's *Annual Report on Exchange Arrangements and Exchange Restrictions 2005,* which presents the main features of exchange restrictions and capital transaction-related regulatory frameworks worldwide, by providing a standard set of common headings at the country level.

Information in the publication has been processed mainly by constructing synoptic tables to compare administrative responsibilities and to emphasize similarities and differences among ASEAN+3 countries.

Specific attention has been paid to the measures concerning inward and outward capital flows. Other measures and restrictions more directly related to current account transactions have been left out.

When a measure (controls or permissions) has been implemented by a country but no detailed information is available, tables present the notation "yes." An empty cell connotes no information available. In any case, the text completes the information provided in each synoptic scheme.

A1. Some features of exchange arrangement systems

Ten countries have currently accepted Article VIII, Sections 2, 3, and 4 obligations under IMF Articles of Agreement. Among them, the last was Cambodia in 2002. At the same time, Lao PDR, Viet Nam, and Myanmar use transitional arrangements under Article IX, Section 2.

	Date of acceptance of IMF's Article VIII, Sections 2,3, and 4
Japan	01 apr 1964
Singapore	09 nov 1968
Malaysia	11 nov 1968
Indonesia	07 may 1988
Korea, Rep. of	01 nov 1988
Thailand	04 may 1990
Philippines	08 sep 1995
Brunei Darusslam	10 oct 1995
China, People's Rep. of	01 dec 1996
Cambodia	01 jan 2002

As for currencies, only four countries allow foreign currencies to be used for domestic transactions in addition to national currencies. Brunei Darussalam and Singapore, which agreed to a reciprocal circulation system for both national currencies, allow official tenders to be exchanged at par without charge or restriction. Moreover, Lao PDR and Cambodia allow for free circulation of US dollars for payments. Lao PDR also allows free use of Thai baht.

Almost all ASEAN+3 exchange rate systems are characterised by a "unitary approach," that is, only one official exchange rate is set. Cambodia and Myanmar are the exceptions, both employing a dual exchange rate system, with an official exchange rate and one market-based. The market exchange rate in Myanmar is unofficial but tolerated.

Under the classification of the exchange systems provided by the IMF, Table A1 shows the current situation in the ASEAN+3 region as regards management of the exchange rate.

Table A1: **Exchange rate systems**

Classification	BRD	CAM	PRC	INO	JPN	KOR	LAO	MAL	MYA	PHI	SIN	THA	VIE
Independently floating					X	X				X			
Currency board arrangement	X												
Conventional pegged arrangement			X					X					
Managed floating with no pre-announced path for the exchange rate		X		X			X		X		X	X	X

Source: *Annual Report on Exchange Arrangements and Exchange Restrictions 2005,* IMF.

Most countries use a managed floating system where the monetary authority intervenes, either directly or not, to influence the exchange rate. Interventions are not automatic, they do not follow an officially announced target rate, or specifically selected indicators.

Only PRC and Malaysia are classified as conventional pegged arrangements. As specified by the IMF in its report. In 2005, both countries moved toward a more flexible exchange rate regime, even if no official reclassification was made.

Finally, Japan, Korea, and Philippines have adopted an independent floating regime while, on the opposite side, only Brunei Darussalam presents a fixed exchange regime where the Brunei dollar is fully linked to the Singapore dollar.

Forward exchange market

Three types of forward exchange markets correspond to three different stages of financial development and regulation. Indeed, no such market exists in Brunei Darussalam, Cambodia, Lao PDR, and Myanmar. An exception is Brunei Darussalam where, due to the currency agreement with Singapore, the Currency Interchangeability Act signed between the two national monetary authorities, hedging transactions by residents of Brunei Darussalam may be conducted in the market for Singapore dollar.

The situation in the remaining countries is presented in Table A2. Here two degrees of controls are noted.. Japan has a completely unrestricted forward market while in Korea and Singapore transactions are limited to banks for hedging purposes. For the other countries the situation is more complex. Different systems of controls apply, concerning the subjects allowed entering forward exchange contracts, the currency and maturity of transactions and the underlying contracts.

Moreover, among all countries, only the Philippines' forward exchange market, under the Currency Rate Risk Protection Program, provides central bank intervention for hedging purposes of foreign exchange risk held by local companies.

No direct and specific intervention on exchange transactions by fiscal or monetary authorities is provided outside the country-specific currency management frameworks.

Table A2: **Forward exchange markets**

PRC	Indonesia	Japan	Korea	Malaysia	Philippines	Singapore	Thailand	Viet Nam
Operations up to one year allowed for institutional operators	Restrictions for contracts with NR if no underlying local investment activity exists	Free with no officially set rates	Free for foreign exchange banks	For financial transactions, prior approval is required. Specific conditions apply depending on operators and contracts' terms and conditions.	Prior BSP clearance for contracts by NR with no full delivery of principal. Only licensed banks may enter long-term contracts. Specifc limits on maturities apply.	Banks may hedge their exchange risk	Free access for FIs to transact with NR in local currency. Approval required for NR selling foreign currencies for bath. Fwd transactions need underlying trade and financial transactions	SBV's permission for CIs to enter short-term transactions (3 to 365 days)

Source: *Annual Report on Exchange Arrangements and Exchange Restrictions 2005,* IMF

A2. Arrangements for international payments and receipts

Prescription on currency requirement

For official requirements for currencies selection and settlement systems, no information is available for Brunei Darussalam and Indonesia. Cambodia, Japan, and Singapore have not been included in Table A3 because they do not provide any prescription requirement.

Among remaining countries, Lao PDR, and Philippines stand out because, even if no official currency requirements apply, effective limitations are set by their central banks by providing and accepting a limited number of selected currencies for international reserves composition.

