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Liberalisation and Regulation of Capital Flows:

Lessons for Emerging Market Economies

by

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LIBERALISATION AND REGULATION OF CAPITAL FLOWS

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Abstract

Capital flows to Emerging Market Economies (EMEs) have been characterised by high volatility over the past couple of decades. In recent years although gross capital flows have increased greatly overall net capital flows have flowed uphill from EMEs to advanced economies. This has challenged the conventional view that capital flows to EMEs are always beneficial through augmentation of their resources leading to greater investment. Full capital account liberalisation can impart avoidable volatility and have an adverse impact on growth prospects of the EMEs. Available evidence is strongly in favour of a calibrated and well-sequenced approach to opening up of the capital account and its active management, along with complementary reforms in other sectors. Greater caution is necessitated in the liberalisation of debt flows.

In order to cushion their economies from undue volatility, despite much advice to the contrary, most EMEs manage their capital accounts actively, including interventions in the foreign exchange markets accompanied by sterilization. Sound macroeconomic and financial policies, accompanied by prudent capital account management, greater exchange rate flexibility, purposive use of prudential regulation, along with continued financial market development, as practised by the Asian EMEs over the past decade have cushioned their economies from the current global financial crisis. They have successfully achieved a virtuous circle of high growth, low inflation and financial stability. How these elements can be best combined will depend on the country and on the period: there is no “one size fits all”.

Such a discretionary approach does put great premium on the skill of policymakers and can run the risk of markets perceiving central bank actions to become uncomfortably unpredictable. Such risk is mitigated by a record of successful management.

Keywords: Capital flows, emerging market economies, economic reform.

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Since the early 1990s, there has been a large trend increase in the volume of private capital flows, both inflows and outflows, to emerging market economies (EMEs). Net capital inflows to EMEs jumped from an average of US \$ 8 billion during the 1980s to an average of US \$ 200 billion during 2003-06 and to a record high of US \$ 617 billion during 2007. The increase in cross border capital flows to and from EMEs during the recent period has taken place in the context of very substantial increases in gross cross border capital flows overall, including amongst advanced economies.

The increasing volume of private capital flows to the EMEs can be attributed to their growing degree of financial openness over time, perception of continuing strong growth prospects, increasing productivity, growth in overall profitability of firms, as also positive interest differentials in favour of these economies, and sometimes the expectation of continuing currency appreciation. However, capital flows are not necessarily the outcome of domestic developments alone in recipient countries; they also reflect the role of push factors emanating in the source countries. The stance of monetary policy and the state of financial markets in the major advanced economies may have led to the emergence of comparatively low interest rates and overall low returns in these economies giving rise to the search for yields.

The traditional pattern of capital flows to EMEs has been in response to the need for financing current account deficits. However, during the recent period even as capital flows to the EMEs have jumped manifold, current account balances, on an aggregate basis, have actually moved from modest deficits (an average of US \$ 28 billion during the 1980s) to substantial surpluses (US \$ 714 billion in 2008). These surpluses have led to increasing foreign reserves of these countries. The external financing constraint that existed up to the 1990s has not been an

issue for most EMEs in the recent period. Large capital flows emerged as a problem of plenty during 2003-07 for the major EMEs creating significant new challenges for macroeconomic management and financial stability.

Periods of booms in capital flows have been frequently followed by periods of reversal of these flows on the back of both push and pull factors [Committee on Global Financial System (CGFS), 2009]. The volatility in capital flows is best encapsulated by recent developments: EMEs, as a group, are projected to record capital outflows (net) of US \$ 190 billion in 2009 as compared to inflows (net) of US \$ 617 billion in 2007. Developing Asian EMEs, despite strong fundamentals, have also not been immune to such swings: net inflows of US 165 billion in 2007 are expected to turn into net outflows of US \$ 47 billion in 2009 (IMF, 2009b). Such large swings in capital flows in a short period typically give rise to serious challenges for macroeconomic management and often impose serious costs on the real economy.

Capital flows that are well above their financing requirements are a relatively new phenomenon for EMEs. If such unrequited flows are not managed actively and appropriately, they can typically be associated with real exchange rate misalignment, credit and asset price booms, inflationary pressures, overheating, and financial imbalances culminating in a financial crisis and capital outflows. Real appreciations, rather than depreciations, generally worry policymakers the most outside of crisis periods (Obstfeld, 2009, Grenville, 2008). Over the past two decades, about 15 per cent of the episodes of large capital inflows ended in crisis (Schadler, 2008). Thus, in order to insulate their economies from undue volatility, most of the EMEs actively manage their capital accounts, to varying degrees, including interventions in the foreign exchange markets accompanied by sterilization. This policy response has been the norm among EMEs, despite much advice to the contrary.

Against this backdrop, this paper undertakes a critical review of the lessons for capital account management for EMEs. Section I reviews stylised facts in regard to capital flows to the EMEs over the last three decades. Section II assesses the theoretical and empirical literature on the benefits of capital account liberalisation on growth. Lessons for sequencing of capital account liberalisation and country experiences in regard to management of capital accounts are also discussed. The impact of the ongoing global financial crisis on the Asian EMEs is compared with those in the Emerging Europe and the factors responsible for the differential impact are also highlighted. Concluding observations and key lessons are set out in Section III.

