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BALANCE OF PAYMENTS-CONSISTENT UNREPORDED FLOWS

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Abstract

The paper develops a balance of payments (BOP)-consistent procedure for estimating unreported flows. Using data between 1990 and 2007, total unreported flows of selected Asian countries is estimated at $4.7 trillion, or more than 80% of the countries' 2007 total gross domestic product. Results reveal that unreported flows increase with reported and accumulated unreported flows. Financial depth and governance of the real sector decrease unreported flows, whereas economic growth and weakness in the governance of reported flows increase unreported flows. Results also reveal that unbalanced financial and real sector development contributes to the unreported flows. Lastly, the paper argues that there is an opportunity to reverse the situation through a judicious application of capital flow and trade flow management techniques and development and improvement in capacity, including governance, to internalize resources and converting them into desired outcomes.

Keywords: balance of payments, unreported flows, Asia
JEL Classification: B50, C82, F20

I. INTRODUCTION

The balance of payments (BOP) records the transactions of an open economy with the rest of the world within a specific period. It is supposed to present a comprehensive monetary expression of capital-, trade-, and labor-related flows of an open economy.

A number of studies, however, find that large amounts of cross-border flows remain unreported in the BOP (c.f., Erbe 1985, World Bank 1985, Cuddington 1986, Dooley 1986, and Morgan Guaranty 1986 on financial flight; Bhagwati 1974, Gulati 1987, Pak *et al.* 2003, and de

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Boyrie *et al.* 2005 on trade misinvoicing; World Bank 2006 on unreported remittances; see also Lessard and Williamson 1987, Boyce and Ndikumana 2001, Collier *et al*. 2001, and Epstein 2005 for integrative approaches). The problem is that unreported flows impose large costs that undermine economic development (c.f., Pastor 1990, Lopez 1996, Vos and Yap 1996, and Beja 2009). Most studies examine how unreported flows undermine the ability of indebted countries to pay or service their mounting external debts. However, there are some studies that focus on the dynamics behind the leakages such as the 'revolving door' pattern between unreported flows and debts (c.f., Boyce 1992 and Ndikumana and Boyce 2003) as well as the linkages between unreported flows and foreign investment (c.f., Kant 1996), foreign aid (c.f., Collier *et al.* 2003), openness (c.f., Lensink *et al.* 1998, Aizenman 2006, and Bhattacharya 1999), or even some measure of risk (c.f., Dooley 1988; Alesina and Tabellini 1989, Hermes and Lensink 2001, and Lensink *et al.* 2000). This paper seeks to contribute to the literature on unreported flows.

Notwithstanding the breadth of the literature, there is to my knowledge no study that applies a BOP-consistent procedure in estimating unreported flows. The failure of these studies to employ BOP-consistent procedures can have deleterious effects on the stated size of total unreported flows. Furthermore, the extant literature takes only a fraction of reported flows when examining the dynamics of unreported flows. This paper proposes that the *volume* of reported flows should be used instead. Part II discusses the methodology then Part III presents the results. Part IV concludes the paper.

II. METHODOLOGY

2.1. Basic Concepts

A BOP-consistent measure of unreported flows should adhere to BOP accounting principles, the first of which is the use of a double-entry reporting procedure: any inflow entry should have a counterpart outflow entry. The BOP-consistent approach stands as a stark contrast to what the extant literature uses in obtaining total unreported flow that is basically a straight-forward summation of the estimated values.

The second principle requires the placing of appropriate directional notations in the BOP. To be precise, an inflow corresponds to a positive notation while an outflow corresponds to a negative notation. According to the extant literature, capital flight should have a positive notation. But, in the BOP-consistent approach, it should have a negative notation. To illustrate the point, consider the following items: capital flight of $10 and export overinvoicing of $10. The latter has

a negative notation by convention. Following the extant literature results in a total unreported flow of zero (i.e., \$10 – \$10 = 0). With correct directional notations, however, total unreported flow is \$20 (i.e., –\$10 –\$10 = –\$20). Disregarding directional notations therefore results in an error in the stated size of total unrecorded flow.

The third principle refers to the use of an equilibrium condition: total inflows should equal total outflows, thus an overall BOP balance of zero. Inaccuracies in data compilation are reflected as errors and omissions (EO). Because the individual components of the BOP are presumably statistically independent with respect to each other, data inaccuracies are random and the size of EO does not say anything about the accuracy of the BOP. As such, EO can play the role of a "balancing" or residual account.

Lastly, the structure of the BOP is defined by its main accounts: current accounts (CA), capital accounts (KA), financial accounts (FA), reserve assets and related items (CRES), and EO.[1] According to economic theory, CA is backed by the financial and capital accounts (FKA) net of CRES. Putting EO for completeness, the BOP equation is:

$$CA = FKA - CRES - EO. \quad (1a)$$

Then re-arranging terms obtains

$$FKA - CA - CRES - EO = 0, \quad (1b)$$

where FKA = KA + FA. Consistent with BOP principles, any addition of +X and –Y in Equation 1b should have the counterpart subtractions to keep the BOP zero; that is,

$$FKA - CA - CRES - EO + X - X - Y + Y = 0. \quad (1c)$$

In the context of unreported flows, the following procedure is introduced: the addition of an unreported flow Z has the counterpart entry –Z in CRES if it is in fact a *de facto* flow but in EO if it is only a *de jure* flow. The *de facto* label indicates real transactions. By construction, CRES includes foreign exchange, monetized gold, special drawing rights, and other related items. Monetary authorities exert effective control over these items. If the contention of the extant literature that an unreported flow is a 'manifestation of the avoidance of social controls' is valid then placing the counterpart entry in CRES is tantamount to introducing the counterfactual scenario that monetary authorities gained effective control over the funds.[2] So the effect of the counterpart entry is to create a so-called 'supplemental reserves' in CRES. On the other hand, the *de jure* label refers to non-real transactions, covering valuation and data compilation adjustments

[1] See *Balance of Payments Manual* (5th Edition) for details of the accounts.

[2] Cumby and Levich (1987), Deppler and Williamson (1987), Gordon and Levine (1989), Boyce (1993), Collier *et al.* (2001), Kant (2002), and Beja (2006) on the meaning of 'capital flight' in general and on the 'avoidance of social controls' in particular.

effects and idiosyncratic measurement outcomes. Placing a counterpart entry in EO is consistent with its function as a residual account.

2.2. Capital and Financial Accounts

One set of calculations deal with the capital and financial accounts. First, calculate net capital flight (NKF) as

$$\text{CDET} + \text{NFI} + \text{KA} - \text{CA} - \text{CRES} - \text{EO} = 0, \quad (2)$$

where CDET is net debt inflows, NFI is net financial investment inflows, and the rest of the items are as defined earlier and comprise net outflows.[3] Equation 2 reclassifies the financial accounts into two groups: debt-related (i.e., CDET) and investments items (i.e., NFI); that is, FA = CDET + NFI. This regrouping of the financial accounts rules out double-counting. Except for debt-related items, the other items in Equation 2 are available in the International Monetary Fund's (IMF) *International Financial Statistics*. CDET is obtained from the World Bank's (WB) *Global Development Finance*.[4] A positive balance in Equation 2 means an unreported *de facto* outflow, whereas negative balance means 'reverse' capital flight.

Putting the negative notation for BOP-consistent reporting, Equation 1b becomes

$$(\text{FA} - \text{KF}) + \text{KA} - \text{CA} - (\text{CRES} - \text{KF}) - \text{EO} = 0. \quad (1d)$$

Notice –KF is reported in FA because it is a type of 'other investment' and its counterpart entry, +KF, is reported in CRES.[5] To illustrate, suppose capital flight is $15. Other accounts the same, the BOP-consistent entries are:

BOP of Country	
FA, other investment: capital flight	– $15
CRES: supplemental reserves	+ $15
Balance	$0

Recording $15 in CRES indicates that the reported CRES is understated by an amount equal to the supplemental reserves that covers for net capital flight.