Table A3: **Rules on currency requirements**

	PRC	Korea	Lao PDR	Malaysia	Myanmar	Philippines	Thailand	Viet Nam
Prescription of currency requirements	Freely convertible currencies may be used in transactions	Settlements in any convertible currency except won.	No official prescription but, in practice, BOL only accepts some currencies	All dealings and transactions with Israel require the prior approval of the COFE	Participation in the Asean Clearing Union. Settlements in Asean Monetary Unit	No official prescriptions but in practice the BSP only accepts some currencies		
Controls on the use of domestic currency						Use for international transactions not allowed, except for imports from and exports to ASEAN countries.	Baht credit facilities by domestic FIs to NR to be used for domestic activities. Quantitative limits apply for other purposes	
For current transactions and payments	The PBC provides clearing arrangements for banks in Hong Kong SAR and Macao SAR	For NR only through their free won accounts			Yes	Yes		
For capital transactions								
- Transactions in capital and money market instruments		Yes		Case by case COFE's approval for ringgit bonds issuance by foreign or international operators	Yes	Yes		Yes
- Transactions in derivatives and other instruments		Yes			Yes	Yes		Yes
- Credit operations		Yes			Yes	Yes	Yes	Yes
Use of foreign exchange among residents	Not allowed	Only through foreign exchange banks.	Formal authorisation from the government required	Prior approval of the COFE is required for most transactions	Yes	No restrictions, unless foreign exchange is purchased from the domestic banking system	Not allowed	For certain transactions only

Source: *Annual Report on Exchange Arrangements and Exchange Restrictions 2005,* IMF.

Only four countries, Lao PDR, Malaysia, Philippines, and Viet Nam participate in an operative bilateral arrangements with one or more other countries.

Administration of exchange controls

Responsibilities for exchange controls are shared among various national authorities and agencies in general, with noticeable differences from country to country (Table A4). While in Brunei Darussalam and Singapore no formal exchange controls exist, the central banks and monetary boards determine exchange controls and regulations in Cambodia, Malaysia, Philippines and Viet Nam. In the remaining countries, two or more authorities, ministries, or agencies share responsibilities following a functional or hierarchical approach.

Table A4**:** **Institutions in charge of controls**

Brunei Darussalam	**Cambodia**	**PRC**	**Indonesia**	**Japan**	**Korea**	
No formal exchange controls	NBC	SAFE responsible for forex administration, under the direction of the PBC.	Commercial offshore borrowing regulated by COLT for SOEs and by BI for banks	MOF, METI and Bank of Japan, acting as the government's agent.	MOFE sets policies. BOK executes.	
Lao PDR	**Malaysia**	**Myanmar**	**Philippines**	**Singapore**	**Thailand**	**Viet Nam**
BOL responsible. External borrowing: MOF's approval for the public sector. BOL's approval for the private sector	COFE (governor of the BNM) sets foreign exchange administration rules	Exchange control administered by the CBM under instructions from MFR. FECB headed by the Deputy Prime Minister allocates foreign exchange for the public sector.	BSP.	No formal exchange controls	BOT responsible on behalf of the MOF, but delegation of responsibility to authorized banks apply	SBV

Source: *Annual Report on Exchange Arrangements and Exchange Restrictions 2005,* IMF.

Controls on export and import of banknotes

Controls on cross-border transactions of banknotes refer to physical movement between countries. (It should be noted that, where not indicated otherwise, measures refer both to residents and nonresidents and indications of limits in US dollar-denominated amounts also refer to equivalent amounts in other currencies).

Once again, Brunei Darussalam and Singapore may be considered separately as there are no controls on the export or import of banknotes (Table A5). Also, Japan may be considered as a special case because a declaration system to the Ministry of Finance via customs applies, but only for inward and outward transactions of amounts above ¥1 million, a much higher limit than those in other countries.

Cambodia and Korea only require a customs declaration for amounts exceeding fixed limits.. Remaining countries have more complex or restrictive systems where no exceptions on maximum amounts are permitted, and/or different treatment of imports and exports or domestic and foreign currency are set, or declaration to customs authorities is replaced with more binding approval procedures.

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Table A5: **Controls on cross-border banknote movements**

	On exports		On imports	
	Domestic currency	***Foreign currency***	***Domestic currency***	***Foreign currency***
Cambodia	Declaration to customs over $10,000	Declaration to customs over $10,000. NBC's prior notification required for banks	Declaration to customs over $10,000	Declaration to customs over $10,000
PRC	Persons may not take out more than 20,000 renminbi	Limits on amounts and forms for R. Both for R and NR needlincenses from banks or SAFE depending on the amounts.	Up to 20,000 renminbi	Declaration to customs over US$5,000.
Indonesia	Over Rp 100 mln, BI prior approval and declaration to customs required		Over Rp 100 mln, BI prior approval and declaration to customs required	
Korea	Declaration to customs over $10,000	Declaration to customs over $10,000. For NR BOK notification also required	Declaration to customs over $10,000	Declaration to customs over $10,000
Lao PDR	Over Kip 5 mln BOL's authorization required	For R, over $2,000 BOL's approval and a customs declaration required. NR limited to previous imports. BOL's approval for commercial banks	Over Kip 5 mln BOL's authorization required	Declaration to customs over $2,000. BOL's approval for commercial banks
Malaysia	Over RM 1,000 a person COFE's prior approval required	For R, over RM 10,000 COFE's approval and a customs declaration required. NR limited to previous imports.	Up to RM 1,000	
Myanmar	Not allowed	Foreign Exchange Certificates required for R	Not allowed	Foreigners may bring in up to $2,000 without any declaration
Philippines	Over P 10,000 BSP's prior authorization required	Declaration to customs over US $10,000	Over P 10,000 BSP's prior authorization required	Declaration to customs over US $10,000
Thailand	Up to B 50,000. Towards Vietnam and bordering countries up to 500,000			
Viet Nam	For individuals, declaration over D5 mln	SBV's permission over previous imports or $3,000. Specific provisions apply for certain transactions	For individuals, declaration over D5 mln	For individuals, declaration over $3,000. SBV's permission for Fis required

Source: *Annual Report on Exchange Arrangements and Exchange Restrictions 2005,* IMF.