I. Capital Flows to Emerging Market Economies: Stylised Facts

Private capital flows to EMEs have grown rapidly since the 1980s, but with increasing volatility over time. Large capital flows to the EMEs can be attributed to a variety of push and pull factors. The pull factors that have led to higher capital flows include overall improvement in macroeconomic management that has led to strong growth in the EMEs over the past decade, macroeconomic stability accompanied by reduction in inflation, along with opening up of the capital account in varying degrees. The major push factor can be attributed to the stance of monetary policy in the advanced economies that led to low interest rates, perceived low financial returns, and resulting mispricing of risk. Periods of loose monetary policy and search for yield in the advanced economies encourage large private capital outflows to the EMEs and reversal in periods of tighter monetary policy. Thus, swings in monetary policy in the advanced economies have led to cycles and volatility in capital flows to the EMEs (Mohan, 2009a and 2009b), swings over which the EMEs have little control. Innovations in information technology have also contributed to the increased two-way movement in capital flows globally. Overall, in

response to these factors, capital flows to the EMEs have grown over time since the early 1980s, but have been associated with increasing volatility (CGFS, 2009).

After remaining nearly flat in the second half of the 1980s, private capital flows jumped to an annual average of US \$ 124 billion during 1990-96¹. With the onset of the Asian financial crisis, total private capital flows fell to an annual average of US \$ 86 billion during 1997-2002. Beginning 2003, a period coinciding with the low interest rate regime in the US and other major advanced economies and the concomitant search for yield, such flows rose more than threefold to an annual average of US \$ 285 billion during 2003-2007 reaching a peak of US \$ 617 billion in 2007 (Chart 1 and Table 1). As noted earlier, the EMEs, as a group, are now estimated to witness outflows of US \$ 190 billion in 2009 – the first contraction since 1988 (IMF 2009b). Amongst the major components, while direct investment flows have generally seen a steady increase over the period, portfolio flows as well as other private flows (bank loans etc) have exhibited substantial volatility. While direct investment flows largely reflect the pull factors, portfolio and bank flows reflect both the push and the pull factors. It is also evident that capital account transactions have grown much faster relative to current account transactions, and gross capital flows are a multiple of both net capital flows and current account transactions.

¹ The data on capital flows are based on World Economic Outlook Database (April 2009) of the International Monetary Fund (IMF, 2009b).

Table 1: Capital Flows (net) to Emerging and Developing Economies (contd.)

(US \$ billion)

Item	1980s	1990-96	1997-02	2003-06	2007	2008	2009
1	2	3	4	5	6	7	8
All Emerging and Developing Economies							
Current account balance	-28	-83	4	364	633	714	262
Private capital flows, net	8	124	86	201	617	109	-190
Direct investment, net	12	61	161	208	359	459	313
Private portfolio flows, net	6	65	2	-25	39	-155	-235
Other private capital flows, net	-9	-2	-77	19	219	-195	-268
Official flows, net		-13	8	-90	-101	-60	58
Change in reserves	-10	-58	-114	-550	-1258	-866	-266
Developing Asia							
Current account balance	-15	-23	40	154	406	422	481
Private capital flows, net	12	59	11	82	165	128	-47
Direct investment, net	5	32	59	83	138	223	162
Private portfolio flows, net	1	17	-3	-23	11	-66	-192
Other private capital flows, net	6	11	-45	23	15	-29	-16
Official flows, net	6	0	1	-19	-37	-13	-11
Change in reserves	-11	-37	-80	-309	-673	-634	-514
Africa							
Current account balance	-10	-8	-6	12	11	12	-73

Private capital flows, net	4	3	4	20	33	24	30
Direct investment, net	1	2	11	20	32	32	28
Private portfolio flows, net	0	2	2	7	10	-16	1
Other private capital flows, net	3	-1	-9	-7	-8	8	2
Official flows, net		2	6	0	5	11	15
Change in reserves	0	-3	-6	-35	-62	-54	22

Central and Eastern Europe

Current account balance	-6	-6	-18	-54	-122	-142	-59
Private capital flows, net	1	5	25	81	174	147	-38
Direct investment, net	0	5	15	35	72	64	30
Private portfolio flows, net	0	3	3	18	-7	-13	-6
Other private capital flows, net	1	-2	7	28	109	96	-62
Official flows, net	4	1	1	-4	-6	7	27
Change in reserves	2	-2	-10	-18	-31	-10	37

Table 1: Capital Flows (net) to Emerging and Developing Economies (concl.)

(US \$ billion)