[3] To be more exact, the expression is called 'indirect measure' of capital flight (c.f.., Dooley 1986 for the so-called 'derived method' version; and Erbe 1985, World Bank 1985, and Morgan Guaranty 1986 for the so-called 'residual method' version). The alternative approach is called 'direct measure' of capital flight (c.f., Cuddington 1986).

[4] Eggerstedt *et al.* (1993), Chang *et al.* (1997), and Beja (2006) for a discussion on data sources.

[5] Vos (1992) on capital flight as a type of 'other investment' flow.

There are other adjustments on CDET and NFI. One adjustment is for exchange rates fluctuation-effects. Debt and financial investments are undertaken in different currencies but are often reported using a reference hard currency like US dollar. Exchange rate fluctuations affect the valuation CDET and NFI and affect the respective reported flows.

Take CDET, for instance. Exchange rate fluctuations that result in a debt inflow is *de jure* increase in indebtedness because there is only an accounting adjustment. There is no actual flow reported in the BOP. Data on the changes in indebtedness due to exchange rate fluctuations ($CDET_{FX\ adj.}$) are available from the WB *Global Development Finance*, but it is possible to calculate them as well, as follows. First compute:

$$DEBT_{FX\,t-1} = \sum_i \alpha_{i,t-1} DEBT_{LONG\,t-1} \frac{FX_{i,t}}{FX_{i,t-1}} + \sum_j \beta_{j,t-1} DEBT_{LONG\,t-1} + IMF_{t-1} \frac{SDR_t}{SDR_{t-1}} + DEBT_{SHORT\,t-1}, \quad (3)$$

where $DEBT_{FX\ t-1}$ is outstanding debt adjusted for exchange rate fluctuation, $DEBT_{LONG}$ is long-term debt; α_i is the proportion of $DEBT_{LONG}$ in major hard currencies like European euro, British pound, French franc, German mark, Japanese yen, and Swiss franc; β_i is the share of $DEBT_{LONG}$ in US dollar and in multiple or in other currencies; FX is the exchange rate between a hard currency to US dollar; IMF is the use of IMF credits; SDR is the exchange rate between special drawing rights and US dollar; and $DEBT_{SHORT}$ is short-term debts.[6] All things the same, an appreciation in a hard currency decreases $\frac{FX_{i,t}}{FX_{i,t-1}}$ and $DEBT_{FX\ t-1}$, too. It follows that[7]

$$CDET_{FX\ adj.} = \Delta DEBT_{FX\ t-1} - \Delta DEBT, \quad (4)$$

where Δ means change and DEBT is outstanding debt unadjusted for exchange rate fluctuation. Proceeding from Equation 1b,

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[6] Boyce and Ndikumana (2001) is the first to apply the procedure. The WB *Global Development Finance* provides two types of CDET: net flows on debt ($CDET_{FLOW}$) and total change in debt stock ($CDEBT_{STOCK}$). $CDET_{FLOW}$ is actual disbursement of debts. $CDEBT_{STOCK}$ is the change in total outstanding indebtedness. The WB *Global Development Finance* specifies:

$CDEBT_{STOCK}$ = $CDET_{FLOW}$ + debt reductions or forgiveness + debt rescheduled + changes in debt arrears + exchange rate valuation effects + debt stock-flow reconciliation.

[7] The BOP 5th Edition excludes changes in CRES caused by fluctuations in exchange rates, changes in the price of assets, monetization or demonetization of gold, changes due to the allocation or cancellation of SDR, and changes due to the reclassification of assets. These are all *de jure* flows. Data are not available for these adjustments.

$$FA + (KA + CDET_{FX\ adj.}) - CA - CRES - (EO + CDET_{FX\ adj.}) = 0. \quad (1e)$$

The other *de jure* flows are debt reductions or forgiveness, debt rescheduling, changes in debt arrears, and a so-called 'debt stock-flow reconciliation'. The first three items are easy to grasp, but last one is basically a catch-all item for data inconsistencies and/or idiosyncratic borrowing patterns that cannot be explained or reconciled using identified debt accounts. These *de jure* flows are likewise available from the WB *Global Development Finance*. In these cases, however, the amounts are entered in KA because they are neither investments- nor portfolio-type flows. To illustrate the BOP-consistent entries, suppose an increase in debt due to exchange rate fluctuation of $10, debt forgiveness of $5, and debt stock-flow reconciliation for other unaccounted inflow of $15. Other accounts the same, the BOP appears as follows:

BOP of Country	
KA: inflow of debt	+ $10
KA: debt forgiveness	– $ 5
KA: debt stock-flow reconciliation	+ $15
EO:	– $20
Balance	$0

As a result of these unreported flows, the reported EO is overstated by net total amount of all *de jure* adjustments.

The procedures for adjusting NFI – comprising foreign direct investments (FDI) and portfolio equities (PORT) – are essentially the same to the ones described for CDET. Thus, the impact of foreign exchange fluctuations on the US dollar valuation of foreign direct investments ($FDI_{FX\ adj.}$) and portfolio equities ($PORT_{FX\ adj.}$) are obtained: $FDI_{FX\ t-1}$ – FDI and $PORT_{FX\ t-1}$ – PORT. Then these amounts are reported as *de jure* flows. As with trade misinvoicing (see below), the discrepancies in the reported FDI and PORT between the source- and receiving-countries are obtained. Under- or over-unreported flows are *de facto* flows. The BOP-consistent entries are straightforward to implement.

2.3. Current Accounts

The other set of calculations deal with the current accounts. Trade misreporting produces unreported flows. Export over-reporting (under-reporting) results in unreported *de facto* outflow (inflow) of funds, whereas import over-reporting (under-reporting) brings about unreported *de facto* inflow (outflow) of funds. Their counterpart entries are reported in CRES as required.

The procedure outlined below calculates trade misreporting by trade flows analysis that utilize aggregate data from the IMF *Direction of Trade Statistics*.[8] Commodity-level trade data from the United Nations *Commodity Trade Statistics* can be used as well. Since imports data are reported in the IMF *International Financial Statistics* as 'free-on-board' while those from the IMF *Direction of Trade Statistics* include 'cost-of-insurance-and freight' (CIF), it is necessary to first transform the data as 'free-on-board' before proceeding to calculate trade misreporting. Thus, the calculated values then are 'pure' misreported trade flows.

To compute export misreporting (X_{MIS}), the reported imports of trade-partners ($M_{PARTNER}$) from own-country are compared with reported exports of own-country (X_{OWN}) to trade-partners:

$$X_{MIS} = M_{PARTNER} - X_{OWN}. \quad (5a)$$

Positive XMIS means export under-reporting and negative XMIS means export over-reporting. To compute import misreporting (MMIS), the reported import of own-country (MOWN) from trade-partners is compared with the reported export of trade partners (XPARTNER) to own-country:

$$M_{MIS} = M_{OWN} - X_{PARTNER}. \quad (5b)$$

Positive M_{MIS} means import over-reporting and negative M_{MIS} means import under-reporting.