Resident and Nonresident accounts

Generally, resident foreign exchange accounts may be held both domestically or abroad in all ASEAN+3 countries. As far as specific information is available, differences among countries mainly concern fund origin, type of account holder, and use of the accounts. Prior approval or notification systems also apply to operating these accounts in excess of fixed limits.

Holding resident accounts in domestic currency abroad is not allowed in Cambodia and Viet Nam. Restrictions apply in Indonesia and Korea (where notification to the Ministry of Finance is required), while they are freely permitted in Japan and Singapore. In Brunei Darussalam, Indonesia, Japan, Lao PDR , Singapore, and Viet Nam, domestic accounts are allowed if converted into foreign currency. An explicit prohibition for these operations exists in Cambodia, Korea, Philippines, and Thailand. In the remaining countries specific limitations apply depending on operation. In the case of PRC; it is the amount that may be converted without approval, while in Malaysia; it is the use of the converted foreign exchange, as in Myanmar. Similar restrictions apply to nonresident accounts in domestic or foreign currency.

Table A6: **Resident Accounts in Foreign Exchange**

	Brunei Darussalam	Cambodia	PRC	Indonesia	Japan	Korea	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam
Foreign exchange accounts permitted	Yes	Yes	Yes. For enterprises approved by the gov. Under SAFE's approval for domestic Inst. s. Savings accounts for natural persons	Yes	Yes	Yes	Balances to be used under general or specific approval. Bank's approval and report to BOL for withdrawals over $10,000	Yes	Yes	Yes	Yes	Yes	Yes
Held domestically	Yes	Yes	Yes	No checks may be drawn on foreign currency accounts.	Yes	Yes	Different features for crediting and debiting	R allowed to open foreign currency accounts with licensed onshore banks under some limitations and convertion condition	To be kept by national firms with state-owned banks. Permitted only for nationals earning foreign exchange.	Yes	Yes	Yes	For organisations at authorised banks. For private individuals at licensed banks for specified uses.
Approval required			Yes					From the COFE	Yes			Approval not required for funds originating from abroad and under documentation. Limits on deposits and on total outstanding balances	

Held abroad	Yes		Yes	Yes	Yes	Ils permitted for asset diversification purposes. Prior BOK's notification required for transfers abroad by individuals > $50,000 a day	In exceptional cases with BOL's approval	R allowed to open foreign currency accounts with licensed offshore banks under some limitations and reporting condition	Yes	Only for foreign exchange earners	Yes	Yes	Yes
Approval required			Yes					From the COFE	Yes			Approval required for deposits with domestic origin	SBV's approval and documentation for enterprises operating in specific sectors and with foreign organisations. For other organisations operating in all other activities Prime Minister' or SBV's approval is required
Accounts in domestic currency held abroad	n.a.	No	n.a.	Permitted with some limits	Yes	Prior MOFE notification	n.a.	n.a.	n.a.	n.a.	Yes	n.a.	No
Accounts in domestic currency convertible into foreign currency	Yes	No	Convertion by agencies at authorized banks under documentation proof	Yes	Yes	No	Yes	Approval required over prescribed amounts	Conversion permitted only for payment of official expenses	No	Yes	No	Yes

Source: *Annual Report on Exchange Arrangements and Exchange Restrictions 2005,* IMF.

Table A7: **Nonresident accounts**

	Brunei Darussalam	Cambodia	PRC	Indonesia	Japan	Korea	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam
Foreign exchange accounts permitted	Yes	Yes	Yes, savings accounts for NR individuals for a short time.	Yes, only checking and time deposit accounts	Yes	Yes	Balances to be used under general or specific approval. Bank's approval and report to BOL for withdrawals over $10,000	Yes at all licensed banks and merchant banks	Prior approval generally required	Yes	Yes	Accounts to be credited with funds from abroad	Yes for NR organizations operating in Viet Nam or NR organizations and individuals operating abroad that transfer foreign currency in the country under bordergate certification
Domestic currency accounts	Yes	Yes	Yes	Yes	Yes	Free won accounts for current transactions, reinsurance contracts and investments in domestic securities	Yes but funds to be spent in the Lao P.D.R.	All onshore banking institutions allowed to open ringgit account for NR (External Accounts). Limits on the source and use of funds	Yes but all debits and credits require prior authorization	Allowed if funded by inward remittances of foreign currency or by peso income from NR properties in the Philippines.	Yes	For settlement purposes only. Deposits for other purposes only up to 6 months. BOT's approval for a total daily outstanding amount for all such accounts > B 300 mln.	Yes
Convertible into foreign currency	Yes	No	Yes	Yes	Yes	BOK's notification for remittances abroad	Conversion subject to the verification of the originally foreign currency source of the funds	Yes	Approval required	Balances are convertible under specified circumstances.	Yes	Yes. Approval required under specified conditions	Yes

Source: *Annual Report on Exchange Arrangements and Exchange Restrictions 2005,* IMF.

3. Controls on capital transactions

Controls on capital and money market instruments

Controls on capital market and money market instruments are presented in Tables A8 and A9. Brunei Darussalam, Japan, and Myanmar are not considered as no controls apply in Brunei Darussalam and Japan, while information is unavailable for Myanmar. Cambodia has no securities market, so there is no information to provide.

