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OCCASIONAL PAPER SERIES

**Why Capital Was Fleeing Southeast
Asia? Evidence from Indonesia,
Malaysia, Philippines, and Thailand**

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Abstract

The paper revisits the hypothesized direct linkages between two types of capital flows: external debt and capital flight. Do the linkages exist in the cases of Indonesia, Malaysia, the Philippines, and Thailand? The results indicate that, indeed, large sums of capital flowed in and out of these four countries in a revolving door manner. The implications of the results suggest the need for enhanced domestic management and international coordination in capital flows (i.e., external debt and capital flight) and the importance of sound domestic macroeconomic management and solid macro-organizational foundations. Finally, the results lend support to the case for challenging the legitimacy of a substantial portion of these countries' external borrowings and the rationale for continuing to service such debts.

1. Introduction

Scholars have observed that capital has in fact been flowing out of the developing countries and going into the developed countries (see, e.g., Lucas 1990; Tornell and Velasco 1993; Alfaro *et al.* 2003; Epstein 2005). Even when there are capital inflows into the developing countries, most of the funds come increasingly in the form of portfolio and external borrowings. Still, the net flow remains out of the developing countries.

External debt is an important concern to Southeast Asian countries. For instance, in the 1990s, Indonesia, Malaysia, the Philippines, and Thailand all 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 in the 1980s (see, e.g., Beja 2006). Moreover, the empirical evidence suggests that increased indebtedness is positively linked to increased intensity and frequency of debt-related economic cycles (see, e.g., Leung 2003). Mounting external indebtedness and the crises that it creates result in capital flight (see, e.g., Lessard and Williamson 1987; Boyce and Ndikumana 2001; Epstein 2005). In turn, the capital flight aggravates macroeconomic conditions, further inducing capital flight. The reality is that, today, capital flight persists, and that it has extraordinary impacts on economic growth and development.



In this paper, the linkages between external debts and capital flight are analyzed using a revolving door model. Briefly, this model posits direct and indirect linkages between external borrowing and capital flight. The first linkage posits some direct causal effects in which external debt provides the fuel and/or motivation for capital flight, and vice versa. External borrowings, for instance, are transformed - sometimes instantaneously - from capital inflows into capital flight, ultimately ending up abroad, say, as private foreign assets. At the same time, as external debts accumulate, the mounting burdens of debt servicing and the possibility of a debt default signal increased risks, motivating capital to flee. 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. The overall result is a revolving process of capital flight and debt accumulation. In contrast to the first linkage, the second type of linkage - the indirect linkage - posits that capital flight and external borrowing occur because of overlapping sets of exogenous factors but not causally linked to each other. Macroeconomic mismanagement, for instance, can cause capital flight and external borrowing. Yet the indirect linkage suggests that the former does not cause the latter, and vice versa. The analysis that is presented in this paper using for the cases of Indonesia, Malaysia, the Philippines, and Thailand, indeed, confirms a revolving door process between external borrowing and capital flight.

The concept and measurement of capital flight are discussed in Part 2 of the paper. Then, the concept of revolving door capital flows is discussed, followed by the empirics of the model. The analysis on why capital was fleeing Southeast Asia is presented in Part 5. Individual country results are presented and the section is concluded with a summary of key results. Implications are discussed. The last section of the paper concludes the discussions.

2. Concept of Capital Flight

Capital flight is not a new issue. Kindleberger (1987), for example, document capital flight from Europe and the United States in the early twentieth century and even earlier. In the 1930s, for instance, concerns about capital flight from Europe to the United States was a subject of debates, then also later at the Bretton Woods Meetings in

1944 (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) - evidence that capital flight affects developed countries as well.

But today, capital flight is a particularly important concern for developing countries for at least three reasons, the first being capital scarcity. Basically, capital flight aggravates the capital scarcity problem, 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. Back then, the two foci of research were 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 (see, e.g., Lessard and

Williamson 1987); and scholars wanting to examine whether or not external borrowing in fact propels capital flight, and vice versa (see, e.g., Boyce 1992).


After the debt crisis of the 1980s, capital flight became less of an issue. 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 in this paper perhaps with the possible exception of Malaysia if a 50 percent threshold is used as benchmark (Table 1). Indeed, recent experience suggests that developing countries are again becoming vulnerable to debt-related crises. The 1997-1998 Asian crises, for instance, were partly rooted in the accumulation of external debts, although they were private external debts.