For aggregate exports ($X_{MIS\ TOTAL}$) and imports misreporting ($M_{MIS\ TOTAL}$), first, get the reciprocal of key trade-partners' shares to own-country's exports ($X_{PARTNER\ SHARE}$) and imports ($M_{PARTNER\ SHARE}$) then multiply then to Equations 5a and 5b, respectively:

$$X_{MISTOTAL} = \frac{X_{MIS}}{X_{PARTNERSHARE}} \quad (6a)$$

$$M_{MISTOTAL} = \frac{M_{MIS}}{M_{PARTNERSHARE}}. \quad (6b)$$

The sum of Equations 6a and 6b is called net trade misreporting. Next, $X_{MIS\ TOTAL}$ and $M_{MIS\ TOTAL}$ are entered as corrections to the reported exports and imports, respectively, in the trade accounts of CA. Their counterpart entries are reported in CRES. Proceeding from Equation 1b, thus

$$FA + KA - (CA - X_{MIS\ TOTAL} - M_{MIS\ TOTAL}) - (CRES + X_{MIS\ TOTAL} + M_{MIS\ TOTAL}) - EO = 0. \quad (1f)$$

To illustrate the adjustments, suppose Country-A over-reports its exports to Country-B by $10. For simplicity, suppose Country B does not misreport trade. Suppose further that the true value of exports to Country-B is $40. There is a presumption is that actual trade flows are being reported by countries, and so the initial BOPs are:

[8] The alternative to trade-flows analysis is called unit-price analysis (c.f., Pak *et al.* 2003 and de Boyrie *et al.* 2005). The data requirement for such approach is higher than bilateral trade flow analysis.

BOP of Country-A	
CA, exports	+$50
FA, other investments	–$50
Balance	$ 0

BOP of Country-B	
CA, imports	–$40
FA, other investments	+$40
Balance	$ 0

Trade flow analysis reveals the extent of export misreporting. Other accounts the same, the BOP-consistent adjustments in Country-A are:

BOP of Country-A	
CA, trade: exports over-reporting	–$10
CRES: supplemental reserves	+$10
Balance	$ 0

The recording of $10 in CRES indicates that the reported CRES is understated by an amount equal to the supplemental reserves of $10 that covers for exports over-reporting. Both countries have mirror balances in their trade accounts after adjustment, but their financial accounts show different balances precisely because of the unreported *de facto* outflow of $10.

The shipment of merchandise is another possible avenue for unreported *de facto* flow. For simplicity, the estimation of shipping cost misinvoicing ($SHIP_{MIS}$) is done using an index of shipment cost misinvoicing (MIS Index).[9]

$$SHIP_{MIS} = TRADE_{NET} * \text{MIS Index}, \quad (7)$$

where $TRADE_{NET} = X_{OWN} - M_{OWN}$. Positive $SHIP_{MIS}$ means *net* overcharging in exports shipment, whereas negative means *net* overcharging in imports shipment. $SHIP_{MIS}$ is reported in the services accounts of CA. Suppose export shipping misinvoicing is $1, the modified BOP of Country-A is:

BOP of Country-A	
CA, Export: exports over-reporting	– $10
CA, Services: shipment overcharging	+ $ 1
CRES: supplemental reserves	+ $ 9
Balance	$0

The final adjustment in the current accounts involves unreported remittance (UNR), which is an important unreported *de facto* flow if informal remittance is a significant practice for

[9] Proxy for MIS Index is GDP growth rate. The result is a conservative estimate of shipping misinvoicing. An alternative is to use the CIF in the calculation. The extant literature uses 1.1 as a standard value of CIF, but the best approach is to use the actual CIF values of individual countries. However, not all countries report CIF data.

remitting funds. Estimating UNR is done using an index of remittance misreporting (UNR Index).[10]

$$UNR = REM * UNR\ Index. \quad (8)$$

Proceeding from Equation 1b,

$$FA + KA - (CA + UNR) - (CRES - UNR) - EO = 0. \quad (1g)$$

To illustrate, suppose an unreported remittance of +$4. Other accounts the same, the BOP corrections are:

BOP of Country	
CA, Income: unreported remittance	+ $4
CRES: supplemental reserves	– $4
Balance	$0

With the reporting of unreported *de facto* inflow, the reported CRES is overstated by the amount of supplemental reserves.

2.4. Other Calculations

If unreported flows are reported correctly with their counterpart adjustments, the overall balance of the BOP is zero.[11] More specifically, the sum of *de facto* and *de jure* flows equals the sum of supplemental reserves and errors and omissions adjustments. Thus, by necessity, net unreported flow is zero. In the extant literature, net unreported flows may not be zero as explained in section 2.1 earlier. It also necessarily follows that the relevant measure for BOP-consistent analysis is the *volume* of unreported flows (UNREP), defined as:

[10] Proxy for UNR Index is $\frac{REMIT}{GDP}$ (c.f., Beja 2006).

[11] The discussion in the earlier sections disregards what happens to a *de facto* flow. Following equilibrium principle, a *de facto* outflow from, say, Country-A should end up somewhere. It is possible that a *de facto* outflow is declared as other investments inflow in Country-A and the BOP still balances. Or perhaps the *de facto* outflow ends up in another location, say, Country-C. The BOP entries in the third country might be: other investments inflow of +X with the corresponding imports of –X or own-country other investments abroad of –X or accumulation of reserves of –X, or a combination of such transactions provided that the total is –X. Other accounts the same, the flows are fully accounted and the BOP of Country-C is zero. The same logic applies for a *de facto* inflow to Country-A. Notice how an unreported *de facto* flow becomes a legitimate flow thereby making something illicit into something legitimate.

$$\text{UNREP} = \sum_{i} \text{abs}\,(\text{unreported flow}_i), \tag{9}$$

where i represent all unreported flows derived using the procedures described earlier. To make UNREP comparable across periods, the real value is obtained using the US consumer price index (CPI) as deflator:

$$\text{UNREP}_{\text{REAL}} = \frac{\text{UNREP}}{\text{CPI}_{\text{BASE}}} \cdot \tag{10}$$

In addition, the share of unreported flows ($\text{UNREP}_{\text{SHARE}}$) gives the relative burden of unreported flows for cross country comparison:

$$\text{UNREP}_{\text{SHARE}} = \frac{\text{UNREP}_{\text{REAL}}}{\text{GDP}_{\text{REAL}}} \cdot 100, \tag{11}$$

where GDP_{REAL} is real gross domestic product of own-country deflated using CPI.

2.2. Econometrics

Well managed cross-border capital, trade, and labor flows produce agreeable results like economic expansion along with rising household incomes and welfare.[12] The converse is true: ill managed flows result in perverse outcomes like interruptions or deteriorations in economic performance that bring about social disruptions and household misery. The contention in this paper is that cross-border flows management is linked to the capacity (ABSORB) of an economy to not only take in but also transform resources into desirable outcomes.

For any given level of ABSORB, increasing reported flows (REP) generates unreported flows (UNREP). The reasoning behind the argument is simple: if capacity is fixed, an economy is unable to properly use all additional resources from cross-border flows and the unused funds spill out as unreported flows. The corollary to this hypothesis is the following: given REP, ABSORB is negatively correlated with UNREP. It is also hypothesized that UNREP is positively correlated with the accumulation of unreported flows ($\text{UNREP}_{\text{STOCK}}$). Simply put, UNREP generates a self-replicating process that drives further leakages. These three propositions constitute the following model:

$$\text{UNREP} = \alpha\,\text{REP} + \beta\,\text{UNREP}_{\text{STOCK}} + \gamma_j\,\text{ABSORB}_j + \delta_i\,\mathbf{X}_i + u + \varepsilon \tag{12}$$

where $\mathbf{X}$ is a vector of risk-related indicators, u represents fixed effects, and ε is a residual term.

[12] There is a rich literature on this issue. See, for example, King and Levine (1993) as well as Prasad et al. (2007) for capital flows and Frankel and Romer (1999) for trade flows. Kaminsky and Reinhart (1999) and Rodriguez and Rodrik (2001) present critiques.

