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Revisiting the Revolving Door: Capital Flight from Southeast Asia

Edsel L. Beja, Jr.

Abstract

The paper revisits hypothesized direct linkages between external borrowing and capital flight. It reviews the cases of Indonesia, Malaysia, the Philippines and Thailand to see if such linkages exist. The results indicate that, indeed, large sums of capital flowed in and out of these four countries in a revolving door process. Thus, the results lend support to the need for: better domestic management of external debt, sound macroeconomic management and solid macro-organizational foundations (with the government at the centre of policy making), active management of capital flows, and effective domestic and international involvement and coordination in capital flows.

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Edsel L. Beja, Jr. is Deputy Director of the Ateneo Center for Economics Research and Development, and Assistant Professor of Economics, at Ateneo de Manila University. Edsel works in the areas of: capital, trade and labor flows; environment and development; poverty-reduction and pro-poor policies; and political economy. Send comments to: edsel.beja@gmail.com.

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United Nations
Department of Economic and Social Affairs
2 United Nations Plaza, Room DC2-1428
New York, N.Y. 10017, USA
Tel: (1-212) 963-4761 • Fax: (1-212) 963-4444
e-mail: esa@un.org
<http://www.un.org/esa/desa/papers>

Revisiting the Revolving Door: Capital Flight from Southeast Asia

Edsel L. Beja, Jr.

External debt is an important concern to Southeast Asian countries. In the 1990s, for instance, Indonesia, Malaysia, the Philippines, and Thailand became vulnerable to debt-related crises, and experienced large-scale capital flight, especially in the late 1990s. But recent evidence shows that capital flight had already been significant in the region earlier on, even during the 1980s (Beja, 2006a).

In this paper, the linkages between external borrowing and capital flight are analyzed using a revolving door model. Briefly, this model posits direct and indirect linkages between external debt and capital flight. The first type of linkage posits a direct causal effect, whereby external debt provides the fuel and/or motivation for capital flight, and vice versa. Thus, external borrowings are transformed—sometimes instantaneously from capital inflow to capital flight, ultimately ending up abroad, usually in a private foreign account. At the same time, external debts accumulate, so that the mounting burden of debt servicing—and the possibility of a debt crisis—signal increased risk, thus providing a motivation for capital flight. The causality can run in the reverse direction as well. For example, as capital flees, it creates a financial vacuum, and the country, in turn, seeks external resources to fill the void. Or, in the case of flight-fueled external borrowing, money sent abroad is borrowed back. This may be motivated, for example, by a desire to disguise the origin of funds, or to benefit from government guarantees against default. The overall result is a revolving process of capital flight and debt accumulation.

In contrast, the second type of linkage—an indirect linkage—posits that capital flight and external borrowing occur because of overlapping sets of exogenous factors, but are not causally linked to each other. Thus, macroeconomic mismanagement results in both capital flight and external borrowing, but the latter does not cause the former, nor vice versa. The analysis presented in this paper confirms a revolving door process, linking capital inflows, capital flight, and debt accumulation.

The concept of capital flight

Capital flight is not a new issue. Studies have documented capital flight from Europe and the United States in the early twentieth century and, in the case of Europe, during the seventeenth century or even earlier (see, e.g., Kindleberger, 1987). In the 1930s, and later after World War II, concerns about capital flight from Europe to the United States became the subject of debates at the Bretton Woods meetings (Helleiner, 1994). Even in recent decades, studies have documented capital flight from some Organization of Economic Cooperation and Development (OECD) countries (see, e.g., Gibson and Tskalotos, 1993)—which is evidence that capital flight affects the developed world, too.

But, today, capital flight is a particularly important concern for developing countries for at least three reasons, the first being capital scarcity.¹ Basically, capital flight aggravates the capital scarcity problem,

1 “Capital scarcity” means the lack of financial resources and infrastructural underdevelopment. Infrastructure refers to both physical (e.g., machines and transportation, communication, utilities) as well as social (e.g., education, health and public services, legal framework and institutions of financial and labour markets) capital. A country with a low level of infrastructural development can thus be called capital scarce. It is constrained in attracting capital or will be unable to fully exploit the potential of additional resources; hence it will likely remain a capital scarce country.

but more importantly, it restricts the capacity and ability of the affected country to mobilize its domestic assets and access foreign resources. Consequently, capital flight retards economic growth and development and contributes to underdevelopment.

A second reason is the ability of capital flight to induce a negative feedback process, especially during periods of crisis and uncertainty. As resource constraints become binding, economic growth is further limited. Then more capital flight could occur. There is also the possibility of being cut off from external sources of funds. Consequently, it becomes more difficult to implement economic policies, and improving the social conditions of people also becomes more difficult.

A third reason is economic justice, particularly the distributive impacts of external indebtedness and capital flight, and the legitimacy of external debts. When the elite squander external debts, or external borrowings are inappropriately used to benefit only a few, it is the rest of society that suffers. More importantly, the economic and social costs of external indebtedness and capital flight are imposed on the majority. In addition, capital flight represents lost resources that could have been utilized in the domestic economy to generate additional output and jobs. Thus, ultimately, it represents lost opportunities. Therefore, when society as a whole does not benefit from external debts, questioning the legitimacy of such debts and the rationale for continuing to honour them becomes imperative.

The recent interest in capital flight was triggered by the Latin American debt crisis in the 1980s. The two foci of research were then as follows: scholars seeking to understand the relationship between capital flight and external debt, as capital flight undermined the ability of highly indebted countries to repay or service their mounting external debts (Lessard and Williamson, 1987); and scholars wanting to examine whether or not external borrowing in fact propels capital flight, and vice versa (Boyce, 1992).

After the debt crisis of the 1980s, capital flight became less of an issue, and capital started to flow back to developing countries, with the possible exception of Africa (see, e.g., Boyce and Ndikumana, 2001; Collier et al., 2001). Thus scholars stopped paying attention to capital flight. By the latter half of the 1990s, however, there was a resurgence of capital flight, as developing countries faced a greater number of intense financial and economic crises, making scholars interested in re-examining the issues.

At least three arguments point to the need to study capital flight again. As in the past, external debts constitute the first reason. Country indebtedness remains a problem for developing countries, including the four Southeast Asian countries we study (Table 1). Indeed, recent experience suggests that developing countries are again becoming vulnerable to debt-related crises. Leung (2003), for example, presents empirical evidence that the increased indebtedness of developing countries is positively linked to the increased intensity and frequency of debt-related economic cycles, a problem especially significant in Africa and, to some extent, in Asia. The 1997–1998 Asian crises, for instance, were partly rooted in the accumulation of external debts, although they were private external debts.

The second reason relates to changes in the economic policies adopted by or, in some cases, forced upon developing countries. In particular, neoliberal policies led to wide-scale and aggressive deregulation and financial liberalization without ensuring, or in some cases, neglecting the provision of appropriate governance structures and administrative capacity. Consequently, the economic environment has become more vulnerable to financial swings, crashes, crises, contagions, and economic stagnation. In fact, some scholars have argued that financial and economic crises are inevitable under such conditions (see, e.g., Palma, 2003),

Table 1.
Share of total external debt to GDP by region, 1970–2002

Region	1970s	1980s	1990s	2000s
Asia	0.21	0.29	0.38	0.47
Indonesia	0.47	0.27	0.61	0.93
Malaysia	0.12	0.27	0.35	0.47
Philippines	0.33	0.54	0.69	0.67
Thailand	0.14	0.26	0.33	0.65
Latin America	0.21	0.35	0.60	0.47
Africa	0.19	0.42	0.83	1.05

Note: Figures are based on World Bank (2004).

and moreover, they become more frequent (see, e.g., Kaminsky and Reinhart, 1999) and can lead to capital flight (see, e.g., Beja, Junvith and Ragusett, 2005). The longer a country is in such a situation, and also the longer it postpones the re-introduction of governance structures and administrative capacity, the greater are the chances that financial and economic crises will occur. Also, when crises occur, they will be more intense and their social and economic costs will be very significant. Neoliberal policies have therefore made developing countries even more vulnerable to capital flight. Furthermore, given these developments, large and volatile capital flights will be common occurrences.

A related issue in the context of the neoliberalization, especially financial liberalization and globalization, concerns the use of capital flight as a weapon against the policies of developing country governments that threaten, so to speak, the prerogatives of the elites and the powerful in their use of capital and resources. In this context, capital flight can be seen as a capital threat that would go on strike against any form of government intervention to manage capital and resources, say, into productive endeavours to benefit society at large in the long term. Thus, to what extent financial liberalization undermines the government's policy space, or strengthens the capital threat, are critical dimensions to capital flight. What if the government simply wants to lower interest rates, target credit provisions, and so on, in order to realize full employment and raise social welfare? What if the government regulates capital flows to address external vulnerability and stabilize economic growth? In this context, capital flight necessarily includes a dimension of political economy, of class conflict, and concerns the State as a whole.

A third reason for reconsideration is that capital flight means lost resources to the domestic economy, and therefore, lost opportunities. It is paradoxical that resources are flowing out of developing countries rather than to them, although it is in developing countries that resources are most needed to generate economic growth and development. Even very poor countries have become net lenders to the rest of the world (see, e.g., Boyce and Ndikumana, 2001). Such lost resources do not contribute to the expansion of domestic economic activities or to the improvement of the social welfare of domestic residents. On the contrary, they imply foregone goods and services essential to sustaining economic growth (see, e.g., Beja, 2006b).

Moreover, capital flight can also mean lost resources for debt servicing, thus making the social burden of external debt heavier. Since in the developing countries institutions are weak, fragile or missing, the social and economic costs can be large and can affect many in society. And because capital flight is often undertaken by the elite, the rest of society carries a disproportionate burden of the external debt. In fact, the elite are often able to avoid these costs because they are able to transfer their wealth abroad.

The interest in capital flight stems from both old and new issues. The lessons from the past remain very relevant to the current context, but because of the new dimensions to the same problem, new lessons have to be learned. Hopefully, this paper contributes to that end.

Another point of clarification before we continue with the discussion concerns the difference between normal capital flow and capital flight. Capital flight is a type of capital flow, and they have a common feature: both are movements of capital across countries. But the similarity stops there. Capital flows represent portfolio decisions typically undertaken to exploit favourable returns to capital, among other advantages. Capital flight, on the other hand, represents a decision to take capital out and take refuge in another country in order to avoid social controls.