Table 1: Decadal Average of Shares of Total External Debt to GDP

Country	1970s	1980s	1990s	2000s
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
Region				
Asia	0.21	0.29	0.38	0.47
Latin America	0.21	0.35	0.60	0.47
Africa	0.19	0.42	0.83	1.05


Source of data: World Bank (2005)



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 capacities. The economic environment became 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), more frequent (see, e.g., Kaminsky and Reinhart 1999), and 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.

Moreover, capital flight can also mean lost resources for debt servicing, 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 elites, the rest of society carries a disproportionate burden of the external debt. In fact, the elites are often able to avoid these costs because they can move abroad as well as transfer their wealth to safe havens.

In short, the recent interest in capital flight stems from both old and new issues. 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.

There is one point of clarification before continuing on with the discussion, and that is the difference between normal capital outflow and capital flight. Both these flows are movements of capital across countries. But their similarity stops there. Capital outflow represents a portfolio decisions typically undertaken to exploit favourable returns to capital, among other advantages. Capital flight, in contrast, represents a decision to take capital out and take refuge in another country in order to avoid social controls. Normal capital outflows are like two-way streets, where the traffic of capital goes in both directions and is presumably recorded in official statistics. Capital flight is more like a one-way street, in which the traffic is moving out and typically remains unrecorded. Sometimes, capital flight is financed by capital inflows. 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: 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 where the environment that has been deregulated and financially liberalized. Any movement of capital, no matter what the purpose is and the consequences to the economy, is considered legitimate and normal. If there are unrecorded capital flows, they are to be considered integral to the system that market processes can correct.

Such a perspective ignores, and indeed does not see, the social and economic impacts of capital flight. These impacts can be significant, and are shouldered by the majority in society (i.e. the poor), and have long lasting impacts. Therefore, while both capital outflow and capital flight share a common feature, capital flight, in fact, has unique characteristics. It may be that affected countries 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 defined the movement of funds from resource-scarce developing countries to avoid social controls. Resource scarcity means the lack of financial capital and infrastructural underdevelopment, with infrastructure encompassing both physical and social capitals. A country with a low level of infrastructural development is constrained to attract external funds or unable to fully exploit the potentials of additional resources and is likely to remain a resource-scarce country. Social control is the actual or potential (including formal and informal) regulations on resources.

The definition raises fundamental problems: there are many ways to operationalize capital flight, and consequently, result in different estimates (see, e.g., Beja 2005). In this paper, capital flight (KF) is measured using the residual method; that is, net unrecorded capital outflow, or the residual between officially recorded sources and uses of funds. Recorded sources of funds are net additions to external debt (CDET) and net non-debt creating capital inflows (NKI). NKI is the sum of net foreign direct investments (FDI), net

portfolio investment equities plus other investment assets (PORT). Recorded uses of funds are the current account deficits (CAD) and the accumulation of international reserves (CRES). Equation 1a includes the relevant foreign exchange flows, thus

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

Positive KF means capital flight, while negative KF means “reverse” capital flight. As in the literature, KF has a positive notation because capital flight is a form of foreign assets accumulation (see, e.g., Vos 1992). Other transactions like illegal capital flight and money laundering can not be measured. In addition, capital flight can take place within normal processes like the banking system, which makes a complete estimation impossible. Still, Equation 1a obtains an indicative measure of the magnitude of capital flight. It is *prima facie* evidence of capital flight.

Data used in the calculations have errors, and so adjustments are needed. The first set of adjustments concerns the financial accounts. In particular, an adjustment is needed when external debts were misrecorded and/or when central banks make corrections on the data. Also, an adjustment is needed to account for the impact of exchange rate fluctuations on the stock of external debt (DEBT). Long-term external debts (LTDEBT) are normally denominated in hard currencies, and exchange rate fluctuations affect the US dollar (US\$) values of debts, in turn, affect CDET. A way to calculate the beginning-of-year adjusted external debt (ATTD) that accounts for the foreign exchange rate fluctuations is as:

$$(2) \quad \begin{aligned} ATTD_{t-1} = & \sum_i \alpha_{i,t-1} LTDEBT_{t-1} \frac{FX_{i,t}}{FX_{i,t-1}} + \sum_j \beta_{j,t-1} LTDEBT_{t-1} \\ & + IMF_{t-1} \frac{SDR_t}{SDR_{t-1}} + STDEBT_{t-1} \end{aligned}$$

where α_i is the proportion of long-term debts 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 US\$, multiple, and other currencies; FX is the exchange rate of the hard currencies to US\$; IMF is use of IMF credits; SDR is the exchange rate between Special Drawing Rights and US\$; and STDEBT is short-term

external debt. Subscript -1 denotes the end of last year (hence, the beginning of the current year).