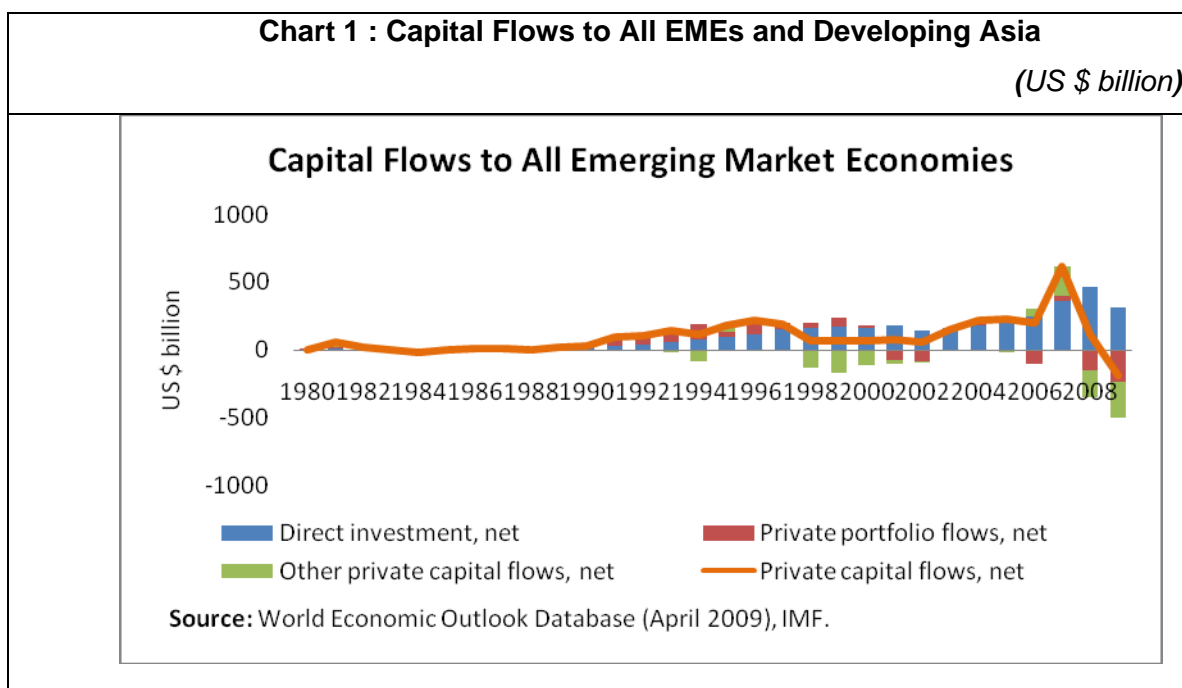
Item	1980s	1990-96	1997-02	2003-06	2007	2008	2009
1	2	3	4	5	6	7	8
Commonwealth of Independent States and Mongolia							
Current account balance	6	-1	20	71	71	109	1
Private capital flows, net	-6	-3	-4	27	127	-127	-119
Direct investment, net	0	2	5	13	27	44	17
Private portfolio flows, net	0	1	-1	3	14	-37	2
Other private capital flows, net	-6	-5	-8	11	86	-135	-138
Official flows, net		1	-4	-17	-6	-1	25
Change in reserves	-1	1	-8	-73	-168	33	94
Middle East							
Current account balance	14	-12	24	152	254	342	-10
Private capital flows, net	-11	26	-1	-30	11	-121	-30
Direct investment, net	0	3	8	15	4	11	18
Private portfolio flows, net	3	10	-7	-25	-31	-12	-14
Other private capital flows, net	-14	13	-2	-20	38	-120	-33
Official flows, net	4	2	-6	-38	-59	-76	-9
Change in reserves	-3	-4	-9	-79	-192	-151	47
Western Hemisphere							
Current account balance	-17	-33	-55	29	13	-28	-77
Private capital flows, net	9	33	52	22	107	58	13
Direct investment, net	6	18	63	43	86	84	59

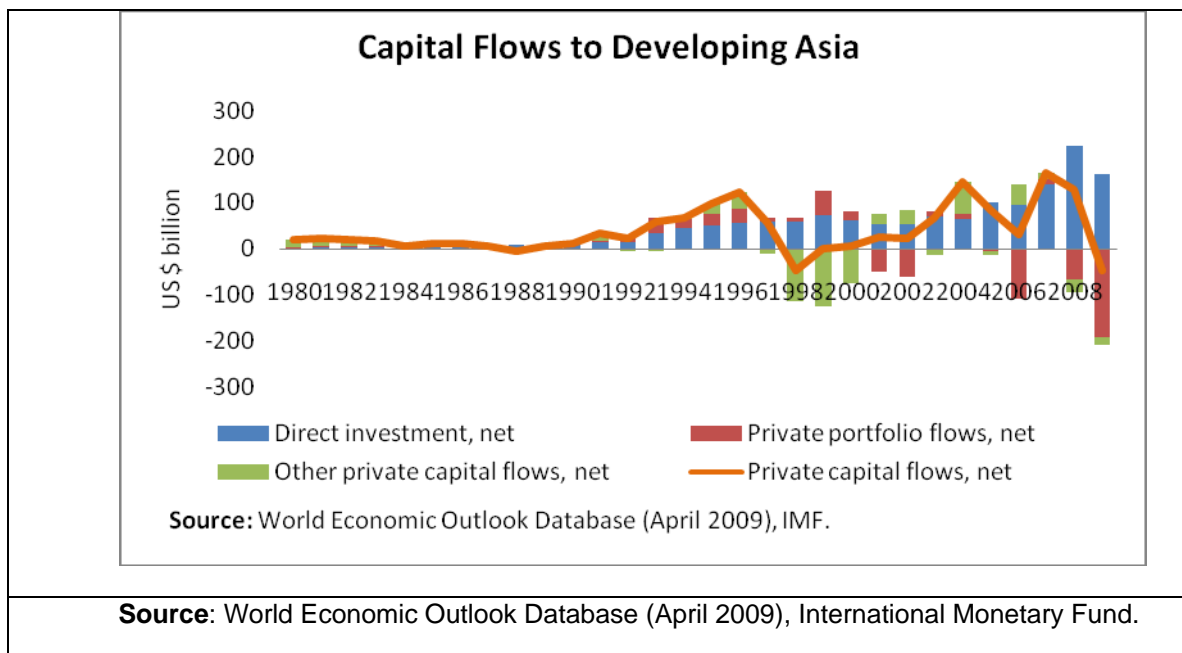
Private portfolio flows, net	1	32	9	-4	42	-11	-24
Other private capital flows, net	2	-16	-20	-17	-21	-15	-21
Official flows, net	7	5	11	-13	2	11	11
Change in reserves	2	-14	-1	-35	-132	-50	49

Notes:

1. Data in columns 2 to 5 are annual averages for the respective periods.
2. Data for 2009 in column 8 are IMF projections.
3. -ve sign in "change in reserves " denotes increase in reserves.