Furthermore, normal capital flows are like two-way streets, where the traffic of capital goes in both directions and is presumably recorded in official statistics (i.e., balance of payments). Capital flight, in contrast, is more like a one-way street, in which the traffic of capital is moving out and typically remains unrecorded. Sometimes, capital flight is financed by capital inflows, such as external debts. At other times, capital flight itself finances the capital inflows, returning in the guise of foreign investments to avail of the incentives extended to overseas investors. Hence, it is possible to have large volumes of capital flows across countries without any capital flight involved. It is also possible that even without capital inflows to a country, there are still huge amounts of capital flight.

Lastly, when this capital flow perspective is employed, there is at the outset a problem in understanding capital flight: basically, the notion of an optimal portfolio allocation of capital precludes any unrecorded capital flows. In fact, in a two-way street capital flow system, there should not be any unrecorded flows, especially when the environment has been deregulated and financially liberalized. Any movement of capital, no matter what the purpose, is considered legitimate and normal. If there are unrecorded capital flows, they are to be considered integral to the system and, whatever the outcome—including adverse impacts on the country—it is presumed to be an optimal situation that market processes can correct.

Clearly, such a perspective ignores, and indeed does not see, the social and economic impacts of capital flight. We argue that these impacts can be significant, are shouldered by the majority in society (i.e. the non-elite, or the poor), and long lasting. Therefore, while both capital outflow and capital flight share a common feature, capital flight, in fact, has unique characteristics. Thus, it may be that affected countries should take up policies that address capital flows in general but, at the same time, include policies that address capital flight itself.

Defining and measuring capital flight

“Capital flight” is the movement of capital from a resource-scarce developing country to avoid social control.² “It is measured as net unrecorded capital outflow or the residual between officially recorded sources and recorded uses of funds. The recorded sources of funds are net additions to external debt (CDET) and net non-debt capital inflows (NKI). NKI is the sum of net direct foreign investments (FDI) and net portfo-

2 There are various definitions of capital flight (see, e.g., Beja, 2005). In this paper, “capital flight” is the movement of capital and resources in order to avoid social controls. “Social control” refers to actual or potential, formal and informal regulations on capital, covering societal norms and expectations on the use of foreign exchange, the extralegal or non-governmental exactions on the use of resources, government taxation, as well as the government’s capacity to direct resources into productive endeavours engendering economic growth, which can be extended or reduced depending on the circumstances. As such, capital flight can be a movement of funds to avoid losses in the principal, or losses in the returns, or loss of control over one’s personal wealth or assets.

lio equity investment plus other investment assets (PORT). The recorded uses of funds are current account deficits (CAD) and net accumulation of international reserves (CRES). Note that “net” means accounting all the inflows and outflows of funds. Thus,

$$KF = CDET + NKI - CAD - CRES, \quad (1a)$$

which is called baseline capital flight (BKF). Positive BKF means capital flight; negative BKF means “reverse” capital flight. This paper also follows the convention in the literature by which capital flight is denoted with a positive notation, because capital flight is a form of foreign private assets accumulation. Thus “reverse” capital flight is like reducing foreign private assets, thus a negative notation. Note further that because the right hand side of Equation 1a contains variables that are considered officially recorded transactions, positive BKF implies net unrecorded capital outflows and negative BKF, net unrecorded capital inflows.

Data used in the calculation have errors, so adjustments are needed to correct for them. The first set of adjustments concerns the financial accounts. An adjustment is needed for the impact of exchange rate fluctuations on the stock of external debt (DEBT). Long-term external debts (LTDEBT) are normally denominated in a mix of hard currencies, and their fluctuations will affect the US dollar (US\$) values of LTDEBT, which will have implications on CDET. So the beginning-of-year adjusted external debt (ATTD) that accounts for foreign exchange rate fluctuations can be obtained as

$$\begin{aligned} ATTD_{-1} = & \sum_{i=EU, UK, FF, DM, Yen, SF} (\alpha_{i,t-1} LTDEBT_{-1}) (FX_i / FX_{i,-1}) + \sum_{i=USD, MULT, OTHER} (\beta_{i,-1} LTDEBT_{-1}) \\ & + IMF_{-1} (SDR_t / SDR_{-1}) + STDEBT_{-1}, \end{aligned} \quad (2)$$

where α_i is the proportion of LTDEBT in Euros (EU), British pounds (UK), French francs (FF), German marks (DM), Japanese yens (Yen), and Swiss francs (SF); β_i is the proportion of LTDEBT in USD, multiple and other currencies; FX is the exchange rate of the hard currencies to USD; IMF is use of IMF credits; SDR is the exchange rate between Special Drawing Rights and USD; STDEBT is short-term external debt. The subscript -1 denotes the end of the last year (and hence, the beginning of the current year). Data for the currency composition of MULT, OTHER, and STDEBT are however not available, and their dollar valuations are unadjusted. All things the same, an appreciation in a hard currency relative to US\$ reduces $FX_i/FX_{i,-1}$ and $ATTD_{-1}$, so DEBT should be lower. With Equation 2, the adjustment factor for the impact of exchange rate fluctuations on the stock of external debt (ADEBT) is

$$ADEBT = ATTD_{-1} - DEBT_{-1} \quad (3)$$

Equation 3 gives an estimate on the extent to which DEBT was impacted by foreign exchange fluctuations. For instance, if the Japanese yen appreciated relative to USD, all others the same, we expect to have a lower $ATTD_{-1}$ and ADEBT is negative. Therefore CDET would not be an accurate estimate of the net inflow of new borrowing. Accordingly, we calculate the change in the adjusted external debt (CDETADJ). Using Equation 3, we subtract ADEBT from CDET,

$$CDET_{ADJ} = CDET - ADEBT. \quad (4a)$$

Since $CDET = DEBT - DEBT_{-1}$, it can be shown that Equation 4a is equal to

$$CDET_{ADJ} = DEBT - ATTD_{-1}. \quad (4b)$$

Equation 1a can be re-calculated to obtain an adjusted baseline capital flight (KF_{ADJ}):

$$KF_{ADJ} = CDET_{ADJ} + NKI - CAD - CRES. \quad (1b)$$

Unfortunately, it is not possible to calculate an adjustment for the discrepancies in direct foreign and portfolio equities investments because of data limitations. But if data allows, the procedure would be similar to that of $CDET_{ADJ}$; that is, the discrepancies in the FDI data between source-country and host-country are obtained the impact of foreign exchange fluctuations are calculated. The same applies for PORT.

The second set of adjustments concerns the current account. In particular, an adjustment is needed to account for systematic trade misinvoicing, which can be measured via trading-partner data comparison. Import overinvoicing and export underinvoicing are often significant avenues for capital flight. Import underinvoicing (technical smuggling) is undertaken to evade customs duties and trade regulations, but conceptually, it is a form of “reverse” capital flight in that it results in unrecorded flows of foreign exchange (smuggled goods must be paid for, even if they are not fully taxed). “Pure” (as opposed to technical) smuggling in which imported goods are not taxed or recorded at all can be captured by trading partner data comparison. Export overinvoicing can happen if there are incentives on the export performance of industries that lead to invoice padding. In any of these cases, the current account is inaccurate, thus we need to make the adjustment.

To determine the magnitude of total trade misinvoicing, we follow three steps. The first step is to compute the export misinvoicing (DX) and import misinvoicing (DM) for a country in its trade with major industrialized-country trading-partners:

$$DX = PX - CIF * X, \quad (5a)$$

$$DM = M - CIF * PM, \quad (5b)$$

where PX is the industrialized-country trading-partner’s imports from country i , and PM is the industrialized-country trading-partner’s exports to country i ; X and M are country i ’s exports to and imports from industrialized-country trading-partners, respectively; and CIF , the cif/fob factor, is an adjustment for the cost of freight and insurance. For Equations 5a and 5b, the trade data between country i and its industrialized-country trading-partners are utilized. The rationale for doing this is that the information from the industrialized countries is expected to be more reliable compared to the data from the developing countries. Accordingly, positive values of DX and DM indicate net export underinvoicing and net import overinvoicing, respectively; whereas negative values of DX and DM indicate net export overinvoicing and net import underinvoicing, respectively.

Next, the global export and import trade discrepancies of country i ($MISX$ and $MISM$, respectively) are calculated. DX and DM are multiplied to the reciprocal of the shares of all industrialized-country trading-partners to country i ’s total exports (X_{INDUS}) and total imports (M_{INDUS}) to obtain $MISX$ and $MISM$,

$$\text{MISX} = \text{DX} / \text{X_INDUS}, \quad (6a)$$

$$\text{MISM} = \text{DM} / \text{M_INDUS}. \quad (6b)$$

The last step is to obtain total trade misinvoicing (MIS) as the sum of Equations 6a and 6b. MIS is added to Equation 1b:

$$\text{KF}_{\text{ADJ}} = \text{CDET}_{\text{ADJ}} + \text{NKI} - \text{CAD} - \text{CRES} + \text{MIS}. \quad (1c)$$

In addition to the trade misinvoicing adjustment, we make another adjustment on the current account for the unrecorded income remittances (UNREMIT). For developing countries that have sizeable numbers of overseas workers, remittances are a significant component in the current account. If informal remittances are substantial, then it also requires an adjustment. To obtain an adjustment, we extrapolate the annual size of UNREMIT using an index for unrecorded remittance (UNREMIT Index):

$$\text{UNREMIT} = \text{REMIT} * \text{UNREMIT Index}, \quad (7)$$

where REMIT is recorded overseas remittances. UNREMIT is added to Equation 1c, thus

$$\text{KF}_{\text{ADJ}} = \text{CDET}_{\text{ADJ}} + \text{NKI} - \text{CAD} - \text{CRES} + \text{MIS} + \text{UNREMIT}, \quad (1d)$$

which is called total capital flight (TKF).

To make TKF figures comparable across periods, we calculate real capital flight (RKF), using the United States producer price index (PPI) in 1995 prices as the deflator:

$$\text{RKF} = \text{TKF} / \text{PPI}. \quad (8)$$

To make RKF comparable across countries, we determine the relative burden of RKF to the (size of the) economy; that is,

$$\text{RKF_GDP} = \text{RKF} / \text{RGDP}, \quad (9)$$

where RKF_GDP is the relative burden of RKF, and RGDP is real gross domestic product in 1995 prices.