All things the same, an appreciation in a hard currency relative to US\$ reduces $FX_i/FX_{i,-1}$ so, too, $ATTD_{-1}$, and $DEBT$ must be smaller. The adjustment factor is thus,

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

If the Japanese yen appreciates relative to US\$, all things being equal, $ATTD_{-1}$ must be smaller, and $ADEBT$ must be negative. $CDET$ becomes an inaccurate estimate of the net additions to external indebtedness. The change in the adjusted external debt ($CDET_{ADJ}$) is:

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

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

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

Likewise, adjustments are needed to account for the discrepancies in the recorded foreign direct investments (FDI) and portfolio equities investments plus other investment assets (PORT). Also, the impact of the foreign exchange fluctuations on FDI and PORT are calculated. The procedure is similar to that of $CDET_{ADJ}$. After the discrepancies in the FDI and PORT data between source-country and host-country are determined, the impacts of the foreign exchange fluctuations on FDI and PORT are calculated. Thus the adjusted $CDET$ ($CDET_{ADJ}$) and the adjusted PORT ($PORT_{ADJ}$) are obtained, and thus the adjusted NKI (NKI_{ADJ}). Equation 1a is re-estimated as follows:

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

The second set of adjustments to Equation 1a concerns the current accounts. An adjustment is needed to account for trade misinvoicing. Import overinvoicing and export underinvoicing are typical avenues for capital flight. Import underinvoicing (or technical smuggling) is exploited to evade customs duties and trade regulations, but conceptually, it is a form of reverse capital flight in that unrecorded flows of foreign exchange occur. "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 export performances that result in invoice padding. In any of these cases, the trade balance is inaccurate.

The magnitude of trade misinvoicing is obtained by comparing trade data between trade partners. The first step in the procedure is to compute export misinvoicing (DX) and import misinvoicing (DM) for a country in its trade with major industrialized-country trade partners,

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

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

where PX is the industrialized-country trade partner's imports from country-i, and PM is the industrialized-country trade partner's exports to country-i; X and M are country-i's exports to and imports from industrialized-country trade partners, respectively; and CIF is an adjustment for the cost of freight and insurance. Positive values of DX mean net export underinvoicing and negative values mean net export overinvoicing. Positive values of DM mean net import overinvoicing and negative values mean net import underinvoicing.

To estimate the global export and import trade discrepancies of country-i (MISX and MISM, respectively), DX and DM are multiplied with the reciprocals of the shares of all industrialized-country trade partners to country-i's total exports (X_INDUS) and total imports (M_INDUS), respectively:

$$(6a) \quad MISX = \frac{DX}{X_INDUS}$$

$$(6b) \quad MISM = \frac{DM}{M_INDUS}$$

Then MIS is obtained as the sum of MISX and MISM, and it added to CAD.

When developing countries have sizeable overseas workers, income remittances (REM) become significant items in their current accounts. When informal remittances are substantial, an adjustment on CAD is needed. Unrecorded income remittances (UNR) is

calculated using REM and an index for informal remittances (UNRI); that is,

$$(7) \quad UNR = REM * UNRI;$$

and it is added to CAD. The calculated adjustments (MIS and UNR) obtain the adjusted CAD (CAD_{ADJ}).

Finally, adjustments on CRES may be obtained, covering the impact of foreign exchange fluctuations on the dollar valuations of the international reserves and other asset holdings (e.g., gold) of the central bank.

$$(1c) \quad KF_{ADJ} = CDET_{ADJ} + NKI_{ADJ} - CAD_{ADJ} - CRES_{ADJ},$$

which is called total capital flight (TKF). Real capital flight (RKF) is calculated next using the United States producer price index (PPI) in 1995 prices, as deflator,

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

The relative burden of RKF is,

$$(9) \quad RKF_{GDP} = \frac{RKF}{RGDP} ,$$

where RGDP is gross domestic product in 1995 prices.