Source: World Economic Outlook Database (April 2009), IMF.





Source: World Economic Outlook Database (April 2009), International Monetary Fund.

There have been several distinguishing features of the large private capital flows that have taken place in recent years. First, there has been the coexistence of large current account surpluses in many of the recipient countries, particularly in Asia. Second, the large and sudden increase in capital flows that took place was to EMEs in CIS countries and Central and Eastern Europe (see Table 1). Their sudden reversal in 2008 and 2009 has led to predictable balance of payment and macroeconomic crises. Third, a pattern of significant two way flows has emerged, particularly in Asian EMEs.

Reversals of capital flows to the EMEs are often quick, as again shown by the current financial crisis, necessitating a painful adjustment in bank credit, and collapse of stock prices. Such reversals also result in the contraction of the central bank's balance sheet through the depletion in foreign assets in the form of declining foreign exchange reserves, which may be difficult to compensate through as rapid an accretion of the highest quality domestic assets. These developments can then lead to

banking and currency crises, large employment and output losses and huge fiscal costs, as is being observed currently in the European EMEs. Thus, the boom and bust pattern of capital inflows can, unless managed proactively, result in macroeconomic and financial instability. Hence, the authorities in the EMEs need to watch closely and continuously financial and economic developments in the advanced economies on the one hand and simultaneously manage their capital account actively.

Underlying the sharp expansion in the volume of net capital flows has been an even more significant growth in gross inflows and gross outflows, particularly during the period 2003 onwards (CGFS, 2009). Gross inflows and gross outflows can have greater impact on daily exchange rate movements and expectations relative to net flows and are often more important from policymakers' point of view. Private capital inflows by non-residents to all EMEs, taken together, jumped from an annual average of US \$ 200 billion during 1998-2000 to US \$ 800 billion in 2003-06 and further to US \$ 2.1 trillion in 2007. Over the same periods, private capital outflows by residents from the EMEs rose from US \$ 100 billion to US \$ 600 billion and further to US \$ 1.5 trillion (Table 2a). Capital inflows to and capital outflows from the EMEs, as a proportion of their GDP, were 14 per cent and 10 per cent in 2007; for Developing Asia, these ratios (as per cent to their GDP) amounted to 16 per cent and 13 per cent, respectively (Table 2b). Although net capital flows to Developing Asia, as per cent to GDP, as noted earlier, have been somewhat lower as compared to other regions, it is interesting to note that the underlying inflows and outflows to Developing Asia were higher than that to all regions (except Middle East).

Table 2a: Private Capital Inflows and Outflows to Emerging and Developing Economies
(US \$ billion)

Region/Item	Average 1998– 2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	2	3	4	5	6	7	8	9	10	11
All Emerging and developing economies										
Private capital flows, net	108	69	54	150	220	223	203	617	109	-191
Inflow	222	170	167	419	667	842	1314	2130	754	525
Outflow	113	101	113	269	447	619	1112	1513	645	715
Africa										
Private capital flows, net	9	1	2	5	13	26	35	34	25	30
Inflow	15	14	14	19	26	45	70	63	41	34
Outflow	7	13	12	14	13	19	35	29	17	4
Central and Eastern Europe										
Private capital flows, net	35	6	26	42	61	100	120	174	147	-38
Inflow	38	15	29	53	93	118	174	217	156	-52
Outflow	2	9	3	11	31	18	54	44	9	-13

Table 2a: Private Capital Inflows and Outflows to Emerging and Developing Economies
(US \$ billion)

Region/Item	Average 1998– 2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	2	3	4	5	6	7	8	9	10	11
Commonwealth of Independent States										
Private capital flows, net	0	7	16	19	3	30	55	127	-127	-119
Inflow	2	11	23	46	63	112	161	284	154	-4
Outflow	2	4	7	27	60	82	106	157	282	115
Developing Asia										
Private capital flows, net	-15	19	24	63	144	83	32	164	128	-47
Inflow	57	58	81	215	355	392	558	931	327	465
Outflow	71	39	57	153	212	309	527	767	199	512
Middle East										
Private capital flows, net	1	-7	0	1	-18	-55	-50	11	-121	-30
Inflow	18	-3	10	31	67	84	246	414	-67	7
Outflow	17	4	10	30	85	139	297	403	54	37
Western Hemisphere										
Private capital flows, net	78	43	6	20	17	39	11	107	58	13
Inflow	92	76	30	54	64	90	105	221	143	74
Outflow	14	32	24	34	47	51	94	114	85	61

Source: World Economic Outlook Database (April 2009), IMF.

Note: Data for 2009 in column 11 are IMF projections.