REP, $UNREP_{STOCK}$, and ABSORB comprise the core indicators of the model. Define

$$REP_{REAL} = \frac{\sum_{i} abs(\text{reported flow}_i)}{CPI_{BASE}} \quad (13)$$

where i covers all BOP-reported inflows and outflows. Like Equation 10, Equation 13 disregards the directional notations to obtain *volume* of flows. Also define

$$UNREP_{STOCK} = UNREP_{STOCK-1} + UNREP_{REAL} + \Delta UNREP_{REAL}, \quad (14)$$

where Δ means change. The last term is a correction process that takes the following values:

$$\Delta UNREP_{REAL} = \begin{cases} 0 & \text{if } \Delta UNREP_{REAL} > 0 \\ \Delta UNREP_{REAL} & \text{if } \Delta UNREP_{REAL} < 0 \end{cases} \quad (15)$$

Equation 15 takes a value of zero to avoid double-counting, and so only negative values perform the correction process. UNREP becomes smaller a reported flows are progressively managed, resulting in a smaller $UNREP_{STOCK}$ in the end.

ABSORB is operationalized as financial sector depth and real sector depth. The former implies greater funds intermediation and the latter, greater production possibilities. The proxies for financial sector depth are money supply (MONEY) and quantity of domestic credit (CREDIT). MONEY is quasi money, which is considered as a broad measure for financial intermediation. CREDIT is total credit provided by the monetary authorities and banking institutions to different sectors in the economy including government; it is the best measure for funds intermediation.

The proxies for real sector depth are size of manufacturing sector (MANUF) and gross capital formation (KFORM). MANUF is output value added of (major) manufacturing industries, and so it is a limited measure of productive possibilities. KFORM is the level of private domestic investments corresponding to additions in fixed assets and inventories; it is the best measure for productive possibilities.

Financial sector depth benefits the real sector as funds intermediation gives rise to the effective use of resources, both sourced internally or externally. That segment in the real sector that exhibits increasing returns gains more from such development. Of course, as the real sector expands with more investments, there comes more demand for funds intermediation. In short, there are complementarities between the financial and real sectors. The pairings of the ABSORB indicators provide alternative specifications of Equation 12 and tests for robustness.

As mentioned earlier, UNREP is a manifestation of the avoidance of social controls. Such avoidance is presumably the response to perceived risks. The contention is that a negative risk increases UNREP.[13] Risk is operationalized as economic growth rate (GROW), government

[13] This conception is inspired by Berlin (1958) and Sen (1999). Positive risk implies positive freedom, thus

spending (GOVT), and quality of governance (GOVN).[14]

GROW is normally a positive risk because it means more opportunities and capacity to absorb flows. It is, however, possible that a deluge of external funds following rapid economic expansion can overwhelm an economy. GROW can therefore become a negative risk. To bypass simultaneity problems between GROW and ABSORB, GOVT, as well as GOVN, lagged GROW is used in the model.

GOVT represents government participation in the domestic economy in general, which, in the developmental tradition, represents a positive risk.[15] Indeed, there are plenty of cases where funds intermediation and domestic industrialization were facilitated by some form of government intervention. On the other hand, wasteful and duplicating activities eventually strain government finances that invite structural adjustments. Inconsistencies and confusing policies, weaknesses in regulation, malfeasance and corruption, intrusion of political interests undermine the efficacy of government participation in the economy and become bases for the removal of government from participating in the economy. Where capacity is limited, government involvement in the economy generates leakages. GOVT can thus also exist as a negative risk.

GOVN stands for the quality of institutionalized authority, measured as the level of civil and political liberties. There is accountability and security if democracy is real. When property rights are well defined and protected, people feel safe against undue processes and summary actions of government. People are able to better participate in social and economic processes under positive governance. Conversely, democracy without the support institutions that ensure democratic processes generates anxiety and disappointment. Predation and state capture of a minority introduce institutional decay. Unpredictability, insecurity, and unevenness prompt the avoidance of social controls. Accordingly, GOVN can be a positive or negative risk.

The interaction terms are also relevant risk indicators. The positive governance of flows promotes efficiency and expansion that enhances absorption of resources and lessen leakages. Conversely, weak or weakening governance of flows results in leakages. Moreover, the positive governance of the financial sector disciplines casino-like activities, encourages long-term investments, and promotes real sector deepening. But the result of the interaction term of

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capability and space to work towards something desirable. Positive freedom also implies an involvement in the governance towards some desired end. Negative risk implies negative freedom, which means restraints.

[14] Arguably, the role of price (as risk indicator) is irrelevant in using the volumes of flows. The implication is that flows are more regulation rather than market allocation issues.

[15] There is an extensive literature on the role of an activist government in development (c.f., Johnson 1982, Amsden 1989, Haggard 1990, Wade 1990, Weiss and Hobson 1995, and Chang 2002).

governance and financial sector depth only reveals the extent to which governance affects the domestic financial sector. Positive governance of the real sector leads to coordination of activities that promotes balanced expansion and deepening. There is coherence of policies as demonstrated by context-based interventions and systematic approach to reforms. Yet again, weak governance guarantees the transformation of the real sector not only as a source of loot but also as conduit for leakages. Lastly, the spending of democratic governments is generally considered transparent and responsible but that of undemocratic governments is dubious and indulgent. The former generates confidence and the latter, anxiety. Therefore, the coefficients of the interaction terms depend on whether they reflect positive or negative risks.

GOVN data are taken from the *Polity IV* database. The rest of the indicators are from the WB *World Development Indicators*. Except for GOVN and GROW, data are transformed as shares of GDP to minimize estimation biases caused by own-country size effects.[16] Estimation is done using pooled regression following a general-to-specific regression strategy wherein non-core indicators that come out as not statistically significant are removed then the more parsimonious model is estimated until the best results are obtained.

III. RESULTS

Table 1 summarizes the unreported flows (UNREP) of ten Asian countries for the period 1990 to 2007 and Table 2 presents descriptive statistics. There is increasing UNREP in both levels and shares, except in India, Pakistan, Sri Lanka, and Thailand. Among the four, the reduction in Sri Lanka's share is not significant but those of the other three countries do not vary much between decades that is why small changes are significant relative to the overall trend.

At first glance at the numbers, there appears to be sub-groupings with regards to UNREP. For instance, shares of East Asian countries are generally larger than 10% of GDP (except for Thailand). Those for South Asian countries fall below 10% (except for Nepal). This difference is perhaps caused by the volume of reported flows, with East Asia receiving far more than South Asia because of rapid economic growth and larger market size.

Upon closer inspection, though, the seeming associations between shares and characteristics of countries disappear. Consider the following observations. For China, the largest economy in the group with regards to total output, UNREP is 14% of GDP; yet Nepal, the smallest economy in the group, UNREP is 11% of GDP. China is also the fastest growing economy; but the Philippines, the economic laggard in the group, reports UNREP of about 23%

[16] GOVN is in a scale from -10 (dictatorship) to 10 (democratic).

of GDP. What is more, UNREP of the largest countries in terms of population differs. Compare China with India; the latter has the smallest UNREP of 5% of GDP. For less populated countries like Malaysia, Nepal, and Sri Lanka, shares exceed 10% of GDP. Moreover, in Malaysia, which is the most progressive country in the group with respect to the Human Development Index (HDI), UNREP exceeds 20% of GDP. In contrast, the low HDI countries of Nepal and Bangladesh have an average 9% of GDP. Clearly, regression analysis must distill the determinants of UNREP given these differing qualities. Total UNREP of the group for whole period reached $4.7 trillion, or more than 80% of their 2007 GDP.

[Insert Tables 1 and 2 about Here]

Correcting for unreported flows changes the balance of payments (BOP) in remarkable ways. Take the 1990 BOP of the Philippines as illustration (Table 3).

The reported current accounts of the Philippines in 1990 indicate a deficit of $2.6 billion. Trade flow analysis uncovered under-reporting in exports and imports of $691 million and $1.8 billion, respectively. Other current accounts items need adjustments for shipping misinvoicing of $122 million and unreported remittances of $48 million. With the corrections, the current accounts report a larger deficit of $3.8 billion. In the financial accounts, the reported figure is a surplus of about $2 billion. 'Reverse' capital flight in 1990 of $62 million raised the surplus to $2.1 billion. Notice that unreported *de facto* flows reported in the current and financial accounts equal the supplemental reserves of $1.1 billion under reserves and related assets.