3. Concept of the Revolving Door

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, the following hypothesis can be made: 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. Therefore a hypothesis can be as follows: 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

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.

The above explanation can be extended to include new dimensions among the indirect linkages, arising from recent developments in international finance, specifically, the impact of deregulation and financial liberalization on capital flight. In conventional analysis, economic reforms are expected to reduce 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 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. Put in another way, 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. The hypothesis then is: 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. And the correlation between current and past capital flight, and between current and past borrowing, suggests persistence or hysteresis.

Direct linkages

The direct linkages between capital flight and external debt have two directions. In the first, external debt provides the fuel or is the



driver of 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-fuelled 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-fuelled capital flight will continue. It can be hypothesized 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 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.

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. Thus the hypothesis is: a higher total external indebtedness increases capital flight.

Of the two linkages described above, debt-fuelled 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-fuelled borrowing and flight-driven borrowing. Flight-fuelled 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. 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. 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-fuelled borrowing serves as a pretext for otherwise unexplained or "hidden" wealth. One crucial dimension of this process is that flight-fuelled 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. The hypothesis is: 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. It can be hypothesized that: 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-fuelled 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.

4. Empirics of the Revolving Door Model

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. 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. 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. 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. 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.

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) found 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.

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. 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.

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 of the domestic economy, 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. 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.

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.

4. Revisiting the Revolving Door

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

$$(1) \quad \begin{aligned} KF &= f(\text{CDET}, \text{SDET}, Z) \\ \text{CDET} &= f(KF, \text{RES}_{-1}, Z) \end{aligned}$$

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. 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 Z depends on the country context.

Estimates of capital flight from the four Southeast Asian countries studied in this paper are discussed in Beja (2006). The rest of the data were taken from the *International Financial Statistics* and the *World Development Indicators*. Data for the political and governance indicators were constructed after a review of the economic histories of the four Southeast Asian countries.




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 to use simply because the levels of economic performance in the region were 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.

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 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.

5. 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. The revolving door specification for Southeast Asia is as follows:

$$(2) \quad KF = \alpha_0 + \alpha_1 CDET + \alpha_2 SDET + \alpha_3 KF_{-i} + \alpha_4 EP + \alpha_5 RR + \alpha_6 D_i + e_1$$

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

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): D_1 for financial liberalization, D_2 for banking deregulation, D_3 for the implementation of a distinctive domestic economic policy, and D_4 for the 1997-1998 Asian financial and economic crises. Interaction terms in the right-hand side of the

specified model are also included. Though rudimentary, the 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. Fuel linkages mean $\alpha_1 > 0$ and $\beta_1 > 0$, while drive linkages means $\alpha_2 > 0$ and $\beta_2 > 0$. 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 $\beta_3 < 0$. The other coefficients may be positive or negative, depending on the particular indicator used. Stepwise regression was followed; that is, after estimating the basic model, the statistically insignificant indicators were removed, then the revised model was re-estimated. A Two Stage Least Squares procedure was employed to address the simultaneity problem. The country results on Indonesia, Malaysia, the Philippines and Thailand are presented next.

Determinants of Capital Flight and External Borrowing

Indonesia

In the case of Indonesia, the results indicate statistical evidence of debt-fuel and debt-driven capital flight, although SDET was found to be statistically weak. The coefficient on CDET means that a dollar of external borrowing fuels about 94 cents of capital flight each year. From an economic point of view, the result on SDET means a further 3 cents of capital flight driven in subsequent years because of increased indebtedness. The total relationship between the external debt and capital flight 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 (see Table 1). On the indirect linkages, the results suggest that robust economic performance (GROW) was negatively correlated with KF. The results likewise suggest that the level of international reserves (RES) and changes in interest rate differentials (CINT) were negatively correlated with KF. We did not find statistical evidence of capital flight hysteresis. As expected, the Asian Crisis (D_4) was significant in inducing capital flight.