Analysis of the revolving door model of capital flight

In conventional analysis, capital scarcity is supposed to result in capital inflow. This situation occurs because the expected returns to capital are higher in places where at the margin it is scarce. By definition, capital is scarce in developing countries so we expect capital to flow to them. Typically, this process is facilitated by an attractive positive rate of return to capital. As capital scarcity becomes less of a constraint, the returns to capital decrease and its flow is expected to slow down. Eventually, capital will move to other places where the returns are relatively higher. In other words, market processes will ensure that capital is appropriately allocated between areas where it is plenty and areas where it is scarce. Following this logic, we therefore make the following hypothesis: *high rates of return to capital in a country decrease capital flight.*

Conventional analysis also suggests that capital will flow to where it is most needed or desired; that is, to where it will be relatively more productive. As such, when a country is experiencing robust economic expansion, investments (both domestic and foreign) are pulled into the country to further fuel economic growth. Capital inflows help to sustain that robust economic growth, but eventually diminishing returns and decreasing returns to capital should be expected. As long as the economy enjoys relatively higher returns to capital than do other places, however, investments will continue to flow in. The converse applies as well. We therefore hypothesize that: *high and sustained economic growth within a country decreases capital flight.*

Recent empirical studies challenge this conventional analysis. In fact, the evidence suggests that the direction of capital flows is often in reverse; that is, capital is moving away from the developing countries. When capital does flow to developing countries, it subsequently flows out as capital flight, thus a strong and positive correlation exists between the capital flows. Thus, the revolving door model of capital flight is an attempt to address this puzzle. The model posits direct and indirect linkages between capital flight and external debt (Table 2).

Table 2.
Typology of the determinants of capital flight and external borrowing

Indirect linkages	Direction of linkages: (A) Exogenous variables → External debt Capital flight		
	Direction of linkages:	(B1) External debt to capital flight	(B2) Capital flight to external debt
Direct linkages	(1) Means	Debt-fueled flight	Flight-fueled debt
	(2) Motive	Debt-driven flight	Flight-driven debt

Note: Table adapted from Boyce (1992).

Indirect linkages

One class of explanations posits only an indirect linkage between capital flight and external debt, with the contention that some overlapping sets of exogenous factors cause both capital flight and external borrowing. Capital flight occurs not because of capital inflows or external debt per se, but rather because of, say, macroeconomic mismanagement. In similar fashion, developing countries are (now highly) indebted not because of capital flight but, again, because of macroeconomic mismanagement. Policy mistakes, corruption, rent-seeking behaviour, weak domestic institutions, and the like, will induce capital flight and cause external debt problems. Another contention is that capital inflows (especially during surges of capital flows) lead to risky or unsound investment decisions and over-borrowing. When governance structures and mechanisms for administrative controls and prudential regulation are weak, fragile or missing, money borrowed from abroad can end up being pocketed by the domestic elite (and usually transferred into private accounts abroad), spent on conspicuous consumption, or allocated into showcase and unproductive development projects that do not generate foreign exchange to finance external debt servicing. So capital flight and external borrowing are manifestations and responses to unfavourable domestic economic conditions.

We can extend the above explanation to include new dimensions among the indirect linkages between capital flight and external debt, arising from recent developments in international finance and the global economy. Specifically, we consider the impact of deregulation and financial liberalization on capital flight. In conventional wisdom, when a country adopts economic reforms, the expectation is that there will be no more capital flight. Accordingly, foreign savings will be made available to domestic entrepreneurs who in turn will use the cheap funds to build businesses, and create jobs and other infrastructure in the country.

But such an outcome is only possible when economic reforms are pursued with complementary governance structures and administrative capacity. When these structures are weak, fragile or missing, deregulation and financial liberalization will induce capital flight. Thus deregulation and financial liberalization have not only enabled developing countries to have greater access to external capital, but have also led these countries (and firms) to take risky and unsound investment decisions and over-borrow. Such action can be mediated by asymmetric risk problems that favour international finance / investment over domestic finance / investment, especially with regard to the expropriation of capital and taxation. But the consequent economic and financial crises have only induced more capital flight and greater external borrowing.

Furthermore, deregulation and financial liberalization in developed countries have unleashed large amounts of capital seeking new investment areas with attractive returns. The consequent increase in competition in the capital markets and the tendency towards short-term and rapid investments have created an economic environment prone to financial swings, crises, contagions, and economic stagnation. While it may be true that some developing countries have benefited from increased capital inflows (i.e., availability of external savings), they have also found it more difficult to manage their economies, as capital comes in and leaves rather quickly. In the end, we find that developing countries experience frequent and severe financial and economic crises, as demonstrated in the 1990s. In turn, we argue that capital flight has increased during the period of deregulation and financial liberalization. Thus we hypothesize that: *deregulation and financial liberalization increase capital flight and external borrowing.*

The discussion above implies that there is a supply-and-demand dimension underlying the indirect linkages to capital flows or external debt, and by extension, there is also a supply-and-demand dimension to capital flight and external borrowing. This situation suggests that the effective management of both demand and supply of capital is needed to reduce capital flight. We argue that in a context where the institutions of governance and administrative capacity are weak, fragile, or missing, deregulation and financial liberalization will result in greater economic vulnerability and intense financial and economic crises, while governments become ineffective, or unable to respond. In fact, McKinnon (1991) presciently warned that embarking on premature deregulation and rapid financial liberalization of capital flows will result in unwarranted capital flight or unwarranted indebtedness, or both.

The indirect linkages to capital flight would therefore be stronger in the presence of weak, fragile or missing governance structures and administrative capacity. Capital flight occurs because the prevailing conditions allow it. In this framework, sound institutions and the pursuit of reforms in the proper manner, will reduce economic risk, sustain economic growth, and reduce capital flight.

While the indirect linkages may help explain a cross-sectional correlation between capital flight and external borrowing, it remains to be explained why there is often a close year-to-year correlation between capital flight and external debt and why, in some cases, capital flight tends to be persistent. The tight correlation between the current flows suggests a direct linkage between these variables. The correlation between current and past capital flight, and between current and past borrowing, suggests persistence or hysteresis.³

Direct linkages

Table 2 (above) also shows the direct linkages between capital flight and external debt. As shown in the table, there are two directions of direct linkages. In the first, external debt provides the fuel or is the driver of

3 Hysteresis may suggest a momentum effect or a habit-forming effect, implying the irreversibility of trends even when macroeconomic conditions improve. Hysteresis likewise applies to the indirect linkages.

capital flight; that is, capital inflow has a “liquidity” (or fuel) effect, while its accumulation has a “stock” (or driver) effect. The reverse link posits that capital flight creates the fuel or is the driver of borrowing; that is, capital flight (again) has a short-run “liquidity” effect but, as it persists, also has a “stock” effect.

External debt linked to capital flight

The argument that external debt fuels capital flight acknowledges the fact that loan proceeds can be “transformed” from capital inflow to capital flight. In this case, external debt provides the resources or funds for capital flight. Such funds could create conditions for capture as “loot” that individuals (often the elite) appropriate as their own. In fact, the (captured) funds may not even enter the country at all. Instead only accounting entries are done in the respective accounts of financial institutions.

An important aspect of debt-fueled capital flight is the process of debt “layering” between the lender and the borrower in whose name the external debt is acquired. There is an asymmetry between the identity of the borrower and the liability holder, which is the public. Private external debts, for example, enjoy government guarantees that effectively transform them into public debt (i.e., publicly guaranteed private debts). Because of debt guarantees, lenders become overconfident and facilitate the provision of funds. At the same time, the guarantees effectively absolve the borrower of the responsibility of repaying the external debt in the event of a default. Precisely because of debt guarantees, borrowers become very eager to acquire external debts. In other words, such arrangements simultaneously create incentives for over-borrowing and over-lending.

Potentially, therefore, all types of external borrowing are transferable as capital flight. Lenders are partly responsible for capital flight in developing countries insofar as they collude, indirectly or directly, with individuals who channel loan proceeds into capital flight. As long as lenders continue to provide the funds, debt-fueled capital flight will continue.⁴ And so we hypothesize that: *an increase in capital inflows from external borrowing increases capital flight.*

The argument that external debt drives capital flight points to the fact that debt-servicing problems would eventually arise as debt accumulation goes out of hand. Thus the accumulation of external debt signals increased risks, to which capital holders respond by pulling out capital to avoid unfavourable developments. Reinhart and Rogoff (2004) argue that a history of default, or a high potential of default, underpins much of the capital outflows from developing countries. As such, a past history of default compounds the risk associated with external debts and debt accumulation, and thus drives capital flight. The motivation for capital flight is to avoid the unfavourable developments due to a mounting stock of external debt. In this context, accumulated external debt has a “stock” effect on capital flight.

Faced with difficulties in servicing large external debts, developing countries often go into a structural adjustment programme. There are various components to such programmes, among them: reductions in public expenditures, raised taxes, and a tight monetary policy to reduce aggregate demand. The usual outcome is slower economic growth, at least in the short run. The country becomes vulnerable in that unless it recovers and proceeds to sustained economic growth and development, it could regress into a worse situation. Often it is the latter that happens. In addition, there are significant social and political changes associated with structural adjustments, which can adversely affect overall economic stability.

⁴ This does not mean that developing countries should stop borrowing funds or that lenders should stop extending loans. Incurring external debt may sometimes be necessary to finance economic growth and development. What this suggests, therefore, is that lenders have to be judicious in the manner by which they provide loans. They have the responsibility to review and, in turn, to refuse questionable development projects.

At the same time, greater external debt increases the demand for foreign exchange as debt servicing requirements increase. When demand reaches a point where international reserves are no longer adequate, a devaluation of the currency becomes inevitable. Like increasing taxes, a devaluation of the currency lowers the value of capital as well as the returns on investment. The country becomes vulnerable, too. Faced with increased risks, capital holders convert their domestic assets to foreign assets, reinforcing pressure on foreign reserves. Overall, capital flight is a mechanism to avoid unfavourable economic conditions engendered by external debt accumulation. We thus hypothesize that: *a higher total external indebtedness increases capital flight.*

Of the two linkages described above, debt-fueled capital flight is contemporaneous with external borrowing, so they have a close year-to-year correlation. Debt-driven capital flight, on the other hand, has a lagged effect: it will not be contemporaneous with external borrowing, but a close correlation can be expected between capital flight and external debt stock (see, e.g., Collier, Hoeffler and Patillo, 2001; Ndikumana and Boyce, 2003). The impact of the external debt stock on capital flight could be seen as reductions in international reserves.