Table 2b: Private Capital Inflows and Outflows to Emerging and Developing Economies
(Per cent to respective regional GDP)

Region/Item	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	2	3	4	5	6	7	8	9	10
All Emerging and developing economies									
Private capital flows, net	1.1	0.8	2.0	2.5	2.1	1.6	4.0	0.6	-1.1
Inflow	2.6	2.5	5.6	7.5	7.9	10.5	13.9	4.1	3.1
Outflow	1.6	1.7	3.6	5.0	5.8	8.9	9.9	3.5	4.2
Africa									
Private capital flows, net	0.3	0.4	0.9	1.8	3.1	3.7	3.0	1.9	2.7
Inflow	3.3	3.1	3.3	3.6	5.4	7.3	5.7	3.2	3.0
Outflow	3.0	2.7	2.5	1.8	2.3	3.6	2.6	1.3	0.3
Central and Eastern Europe									
Private capital flows, net	1.0	4.2	5.5	6.5	8.8	9.4	10.9	7.9	-2.6
Inflow	2.7	4.6	6.9	9.8	10.4	13.7	13.7	8.4	-3.5
Outflow	1.7	0.5	1.4	3.3	1.6	4.3	2.8	0.5	-0.9
Commonwealth of Independent States									
Private capital flows, net	1.6	3.4	3.3	0.3	3.0	4.2	7.5	-5.8	-7.6
Inflow	2.7	4.9	8.0	8.1	11.2	12.3	16.7	7.1	-0.2
Outflow	1.0	1.5	4.7	7.7	8.2	8.1	9.2	12.9	7.4
Developing Asia									
Private capital flows, net	0.8	0.9	2.1	4.1	2.1	0.7	2.8	1.8	-0.6
Inflow	2.4	3.0	7.2	10.2	9.8	11.9	15.9	4.5	6.1
Outflow	1.6	2.1	5.1	6.1	7.7	11.2	13.1	2.8	6.8
Middle East									
Private capital flows, net	-0.1	0.0	0.2	-2.1	-5.4	-4.2	0.8	-6.7	-1.9
Inflow	-0.5	1.5	4.4	8.0	8.3	20.4	29.7	-3.7	0.4
Outflow	0.6	1.5	4.2	10.2	13.6	24.6	28.9	3.0	2.3
Western Hemisphere									
Private capital flows, net	2.1	0.3	1.0	0.8	1.5	0.3	2.9	1.4	0.4
Inflow	3.7	1.7	2.9	2.9	3.4	3.4	6.1	3.4	2.1
Outflow	1.6	1.4	1.8	2.1	1.9	3.0	3.1	2.0	1.7

Source: World Economic Outlook Database (April 2009), IMF.

Note: Data for 2009 in column 11 are IMF projections.

These developments could also be attributed to the greater role of portfolio investors on the back of increased financial openness in recent years, and the emergence of overall excess liquidity globally. Higher capital outflows also reflect increased institutional investment by pension funds and mutual funds. The rise of institutional investors often helps local markets to deepen and to broaden. A more diversified and resilient structure of domestic financial intermediation can actually help achieve a safer and more effective use of foreign investment in domestic assets.

These data show that there has been a significant opening of the capital accounts in EMEs, and particularly in Asia. Domestic market participants are increasingly looking at global capital markets for minimising their financing costs and diversifying their investments. Such large expansion in two way flows could be expected to have significant effects on the behaviour of private market participants, more than might be implied if one looked at net flows alone. It is possible that even if the net capital flows are not absorbed in the domestic economies, as demonstrated by the increase in foreign exchange reserves, individual market participants could still have benefited from better access to global financial markets in both directions.

While capital inflows to and outflows from EMEs have recorded strong growth over the past decade, the absolute volume of these capital inflows and outflows remains relatively small compared to those amongst the group of advanced economies. Global capital inflows rose from 5 per cent of world GDP in 1998 to over 17 per cent of world GDP in 2007, the bulk of which was on account of advanced economies. The high volume of sustained inflows and outflows is best captured in the stock of external assets and liabilities. For advanced economies, both external assets and liabilities in 2007 exceeded 220 per cent of their GDP, twice the ratio a decade earlier (Milesi-Ferretti, 2009). For the group of EMEs, external

liabilities rose from 70 per cent of their GDP in 1998 to 88 per cent in 2007; over the same period, their external assets recorded relatively faster increase from 57 per cent to 88 per cent, the result of large current account surpluses and large increase in official reserve holdings.

Trends in Capital Flows to Asian EMEs

The major Asian EMEs, with the exception of India, have consistently recorded growing current account surpluses since the Asian financial crisis (Annex 1). This reflects the decline in investment rates in most of the economies that were affected by the financial crisis of the late 1990s. Though the investment rates remain below the pre-crisis peaks even after a decade, they are still higher than those in most other parts of the world (Kawai and Lamberte, 2008). On the other hand, rates of investment in People's Republic of China (PRC) and India have risen since the Asian crisis and now exceed those of the then crisis-affected economies (Table 3). These patterns are mirrored in real GDP growth rates. India, which had growth rates that were among the lowest in the pre-crisis period, is now exhibiting growth rates that are the second highest in the region (Table 4). Thus, the current account deficit observed in India is not unexpected; but PRC's growing surplus, despite rising investment, is surprising. Net capital accounts also show divergent patterns (see Annex 1). In 2007, India, with net capital flows of US \$ 108 billion (9.2 per cent of GDP), was exceptional and emerged as the largest recipient of capital flows in the region, even exceeding PRC (US \$70 billion or 2.1 per cent of GDP). In net terms, capital flows received by Developing Asia were largely explained by PRC and India. Net capital flows received by other Asian EMEs, taken together, were near zero, despite significant increases in gross flows.