$$(12) \quad KF = - 6.47 + 0.94CDET + 0.03SDET - 0.44GROW_{-1} - 0.12CINT - 0.24RES_{-1} + 7.92D_4$$

$$\quad \quad \quad (-3.25)^{hs} \quad (9.15)^{hs} \quad \quad (1.35)^{ws} \quad \quad (-2.48)^{hs}$$

$$\begin{array}{ccccccc}
 (-1.68)^s & & (-1.77)^s & & (2.92)^{hs} & & \\
 CDET = 5.77 + 0.56KF - 0.33RES_{.1} - 0.24GROW_{.1} + 0.01INT - \\
 2.90D_2 + 0.39D_2KF & & & & & & \\
 & & (3.82)^{hs} & (3.52)^{hs} & (-4.30)^{hs} & & (-2.06)^{vs} \\
 (0.17) & & (-1.85)^s & (1.87)^s & & & \\
 KF & : & Adj. R^2 = 0.89 & & F-Stat = 43.55 & &
 \end{array}$$

$$CDET : Adj. R^2 = 0.74 \quad F-Stat = 16.15$$

D₁=financial liberalization; D₂=banking deregulation; D₃ = New Economic Policy; D₄=1997-1998 financial and economic crises. Numbers in braces are t-values. Highly significant (hs) = 1 percent; very significant (vs) =5 percent; significant (s) = 10 percent; and weakly significant (ws) 15-20 percent confidence interval.

Moreover, the results indicate statistical evidence of flight-fuelled external borrowing. The coefficient on KF suggests that a dollar of capital flight induced about 56 cents of external borrowing each year. The results, however, did not reveal flight-driven linkage. On the indirect linkages, economic performance (GROW_{.1}) has a negative correlation with CDET, suggesting that robust economic growth enables Indonesia to rely more on its own domestic resources than on external funds. This finding is 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 export revenues) 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 banking deregulation (D₂) showed a negative correlation with CDET, implying that less external borrowing was undertaken during the banking deregulation period. At first glance, this result appears surprising; but on closer review, banking deregulation program shifted the borrowing pattern to the domestic sources rather than to external sources as Bank Indonesia provided the credit instruments or certificates to domestic borrowers. However, the result on the interaction of D₂ and KF revealed that partly because of capital flight (during the same period), there was increased external borrowing. Here, a dollar of capital flight resulted in about 39 cents

of external borrowing each year during the deregulation period, thus a further evidence of the flight-fuelled process. These seemingly contradictory results can be rationalized as evidence of capital flows dynamics in the context of free capital movements in Indonesia.

Malaysia

In the case of Malaysia, we found evidence of debt-fuelled capital flight. However, there was no debt-driven capital flight. Thus, for every dollar of external borrowing, 55 cents of capital flight (debt-fuelled) was induced each year over the period 1970 to 2002. Among the four Southeast Asian countries, Malaysia had the lowest debt-fuelled 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. 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).

$$(13) \quad KF = 15.20 + 6.15CDET + 0.03SDET - 0.32 CDET_{-1} - 0.36INT - 0.29CRES_{-1} + 8.69D_3$$

$$\begin{array}{cccccc} (6.15)^{hs} & (4.75)^{hs} & (0.95) & (-2.21)^{vs} & (-0.94) & (-1.86)^s \\ & (4.21)^{hs} & & & & \end{array}$$

$$CDET = - 2.00 + 0.36KF + 0.05RES_{-1} + 0.45CAD_{-1} + 2.44 D_1 + 5.19D_3 - 1.38 D_4KF$$

$$\begin{array}{cccccc} (-0.74) & (2.41)^{hs} & (0.30) & (4.90)^{hs} & (1.53)^{ws} \\ (2.65)^{hs} & (-2.82)^{hs} & & & \end{array}$$

$$KF: \text{Adj. } R^2 = 0.64 \quad F\text{-Stat} = 18.77$$

$$CDET: \text{Adj. } R^2 = 0.68 \quad F\text{-Stat} = 12.03$$

D₁=financial liberalization; D₂=banking deregulation; D₃ = New Economic Policy; D₄=1997-1998 financial and economic crises. Numbers in braces are t-values. Highly significant (hs) = 1 percent; very significant (vs) =5 percent; significant (s) = 10 percent; and weakly significant (ws) 15-20 percent confidence interval.

In the case of Malaysia, we found evidence of flight-fuelled external borrowing. That is, each dollar of capital flight induced 36 cents of external borrowing each year. The results suggest that there was no flight-driven external borrowing.