Meanwhile, reported capital accounts of the Philippines indicate a zero amount. The debt stock-flow reconciliation and other *de jure* flows raised the capital accounts surplus to $805 million. That amount is subtracted from the reported error and omissions of $594 million, resulting in a revised figure of $212 million.

The last row of Table 3 gives total unreported flows for the year. Basically, the steps are the same for succeeding years. For comparison, the 2000 BOP of the Philippines is appended to the 1990 records. (Appendix 1 contains the revised BOP of each of the ten countries).

[Insert Table 3 about Here]

Table 4 summarizes the results of various model specifications. Government spending is a statistically insignificant negative risk and the interaction between governance and government spending is a statistically insignificant positive risk. Perhaps unreported flows from government

spending occur in a roundabout manner as transactions are facilitated by soft budget constraints, which trouble the ten countries in this study. The findings lend credence to the contention that better application of government spending means less resources ending up as leakage. Clearly, there is a need for government to perform a positive role because it needs to get rid of development obstacles but also provide an environment that enlarges absorptive capabilities.

The initial runs reveal that governance does not significantly contribute to unreported flows. At first glance, this finding suggests that the results are applicable regardless of the type of government operating in each country. Alternatively, the findings suggest that providing political freedom alone is not enough to bring about progress in general and reductions in unreported flows in particular. Upon closer inspection, this finding is not surprising at all. At one level, the civic and political liberties of the counties have remained stable or exhibited little improvement within the period under study. On another level, the GOVN is an average measure and as a catch-all index it is possible that the statistically insignificant results is the consequence of data that are rather amalgamated and thus cannot display the nuances of governance.

[Insert Table 4 about Here]

Removing statistically insignificant non-core indicators exposes significant relationships that explain unreported flows. Models 5 to 8 indicate that, on average, 0.09 units of unreported flows stem from each unit of reported flow. Additional unreported flows come from the swelling of unreported flows (i.e., UNREP$_{STOCK}$), averaging about 0.13 units. The interaction term between governance and reported flows indicates a weakness in managing flows that adds 0.02 units to unreported flows. Perhaps, this condition stems from the way some of the ten countries have embarked on financial liberalization with limited compensatory measures to handle the surge in flows following the opening of the economy. Strong economic growth increases unreported flows because it not only brings in external funds but also expands domestic resources, yet these are not well absorbed by the economy. The interaction of governance and financial sector depth is notable, albeit the size of the coefficient is quite small. Perhaps, this finding is consistent with the opinion that monetary authorities of the ten countries enjoy some autonomy in their governance of the financial sector.

But results on financial sector depth and real sector depth reveal severe limitations on the capacities to take in available resources. In general, the results imply an unbalanced development pattern in the domestic economy. Although funds intermediation reduces unreported flows, shallow industrialization results in leakages. The financial sector is thus not a likely conduit for

unreported flows. The net effect of these opposing processes is 0.16 units of unreported flow for each unit of uneven development.

The quality of governance has to improve in order for the financial sector to expand its role in the economy. The success of the financial sector rests, in part, on the success of the real sector. The success of the real sector, in turn, is contingent on the quality of governance in economic coordination and planning. This notion is reinforced by the statistically significant negative interaction term between governance and real sector indicators, of about 0.02 units. Altogether, around 0.39 units for each unit of funds coming from cross-border flows and domestic resources become unreported flows; or, more specifically, 0.22 units from cross-border flows and 0.17 units from domestic resources.

The implications of these results are valuable for the management of an economy because imbalances in governance and development can lead to a systemic exploitation of the weaker system. Reforms are therefore necessary to change the existing configuration.

The results reiterate the need for increased regulation.[17] In the context of cross-border flows, an important step is the application of capital flow management techniques, which are tools for directing flows to activities that bring forth the most desirable outcomes. These tools help establish a policy space for designing programs that are appropriate to the domestic circumstances and makes balanced development feasible. Issues like unsound fiscal deficits, high inflation rates and other macroeconomic concerns are important issues that need to be addressed by the government. Dealing with such issues becomes easier when the government has effective control on the direction of policies.

Trade flow management techniques complement capital management techniques. Trade coordination is important to avert financial sector destabilization and real sector disintegration that often come with uneven economic openness. Unfortunately, trade policy is oriented at capturing the export markets of industrial economies at the expense of the domestic economies. There is therefore a need to upgrade domestic capacity to raise productivity and exploit the complementarities that would arise from economic openness and industrialization.

In the context of the domestic economy, the important role of capacity needs to be underscored. Resources are wasted if capacity remains weak. Resources are also wasted if the timing and sequencing of regulations are inappropriate. Likewise, resources are wasted if the government is captured by rent-seeking and other unproductive profit-seeking activities and there

[17] The distinction between 'regulation' and 'control' should be stressed so there is no misreading of the policy implications. Regulation is basically bringing agents to operate within defined rules. Control means suppressing agency by imposing an authority's judgment over agents'.

is institutional decay. Capacity creates synergy that supports critical economic processes. As the economy matures, resources are internalized more effectively and confidence in the economy is raised, setting off a cumulative process of accumulation, expansion, and advancement that then translates into progress and development. It can be argued further that the lynchpin of this process is a government that systematically pulls off interventions and ultimately succeeds in achieving desirable outcomes.

IV. CONCLUSION

A balance of payments (BOP) consistent procedure for estimating unreported flows was applied to ten Asian countries. Estimation results reveal large amounts remain unreported in the BOP, reaching US$ 4.7 trillion for the period 1990 to 2007. Regression analysis finds that unreported flows increase with reported and accumulated unreported flows. Financial depth and governance of the real sector decrease unreported flows, whereas economic growth and some weaknesses in the governance of reported flows increase unreported flows. There is also an unambiguous finding that unbalanced financial and real sector development mediates the leakage of funds. Results indicate that about 0.22 units of unreported flows come from cross-border flows and another 0.17 units from domestic resources. Large amounts of funds are lost in the end. Still, regression results suggest that there are opportunities for improvement.

The *sine qua non* of an open economy is cross-border flows of resources. Well managed flows produce agreeable outcomes like economic expansion along with rising individual incomes and welfare. If flows are not well managed, perverse outcomes eventually occur like interruptions and/or deteriorations in economic performance that cause social disruptions and household misery. The findings in this paper support the proposition that government should apply capital flow and trade flow management techniques along with better governance in administering the domestic economy in order to reduce unreported flows. Developed or improved capacity enables a country to not only internalize funds more effectively but also convert them more fruitfully into outcomes that lead to progress and development.

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Table 1

Total undocumented flows and stock as share to GDP, in constant million dollars

	1990-2007	Period	1990s	Period	2000s	Period	$\chi^2_{(2,0.01)}$
	level	share	level	share	level	share	Δ ave. share
Bangladesh	58,075	6.8	23,927	5.6	34,148	8.5	
China	2,770,314	13.7	1,133,454	14.9	1,636,860	11.7	
India	456,213	4.8	198,058	5.0	258,155	4.9	Yes
Indonesia	489,184	12.7	178,115	10.6	311,069	15.9	
Malaysia	378,163	20.1	140,714	16.2	237,449	26.0	
Nepal	11,872	11.1	4,748	9.5	7,124	14.2	
Pakistan	86,139	6.7	40,970	6.7	45,169	6.5	Yes
Philippines	330,225	22.9	120,919	16.1	209,306	30.8	
Sri Lanka	29,548	10.4	15,876	11.7	13,673	8.6	No
Thailand	178,359	6.5	110,019	7.4	68,340	5.9	Yes
Total	4,788,093	82.3	1,966,801		2,821,292		
Stock at end period	4,558,070	78.4	1,817,843		2,740,227		

Source: Calculations of the author.