Table 3: Gross Domestic Capital Formation in Asian EMEs

Country	(Per cent to GDP)					
	1990	1995	1996	1997-2002	2003-06	2007
PRC	36.1	41.9	40.4	36.8	43.1	44.2
India	26.0	26.2	24.0	24.5	33.0	39.1
Indonesia	30.7	31.9	30.7	20.9	24.7	24.9
Republic of Korea	37.5	37.7	38.9	29.9	30.1	29.4
Malaysia	32.4	43.6	41.5	28.0	21.7	21.9
Philippines	24.2	22.5	24.0	20.3	15.7	15.3
Taipei,China	23.0	25.2	23.1	22.0	21.0	21.5
Thailand	41.4	42.1	41.8	24.2	27.9	26.8

Source: Key Indicators for Asia and the Pacific 2008, Asian Development Bank; Reserve Bank of India; and National Statistics, Taipei,China.

Table 4: Real GDP Growth in Asian EMEs

Country	(Per cent)					
	1990-96	1997-02	2003-06	2007	2008	2009 P
1	2	3	4	5	6	7
PRC	10.8	8.4	10.5	13.0	9.0	7.5
India	5.5	5.3	8.4	9.3	7.3	5.4
Indonesia	7.3	1.0	5.3	6.3	6.1	3.5
Korea	7.9	4.5	4.1	5.1	2.2	-1.8
Malaysia	9.5	3.4	5.9	6.3	4.6	-4.5
Philippines	2.8	3.4	5.4	7.2	4.6	0.0
Taipei,China	6.9	4.2	4.7	5.7	0.1	-7.5
Thailand	8.6	0.8	5.8	4.9	2.6	-3.0

Source: World Economic Outlook (WEO) Database (April 2009), IMF; WEO Update (July 2009); and latest IMF Article IV Consultation Reports (Public Information Notices) for respective countries.

Note: Data for 2009 in column 7 are IMF projections.

At the aggregate level, net capital flows to Developing Asia (in US \$ billion) in the recent years (US \$ 165 billion in 2007) were only slightly above the net inflows received in 1996 (US \$ 123 billion). For all EMEs, in contrast, the 2007 peak (US \$ 617 billion) was much above the 1996 levels (US \$ 212 billion) (see Chart 1). As noted earlier, CIS, Central and

Eastern Europe and the Western Hemisphere have emerged as the major recipients in the recent period. Importantly, net capital flows to developing Asia, as per cent to its regional GDP, in 2007 at 2.8 per cent were less than a half of the peak of 6.1 per cent recorded in 1996. Among other regions, net capital flows to Central and Eastern European EMEs were as high as 10.9 per cent of their regional GDP followed by those to CIS EMEs (7.5 per cent of their regional GDP). For all EMEs taken together, net capital flows were 4.0 per cent of their aggregate GDP (Table 5 and Chart 2).

Table 5 :Capital Flows (net) to All EMEs: Region-wise (contd.)
(per cent to GDP of respective region)

Item	1980s	1990-96	1997-02	2003-06	2007	2008	2009
1	2	3	4	5	6	7	8
All EMEs							
Private capital flows, net	0.2	2.5	1.4	2.1	4.0	0.6	-1.1
Direct investment, net	0.3	1.2	2.6	2.1	2.3	2.5	1.9
Private portfolio flows, net	0.1	1.3	0.1	-0.2	0.3	-0.8	-1.4
Other private capital flows, net	-0.2	-0.1	-1.3	0.2	1.4	-1.0	-1.6
Official flows, net	n.a.	-0.2	0.1	-0.9	-0.7	-0.3	0.3
Change in reserves	-0.3	-1.2	-1.8	-5.5	-8.2	-4.7	-1.6
Developing Asia							
Private capital flows, net	1.5	3.7	0.4	2.3	2.8	1.8	-0.6
Direct investment, net	0.5	2.0	2.7	2.2	2.4	3.1	2.1
Private portfolio flows, net	0.1	1.1	0	-0.4	0.2	-0.9	-2.5
Other private capital flows, net	0.8	0.6	-2.2	0.6	0.3	-0.4	-0.2
Official flows, net	0.7	0.1	0.1	-0.5	-0.6	-0.2	-0.1
Change in reserves	-1.2	-2.5	-3.4	-8.2	-11.5	-8.8	-6.8
Africa							
Private capital flows, net	1.1	0.7	0.8	2.4	3.0	1.9	2.7
Direct investment, net	0.3	0.5	2.5	2.6	2.9	2.5	2.5
Private portfolio flows, net	0.0	0.5	0.4	0.8	0.9	-1.2	0.1
Other private capital flows, net	0.8	-0.3	-2.0	-1.0	-0.8	0.6	0.2
Official flows, net	n.a.	n.a.	1.4	0.2	0.5	0.9	1.3
Change in reserves	0.1	-0.7	-1.5	-4.3	-5.6	-4.2	1.9
Central and Eastern Europe							
Private capital flows, net	0.3	1.0	4.3	7.6	10.9	7.9	-2.6
Direct investment, net	0.0	1.0	2.5	3.2	4.5	3.4	2.1
Private portfolio flows, net	0.1	0.6	0.5	1.7	-0.5	-0.7	-0.4
Other private capital flows, net	0.2	-0.6	1.2	2.6	6.9	5.2	-4.3
Official flows, net	1.2	0.2	0.1	-0.3	-0.4	0.4	1.8
Change in reserves	0.5	-0.4	-1.6	-1.7	-2.0	-0.5	2.5

Table 5 :Capital Flows (net) to All EMEs: Region-wise (concl.)