For equity purchases by nonresidents, there are different degrees of controls. No limits apply in Indonesia while restrictions in the Philippines—mainly registration requirements—depend on who is involved in the transaction. In Thailand and Viet Nam, more binding limits apply via percentage limits on foreign investor domestic shareholdings. PRC system of controls contain both limitations on who can invest (only "qualified foreign institutional investors" may buy "A" shares) and limits on the amount of holdings.

Local selling or issuing activities by nonresidents also present interesting features. Singapore has the most liberal system, with no issuing restrictions. At the other extreme, issuing by nonresidents is prohibited in Viet Nam. In PRC, Indonesia, and Korea, there are a range of limitations based on the kind of instrument or on the foreign providers, or approvals are required. In Thailand, the Ministry of Finance, the Bank of Thailand and the Security Exchange Commission set regulations.

Conditions for residents' purchase abroad of shares or similar securities also vary among countries. General controls on amounts and origin of funds financing the transaction apply in some countries. Central bank or national authority prior approval is required in others, while in Viet Nam these transactions are not allowed.

Finally, controls on shares or other securities with ownership rights, sold or issued abroad by residents, vary from limits on amounts depending on the listing market (Indonesia), approval requirements related to the nature of the shares (Malaysia), or fall under the general regulatory framework (Thailand).

Similar comparisons may be made referring to bonds and debt securities markets. For local purchase of instruments by nonresidents, limitations mainly apply on the basis of investors and instruments purchased.

Nonresidents may not sell or issue bonds, or other debt securities in the domestic market in PRC and Viet Nam. In general, for other countries, approval requirements are set and, once again, the system prevailing in Viet Nam is more complex, with three authorities involved in the approving process.

The PRC control system for the purchase, sale, or issuance abroad of debt securities by residents is similarly complex. Different authorities share responsibility for authorization of domestic purchasers. Moreover, in the PRC, as well as in the Philippines, resident transactions may not be financed with foreign exchange provided by the domestic banking system. It is not allowed in Viet Nam. For sale or issuance of debt instruments abroad by residents, the most frequent control system is the requirement of prior approval.

Table A8: **Controls on capital market securities**

Controls on capital market securities	PRC	Indonesia	Korea	Lao PDR	Malaysia	Philippines	Singapore	Thailand	Viet Nam
Shares or other securities of a participation nature									
- Purchase locally by nonresidents	QFIIs may invest domestically in A shares, subject to limitations. B shares nay be bought by all inestors	No limits		Yes		Registration with the BSP or a designated custodian bank may be required, belonging to the nature of the participants and of the agreement.		Limits on foreign equity participation in local financial institutions	Foreign individuals and organisations allowed to hold, in aggregate, up to 30% of an issuer's listed current shares
- Sale or issue locally by nonresidents	Transactions are limited to B shares.	Free issuing of IDRs by foreign companies through custodian banks in Indonesia	Foreign institutions eligible to list their shares on the KSE in the form of depository receipts.	Yes	Approval required, but free repatriation of proceeds at any time	SEC's approval and registration required. No purchase of foreign exchange in the domestic banking system allowed	NR may issue equity shares and use offshore the proceeds of public offering in S$ without converting into foreign currency	Approval of MOF, BOT and SEC	Not allowed
- Purchase abroad by residents	Overseas listed domestic companies may repurchase the shares issued by them, under SAFE's approval.			Yes	R without domestic credit facilities allowed to purchase foreign shares or other securities. R with domestic credit facilities subject to permitted investment limit.	Prior BSP's approval on investments > US $6 mln an investor a year if the foreign exchange is purchased from the domestic banking system.		Purchases of shares under employee stock option plans > $100,000 a year allowed without BOT's approval.	Not allowed
- Sale or issue abroad by residents	Yes	No controls apply for shares not listed on the ISM. For listed securities a maximum % of foreign ownership of shares applies		Yes	No controls, but approval must be obtained to issue securities other than ordinary shares and irredeemable preference shares. SC's approval for issuance by public companies	Resident companies must comply with the disclosure requirements of the SEC		Approval is required under the regulations governing domestic issuance.	
Bonds or other debt securities									

- *Purchase locally by nonresidents*	QFIIs may invest in treasury bonds, convertible bonds, and corporate bonds listed on domestic securities exchanges.			Yes	A tax exemption is given on interest income derived by NR individuals and companies for specified securities.	Yes		Limitations on investments over B50 mln a consolidated entity on short-term debt and related products froma a local FIs in the primary market without underlying transactions.	
- *Sale or issue locally by nonresidents*	Not permitted		Prior report to the MOFE and the FSC required	Yes	BNM's approval required for issuance of ringgit bonds by MDBs and foreign MNCs	Prior approval or license to do business from government agencies required. No purchase of foreign exchange from the domestic banking system allowed	NR may issue bonds and use offshore the proceeds without converting into foreign currency. Rated and unrated foreign entities allowed to issue S$ bonds. For unrated, investor base restricted to sophisticated investors only	Approval of MOF, BOT and SEC	Not allowed
- *Purchase abroad by residents*	Banks to be authorized by CBRC. Insurance companies to be authorized by CBRC and SAFE. But no permition to purchase foreign exchange for this purpose	Yes		Yes	R without domestic credit facilities allowed to purchase foreign shares or other securities. R with domestic credit facilities subject to permitted investment limit.	Purchase of foreign exchange from the domestic banking system not allowed		Approval of BOT	Not allowed
- *Sale or issue abroad by residents*	Prior authorization by the SDPC and the SAFE plus State Council for Examination's approval. Repatriation requirements.	Banks are allowed to issue securities on primary capital markets, subject to regulations on offshore loans	For foreign currency-denominated bonds report to a designated foreign exchange bank. For won-denominated bonds report to the MOFE	Yes	Approval for primary offerings or issuance. Free sales of bonds or other debt securities but proceeds must be repatriated	Yes		SEC's approval and only if security is to be traded on markets abroad.	SBV's approal required

Source: *Annual Report on Exchange Arrangements and Exchange Restrictions 2005,* IMF.