Capital flight linked to external debt

The second direction of linkages is flight-fueled borrowing and flight-driven borrowing. Flight-fueled borrowing takes place when capital is pulled out from a country and then re-enters the same country in the form of external debt or foreign investment.⁵ In this case, domestic capital is first converted into dollars, for example, and then deposited overseas; the depositor then takes a 'loan' from the same bank.⁶ In effect, this process conceals the source of the funds. It transforms capital that may have been acquired through inappropriate or dubious ways, into something legitimate. Also, flight-fueled borrowing serves as a pretext for otherwise unexplained or "hidden" wealth. One crucial dimension of this process is that flight-fueled borrowing sheds the national character of the capital; that is, domestic capital re-emerges as foreign capital. Freed of domestic social controls, it is able to enjoy the privileges extended to foreign capital. Thus we hypothesize that: *an increase in capital flight increases external borrowing.*

Flight-driven borrowing is a straightforward process. Capital flight drains domestic resources, thereby generating demand to replenish the lost funds. As long as external debts enjoy government guarantees, ostensibly precluding the possibility of a default, funds will flow to the country in response to this demand. Again, this process is a "stock" effect rather than a "liquidity" effect. We hypothesize as follows: *an increase in the stock of capital flight decreases international reserves and increases external borrowing.*

Of the latter two types of linkages described above, flight-fueled borrowing is contemporaneous with capital flight; hence they have a close year-to-year correlation. Flight-driven borrowing has a lagged effect, possibly exhibited as a reduction in international reserves; and so it is not contemporaneous with capital flight. Note that the net effect on international reserves depends on the magnitude of capital flight relative to external borrowing.

5 When capital flight re-enters a country in the form of loans, we refer to these loans as "back-to-back" loans. On the other hand, when it enters a country as foreign investment, we refer to it as a "round-tripping investment".

6 An extension works as follows: domestic capital is dollarized and deposited in an overseas bank, and then the depositor makes an investment to the source country using, say, a pseudo or proxy foreign company. Round-tripping is the mechanism for transforming funds acquired through questionable means into "unquestionable" foreign investments. It reflects a further spin of the global financial merry-go-round, in which foreign capital is extended as a loan or investment to developing countries, after which it flows back to financial centers and is again lent to or invested in developing countries.

Econometrics of the revolving door model of capital flight

Empirical evidence suggests that there is a common set of determinants of capital flight and external borrowing. This observation is generally applicable in country and regional studies. For the revolving door model, evidence likewise suggests that capital flight and external debt have common determinants.^{7, 8} These determinants can be grouped into three broad themes: (1) capital flows / external debt; (2) economic performance; and (3) politics and governance. The first theme covers the direct linkages of capital flight, while the latter two deal with are for the indirect linkages. Note that economic performance on the one hand, and politics and governance, on the other, are complex and difficult concepts to untangle. For the econometric analysis, four sets of specific indicators are needed, as follows: (1) capital inflows/external debt; (2) economic performance indicators; (3) rates of return to capital and risk; and (4) politics-governance-institutions indicators.

Capital inflows/external debt

Capital inflows and external debt are the most important variables explaining capital flight. This conclusion holds even using alternative specifications and estimation procedures. As for the revolving door model itself, the empirical evidence from the revolving door papers is strong especially for the fuel linkages, as it supports the contention that the causal relationships between external debt and capital flight run both ways and are strongly correlated year-to-year. The empirical evidence is also robust for the drive linkage, especially for debt-driven capital flight. Ndikumana and Boyce (2003) even proposed that the reverse drive linkage could be verified using international reserves instead of the lags of external debt, but they were unable to obtain empirical support for this proposal.

There are also alternative measures for capital inflows. The empirical evidence for such linkages appears dependent on the type of indicator used. Short-term capital flows tend to confirm the fuel linkage (see, e.g., Cuddington, 1987). International aid and grants seem to have a positive linkage to capital flight (see, e.g., Hermes and Lensink, 1992; Collier, Hoeffler and Patillo, 2003). But the evidence for foreign direct investment (FDI) is mixed. Kant (1998) and Harrigan, Mavrotas and Yusop (2000), for example, found a negative linkage between FDI and capital flight; but Lensink, Hermes and Murinde (2000) and Collier, Hoeffler and Patillo (2001) did not obtain any statistically significant relationship.⁹ There is no revolving door paper that uses any of these alternative specifications.

Trade flows have been used to proxy capital inflows, but the empirical results are mixed. Mikkelsen (1991) and Lensink, Hermes and Murinde (2000) found no linkage between total trade and capital flight. Smit and Mocke (1991), however, obtained a positive linkage between the current account balance and capital flight. When trade-related variables are found to be significant, the results are difficult to interpret.

7 Differences in estimation and econometric techniques contribute to differences in empirical results. But controlling for the estimation methods, empirical evidence suggests that there is a common set of determinants of capital flight. We will not attempt a survey of the literature, as Hermes, Lensink and Murinde (2003) and Ndikumana and Boyce (2003) provide excellent reviews.

8 Papers that use the revolving door model include Boyce (1992), Chipalkatti and Rishi (2001), Ndikumana and Boyce (2003), and Demir (2004), and simply refer to these papers as “revolving door papers”.

9 Claessens, Dooley and Warner (1995) found the statistical properties (in particular, the volatility) of portfolio and direct foreign investments are similar, so a distinction between short-term and long-term flows may not be helpful. Sarno and Taylor (1999) have found a hierarchy of volatility in the various types of capital flows. Perhaps what matters is the composition of short-term and long term flows. FDI becomes an object for capital flight when it is used to acquire resources to fuel capital flight. This process is possible because FDI is not “bolted” capital, although the physical assets acquired with it are.

On one level, the results could suggest that there are available resources for capital flight; that is, there are “lootable” resources. On another level, the results could reflect the size of normal (capital) flows, so a large trade (or current account) balance would mean bigger trade financing, hence implying greater (official) capital movement. A more favourable trade balance could also lead to a reduced demand for external funds (i.e., external borrowing) as revenues from trade are now available for trade financing.¹⁰ Among the revolving door papers, Demir (2004), using the growth rate of the export-import ratio as a proxy for trade flows, obtained a positive link between capital flight and external debt, while Ndikumana and Boyce (2003), using total exports, got a positive linkage with capital flight alone.¹¹

But there can be hysteresis in capital flight and external debt. Today’s capital flight could mean future capital flight; today’s external debt could mean future borrowing. One way to assess hysteresis is to determine whether or not the lags of capital flight (external debt) are statistically significant. Among the revolving door papers, only Ndikumana and Boyce (2003) found statistical evidence for capital flight hysteresis.

Economic performance indicators

Sound economic performance will suggest a robust and sustainable economy where capital is likely to be attracted and to remain. Consequently, we expect less capital flight from a country so characterised.

Economic growth is a key indicator of economic performance. Pastor (1990) and Ndikumana and Boyce (2003), for example, found a negative link between differential growth rates (i.e., a country’s own growth rate minus the foreign country’s growth rate) and capital flight. But when using only the country’s own growth rate for economic performance, the empirical evidence is actually mixed. Lensink, Hermes and Murinde (2000), for example, found a negative linkage between economic growth and capital flight, while Boyce (1992), Hermes and Lensink (1992), Chipalkatti and Rishi (2001), and Demir (2004) obtained no statistically significant relationship at all. As Ndikumana and Boyce (2003) explain, the country’s own growth rate is problematic in part because it is affected by some of the same factors that trigger capital flight. Isolating its independent impact on capital flight can be difficult.

At the conceptual level, differential growth rates indicate the relative performance of economies, just as differential interest rates reveal the relative returns to capital (or investments). In this context, we think that the superior specification would be the differential growth rates. Among the revolving door papers, all except for Ndikumana and Boyce (2003) used the country’s own growth rate, and found no statistically significant relationship between economic growth and capital flight.

An alternative economic performance indicator is growth of exports. Robust export performance typically implies robust economic growth, especially if an economy is organized around the export sector. Accordingly, robust export growth is expected to reduce capital flight. Most of the research on capital flight does not use export (or trade) growth rates. Among the revolving door papers, Demir (2004) used a similar indicator but obtained a positive linkage with capital flight, while Ndikumana and Boyce (2003) employed total exports but only to assess the presence of “lootable” resources.

10 The sign of the coefficient for trade and capital flight is indeterminate. A negative sign between normal capital outflows and capital flight could mean that trade revenues substitute for external funds. A positive sign, on the other hand, could mean that trade increases the demand for trade financing. Thus a larger trade could indicate the availability of more resources for capital flight.

11 Ndikumana and Boyce (2003) obtained a positive sign for the pooled regression, but a negative sign for the cross section regression; that is, exports can explain capital flight for within country but not inter-country variations.

Yet another alternative indicator for economic performance is government budget deficit (or budget surplus). When there are large government budget deficits, the expectation is that government will acquire domestic debt or external debt, or both. On one level, the deficits could mean access to funds for capital flight; on another level, the deficits could signal macroeconomic mismanagement. If capital holders are unsure about how the budget deficits will be managed, or if they are unconvinced that the deficits will be managed well, they will pull out capital to avoid unfavourable developments. As such, budget deficits could have a positive lagged effect on capital flight. Alternatively, large government budget deficits could mean that pump-priming activities are being undertaken to invigorate the economy, and if effective, will result in robust economic growth. As such, budget deficits could have a negative lagged effect on capital flight.

The empirical evidence regarding budget deficit (budget surplus) is mixed. For example, Hermes and Lensink (1992) found no statistically significant relationship between budget deficit and capital flight. Boyce (1992) and Chipalkatti and Rishi (2001) did not find a statistically significant relationship either. Using government budget surplus, Ndikumana and Boyce (2003) obtained ambiguous statistical results. For the other revolving door papers, the empirical evidence was rather mixed.

In addition to government budget deficits (or surpluses), another alternative measure is taxation. But this likewise suffers from possible dual interpretations, a problem analogous to those associated with the use of government deficits. For instance, when the government has a good tax revenue position, then there is no need for external borrowing, as there are available resources to finance public expenditure. In fact, the government would have funds to pay its debt obligations. But a good tax revenue position could also mean that the government is able to borrow more funds, because the ability to collect taxes (and the availability of resources) improves the government's credit rating. Similarly, the desire to avoid taxes could be a motive for capital flight, but a strong tax collection capacity may signal government's having a greater capability to detect and deter tax evasion (including capital flight).