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.

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). Moreover, we found that the dummy for the NEP (D₃) had a positive correlation with CDET. 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 of D₄ 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.

The Philippines

In the case of the Philippines, the results confirm debt-fuelled and debt-driven capital flight (although CDET was statistically weak). In

fact, the results corroborate the findings of Boyce (1992). However, the results here suggest that for each dollar of external borrowing induced 40 cents of capital flight (debt-fuelled) in the pre-financial liberalization period. The figure increased to about US\$1 in the liberalization period, implying more avenues for capital to flee became available. In addition, an increasing stock of external debt further induced an additional 10 cents of capital flight (debt-driven). Overall, at least 50 cents of external debt ended up as capital flight each year, but in the post financial liberalization period, about US\$1.10 ended up as capital flight each year. The results suggest that more capital was flowing out of the country, and consequently a hollowing out of the Philippine economy was taking place.

For the indirect linkages, the results suggest that robust economic performance (proxied by $GROW_{-1}$) and the level of international reserves (RES_{-1}) were negatively correlated with capital flight. No statistical evidence of capital flight hysteresis was found. None of the dummy variables and the interaction terms was found to be statistically significant, except for the interaction term between financial liberalization (D_1) and CDET, indicating an additional 60 cents of capital flight for each dollar of external debt. As pointed out above, financial liberalization resulted in more opportunities for capital flight.

$$(12) \quad KF = -4.22 + 0.40CDET + 0.12SDET - 0.86GROW_{-1} - 0.60RES_{-1} + 0.64CDET * D_1$$

$$\begin{array}{cccc} & (-0.86) & (1.44)^{ws} & (2.38)^{vs} & (-2.38)^{vs} \\ (-3.30)^{hs} & & (1.73)^s & & \end{array}$$

$$CDET = -1.79 + 0.68KF + 0.6 RES_{-1} + 0.3 CAD_{-1} + 1.0 KF * D_2$$

$$\begin{array}{ccccc} (-0.77) & (3.17)^{hs} & (2.98)^{hs} & (1.76)^s & (4.42)^{hs} \end{array}$$

$$KF: \text{Adj. } R^2 = 0.40 \quad F\text{-Stat.} = 4.46$$

$$CDET: \text{Adj. } R^2 = 0.55 \quad F\text{-Stat.} = 7.68$$

D_1 =financial liberalization; D_2 =banking deregulation; D_3 = New Economic Policy; D_4 =1997-1998 financial and economic crises. Numbers in braces are t-values. Highly significant (hs) = 1 percent; very significant (vs) =5 percent; significant (s) = 10 percent; and weakly significant (ws) 15-20 percent confidence



interval.

Moreover, the results confirm flight-fuelled and flight-driven external borrowing. Again, the results corroborate Boyce (1992). In this case, the results suggest that each dollar of capital flight induced about 70 cents of borrowing each year. The results for the flight-driven linkage suggest that a further 60 cents of borrowing. Additional flight-fuelled borrowing was revealed by a positive correlation between banking deregulation (D_2) and KF, which implies that banking deregulation interestingly resulted in more external borrowing. So, at least US\$1.70 of external borrowing was undertaken for each dollar of capital flight. Interestingly, there was 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 ($RES_{.1}$) can capture this dimension of the political economy of debt management in the country. The results indicate that higher level of international reserves enabled the Philippines to borrow more.

On the indirect linkages, the results show that economic growth performance (proxied by $CAD_{.1}$) was positively correlated with external borrowing. It is not a surprising result since the Philippines has had a low level of domestic savings relative to its Southeast Asian neighbours. Also, it can be argued that this result is consistent with the “twin” deficits argument; that is, budget deficits in the Philippines led to larger current account deficits, which in turn were financed by external borrowing.

Thailand

In the case of Thailand, the results confirm debt-fuelled and debt-driven capital flight, but CDET was found to be statistically weak. The results suggest that for each dollar of external borrowing 10 cents of capital flight was induced each year. A further 10 cents of capital flight was also due to external debt accumulation. Therefore about 20 cents of capital flight was induced by external borrowing each year.