The main features of controls on money market instruments and collective investment securities are presented in Table A9. (Singapore is not included as information is unavailable). Transactions conducted locally by nonresident operators are not allowed in PRC. This clearly shows an asymmetrical approach by national regulatory authorities. At the same time, sale or issue abroad by residents of money market instruments are prohibited in Viet Nam.

Moreover, one of the most interesting aspects provided by comparison among countries is the complexity linked to the number of national authorities involved in control systems. Indeed, where different authorities do not intervene, as in PRC and Thailand, a functional sharing of responsibilities takes place depending on the origin of the investors and the place of transaction. This is also true in Korea.

Controls on derivatives and other instruments

These instruments are negotiable instruments outside the previous headings (Table A10). They are represented by a wide range of different transactions.

No controls on derivatives apply in Brunei Darussalam, Cambodia, Japan, and Singapore, so these countries are not included in the table. For Myanmar information is unavailable.

For the four countries where detailed information is available, there are different degrees of controls on transactions by residents or nonresidents. While controls in PRC discriminate more “against” nonresident-promoted operations, the regulatory framework in Malaysia seems slightly more in favor of them.

Regarding the other countries, the most interesting aspect is, on one hand, the prohibition of such transactions in Indonesia (if these are not associated with foreign exchange and interest rates) and, on the other hand, the general provision of no controls in Korea (where transactions are conducted through domestic foreign exchange banks). In general, approval requirements widely apply.

Controls on credit operations

Various authorities in each country intervene depending mainly on the direction of capital flows—by residents to nonresidents or vice versa (Table A11). There are no controls in Brunei Darussalam and Japan. Cambodia, Myanmar, and Singapore are not included as no detailed information is available. In Cambodia, loans and borrowing contracts between residents and nonresidents are free, provided they are done through authorized intermediaries.

In PRC and Korea, two different authorities are responsible for controlling transactions (the CBRC and the SAFE in PRC) and for approvals (BOK and MOF in Korea). Also, two different authorities are involved in Viet Nam for guaranteeing borrowing abroad by residents from nonresidents (the central bank for credit institutions and the Ministry of Finance for enterprises). A more liberal framework applies in the Philippines for both commercial and financial credits, where no controls apply provided that foreign exchange used in the transactions does not come from the domestic banking system.

Table A9: **Controls on money market instruments and collective investment securities**

	PRC	Indonesia	Korea	Lao PDR	Malaysia	Philippines	Thailand	Viet Nam
On money market instruments								
- Purchase locally by nonresidents	Not allowed	Yes		Yes		Yes	Limitations on investments over B50 mln a consolidated entity on short-term debt and related products from a local FIs in the primary market without underlying transactions.	Yes
- Sale or issue locally by nonresidents	Not allowed		MOFE's approval only for won-denominated securities < one year.	Yes	Some restrictions apply.	Prior approval or license to do business from government agencies required. No purchase of foreign exchange from the domestic banking system allowed	Approval of MOF, BOT and SEC	Yes
- Purchase abroad by residents	Banks to be authorized by CBRC. Insurance companies to be authorized by CBRC and SAFE. But no permission to purchase foreign exchange for this purpose	Yes	BOK's approval for short-term securities in won.	Yes	Yes	Purchase of foreign exchange from the domestic banking system not allowed	Approval of BOT	Yes
- Sale or issue abroad by residents	SAFE's approval required.	COLT's approval for banks concerning maturity and amounts. Total issuances should not exceed 30% of a bank's capital.	No controls for forex banks for instruments in foreign currency. MOFE's approval only for unsound enterprises and for issuance by R in won.	Yes	Sales are freely permitted. Approval for some securities apply under the Securities Commission Act	Yes	Not allowed. Some exception for finance companies issuing in foreign currency.	Yes
On collective investment securities								

- *Purchase locally by nonresidents*	Qualified foreign institutional investors may invest in domestic closed-end and open-end funds	No person may purchase more than 1% of any fund		Yes		Yes		Yes
- *Sale or issue locally by nonresidents*	Not allowed		Issuing by foreign Inst. s under establishment in Korea and prior report to the FSC unless securities are sold through a domestic distributor.	Yes	No limit on sales and the repatriation abroad of proceeds. All funds must be managed and administered by a management company that is a public company approved by the SC. COFE's prior approval for issuance of securities	Prior approval or license to do business from government agencies required. No purchase of foreign exchange from the domestic banking system allowed	Yes	Yes
- *Purchase abroad by residents*	Banks to be authorized by CBRC. Insurance companies to be authorized by CBRC and SAFE. But no permission to purchase foreign exchange for this purpose			Yes	No controls, but approval must be obtained to issue securities other than ordinary shares and irredeemable preference shares. SC's approval for issuance by public companies	Purchase of foreign exchange from the domestic banking system not allowed	Approval of BOT	Yes
- *Sale or issue abroad by residents*	SAFE's approval required.		Issuing in foreign currency under prior report to the designated exchange bank. MOFE's approval for issuing in domestic currency.	Yes	Approval for primary offerings or issuance. Free sales of bonds or other debt securities but proceeds must be repatriated. COFE's and SC's approval generally required for securities of a public companies	Yes	SEC's approval for offering of funds and only by local fund management companies. Funds managed by local firms deemed to have Thai nationality	Yes

Source: *Annual Report on Exchange Arrangements and Exchange Restrictions 2005,* IMF.