Pastor (1990) and Vos (1992) found no statistically significant relationship between taxes and capital flight. Hermes and Lensink (1992) obtained a positive linkage between the uncertainty of tax policy (i.e., tax variability) and capital flight.¹² Ndikumana and Boyce (2003) argued that it may be problematic to characterize government performance using a single indicator, such as government budget deficit or taxation. But the more important problem is that data quality for taxes is often suspect, so empirical analysis would not reveal the true relationship between the indicator and capital flight. None of the revolving door papers uses taxes or uncertainty of tax policy as an indicator.

Rates of return and risk indicators

Low rates of return to capital would push or repel capital to locations where the rates of return are relatively higher (and vice versa). Two measures of rates of return to capital have been used in the literature. The first is a simple differential rate of return that may either be inter-country differences in nominal returns (see, e.g., Cuddington, 1987; Harrigan, Mavrotas and Yusop, 2000) or real returns (see, e.g., Boyce, 1992; Demir, 2004). The second is the differential rate of return plus some foreign exchange adjustment (see, e.g., Pastor, 1990; Hermes and Lensink, 1992; Vos, 1992). For either specification, the empirical evidence is rather mixed. Arguably, the second version is the more accurate indicator, as the first version may not capture the open-economy effects.

12 The sign of the coefficient for taxes is undetermined. Following Hermes and Lensink (1992), we argue that it could be the uncertainty of the tax policy that matters more with regard to capital flight. They measure the variance of government expenditure, the government budget deficit, etc., and use it as a proxy for uncertainty in policies.

Among the risk indicators, the variables that are commonly used are: overvaluation of foreign exchange, and inflation. An overvalued exchange rate raises expectations for a devaluation of the local currency. The farther the adjustment is postponed, the stronger the expectation will be for the devaluation. Any sign of economic growth slowdown will more likely lead to economic instability and drive capital out of the country. To measure overvaluation, a black market premium (i.e., the ratio of the black market rate to the official exchange rate) can be used as indicator. Schineller (1997) found a weak but positive linkage between the black market premium and capital flight. Among the revolving door papers, none uses a black market premium as indicator.

Inflation is the important risk indicator. Basically, an inflationary environment is not attractive to capital. Domestic capital holders will convert their domestic assets into foreign assets to avoid losses on the value of their capital. Indeed many analysts use inflation as an indicator for the overall health of the economy. Most of the economic studies on capital flight include inflation among the determinants (see, e.g., Hermes and Lensink, 1992; Pastor, 1990; Vos, 1992). Among the revolving door papers, only Ndikumana and Boyce (2003) used inflation, but they found no statistically significant relationship between inflation and capital flight.

Lastly, we can also interpret the year-to-year flows in capital and external debt and their stocks (especially for external debt) as indicators of vulnerability. These can be interpreted as risk-related indicators. Thus, the larger the capital flows become, the greater the vulnerability, especially when the flows are volatile, short-term, and easily reversible. A similar argument can be made for external debt.

Political and governance indicators

Some studies on capital flight include political and governance indicators. If there is political instability or uncertainty, the economic environment is insecure and capital flees. The capacity of institutions to respond to political and economic challenges is important as well. Unfortunately, the lack of useful data serves as the constraint to quantitatively determine how weak, fragile or missing institutions induce capital flight.¹³ Meanwhile, the conventional analysis is that corruption reduces economic growth and investment. Recent studies find that there can be cases of economic growth despite corruption (see, e.g., Rock and Bonnett, 2004).

Political (or policy) uncertainty appears to have a positive link to capital flight (see, e.g., Lensink, Hermes and Murinde, 2000). Direct measures of political (or policy) uncertainty have been used, such as the number of labour strikes or the election of a left-wing party (see, e.g., Fatehi and Gupta, 1992; Gibson and Tskalotos, 1993), political crisis or the adoption of structural reform programmes (see, e.g., Chipalkatti and Rishi, 2001). Indirect measures have also been used such as proxies for political instability (see, e.g., Ndikumana and Boyce, 2003), the variance of the foreign exchange rate (e.g., Harrigan, Mavrotas and Yusop, 2000), or the level of tourist arrivals (see, e.g., Smit and Mocke, 1991). There are market-based indicators, too, like the market-risk perception of bankers (see, e.g., Collier, Hoeffler and Patillo, 2001). Regardless of the indicator used, the empirical results indicate that political risk and policy uncertainty are positively linked with capital flight. Among the revolving door papers, Boyce (1992), Chipalkatti and Rishi (2001) and Ndikumana and Boyce (2003) used political risk indicators, but they found a rather weak linkage between these indicators and capital flight.

13 Unlike cross country data, political indicators do not show much variation. There is also difficulty interpreting political indicators across countries. For instance, corruption in Indonesia is qualitatively different from corruption in the Philippines. Political indicators can be decisive factors in explaining capital flight.

Lastly, we highlight two important aspects of governance, namely economic governance (i.e., macro-level) and corporate governance (i.e., micro-level). Each reinforces the other. Weak, fragile or missing institutions of governance and administrative capacity create vulnerability to speculative attacks and financial and economic crises. Simultaneously, they make an economy incapable, even powerless to some extent, of responding to such attacks and crises. Thus, as pointed out, financial and economic crises are outcomes of a combination of institutional factors, on the one hand, and economic policy, on the other. At the micro-level, a similar argument can also be made. Weak corporate and financial governance create opportunities for private sector misbehaviour and mismanagement, including rent-seeking and risky behaviour. Indeed, they have all been linked to the recent economic and financial crises in Asia (see, e.g., Jomo, 1998; Haggard and McIntyre, 2001). On the whole, we argue that weak, fragile or missing governance structures and administrative capacity have a positive impact on capital flight. Unfortunately, useful indicators are difficult to obtain. Among the revolving door papers, none actually uses a governance indicator.

General setup of the revolving door model

Incorporating the direct and indirect linkages (\mathbf{Z}), the revolving door can be presented in the following general functional form:

$$KF = f(\text{CDET}, \text{SDET}, \mathbf{Z}) \quad (10)$$

$$\text{CDET} = f(KF, \text{RES}_{-1}, \mathbf{Z})$$

where KF stands for capital flight, CDET for net additions to external debt, SDET for external debt stock, and RES_{-1} for lagged of total international reserves representing the direct linkages on capital flight and external debt, respectively. \mathbf{Z} is a vector of variables. The general setup consists of simultaneous equations to allow for simultaneity in KF and CDET. Only CDET, KF, SDET, and RES are specified in Equation 1, but what goes into \mathbf{Z} depends on the country context. For now, we can specify the following structural form:

$$KF = \alpha_0 + \alpha_1 \text{CDET} + \alpha_2 \text{SDET} + \alpha_3 \mathbf{Z} + e_1 \quad (11)$$

$$\text{CDET} = \beta_0 + \beta_1 KF + \beta_2 \text{RES}_{-1} + \beta_3 \mathbf{Z} + e_2.$$

To test for the fuel linkages, the hypotheses are $\alpha_1 > 0$ and $\beta_1 > 0$; for the drive linkages, $\alpha_2 > 0$ and $\beta_2 > 0$. The signs of α_3 and β_3 depend on the chosen indicators.

Why was capital fleeing Southeast Asia?

In this section, the results on the revolving door model as applied to Indonesia, Malaysia, the Philippines and Thailand are presented. First to be discussed are the lists of determinants and data sources, and the analysis follows.

Capital inflows / external debt

Figures on net additions to external debt (CDET) are used for capital inflows (adjusted for the impact of foreign exchange rate fluctuations). CDET will be used to test for the fuel linkage on capital flight, while the external debt stock (SDET) will be used to test for the drive linkage. KF will be used to test for the fuel linkage with external debt, while the lagged of total international reserves (RES_{-1}) will be used to test for the

drive linkage. Note that both SDET and RES_{-1} can also be interpreted as risk indicators due to external debt and capital flight, respectively.

Economic performance

For economic performance, we will use the lagged economic growth rates (GROW). For the four Southeast Asian countries we study, $GROW_{-1}$ rather than differential growth rates is arguably more appropriate because the levels of economic performance in the region were simply impressive. From the 1980s until the 1997-1998 Asian financial and economic crises, the growth rates of Indonesia, Malaysia, and Thailand were among the highest in the world. Thus, there were strong expectations that the robust economic performance would continue in the 1990s. The Philippines was the exception among the four countries, because its growth was intermittent; it also had (historically) failed to sustain high growth rates for more than three to four consecutive years. But while the Philippines lagged in economic performance compared to the other three countries, on average, its growth rate was better than the average of the developing world as a whole.

The lagged of the current account deficit (CAD) can be used as an alternative indicator to $GROW_{-1}$. Note that GROW and CAD are positively correlated, especially in the context where economic growth is driven by exports that are import-dependent; that is, more rapid economic growth is associated with a larger CAD. At the same time, CAD_{-1} can also be interpreted as a risk indicator of the sustainability of economic growth in two ways. Firstly, a low CAD_{-1} would imply a “lower quality” of economic performance (via the performance of the export sector). Secondly, large and unsustainable CAD will suggest significant economic adjustments in the future, and so it can adversely affect future economic performance. Furthermore, when CAD is dominantly financed by capital inflows—hence economic growth is also financed by capital inflows—there is greater risk for sudden stops and reversals in capital flows, especially in an environment where capital is mobile, volatile, and (increasingly) short-term in nature.