Note: Stock in the 1990s and 2000s refer to decade stock only. χ^2 tests the hypothesis that the reduction in share is significant.

Table 2

Summary statistics of unreported flows

	Mean	Maximum	Minimum	> Mean	Median	Skewness	Kurtosis
Bangladesh	3,165	5,089	1,650	10	3,182	0.2	-1.3
China	154,443	270,185	43,919	10	157,191	0.1	0.3
India	24,408	52,071	4,293	10	25,026	0.4	0.2
Indonesia	27,008	57,380	10,432	5	19,647	0.9	-0.9
Malaysia	20,510	45,022	6,914	8	19,623	0.4	0.3
Nepal	643	1,234	51	9	,620	0.0	-1.5
Pakistan	4,837	9,606	2,244	9	4,522	0.6	-0.8
Philippines	18,492	35,462	4,638	9	19,042	0.1	-0.9
Sri Lanka	1,653	2,403	838	8	1,551	-0.2	-0.9
Thailand	9,564	28,605	5,038	6	7,517	2.6	7.8

Source: Calculations of the author.

Table 3

Balance of Payments of the Philippines, 1990 and 2000, in current million dollars

	1990		2000	
	Reported	Revised	Reported	Revised
CURRENT ACCOUNT	-2,695	**-3,881**	-2,225	**-12,940**
Goods Exports: F.O.B.	8,186	**8,877**	37,347	**42,732**
Goods Imports: F.O.B.	-12,206	**-14,009**	-43,318	**-59,816**
Services	1,483	**1,361**	-1,870	**-1,980**
Income	-872	**-824**	-27	**481**
Current Transfers	714	**714**	5,643	**5,643**
CAPITAL ACCOUNT	0	**805**	138	**-2,430**
FINANCIAL ACCOUNT	2,057	**2,119**	3,234	**-246**
Direct Investment Abroad	0	0	-125	-125
Direct Investment in Economy	530	530	2,240	2,240
Portfolio Equity, Debt Securities & Derivatives: Assets	0	0	-646	-646
Portfolio Equity, Debt Securities & Derivatives: Liabilities	-50	-50	137	137
Other Investment: Assets	0	**62**	2,454	**-1,026**
Other Investment: Liabilities	1,577	1,577	-826	-826
ERRORS AND OMISSIONS	593	**-212**	-1,624	**944**
OVERALL BALANCE	-45	**-1,169**	-477	**-14,672**
RESERVES ASSETS & RELATED ITEMS	45	**1,169**	477	**14,672**
Reserve Assets	388	388	69	69
Use of Fund Credit and Loans	-343	-343	303	303
Exceptional Financing	0	0	105	105
Supplemental Reserves		**1,124**		**14,195**
UNREPORTED FLOWS				
Volume of Unreported Flows	3,530		28,549	
Export Misinvoicing	691		5,385	
Import Misinvoicing	-1,803		-16,498	
Shipment Misinvoicing	-122		-110	
Unreported Remittance	48		508	
Financial Flight	62		-3,480	
Debt Stock-Flow Reconciliation & *de jure* Flows	805		-2,568	

Source: IMF *International Financial Statistics* and calculations of the author.

Notes: Current accounts items of services, income, and current transfer as well as financial accounts of portfolio and derivatives accounts are compressed to save space. The bold texts indicate the corrected figures. Direct investments and portfolio accounts as well as reserves assets and related items are unadjusted because data for are unavailable for adjustment.

Table 4

Regression results for ten Asian economies

Dependent variable: UNREP	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Volume of reported flows	0.113***	0.119***	0.106**	0.122**	0.080**	0.084*	0.092**	0.104**
Stock of unreported flows	0.130***	0.135***	0.125***	0.130***	0.129***	0.136***	0.124***	0.130***
Financial depth: Money supply	-0.077***	-0.095***			-0.059***	-0.081***		
Financial depth: Domestic credit			-0.057**	-0.072***			-0.044***	-0.066***
Real sector depth: Share of manufacture	0.062		0.084		0.092		0.083	
Real sector depth: Capital formation		0.227***		0.229***		0.238***		0.227***
Size of government	0.335*	0.257[W]	0.166	0.111				
Growth rate lagged	0.337***	0.196*	0.349***	0.210**	0.361***	0.207*	0.357***	0.214**
Governance: Polity-2 index	0.278	0.351	0.107	0.182				
Polity-2 index • Total reported flows	0.015***	0.012*	0.020***	0.017**	0.022***	0.018***	0.023***	0.020***
Polity-2 index • Money supply	0.003[W]	0.004**				0.002**		
Polity-2 index • Domestic credit			0.002	0.003				0.002*
Polity-2 index • Share Manufacture	-0.016[W]		-0.017[W]		-0.015***		-0.014***	
Polity-2 index • Capital formation		-0.019***		-0.018***		-0.016***		-0.015***
Polity-2 index • Size of government	-0.039	-0.026	-0.016	-0.007				
Adjusted-R^2	0.690	0.702	0.679	0.690	0.692	0.703	0.685	0.694

Notes: Results have Newey-West HAC standard errors and covariance. Fixed effects not reported in the table. Highly significant (0.01) = ***; very significant (0.05) = **; significant (0.10) = *; weak significant (0.20) = w. Models 5 and 7 are further reduced specifications. The Durbin-Wu-Hausman test indicates that pooled regression results are consistent.

APPENDIX

Table A.1

Revised Balance of Payments of Bangladesh, in current million dollars

MAIN ACCOUNTS	1990	1995	2000	2005	2007
Current Accounts	-833.5	-823.9	215.5	308.1	675.8
Capital Accounts	780.4	0.0	-971.0	-1,320.4	1,547.9
Financial Accounts	642.0	178.8	-5.5	63.7	1,049.3
Errors and Omissions	-856.1	133.3	1,502.0	938.2	-1,712.1
Overall Balance	-267.2	-511.7	741.0	-10.4	1,561.0
Reserve Assets and Related Items	267.2	511.7	-741.0	10.4	-1,561.0
UNREPORTED FLOWS					
Volume of Unreported Flows	1,531.5	1,905.3	3,843.9	5,925.3	5,272.4
Net *de facto* Flows: Supplemental res.	*491.4*	*154.3*	*-771.8*	*-405.7*	*-188.2*
Export misreporting	109.7	582.2	1,365.3	2,065.7	1,315.3
Import misreporting	-471.2	-848.9	-827.9	-1,699.6	-1,856.2
Shipping cost misinvoicing	-94.3	38.1	-98.3	-190.5	-269.6
Unreported remittance	20.1	188.8	82.2	308.7	629.4
Capital flight	-55.8	132.8	250.5	-78.6	369.3
Net *de jure* Flows: EO adjustment	*-780.4*	*114.5*	*1,219.7*	*1,582.1*	*-832.5*
Debt stock-flow reconciliation, etc.	780.4	-114.5	-1,219.7	-1,582.1	832.5

Source: Calculations of the author.
Note: Only five year intervals and 2007 are shown to conserve space. Full tables are available by request.