The results also confirm that robust economic performance (proxied by $GROW_{.1}$) and the level of international reserves ($RES_{.1}$) were negatively correlated with capital flight. No statistical evidence was

found for capital flight hysteresis. The 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\$1.10 for every dollar of external borrowing ended up as capital flight during the crises. Overall, from an economic point of view, 10 cents of external debt was fuelling capital flight between 1970 and 2002, except between 1997 and 1998 when about US\$1.20 of external borrowing was fuelling capital flight.

$$(13) \quad KF = 6.21 + 0.12CDET + 0.11SDET - 0.72GROW_{-1} - 0.23RES_{-1} + 1.09CDET * D_4$$

$$\begin{array}{cccc} & (2.58)^{hs} & (1.34)^{ws} & (2.53)^{hs} & (-6.11)^{hs} \\ (-2.37)^{vs} & & (1.77)^s & & \end{array}$$

$$CDET = 19.02 + 0.68KF - 0.73RES_{-1} + 0.31CDET_{-1} - 0.90GROW_{-1} + 1.61INT * D_1$$

$$\begin{array}{cccc} & (2.86)^{vs} & (1.26)^{ws} & (-3.59)^{hs} & (1.60)^s \\ (-1.57)^s & & (2.54)^{hs} & & \end{array}$$


$$KF: \text{Adj. } R^2 = 0.78 \quad F\text{-Stat.} = 14.53$$

$$CDET: \text{Adj. } R^2 = 0.40 \quad F\text{-Stat.} = 6.93$$

D_1 =financial liberalization; D_2 =banking deregulation; D_4 = New Economic Policy; D_4 =1997-1998 financial and economic crises. Numbers in braces are t-values. Highly significant (hs) = 1 percent; very significant (vs) =5 percent; significant (s) = 10 percent; and weakly significant (ws) 15-20 percent confidence interval.

Moreover, there is evidence of flight-fuelled external borrowing. But it is statistically weak. The results suggest that for each dollar of capital flight, 70 cents of external borrowing was undertaken. However, 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.

Lastly, 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. 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. 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 on external borrowing; that is, 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 external borrowing.

6. Some implications of the results

The above results suggest a need rethink how capital flows impact developing countries, as well as a need for decisive progressive policy actions. A key element in the rethinking and for action is to bring the government back to the centre public policy, especially in social regulation and in providing clear vision for development. Thus, in the management of the macro economy, it is essential for the government to emphasize domestic responsibility in setting economic goals. Likewise, it is essential for the government to choose policies that reflect domestic characteristics and contexts. So it must be embedded in society to be able to effectively respond to the domestic challenges; at the same time, autonomous to withstand the external challenges that are counter-productive to realizing economic growth and development. Thus, putting restraints on speculative capital flows, managing external debt, monitoring economic activities especially the unproductive ones, among others, must be seen as necessary tools of government regulation. At the same time, however, the government must also promote and enable relationships that support both the macro economic and the macro-organization goals. Thus, enabling and allowing government-business cooperation and more meaningful participation of civil society, among others, are to be expected.

Furthermore, the results on the indirect linkages suggest the importance of sound macro economic management. Countries unable to sustain economic growth because of poor macro economic 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 likewise 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.

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 flows management and related techniques. The goal for the 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.

Finally, on the issue of debt itself, it is important to rethink sound domestic management of external debts. The results provide statistical grounds for a reexamination of the legitimacy of external debts contracted in the past, especially those considered as illegitimate or odious debts. 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. In this case, therefore, progressive actions will mean that debt amortizations (at the lease) must be cancelled.

But the responsibility of governments to ensure that external debts benefit the domestic residents - not that they enrich a few individuals - remains. 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 an 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. Then, in this case, 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 so that society will now anymore bear the adverse consequences of external indebtedness.

7. Conclusion

This chapter 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 borrowing, 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 borrowing (capital inflows) and capital flight, holding that external borrowing (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. And 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. As capital flight continues, the country will experience a reduction in available resources and be forced to incur external borrowing to replenish lost funds. Indeed, the results confirm the revolving door process: external borrowing fuels capital flight and vice versa. In addition, robust economic performance reduces capital flight and external borrowing. A similar result was seen for international reserves. More interestingly, financial liberalization facilitated capital flight and external borrowing. Economic and financial crises also induced capital flight. But in the context of financial liberalization, even more capital flight occurred during economic and financial crises.

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 curtailment 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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