We will not use other indicators for economic performance, such as inflation and budget deficits. We take the lead from Ndikumana and Boyce (2003) that these indicators would be problematic to use in the revolving door model. It is not advisable to use inflation, as most of the production inputs are imported. Thus, domestic inflation may partly consist of imported inflation. In fact, it is likely that domestic inflation is predominantly supply-driven, and not demand-driven (the latter reflects robust economic expansion). Using budget deficit is also not suggested, as debt servicing can distort government expenditure figures. It is particularly problematic when indebted countries have some form of automatic appropriations for principal and interest payments built into government budgets. On the other hand, budget surplus is problematic because governments can have (significant) off-budget accounts.¹⁴

Rates of return and risk

For the rates of return to capital, we will use either the differential rates of return (INT) or the change in differential rates of return (CINT), defined as the domestic deposit rate minus the United States 90-day Treasury bill interest rate. We will not include any adjustment for the depreciation of foreign exchange because the currencies of the four Southeast Asian countries we study were either on managed float, quasi-pegged or, as in

14 In an open economy framework, CAD and budget deficits (BD) have a positive correlation. The direction of causality is from BD to CAD. Thus, under flexible exchange rates, BD induces an upward pressure on the interest rate, causing capital inflows, an appreciation of the currency, and increasing CAD. Under the fixed exchange rate, on the other hand, BD stimulates aggregate demand, thereby increasing incomes or prices, and thus, increasing CAD. If the direction of causality is reversed, it is called ‘current account targeting’. In this case, CAD affects economic growth, in turn, it affects BD. There could also be bi-directional linkages between BD and CAD.

the case of Thailand before June 1997, fixed. In fact, the currency (or quasi) pegs enjoyed such a high degree of credibility during the 1990s that exchange rate risk was practically zero. Note that we use INT (or CINT) as indirect linkage indicators on both capital flight and external debt. A positive INT (or CINT) will lead to a decrease in capital flight, but not to an increase in external debt. Note that these indicators are risk variables, too.

We will use the lag of total international reserves (RES) or the accumulation of international reserves (CRES) to proxy for the foreign exchange risk. A large (discrete) reduction in RES_{-1} (i.e., a large $CRES_{-1}$) could imply the increased dollarization of domestic assets and capital flight, which would be the case during an economic or political crisis.

Politics and governance

Political and governance indicators are the most difficult to identify. For the four Southeast Asian countries, we reviewed country studies to be able to identify the appropriate variables to use. To improve the precision of our choice of variables, we interviewed key resource persons in each of the four countries.

We will use dummy variables for political and governance indicators. In particular, we will test for indirect linkages of financial liberalization (D_1), banking deregulation (D_2), the implementation of a distinctive domestic economic policy (D_3), and the 1997–1998 Asian financial crises (D_4) on capital flight and external debt. Note that these indicators are indirect political and governance indicators and are rough proxies. Data for direct political indicators, such as political freedom and civil liberties, do not show sufficient variation for each country over time. We expect that direct indicators for politics and governance will be not give useful statistical results, and so direct indicators were not used.

Data sources

Estimates of capital flight (KF) were computed using a modified residual method; that is, the net of officially recorded capital inflows and recorded foreign exchange outflows, adjusted for trade mis-invoicing (MIS) and unrecorded remittances (UNREMIT), or $KF = CDET + NKI - CAD - CRES + MIS + UNREMIT$, where NKI stands for net non-debt creating capital inflows (i.e., net direct and portfolio investments), and the other terms are as defined earlier. Beja (2006a) discusses estimates of capital flight from the four Southeast Asian countries covered in this paper. The data for the other economic indicators (e.g., domestic interest rates, 90-day US Treasury bill rate, exports and imports, GDP, and RES) were taken from the International Financial Statistics 2004 CD-ROM and the World Development Indicators 2004 CD-ROM. Data for the political and governance indicators were constructed after a review of the economic histories of the four Southeast Asian countries. Table 3 presents a summary of the dummy variables used in the regressions.

In order for the variables to have the same dimension and thus minimize estimation biases associated with the use of nominal values, CDET, SDET, KF, CAD, CRES, and RES are expressed as percentages of GDP (in 1995 constant prices). The other variables (e.g., INT and CINT) are expressed in percentages, as well.

Revolving door model of capital flight for Southeast Asia

Thus we present a revolving door specification for Southeast Asia as follows:

$$KF = \alpha_0 + \alpha_1 CDET + \alpha_2 SDET + \alpha_3 KF_{-1} + \alpha_4 EP + \alpha_5 RR + \alpha_6 D_1 + e_1 \quad (12)$$

$$CDET = \beta_0 + \beta_1 KF + \beta_2 RES_{-1} + \beta_3 CDET_{-1} + \beta_4 EP + \beta_5 RR + \beta_6 D_1 + e_2,$$

Table 3.
List of dummy variables

Dummy variable: D = 1; 0 otherwise	Indonesia	Malaysia	Philippines	Thailand
D ₁ = financial liberalization	1970–2002	1971–1982; 1991–2002	1985–2002	1991–2002
D ₂ = banking deregulation	1988–1994	N/A	1995–2002	1993–2002
D ₃ = distinctive economic policy	N/A	1971–1990	N/A	N/A
D ₄ = 1997–1998 Asian financial/economic crisis	1998–1999	1997–1998	1997–1998	1997–1998

where EP is an economic performance indicator (i.e., $GROW_{-1}$ or CAD_{-1}); RR stands for the rate of return and risk indicators (i.e., INT or CINT); and D_i signifies dummy variables (to proxy for other exogenous variables): D₁ for financial liberalization, D₂ for banking deregulation, D₃ for the implementation of a distinctive domestic economic policy, and D₄ for the 1997–1998 Asian financial and economic crises. In addition, we include interaction terms in the right-hand side of Equation 3. Though rudimentary, these interaction terms could capture the overlap between the dummy variables and direct linkages or the continued application of an economic policy, such as financial liberalization. As indicated in the previous section, $\alpha_1 > 0$ and $\beta_1 > 0$ capture the fuel linkages, while $\alpha_2 > 0$ and $\beta_2 > 0$ are for the drive linkages. Hysteresis on capital flight means $\alpha_3 > 0$, while on external debt, $\beta_3 > 0$. Note that the following are possible: $\beta_2 < 0$ and $\beta_3 < 0$. Also α_4 , α_5 , β_4 , and β_5 may be positive or negative, depending on the particular indicator used. The same applies for α_6 and β_6 . Finally, Equation 3 is estimated using Two Stage Least Squares (TSLS) procedure to address the simultaneity problem.¹⁵ And stepwise regression was followed; that is, after estimating the basic model, the statistically insignificant indicators were removed, and the revised model re-estimated. Moreover, OLS violations are tested and corrected.

Determinants of capital flight

Table 4 (below) summarizes the regression results on the determinants of capital flight for Southeast Asia. In the case of Indonesia, we find evidence of debt-fuel and debt-driven capital flight, although SDET was statistically weak. The results suggest a dollar of external borrowing can induce about 94 cents of capital flight (debt-fuel) each year. From an economic point of view, the result on the stock of external debt also suggests a further 3 cents of capital flight (debt-driven) was induced in subsequent years. Therefore, the total relationship between external debt and capital flight direct linkages was about one-to-one over the period 1970 to 2002. Of course, this result is not surprising considering that, among the four Southeast Asian countries we study, Indonesia had the highest external debt to GDP ratio (Table 1).

On the indirect linkages, the results suggest that robust economic performance (proxied by $GROW_{-1}$) was negatively correlated with KF. The results likewise suggest that the level of international reserves (RES_{-1}) and changes in interest rate differentials ($CINT_{-1}$) were negatively correlated with KF. We did not find statistical evidence of capital flight hysteresis. But we found that the dummy for the 1997–1998 Asian financial and economic crises (D₄) was statistically significant, revealing that indeed the crisis was devastating to Indonesia.¹⁶

In the case of Malaysia, we found evidence of debt-fueled capital flight. However, there was no debt-driven capital flight. Thus, for every dollar of external borrowing, 55 cents of capital flight (debt-fueled) was

15 The instruments are $CDET_{-1}$, KF_{-1} , $RES_{-(i+1)}$, and XM_{-i} , where XM is exports plus imports. XM is also expressed as a percentage of GDP. Two Stage Least Squares or Three Stage Least Squares can be used in the regression, but the results are qualitatively similar, though the latter could have lower standard errors.

16 D₄ = 1 from 1998 to 1999; and D₁ = 0 otherwise (Table 3).

Table 4
Determinants of capital flight for Southeast Asia

	Indonesia	Malaysia	Philippines	Thailand
Constant	-6.47 [-3.25]***	15.20 [6.15]***	-4.22 [-0.86]	6.21 [2.58]***
CDET	0.94 [9.15]***	0.55 [4.75]***	0.40 [1.44] a	0.12 [1.34]a
SDET	0.03 [1.35] a	0.03 [0.95]	0.12 [2.38]**	0.11 [2.53]***
GROW ₋₁	-0.44 [-2.48]***		-0.86 [-2.38]**	-0.72 [-6.11]***
CAD ₋₁		-0.32 [-2.21]**		
INT		-0.36 [-0.94]		
CINT	-0.12 [-1.68]*			
RES ₋₁	-0.24 [-1.77]*		-0.60 [-3.30]****	-0.23 [-2.37]**
CRES ₋₁		-0.29 [-1.86]*		
D3		8.69 [4.21]***		
D4	7.92 [2.92]***			
CDET*D ₁			0.64 [1.73]*	
CDET*D ₄				1.09 [1.77]*
Adj. R ₂	0.89	0.64	0.40	0.78
DW	1.64	1.94	1.87	1.81
F-Stat	43.55	18.77	4.48	14.53
p-value	0.00	0.00	0.00	0.00

Notes:

- (1) *** = 1 per cent; ** = 5 per cent; * = 10 per cent; a = 15 per cent (i.e., weakly significant). Numbers in braces are t-values.
 - (2) D₁ = financial liberalization; D₂ = banking deregulation, D₃ = NEP; and D₄ = 1997–1998 Asian financial and economic crises.
 - (3) Alternative indicators (column 1 in Table 4) were used in the regression. For instance, when GROW₋₁ was found to be statistically insignificant, it was replaced with CAD1, as in the Malaysian case. Only the best regression results are presented in the table.
 - (4) For Indonesia, we estimated a model with decade dummies (e.g., Y₇₀ and Y₈₀ for the 1970s and 1980s, respectively):

$$\text{KF} = -9.68 + 0.92 \text{CDET} + 0.05 \text{SDET} + 0.61 \text{GROW-1} + 0.24 \text{RES-1} - 0.03 \text{CINT} + 1.50 \text{D4}$$

$$\begin{matrix} (-3.54)*** & (9.54)*** & (2.21)** & (3.40)*** & (1.74)* & (-0.44) & (3.53)*** \\ + 0.35 \text{Y70} + 2.28 \text{Y80} \\ (0.29) & (2.09)** \end{matrix}$$
- Adj. R₂ = 0.90 DW = 1.69 F-Stat = 38.83 (0.00)***

induced each year over the period 1970 to 2002.¹⁷ Among the four Southeast Asian countries, Malaysia had the lowest debt-fueled capital flight, which is consistent with its external debt to GDP ratio (Table 1).