Table A.2

Revised Balance of Payments, China, in current million dollars

MAIN ACCOUNTS	1990	1995	2000	2005	2007
Current Accounts	31,325.1	41,114.2	131,839.8	275,100.1	461,251.7
Capital Accounts	2,102.3	-124.6	-1,143.4	-469.1	5,731.3
Financial Accounts	-4,674.5	26,821.8	15,544.3	58,156.2	140,149.9
Errors and Omissions	-5,307.5	-17,698.6	-10,639.9	-11,869.0	13,716.5
Overall Balance	23,445.4	50,112.9	135,600.9	320,918.2	620,849.4
Reserve Assets and Related Items	-23,445.4	-50,112.9	-135,600.9	-320,918.2	-620,849.4
UNREPORTED FLOWS					
Volume of Unreported Flows	31,774.2	115,574.3	164,576.7	236,167.1	361,263.1
Net *de facto* Flows: Supplemental res.	*-11,398.6*	*-27,643.9*	*-124,907.8*	*-113,576.2*	*-159,158.4*
Export misreporting	20,186.8	69,577.8	127,673.5	158,445.2	147,836.4
Import misreporting	-1,207.2	-32,050.9	-19,280.4	-58,303.8	-99,736.1
Shipping cost misinvoicing	348.3	1,967.5	2,895.8	13,955.7	40,999.7
Unreported remittance	0.1	1.5	32.5	185.0	318.7
Capital flight	-7,929.5	-11,852.0	13,586.4	-705.9	69,739.7
Net *de jure* Flows: EO adjustment	*-2,102.3*	*124.6*	*1,108.0*	*4,571.6*	*-2,632.5*
Debt stock-flow reconciliation, etc.	2,102.3	-124.6	-1,108.0	-4,571.6	2,632.5

Source: Calculations of the author.
Note: Only five year intervals and 2007 are shown to conserve space. Full tables are available by request.

Table A.3

Revised Balance of Payments of India, in current million dollars

MAIN ACCOUNTS	1990	1995	2000	2005	2007
Current Accounts	-6,917.0	-14,180.2	-9,936.8	-24,242.8	-31,147.1
Capital Accounts	2,210.4	-7,290.9	-2,584.7	-4,317.9	382.4
Financial Accounts	4,798.7	6,379.9	17,198.9	47,314.4	128,404.1
Errors and Omissions	-2,642.9	8,260.6	2,913.9	3,871.6	623.0
Overall Balance	-2,550.7	-6,830.5	7,591.2	22,625.3	98,262.4
Reserve Assets and Related Items	2,550.7	6,830.5	-7,591.2	-22,625.3	-98,262.4
UNREPORTED FLOWS					
Volume of Unreported Flows	8,545.8	26,140.4	25,366.2	50,493.9	68,695.9
Net *de facto* Flows: Supplemental res.	*609.7*	*6,097.9*	*-1,524.1*	*-8,071.2*	*-10,774.2*
Export misreporting	2,844.9	3,747.7	4,932.0	4,533.4	7,850.0
Import misreporting	-2,458.4	-11,965.1	-10,025.0	-14,633.0	-21,370.7
Shipping cost misinvoicing	-284.8	-508.6	-603.7	-4,419.4	-7,399.0
Unreported remittance	17.9	109.0	361.1	559.6	1,056.5
Capital flight	-729.3	2,519.1	6,859.7	22,030.5	30,637.4
Net *de jure* Flows: EO adjustment	*-2,210.4*	*+7,290.9*	*2,584.7*	*4,317.9*	*-382.4*
Debt stock-flow reconciliation, etc.	2,210.4	-7,290.9	-2,584.7	-4,317.9	382.4

Source: Calculations of the author.
Note: Only five year intervals and 2007 are shown to conserve space. Full tables are available by request.

Table A.4

Revised Balance of Payments of Indonesia, in current million dollars

MAIN ACCOUNTS	1990	1995	2000	2005	2007
Current Accounts	-1,895.5	-8,001.0	2,609.1	-19,329.2	-16,219.5
Capital Accounts	3,253.9	6,633.7	-6,137.0	-10,943.0	5,275.4
Financial Accounts	517.8	6,834.2	-8,943.8	-4,898.7	3,285.4
Errors and Omissions	-2,509.8	-8,888.3	9,966.3	11,140.9	-6,106.6
Overall Balance	-633.5	-3,421.4	-2,505.3	-24,030.1	-13,765.3
Reserve Assets and Related Items	633.5	3,421.4	2,505.3	24,030.1	13,765.3
UNREPORTED FLOWS					
Volume of Unreported Flows	10,227.1	12,729.7	15,049.2	58,937.9	65,002.2
Net *de facto* Flows: Supplemental res.	*2,884.6*	*4,994.8*	*6,431.0*	*21,918.9*	*26,471.1*
Export misreporting	-951.7	-1,390.2	-2,059.0	11,770.2	14,515.6
Import misreporting	1,562.3	-730.4	-4,564.6	-32,477.8	-43,372.0
Shipping cost misinvoicing	481.8	548.5	1,232.1	998.1	2,056.4
Unreported remittance	0.2	2.1	8.6	102.7	88.3
Capital flight	-3,977.2	-3,424.8	-1,048.0	-2,312.1	240.7
Net *de jure* Flows: EO adjustment	*-3,253.9*	*-6,633.7*	*6,137.0*	*11,277.0*	*-4,729.2*
Debt stock-flow reconciliation, etc.	3,253.9	6,633.7	-6,137.0	-11,277.0	4,729.2

Source: Calculations of the author.
Note: Only five year intervals and 2007 are shown to conserve space. Full tables are available by request.

Table A.5

Revised Balance of Payments of Malaysia, in current million dollars

MAIN ACCOUNTS	1990	1995	2000	2005	2007
Current Accounts	2,147.8	-8,269.7	11,870.4	31,280.5	38,808.8
Capital Accounts	853.6	-1,131.6	-366.2	-776.3	-2,003.8
Financial Accounts	3,291.5	4,954.0	-8,757.7	-16,278.0	3,036.0
Errors and Omissions	183.3	369.9	-2,854.7	-5,778.3	-2,934.1
Overall Balance	6,476.3	-4,077.4	-108.1	8,448.0	36,906.9
Reserve Assets and Related Items	-6,476.3	4,077.4	108.1	-8,448.0	-36,906.9
UNREPORTED FLOWS					
Volume of Unreported Flows	5,426.4	16,262.4	24,743.4	33,672.8	55,788.2
Net *de facto* Flows: Supplemental res.	*-4,525.1*	*2,314.7*	*-900.6*	*-4,828.3*	*-23,763.2*
Export misreporting	1,919.9	6,402.3	10,783.6	17,082.7	22,515.2
Import misreporting	867.8	-6,024.0	-9,256.3	-7,561.8	-15,024.5
Shipping cost misinvoicing	227.5	-10.2	1,845.0	1,767.9	2,369.3
Unreported remittance	2.4	5.8	10.3	11.9	17.4
Capital flight	1,507.4	-2,688.6	-2,481.9	-6,472.3	13,885.8
Net *de jure* Flows: EO adjustment	*-901.3*	*1,131.6*	*366.2*	*776.3*	*1,976.0*
Debt stock-flow reconciliation, etc.	901.3	-1,131.6	-366.2	-776.3	-1,976.0

Source: Calculations of the author.
Note: Only five year intervals and 2007 are shown to conserve space. Full tables are available by request.

Table A.6

Revised Balance of Payments of Nepal, in current million dollars

MAIN ACCOUNTS	1990	1995	2000	2005	2007
Current Accounts	-188.5	-388.8	120.0	381.8	386.2
Capital Accounts	142.5	18.9	-215.4	-237.6	250.3
Financial Accounts	351.5	393.4	322.9	-163.4	-138.1
Errors and Omissions	-137.6	-16.0	361.1	416.9	-155.9
Overall Balance	167.9	7.5	588.6	397.7	342.6
Reserve Assets and Related Items	-167.9	-7.5	-588.6	-397.7	-342.6
UNREPORTED FLOWS					
Volume of Unreported Flows	331.7	78.5	1,074.1	1,227.1	956.9
Net *de facto* Flows: Supplemental res.	*-147.7*	*7.5*	*-665.5*	*-493.7*	*-647.6*
Export misreporting	4.9	0.4	-46.1	-184.8	76.7
Import misreporting	116.6	-0.2	513.0	427.8	214.3
Shipping cost misinvoicing	-20.8	-33.3	-50.5	-42.9	-67.2
Unreported remittance	0.0	0.7	2.2	180.6	292.4
Capital flight	47.0	24.9	246.8	113.1	131.4
Net *de jure* Flows: EO adjustment	*-142.5*	*-18.9*	*215.4*	*277.9*	*-174.9*
Debt stock-flow reconciliation, etc.	142.5	18.9	-215.4	-277.9	174.9

Source: Calculations of the author.
Note: Only five year intervals and 2007 are shown to conserve space. Full tables are available by request.