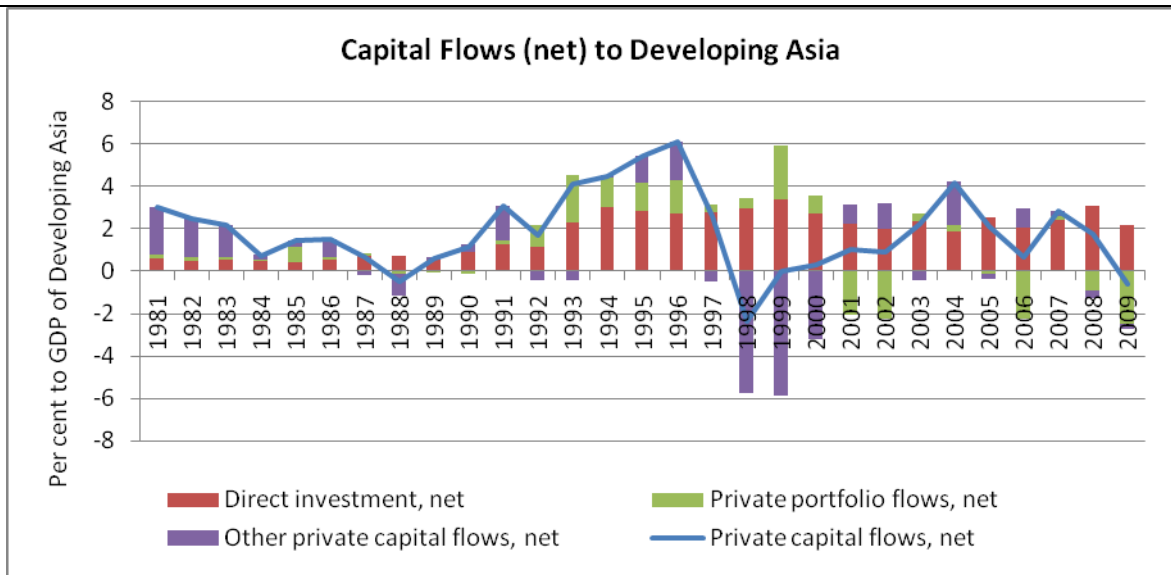
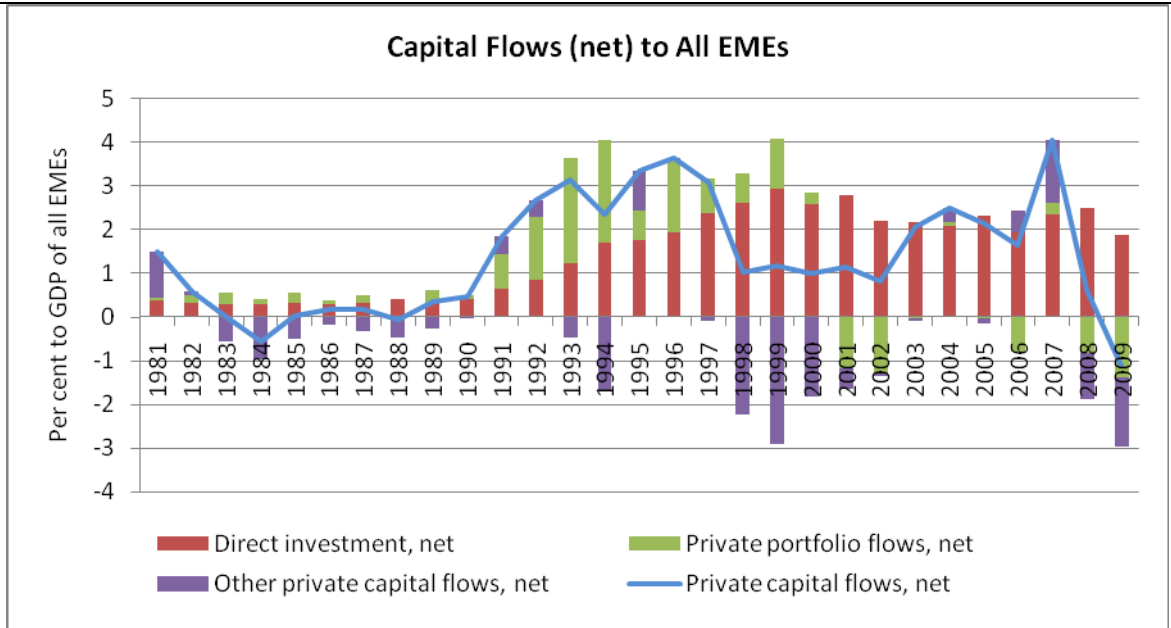
(per cent to GDP of respective region)