Table A10: **Controls on derivatives and other instruments**

	PRC	Indonesia	Korea	Lao PDR	Malaysia	Philippines	Thailand	Viet Nam
Controls on derivatives and other instruments		Transactions not allowed if not associated with foreign exchange and interest rates. Exception allowed by the BI. Limits on not-investment-related transactions	No controls if transactions through domestic foreign exchange banks. BOK's notification or approval for some transactions		Approval required	Pre-qualification and licensing requirements from the BSP, under eligibility conditions of one of the parties.		SBV's approal required
Purchase locally by nonresidents	Not allowed		Yes		No controls apply on the trading of futures and options by NR on the Malaysian Derivatives Exchange	Derivatives involving forward purchases of foreign exchange by NR not allowed. Some exception for BSP-registered foreign investments applies	Maximum outstanding limit of B 50 mln for baht credit facilities with no underlying trade and investment activities in Thailand.	
Sale or issue locally by nonresidents	Not allowed		Yes	Yes	COFE's approval required for issuance	BSP's approval for swap contracts with sale of foreign exchange by NR to banks. NDF foreign exchange sales require prior BSP clearance	SEC's approval required. The approval criteria are based on the soundness of the underlying stock.	SBV's approal required
Purchase abroad by residents	No prior SAFE's approval for FIs approved by CBRC. Speculative trading is not permitted. NFIs may engage through FIs. In general, SAFE's approval required for transactions with foreign institutions		Yes	Yes	Permission required for R to make payments to a NR for any spot or forward contract or interest rate futures.	The purchase of foreign exchange from local banks for settlement of derivatives not permitted	BOT's approval required	SBV's approal required
Sale or issue abroad by residents	The regulations governing purchases apply		Yes	Yes	COFE's permission required.	The purchase of foreign exchange from local banks for settlement of derivatives not permitted	BOT's approval required	

Source: *Annual Report on Exchange Arrangements and Exchange Restrictions 2005,* IMF.

Table A11: **Controls on credit operations**

Commercial credits	PRC	Indonesia	Korea	Lao PDR	Malaysia	Philippines	Thailand	Viet Nam
By residents to nonresidents	FIs authorized by the CBRC may lend to overseas institutions or contract overseas credits	Banks are prohibited from granting credit to NR	BOK's approval for operations over specified amounts a lender	Approved loans registration and reporting on performance to the BOL.required	Temporal limits on export credits extended to NR.	No controls if foreign exchange purchased from the domestic banking system is not involved.		Yes
To residents from nonresidents	All foreign borrowing must be registered with the SAFE.	Free borrowing from NR but under submission of periodic reports to the BI. Some borrowing are subject to approval by The Coordinating Minister of Economy.	MOFE's approval only for short-term credits granted to enterprises with unsound financial structures.	Yes	Approval required for credits over RM 5 mln in aggregate on a corporate group basis	Yes		Borrowing enterprises must observe SBV's supervision. For SOEs, borrowing requires approval by and reporting to SBV
Financial credits								
By residents to nonresidents	FIs authorized by the CBRC may lend to overseas institutions or contract overseas credits	Limitations on the granting of credit by banks to NR	BOK's approval for operations over specified amounts a lender	Yes	No controls apply to credits up to RM 10,000. Lending in foreign currency subject to investment limits.	No controls if foreign exchange purchased from the domestic banking system is not involved.	Only authorized banks allowed to grant financial credits, subject to the rule of net foreign exchange position. BOT's approval for loans over specified amounts to affiliated companies	Yes
To residents from nonresidents	All foreign borrowing must be registered with the SAFE.		MOFE's approval only for short-term credits granted to enterprises with unsound financial structures.	Yes	R require prior approval to obtain any amount of loans in ringgit from NR.	Yes		Borrowing enterprises must observe SBV's supervision. For SOEs, borrowing requires approval by and reporting to SBV
Guarantees, sureties and financial backup facilities								
By residents to nonresidents	Generally, SAFE approval is required for financing guarantees. Registration required for all foreign guarantees	Banks allowed to provide sureties and guarantees to NR entities only under specific conditions	BOK's approval required except for banks		Any payment related to guarantees to be made in foreign currency	BSP's prior approval or registration required, belonging to the nature of the guarentee.	R banks are allowed to guarantee transactions by NR under provision of back-to-back guarantee.	
To residents from nonresidents	Domestic institutions may accept guarantees from foreign institutions				COFE's prior approval required for amounts over set limits.	BSP's prior approval or registration required, belonging to the nature of the guarentee.		SBV guarantees on Cis' borrowing abroad. MOF guarantees for enterprises'

Source: *Annual Report on Exchange Arrangements and Exchange Restrictions 2005,* IMF.

Controls on direct investment and liquidation

Table A12 presents information on controls on both outward and inward direct investments and on requirements and restrictions on their liquidation. Neither Japan nor Singapore are included because in Japan, restrictions only apply to a limited number of industries (defence) and through prior notification, both for inward and outward investments. Singapore has no controls,

For outward direct investments, no restrictions on capital transfers apply in Cambodia, where they are only subject to prior declaration for amounts exceeding a specified limit. Almost all other countries require prior central bank or ministerial approval. In general, controls apply on the source of foreign funds. Viet Nam requires permission from the Ministry of Planning and Investment and enterprises must open compulsory accounts with the central bank for making transactions.

For inward direct investments, the main feature is the existence of specific restrictions by sector. These vary and can be based on negative or positive lists. No foreign exchange controls apply for Cambodia and Thailand. In Cambodia, approval from the Council for Development of Cambodia is required. In Thailand strict controls apply on related proceeds. Central or provincial authorities may be responsible for controls in Viet Nam, depending on the amounts involved.