Table A.7

Revised Balance of Payments of Pakistan, in current million dollars

MAIN ACCOUNTS	1990	1995	2000	2005	2007
Current Accounts	-3,686.4	-4,463.6	-1,526.3	-10,171.4	-7,622.2
Capital Accounts	1,225.2	273.9	-766.7	-3,266.4	2,310.3
Financial Accounts	1,780.1	1,823.2	-3,096.0	4,467.0	12,057.7
Errors and Omissions	-1,330.5	-578.1	1,323.5	3,268.3	-1,908.5
Overall Balance	-2,011.6	-2,944.6	-4,065.5	-5,702.5	4,837.4
Reserve Assets and Related Items	2,011.7	2,944.6	4,065.5	5,702.5	-4,837.4
UNREPORTED FLOWS					
Volume of Unreported Flows	3,779.4	2,111.7	2,242.2	10,756.2	6,594.6
Net *de facto* Flows: Supplemental res.	*1,697.3*	*1,741.0*	*1,438.3*	*6,177.2*	*-2,710.6*
Export misreporting	-437.3	-61.7	-320.7	-2,091.2	-234.9
Import misreporting	-1,566.6	-958.0	-1,086.9	-4,155.1	1,284.0
Shipping cost misinvoicing	-121.6	-143.5	-49.3	-486.2	-639.9
Unreported remittance	100.6	48.3	15.6	167.3	251.8
Capital flight	327.6	-626.2	3.0	388.0	2,049.7
Net *de jure* Flows: EO adjustment	*-1,225.8*	*-273.9*	*766.7*	*3,468.4*	*-2,134.3*
Debt stock-flow reconciliation, etc.	1,225.8	273.9	-766.7	-3,468.4	2,134.3

Source: Calculations of the author.
Note: Only five year intervals and 2007 are shown to conserve space. Full tables are available by request.

Table A.8

Revised Balance of Payments of the Philippines, in current million dollars

MAIN ACCOUNTS	1990	1995	2000	2005	2007
Current Accounts	-3,880.8	-6,863.6	-13,186.2	8,374.6	9,418.8
Capital Accounts	804.5	-181.7	-2,429.8	-741.5	694.8
Financial Accounts	2,118.6	9,873.2	-246.2	4,543.6	8,083.3
Errors and Omissions	-211.7	-1,911.9	944.2	-1,021.8	-2,759.4
Overall Balance	-1,169.4	916.0	-14,918.0	11,155.0	15,437.5
Reserve Assets and Related Items	1,169.4	-916.0	14,918.0	-11,155.0	-15,437.5
UNREPORTED FLOWS					
Volume of Unreported Flows	3,530.2	11,800.9	28,795.2	31,864.2	42,666.5
Net *de facto* Flows: Supplemental res.	*1,124.3*	*319.4*	*14,441.4*	*-9,493.3*	*-6,730.1*
Export misreporting	690.7	698.1	5,384.7	15,323.1	18,334.6
Import misreporting	-1,802.9	-5,550.8	-16,497.9	-10,409.8	-17,283.2
Shipping cost misinvoicing	-122.1	-418.5	-356.4	-384.9	-594.0
Unreported remittance	48.4	387.6	508.3	1,862.3	1,842.5
Capital flight	61.6	4,564.2	-3,480.2	3,102.6	4,430.3
Net *de jure* Flows: EO adjustment	*-804.5*	*181.7*	*2,567.8*	*781.5*	*-670.8*
Debt stock-flow reconciliation, etc.	804.5	-181.7	-2,567.8	-781.5	670.8

Source: Calculations of the author.
Note: Only five year intervals and 2007 are shown to conserve space. Full tables are available by request.

Table A.9

Revised Balance of Payments of Sri Lanka, in current million dollars

MAIN ACCOUNTS	1990	1995	2000	2005	2007
Current Accounts	-420.3	-2,021.8	-1,850.3	-2,080.4	-2,899.2
Capital Accounts	351.0	170.8	-584.7	-580.2	814.1
Financial Accounts	817.0	943.4	903.3	-127.4	-462.3
Errors and Omissions	-466.0	107.8	820.2	757.3	-704.8
Overall Balance	281.6	-799.8	-711.4	-2,030.6	-3,252.2
Reserve Assets and Related Items	-281.6	799.8	711.4	2,030.6	3,252.2
UNREPORTED FLOWS					
Volume of Unreported Flows	1,646.0	1,615.8	2,063.4	2,686.9	2,817.9
Net *de facto* Flows: Supplemental res.	*-165.9*	*1,038.5*	*350.6*	*1,532.3*	*1,878.0*
Export misreporting	422.6	-195.8	-362.1	-242.9	-286.7
Import misreporting	-534.4	-1,052.2	-465.2	-1,155.4	-1,140.3
Shipping cost misinvoicing	-30.2	-54.2	-62.6	-101.7	-171.8
Unreported remittance	20.0	50.2	83.3	162.4	197.3
Capital flight	287.9	213.4	456.2	-194.6	-476.5
Net *de jure* Flows: EO adjustment	*-351.0*	*-50.1*	*634.0*	*829.9*	*-545.3*
Debt stock-flow reconciliation, etc.	351.0	50.1	-634.0	-829.9	545.3

Source: Calculations of the author.
Note: Only five year intervals and 2007 are shown to conserve space. Full tables are available by request.

Table A.10

Revised Balance of Payments of Thailand, in current million dollars

MAIN ACCOUNTS	1990	1995	2000	2005	2007
Current Accounts	-9,608.5	-18,377.5	6,199.1	-5,387.5	11,243.4
Capital Accounts	1,089.4	13,272.1	-3,400.6	-4,370.5	-266.7
Financial Accounts	12,266.6	24,082.6	-8,168.1	12,422.2	-14,793.4
Errors and Omissions	329.2	-14,468.3	2,715.3	6,351.4	5,737.5
Overall Balance	4,076.6	4,508.9	-2,654.3	9,015.6	1,920.8
Reserve Assets and Related Items	-4,076.6	-4,508.9	2,654.3	-9,015.6	-1,920.8
UNREPORTED FLOWS					
Volume of Unreported Flows	6,608.4	25,641.7	10,025.2	8,008.4	19,520.5
Net *de facto* Flows: Supplemental res.	*-841.3*	*2,649.8*	*847.9*	*-3,599.1*	*15,155.9*
Export misreporting	-841.4	-6,773.6	42.9	2,114.2	779.2
Import misreporting	-743.3	2,696.8	-3,736.2	-19.4	-4,845.8
Shipping cost misinvoicing	-753.9	-736.0	555.8	156.0	1,258.5
Unreported remittance	11.1	17.1	23.5	8.4	11.3
Capital flight	3,168.7	2,146.0	2,266.1	1,340.0	-12,359.1
Net *de jure* Flows: EO adjustment	*-1,090.1*	*-13,272.1*	*3,400.6*	*4,370.5*	*266.7*
Debt stock-flow reconciliation, etc.	1,090.1	13,272.1	-3,400.6	-4,370.5	-266.7

Source: Calculations of the author.
Note: Only five year intervals and 2007 are shown to conserve space. Full tables are available by request.