On the indirect linkages, the results suggest that robust economic performance (proxied by CAD_{-1}) was negatively correlated with KF. Because Malaysia is a small country, it logically relies on its export sector to sustain its robust economic performance. The results also suggest that changes in the level of the international reserves were negatively correlated with KF. We found statistical evidence that the New Economic Policy (NEP) (D_3) induced more capital flight, but its interaction with CDET was not statistically significant.¹⁸ Indeed, this finding confirms the contention of some scholars that the NEP (along with its associated programmes) is an important explanation for capital flight during the 1970s and 1980s (see, e.g., Jomo, 1990; Khoo, 1995, 2000).

In the case of the Philippines, we found evidence of debt-fueled and debt-driven capital flight, although CDET was found to be statistically weak. In fact, the results corroborate the findings of Boyce (1992). In our case, however, the results suggest that for every dollar of external borrowing, about 40 cents of capital flight (debt-fueled) was induced in the pre-liberalization period, but the level reached US\$1.04 during the liberalization period, which implies that there were more avenues for capital to flee. Also, the increasing stock of external debt further induced an additional 12 cents of capital flight (debt-driven). Thus we found at least 52 cents of external debt ending up as capital flight each year, but during the liberalization period, there were about US\$1.15 of capital flight each year. This result is very alarming, as it suggests that more capital was flowing out of the country, and consequently a hollowing out of the Philippine economy was taking place.

On the indirect linkages, the results suggest that robust economic performance (proxied by $GROW_{-1}$) was negatively correlated with KF. The results also suggest that the level of international reserves (RES_{-1}) was negatively correlated with KF. We did not find statistical evidence of capital flight hysteresis. None of the dummy variables and the interaction terms was found to be statistically significant, except for the interaction term for financial liberalization (D_1) and CDET.¹⁹ The result revealed an additional 64 cents of capital flight for each dollar of external debt. Thus deregulation and financial liberalization resulted in more opportunities for capital flight.

Finally, for Thailand, we also found evidence of debt-fueled and debt-driven capital flight. As in the case of the Philippines, the result on CDET was found to be statistically weak. Thus each dollar of external borrowing induced about 12 cents of capital flight each year. In addition, a further 11 cents of capital flight was due to external debt accumulation. Therefore about 23 cents of capital flight was induced by external borrowing each year.

Lastly, results confirmed that robust economic performance (proxied by $GROW_{-1}$) is negatively correlated with KF. In addition, the results confirmed that the level of international reserves (RES_{-1}) was negatively correlated with KF. We also did not find statistical evidence of capital flight hysteresis. The

17 Although the regression results indicate that SDET is not statistically significant, it can still be argued that, from an economic point of view, there might be an additional 3 cents of capital flight in subsequent years due to external debt accumulation.

18 $D_3 = 1$ in 1971-1990; and $D_3 = 0$ otherwise (Table 3). The NEP ended in 1990.

19 $D_1 = 1$ from 1985 to 2002; and $D_1 = 0$ otherwise (Table 3). Deregulation and financial liberalization programmes started in 1985. During the Ramos administration (1992-1998), the Government implemented a more aggressive liberalization programme, opening the capital account in 1993. The banking sector was deregulated in 1995.

dummy variables and their interaction terms were not statistically significant except for the interaction of the 1997–1998 Asian financial and economic crises (D_4) and CDET. The results suggest that US\$1.09 for every dollar of external borrowing ended up as capital flight.²⁰ From an economic point of view, we have 12 cents of CDET was fuelling capital flight between 1970 and 2002, except in 1997 and 1998 when about US\$1.20 of CDET was fuelling capital flight.

Determinants of external borrowing

Table 5 (below) summarizes the results on the determinants of external borrowing for Southeast Asia. In the case of Indonesia, we found evidence of flight-fueled external borrowing. A dollar of capital flight induced 56 cents of additional external borrowing is undertaken each year. But the results suggest that there was no flight-driven linkage in Indonesia.

For the indirect linkages, we found that Indonesia's economic performance (proxied by $GROW_{-1}$) has a negative correlation with CDET. This result suggests that with robust economic growth, Indonesia can rely more on its own domestic income (domestic savings) than on external funds. This finding is also consistent with the result for RES_{-1} , which suggests that a high level of international reserves (due to, say, accumulation of foreign exchange as a result of robust growth via exports) enabled Indonesia to rely less on external funds. The result for interest rate differentials (INT) was not statistically significant with regard to external borrowing. Of course, as an oil-producing country, Indonesia can afford to generate capital by exploiting this natural resource. The coefficient on the dummy for banking deregulation (D_2) showed a negative correlation with CDET, implying that less external borrowing was undertaken during the banking deregulation period.²¹

This result for Indonesia might be surprising at first glance. But a closer review of the banking deregulation programme will reveal that the borrowing pattern actually shifted more to domestic sources rather than external sources, particularly with Bank Indonesia providing the credit instruments or certificates. However, the result on the interaction of D_2 and KF revealed that partly because of capital flight (during the same period), there was increased external borrowing. Thus a dollar of capital flight resulted in about 39 cents of external borrowing each year during the deregulation period, which is further evidence of the flight-fueled process. These seemingly contradictory results can be rationalized as evidence of the dynamics of capital flows in the context of free capital movements in Indonesia.

In the case of Malaysia, we found evidence of flight-fueled external borrowing. That is, each dollar of capital flight induced 36 cents of external borrowing is undertaken each year. The results suggest that there was no flight-driven external borrowing (which is actually consistent with the analysis of the results in Table 4).

For the indirect linkages, robust economic performance (proxied by CAD_{-1}) was positively correlated with CDET. As pointed out earlier, Malaysia relies heavily on its export sector. But robust economic growth (via the export sector) was financed by external borrowing. The results suggest that for every dollar of CAD, Malaysia acquired about 45 cents of external debt. The level of international reserves (proxied by RES_{-1}) was positively correlated with CDET, which suggests that larger reserves improve Malaysia's credit rating so that it was able to borrow more.

20 $D_4 = 1$ from 1997 to 1998; and $D_4 = 0$ otherwise (Table 3).

21 $D_2 = 1$ in 1988-1994; and $D_2 = 0$ otherwise (Table 3).

Table 5.
Determinants of external borrowing for Southeast Asia

	Indonesia	Malaysia	Philippines	Thailand
Constant	5.77 [3.82]***	-2.00 [-0.74]	-1.79 [-0.77]	19.02 [2.86]
KF	0.56 [3.52]***	0.36 [2.41]**	0.68 [3.17]***	0.68 [1.26]a
RES ₋₁	-0.33 [-4.30]***	0.05 [0.30]	0.60 [2.98]***	-0.73 [-3.59]***
CDET ₋₁				0.31 [1.60]*
GROW ₋₁	-0.24 [-2.06]**			-0.90 [-1.57]*
CAD ₋₁		0.45 [4.90]***	0.33 [1.76]*	
INT	0.01 [0.17]			
D ₁		2.44 [1.53]a		
D ₂	-2.90 [-1.85]*			
D ₃		5.18 [2.65]***		
D ₂ *KF	0.39 [1.87]*		1.05 [4.42]***	
D ₄ *KF		-1.38 [-2.82]***		
D ₂ *INT				1.61 [2.54]***
Adj. R ₂	0.74	0.68	0.55	0.40
DW	1.94	2.02	1.91	1.64
F-Stat	16.15	12.03	7.68	6.93
p-value	0.00	0.00	0.00	0.00

Notes:

- (1) *** = 1 per cent; ** = 5 per cent; * = 10 per cent; a = +15 per cent (i.e., weakly significant). Values in brackets are t-values.
- (2) D₁ = financial liberalization; D₂ = banking deregulation, D₃ = NEP; and D₄ = 1997–1998 Asian financial and economic crises.
- (3) As in Table 4, alternative indicators (column 1) were used in the regressions. Only the best regression results are presented in the table.

The results for the dummy variables are interesting, too. For instance, financial liberalization (D₁) was positively correlated to CDET, which is consistent with what scholars have pointed out: access to external funds was closely controlled or monitored by the authorities in the late 1980s (e.g., Caprio, Atiyas and Hanson, 1994; Caprio, Honohan and Stiglitz, 2001; Hamilton-Hart, 2002).²² Moreover, we found that the dummy for the NEP (D₃) had a positive correlation with CDET.²³ Again, this finding confirms the earlier analysis of scholars that the Malaysian Government resorted to external borrowing to finance the NEP and its associated programmes (Jomo, 1990; Khoo, 1995, 2000). Another interesting result is the interaction

22 D₁ = 1 from 1971 to 1982 and from 1991 to 2002; and D₁ = 0 otherwise (Table 3).

23 D₃ = 1 from 1971 to 1990; and D₃ = 0 otherwise (Table 3). The NEP ended in 1990.

of D_4 and KF, which reveals a negative correlation, which suggests that policies implemented during the 1997–1998 Asian financial and economic crises (such as capital controls and other counter-cyclical policies) reduced capital flight.²⁴

In the case of the Philippines, we found evidence of flight-fueled and flight-driven external borrowing. Again, our findings corroborate the results of Boyce (1992). In our case, the results suggest that each dollar of capital flight induced about 68 cents of borrowing each year. The results for the flight-driven linkage suggests that a further 60 cents of borrowing took place. Additional flight-fueled borrowing was revealed by the positive correlation of the interaction of banking deregulation (D_2) and KF.²⁵ This result implies that, in the case of the Philippines, banking deregulation resulted in more external borrowing. Overall, the direct linkages indicate US\$1.73 of borrowing for each dollar of capital flight. Interestingly, we found no statistical evidence of external borrowing hysteresis, which may be controversial since the Philippines has had a history of borrowing to finance debt services. Arguably, the level of international reserves (RES_{-1}) captures this dimension of the political economy of debt management in the country.

Among the indirect linkages, the results show that economic growth performance (proxied by CAD_{-1}) was positively correlated with CDET. This result is not surprising since the Philippines has had a low level of domestic savings relative to its Southeast Asian neighbours. We further argue that this result is consistent with the “twin” deficits argument; that is, budget deficits in the Philippines led to current account deficits, which in turn were financed by external borrowing.