There are no controls on liquidation of direct investments in Brunei Darussalam, Korea, and Philippines and, in general, there are no restrictions on repatriation of proceeds. The only exceptions are in Cambodia, where proceeds may be repatriated through authorized intermediaries (which report to the central bank over specified amounts), PRC, where prior consent from the original approval department and a verification by SAFE on use of foreign exchange are required, and Thailand, where repatriation is possible only upon submission of supporting evidence.

Table A12: **Controls on direct investment and their liquidation**

	Brunei Darussalam	Cambodia	PRC	Indonesia	Korea	Lao PDR	Malaysia	Myanmar	Philippines	Thailand	Viet Nam
Controls on direct investment											
Outward direct investment		No restrictions on capital transfers. But prior declaration to the NBC for transactions over $10,000	Controls on the source of foreign exchange funds		Notification to and approval by a foreign exchange bank is required. By the MOFE over $10 mln and in specific other circumstances.	First approval by the relevant authority; then BOL's approval for export of capital. Investment abroad with funds borrowed from a domestic commercial bank prohibited.	The regulations governing the control on capital transactions apply		Prior BSP approval and registration required over specified amounts and if foreign exchange will be purchased from the domestic banking system	BOT's approval for investments over $10 mln a year	MPI's permit required. Enterprises must register compulsory open accounts with SBV
Inward direct investment	No sectoral controls. Only strategic sectors need some degree of local participation.	Approval from the CDC but no foreign exchange controls	Relevant regualtions apply	Several sectors are controlled. Foreign ownership of direct investments subject to divestment requirements. Customary and tax incentives are set for foreign enterprises.	Notification requirement for all FDIs not on the negative list. Establishment of branches by foreign FIs require FSC's approval and by non-FIs notification to foreign exchange banks	Restrictions on sectors. Foreign investors may borrow revolving capital only from a domestic commercial bank	Controls are imposed on equity shares in line with the national economic policy. FIC's prior approval required for specified investments. Also MITI and SC intervene and limits are set for foreign equity ownership	Under acceptance by the MIC. A positive list is set		No restrictions on entry of foreign capital, but strict controls on proceeds apply	Controls by a central or provincial Authority apply depending on amounts. All capital transactions to be made through specific accounts at authorised banks
Controls on liquidation of direct investment	No	Transfer of proceeds free through authorised intermediaries. These report to the NBC over $100,000	Prior approval from the original approval department required. SAFE's verification required to purchase foreign exchange to remit funds belonging to foreign investors after liquidation	At present, foreign payments do not require a transfer permit.	No	Repatriation of earnings and capital allowed	The proceeds of investments by NR may be repatriated freely	Repatriation of capital and profits allowed through banks	No	No restrictions on repatriation upon submission of supporting evidence	n.a.

Source: *Annual Report on Exchange Arrangements and Exchange Restrictions 2005,* IMF.

Provisions specific to credit institutions and institutional investors

In Tables A13a—A13d and Table A14 show the main features of regulations specifically concerning commercial banks and credit institutions. Countries where detailed information is unavailable or no specific provisions exist are not included. The tables are self-explanatory.

Table A13a: **Provisions specific to commercial banks and other credit institutions**

	Cambodia	PRC	Indonesia	Korea	Lao PDR	Malaysia	Philippines	Singapore	Thailand	Viet Nam
Borrowing abroad		The regulations governing commercial credits apply	The COLT supervises all foreign commercial loan transactions. Its prior approval is required before any commercial bank may accept a loan from abroad.	Report to the MOFE by foreign exchange banks for reference purposes and for funding of maturities over 1 year and $50 mln.		Only ADs in foreign currency and approved merchant banks allowed. Other FIs require prior approval for amounts > RM 50 million	Prior BSP approval and registration for medium- and long-term loans for relending.			SBV's registration required
Maintenance of accounts abroad		Registration with or prior approval from the SACE is required			For authorised commercial banks	Now allowed with licensed onshore banks, approved merchant banks, offshore banks in Labuan and overseas banks.				SBV's approval required
Lending to nonresidents (financial or commercial credits)	Banks are not allowed to grant loans outside from deposits of customers and banks collected inside	The regulations governing commercial credits apply	Yes	BOK's approval required for credits and loans in domestic currency over W 1 bln a commercial bank	BOL approval, registration and reporting to the BOL about loan performance	The regulations governing financial credits apply	Banks may grant commercial credit to NR without prior BSP approval under specified modes of payment. Banks are prohibited from extending peso loans to nonresidents	Credit facilities over S$5 mln for speculative activities not allowed. S$ proceeds obtained from S$ loans, equity listings, or bond issuance to be converted into foreign currency before using them abroad	Not allowed for government FIs, except the Export-Import Bank of Thailand. No limitations on authorized banks in Thailand	SBV's registration required
Lending locally in foreign exchange		Lending under review of qualifications by the PBC and to asset-liability ratio requirements. Generally, borrowing under ex post registration with SAFE and SAFE's permission to repay the principal.	Banks allowed. They may also purchase locally issued securities denominated in foreign exchange if investment grade and not issued by their groups.			ADs and approved merchant banks are allowed to lend in foreign currency to R. Prior approval required over the permitted amounts.	Prior BSP approval and registration for medium- and long-term FCDU loans to be eligible for servicing with foreign exchange purchased from the domestic banking system.		Commercial lending to particular industries may be partially (50%) included as foreign assets for risk covering purposes	Authorised credit organisations may loan to R for specified purposes

Purchase of locally issued securities denominated in foreign exchange		Securities denominated in foreign currency are not currently issued	Allowed under open position limits			Purchases allowed for approved issuance. Investment subject to the net open position limits of ADs and approved merchant banks	Allowed for EFCDUs of commercial banks. Allowed under conditions for FCDUs of a thrift bank		Free purchase for commercial banks. BOT permission for finance companies without foreign exchange licenses.	

Source: *Annual Report on Exchange Arrangements and Exchange Restrictions 2005,* IMF.

Table A13b: **Differential treatment of deposit accounts in foreign exchange**

Differential treatment of deposit accounts in foreign exchange	**Brunei Darussalam**	**Cambodia**	**PRC**	**Indonesia**	**Philippines**	**Singapore**	**Viet Nam**
Reserve requirements	Yes		Reserve requirements on domestic and foreign currency-denominated deposits have been unified at 3%.	3% reserve requirement. Reserve requirement in the range of 5% to 8% for accounts in rupiah.	Not applied to deposit accounts in foreign exchange	No requirements for foreign currency deposits of ACU member banks accepted by domestic banks.	4% (foreign currency) and 2% (domestic currency) for maturity up to 12 months. 1% (unified) for maturity of 12 to 24 months
Liquid assets requirements	Yes		The ratio of all liquid foreign exchange capital to all liquid foreign exchange liabilities may not be less than 60%.		For depository banks at all times a 100% asset cover requirement for foreign currency liabilities	No requirements for foreign currency deposits of ACU member banks accepted by domestic banks.	
Interest rate controls							SBV periodically sets a base rate and oscillation margin for CIs' lending rates
Credit controls		Banks must maintain at all times a max ratio of 20% between their overall exposure resulting from their operations with each individual beneficiary and their net worth.	The ratio of the credit balance for a single borrower to a bank's net capital may not exceed 10%.				

Source: *Annual Report on Exchange Arrangements and Exchange Restrictions 2005,* IMF.

Table A13c: **Investment regulations**

Investment regulations	Cambodia	PRC	Indonesia	Korea	Malaysia	Philippines	Thailand
Abroad by banks	Yes	Investment in foreign securities other than equities on foreign securities markets by banks is subject to quarterly approval by the PBC	Banks may invest, within certain limits, only in FIs, including businesses that operate in financial services.		Investment abroad by ADs and approved merchant banks subject to net open position limits	Prior BSP approval and regulation required for investments among subsidiaries	Commercial banks allowed to buy or hold shares in a limited company (including public companies) under limitations
In banks by nonresidents	Yes	PBC approval required	Equity participation of foreign banks in a joint bank can reach 99%.	FSC's approval required for NR to acquire over 10% of stocks	NR aggregate participation up to 30% equity interest in a bank	Free and full foreign ownership of domestic banks. Foreign juridical and natural persons 40%. Banks that are majority foreign owned may not account for more than 30% of the total reserves of the banking system.	Limits to foreign investors investment in Thai commercial banks. Exceptions allowed on a case-by-case basis.

Source: *Annual Report on Exchange Arrangements and Exchange Restrictions 2005,* IMF.

Table A13d: **Foreign exchange positions in banks**

	Cambodia	PRC	Indonesia	Korea	Lao PDR	Malaysia	Philippines	Singapore	Thailand	Viet Nam
Open foreign exchange position limits	Banks must not exceed their short or long position in any single foreign currency by more than 5% and in all foreign currencies by more than 15% of their net worth	For Fis trading foreign exchange on their own behalf limit is 20% of the foreign exchange working capital	A maximum 20% of capital overall on- and off-balance sheet position and on-balance sheet net open position required for banks. 30% if market risk has to be put in the calculation of capital	The overall net open position (short-hand position) of foreign exchange banks limited to 20% of the total equity capital at the end of the previous month.		Banks are subject to the net open position limit	70% of the cover must be maintained in the same currency as the liability. 2,5% limits on bank's long forex position	No limits but the MAS reviews the internal control systems of banks.	For each currency (aggregate) position relative to its capital fund up to 15% or $5 mln (up to 20% or $10 mln)	30% for all authorised banks. Some exemptions by SBV are allowed.
On residents assets and liabilities	Yes	Yes	Yes	Yes	Limits to the net open position of banks with obligation to sell the surplus or purchase the shortage of each foreign currency from the interbank market on the following business day.				Yes	
On nonresident assets and liabilities	Yes	Yes	Yes	Yes			Yes		Yes	

Source: *Annual Report on Exchange Arrangements and Exchange Restrictions 2005,* IMF.

Table A14: **Provisions specific to institutional investors**

	Indonesia	Japan	Malaysia	Philippines	Singapore	Thailand	Viet Nam
Provisions specific to institutional investors	Insurance and reinsurance companies and Indonesian mutual funds are not allowed to invest abroad. Some exception applies		The regulations governing shares and other securities of a participating nature apply		Risk requirements apply		
Limits (max.) on securities issued by nonresidents			Approval required for amounts over the set limits.		Yes	Yes	Institutional Investors are not allowed to purchase or hold these instruments
Limits (max.) on portfolio invested abroad	Liabilities of insurance and reinsurance companies exceeding assets dup to 10% of shareholders' equity.	30% of total assets for insurance companies purchasing foreign currency-denominated assets; 20% of the reserve funds for Post Office Insurance Fund.	Insurers are required to support their margin of solvency (including liabilities) with documented assets	BSP prior approval and registration required for outward investments by R over US$6 mln. Up to this amount BSP documentary requirements apply	Yes	Submission of applications to the BOT to invest in debt securities	Not allowed
Limits (min.) on portfolio invested locally			COFE approval for EPF investment in foreign securities over specified limits			Portfolio investment of life- and non life insurance companies is governed by the acts and notifications of the MOC.	
Currency matching regulations on assets/ liabilities composition					Yes		

Source: *Annual Report on Exchange Arrangements and Exchange Restrictions 2005,* IMF.

1 This was also true before the EMU, when membership in the European Exchange Rate System effectively meant adjusting monetary policy to keep the exchange rate in line with the system's leading currency, the deutschmark.