In the case of Thailand, we found evidence of flight-fueled external borrowing; but in contrast to the Philippines, the coefficient on KF was statistically weak. The results suggest that for a dollar of capital flight, 68 cents of external borrowing was undertaken. The results suggest that there was no flight-driven linkage in Thailand. In fact, a high level of international reserves (RES_{-1}) reduced the demand for external borrowing.

Finally, neither the dummy variables nor the interaction terms were found to be significant except for the interaction of financial liberalization (D_1) and interest rate differentials (INT), suggesting that financial liberalization resulted in more borrowing and that it was encouraged by the prevailing high domestic interest rates in the country.²⁶ Indeed, a wide interest rate differential prevailed in Thailand in the 1990s and can partly explain why the capital account (especially private external borrowing) ballooned to alarming levels (see, e.g., Ammar, 2000). This result can also be interpreted to mean that financial liberalization was not bringing about the anticipated benefits (e.g., lower interest rates and competitive financial markets). In fact, the result on $CDET_{-1}$ indicates hysteresis: a dollar of previous external debt led to further external borrowing of about 30 cents. On the indirect linkages, the results show that robust economic performance (proxied by $GROW_{-1}$) is negatively correlated with CDET.

24 Jomo K.S. pointed out that the impact of the 1998 capital controls might only be a coincidence since by late 1998, the conditions had improved both in Malaysia and globally (interview September 2004). Kaplan and Rodrik (2001) stressed that the introduction of the 1998 capital controls gave the Malaysian Government greater autonomy in economic policy, especially in managing capital flows. In effect, the innovation provided the country with a tool for minimizing the adverse impacts of the crisis and regaining control of the economy.

25 $D_2 = 1$ from 1995 to 2002; and $D_2 = 0$ otherwise. The banking sector was deregulated in 1995.

26 $D_1 = 1$ from 1991 to 2000; and $D_1 = 0$ otherwise (Table 3). Full financial liberalization was achieved by 1991; the capital account was opened in late 1990. The Bangkok International Banking Facility (BIBF) was introduced in 1993 in the hope that it would encourage competition among the domestic commercial banks and give domestic enterprises greater and cheaper access to finance. BIBF was also expected to facilitate an “out-out” flow of finance (i.e., borrowing from abroad and on-lending abroad). It turned out, however, that the BIBF encouraged the “out-in” flow of finance (i.e., borrowing from abroad and on-lending domestically) and lending became predominantly short-term.

Therefore, the above results suggest the need for decisive policy action. For one, there is a need for better domestic management of external debts. The responsibility of the government is to make sure that external debts benefit its domestic residents—not that they enrich a few individuals. Thus, a government that misuses funds is itself liable for the external debt and must not impose this burden on the public. Creditors must also share responsibility in the management of external debts through the application of sound lending policies or some form of involvement in the effective use or disbursement of funds. In cases where external borrowings were actually misused, or proof cannot be presented to demonstrate that the funds were actually used to improve the social conditions of the domestic residents, or if borrowed funds cannot be traced, it can be concluded that those funds were diverted to line the pockets of a few individuals, and more likely, as capital flight. If creditors ignore, or pretend not to see, that borrowed funds were used to benefit only the elite, or if they do not act to redress the situation, they too are accountable for the country's indebtedness. In such cases, domestic residents must question the legitimacy of external debts and the rationale for continuing to honour such debts that society, as a whole, does not benefit from. Then some form of debt relief should be demanded from the creditors. Or alternative debt-relief programmes should be explored by both the government and the creditors, such as interest-rate payment cancellations and rescheduling of debt principal—though in cases where borrowed funds are odious in nature, amortizations must be cancelled—so that society will not any more bear the adverse consequences of external indebtedness.

The results on the indirect linkages suggest the importance of sound macroeconomic management. Countries unable to sustain economic growth, because of poor macroeconomic policies or uncompetitive economic sectors, will discourage domestic and foreign investors. This can lead to conditions conducive to capital flight. We therefore argue that there is a need for countries to maintain effective control of the direction and management of their economies. Because of these macroeconomic linkages, there is also a need for a complementary policy mix covering, but not limited to, interest rate, exchange rate, and trade.

The results on the indirect linkages furthermore suggest the importance of solid macro-organizational foundation. Countries must therefore have policies to strengthen the institutional effectiveness of the government, covering financial governance and administrative capacity. It entails the development of the financial sector through, for instance, deepening of banking and capital markets. It is important to have a financial system that is able to mobilize funds and a capital market that facilitates the transfer of internal and external savings to support capital accumulation in the country. In addition, it is important to have a robust and competitive real sector that produces goods and services both for the domestic and global markets, at the same time, production that is progressively upgrading on the industrial ladder.

Obviously, the above points complement each other. The government must be brought back to the centre stage of public policy. In the management of the macro economy, the government must emphasize domestic responsibility, especially in setting economic goals and a vision of economic development. In addition, the government must choose policies that reflect domestic characteristics and contexts (e.g., choosing an appropriate monetary policy to encourage domestic investment). It must also be embedded in society to be able to respond to domestic challenges, including the provision of social safety nets; yet remain autonomous so it can also withstand external challenges that are counter-productive to realizing robust economic performance and strengthening macro-organizational fundamentals (e.g., putting restraints on speculative capital flows, managing external borrowing, and monitoring economic activities, especially unproductive ones). Likewise, the government must promote and enable relationships to support the realization of macroeconomic and macro-organization goals (e.g., enabling and allowing government-business cooperation and more meaningful participation of civil society).

The results reinforce the importance of effective domestic and international involvement and coordination in the management of capital flows. If external borrowing flows out as capital flight, and if capital surges bring about financial and economic fragility, increased risk, or reduced effectiveness of macroeconomic policies, there is a need to intervene and institute some form of capital flow management (see, e.g., Epstein, Grabel and Jomo, 2003; Chang and Grabel, 2004). But the goal for intervention is not to revert to financial repression—it is to regain control over macroeconomic policies and the direction of development in general. Such tools and related techniques would enable developing countries to retain (as well as attract) capital in the domestic economy, and to use the capital towards achieving sustained economic growth and development. For example, capital management techniques can be used to direct capital flows to the tradable or productive sectors to bring about sustainable industrialization and push the economy to a higher level of production; they can also be used to affect the volume and composition of capital formation. Indeed, economic deregulation, financial liberalization, and globalization, and the processes that go with them also imply that the institutions for governance and the mechanism for administrative controls and regulations are most needed and have to be in place (and should therefore be enhanced) in order to realize a smooth adjustment process. This goal is especially important to Indonesia, Malaysia, the Philippines, and Thailand today.

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Final thoughts

This paper has analyzed the reasons why capital was fleeing Indonesia, Malaysia, the Philippines, and Thailand by employing a revolving door model of capital flight. Two kinds of explanations were presented: indirect and direct linkages between capital flight and external debt. The first explanation posits that there are indirect linkages between capital flight and external debt, holding that capital flight and external borrowing occur because of exogenous factors independent of each other. For example, macroeconomic mismanagement creates a risky and uncertain economic environment, and capital flight is a response to such conditions. In the same fashion, macroeconomic mismanagement creates conditions that lead to even more external borrowing. And external debt can arise from corruption and related factors. It was pointed out that such explanations cannot account for the close year-to-year correlation between capital flight and external borrowing. While the second explanation posits direct linkages between external debt (capital inflows) and capital flight, holding that external debt (capital inflows) provides the fuel and/or motivation for capital flight,

and vice versa. For instance, external borrowing can be transformed from a capital inflow to capital flight that ends up in some private account abroad; capital inflows have “liquidity” effects. Moreover, as external debt accumulates, the mounting burden of debt service and the possibility of a default provide a signal for increased economic (or country) risk, to which capital holders respond by pulling out their capital from the country; thus, total external debts have “stock” effects. Furthermore, capital flight from a country can re-enter the same country in the form of external borrowing, spinning the revolving door pattern. As capital flight continues, the country will experience a reduction in available resources and be forced to incur external debt to replenish lost funds. Then the following seven hypotheses were tested:

- Hypothesis 1:** High rates of return to capital within a country lower capital flight.
- Hypothesis 2:** High and sustained economic growth within a country reduces capital flight.
- Hypothesis 3:** Deregulation and financial liberalization increase both capital flight and external borrowing.
- Hypothesis 4:** An increase in capital inflows from external borrowing increases capital flight (debt-fueled capital flight).
- Hypothesis 5:** Higher stock of external indebtedness increases capital flight (debt-driven capital flight).
- Hypothesis 6:** An increase in capital flight increases external borrowing (flight-fueled borrowing).
- Hypothesis 7:** An increase in the stock of capital flight decreases international reserves and increases external borrowing (flight-driven borrowing).

The results confirm the fourth and fifth hypotheses in the list. The results also confirm the sixth and seventh hypotheses, but in the case of Malaysia, flight-driven debt was not confirmed. Therefore, we conclude that external debt fuels capital flight (and vice versa) and increased indebtedness drives capital flight.

The results likewise confirm the first and second hypotheses. In particular, indicators for economic performance and the rates of return to capital show that the indirect determinants are relevant to Southeast Asia. In particular, robust economic growth or positive interest rate differentials, or both, would reduce capital flight. Therefore the results confirm that there are indirect linkages between external borrowing and capital flight. But economic performance can have different impacts on external borrowing, depending on the specific country context.

The results for policy dummies for deregulation and financial liberalization, and their interaction with capital flight and external debt, lend more support to our results for the direct linkages (particularly, the “fuel” type linkages), but again, depending on the specific country context. This result confirms the third hypothesis. It also reinforces our findings on the revolving process of external borrowing and capital flight.

Even from a qualitative juxtaposition of the data from historical events in Southeast Asia, it can be concluded that trends in capital flight are linked to some extent to either economic or political shocks, or both. Similarly, the trends are linked to policy changes, thus again the results confirm the third hypothesis.

Putting the results together, it can be concluded that the revolving door nature of capital flight is a critical dimension to understanding how capital scarcity, external indebtedness, and consequently, the cur-

tailment of economic growth, affect the sustained development of Southeast Asia. But in general, when developing countries are already lagging behind on the economic ladder, capital flight pulls them further down. This concern also applies to Indonesia, Malaysia, the Philippines, and Thailand. In a way, capital flight kicks away the ladder of economic growth and development. Perhaps it is time to revisit the importance of having decisive policies to strengthen macroeconomic management and macro-organizational fundamentals, and to move away from unfettered capital flows.

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