Item	1980s	1990-96	1997-02	2003-06	2007	2008	2009
1	2	3	4	5	6	7	8
Commonwealth of Independent States and Mongolia							
Private capital flows, net	-0.7	-0.1	-1.6	2.7	7.5	-5.8	-7.6
Direct investment, net	n.a.	n.a.	1.2	1.3	1.6	2.0	1.1
Private portfolio flows, net	n.a.	n.a.	-0.4	0.2	0.8	-1.7	0.1
Other private capital flows, net	-0.6	-0.8	-2.3	1.1	5.1	-6.2	-8.8
Official flows, net	n.a.	-0.1	-1.0	-1.7	-0.3	0.0	1.6
Change in reserves	-0.1	-0.2	-2.0	-7.6	-9.9	1.5	6.0
Middle East							
Private capital flows, net	-2.7	6.1	0.0	-2.8	0.8	-6.7	-1.9
Direct investment, net	0.0	0.7	1.4	1.7	0.3	0.6	1.1
Private portfolio flows, net	0.6	2.3	-1.2	-2.7	-2.2	-0.7	-0.9
Other private capital flows, net	-3.3	3.1	-0.2	-1.8	2.7	-6.6	-2.1
Official flows, net	0.9	0.4	-1.0	-3.9	-4.2	-4.2	-0.6
Change in reserves	-0.6	-0.7	-1.5	-7.9	-13.7	-8.3	2.9
Western Hemisphere							
Private capital flows, net	1.1	2.0	2.5	0.9	2.9	1.4	0.4
Direct investment, net	0.7	1.1	3.1	1.8	2.4	2.0	1.7
Private portfolio flows, net	0.2	2.0	0.4	-0.2	1.2	-0.3	-0.7
Other private capital flows, net	0.2	-1.1	-1.0	-0.7	-0.6	-0.3	-0.6
Official flows, net	0.9	0.3	0.6	-0.5	0.0	0.3	0.3
Change in reserves	0.3	-1.0	0.0	-1.4	-3.6	-1.2	1.4

Note: Data in columns 2 to 6 are annual averages for the respective periods; data for 2009 in column 8 are IMF projections.

Source: World Economic Outlook Database (April 2009), IMF.

Chart 2: Capital Flows to All EMEs and Developing Asia: Per cent to Respective GDP



Source: World Economic Outlook Database (April 2009), International Monetary Fund.

Net capital flows received by India in 2007 were nearly 15 times those in the pre-crisis period: unlike other Asian countries, outflows were relatively small despite substantial liberalisation of the policy regime in

regard to capital outflows. For the remaining major Asian EMEs, including Korea, net capital flows in 2007 were less than US \$ 10 billion each (see Annex 1). However, in all these economies, even as net capital flows do not show any jump, the underlying capital inflows and outflows reflect massive increases in two-way movements.

Korea's experience during this period is interesting. The current account has been in surplus since the crisis. The financial account shows large swings in gross inflows and outflows. Incoming FDI has been small, while Korean companies have been investing abroad increasingly. The portfolio investment account exhibits high volatility. Foreign bond purchases by domestic financial institutions have increased since 2001; and equity investments abroad by residents picked up sharply in 2006 (US \$ 15 billion as compared with US \$ 4 billion in 2005). Some of this has resulted from the capital account liberalization implemented under the IMF programme after the crisis (Kim and Yang, 2008). For Korea and Philippines, net capital flows in 2007 were similar to those in the pre-crisis period.

Malaysia and Thailand recorded net capital outflows in 2007. For Malaysia, net capital outflows reflect higher FDI abroad, carry trades and repayment of Central Government external debt (Foong, 2008). In Taipei, China, net capital flows were broadly balanced in the decade to 2006 reflecting large outflows on account of FDI and portfolio investments. In 2007, net capital outflows jumped substantially on the back of large overseas portfolio equity investments.

Overall, in contrast to current account balances, the capital account in most Asian EMEs reflects somewhat differentiated country specific behaviour and trends (Table 6). As a proportion of GDP, net capital inflows to all Asian EMEs, except India, in the period 2003-07 were substantially lower than that in the pre-crisis period. In retrospect, India

was a clear outlier in Asia with respect to capital flows in 2007, despite its policy of active capital account management. Why this happened and how the macro economy was managed in the face of such flows clearly needs further research.

Table 6: Net Capital Inflows to Asian EMEs

(Per cent to GDP)

Country	1990-96	1997-02	2003-06	2007	2008
1	2	3	4	5	6
PRC	3.2	1.2	2.9	2.1	n.a.
India	2.1	2.1	3.3	9.2	0.8
Indonesia	3.7	-3.9	-0.2	0.7	-0.4
Korea	2.3	0.5	1.7	0.8	-5.4
Malaysia	9.3	-3.9	-3.4	-5.8	n.a.
Philippines	7.4	3.2	0.3	2.1	-2.7
Taipei,China	n.a.	0.3	0.0	-10.0	-0.4
Thailand	10.3	-6.8	2.1	-1.2	4.7

Source: International Financial Statistics CD-ROM, IMF; Reserve Bank of India; Bank of Thailand; and Central Bank Taipei,China.

n.a.: not available

In all the Asian EMEs, however, the current and capital accounts taken together have led to persistent surpluses in the overall balance of payments. As a result, the real exchange rate in all the major economies experienced appreciation pressures between 2003 and July 2007 (just prior to the onset of the sub-prime crisis in the US), regardless of the exchange rate regime followed (Table 7). Since then, as a consequence of capital account reversals emanating from the global financial and economic crisis, most countries in the region have experienced large depreciation pressures. PRC's exchange rate reflects a contrary trend: some real depreciation in the first period, but strong real appreciation in

the latter period followed more lately by near pegging to the dollar in recent months.

Table 7: Movements in Nominal and Real Effective Exchange Rates
(Per cent)

	PRC	India	Indonesia	Korea	Malaysia	Philippines	Taipei,China	Thailand
Nominal Effective Exchange Rates								
January 2003 to April 2009	11.8	-14.3	-28.6	-22.0	-4.8	0.9	-8.2	8.2
January 2003 to July 2007	-3.5	2.0	-14.1	15.5	-1.5	6.5	-5.4	14.2
July 2007 to April 2009	16.0	-15.9	-16.9	-32.5	-3.3	-5.3	-2.9	-5.3
Real Effective Exchange Rates								
January 2003 to April 2009	15.6	-0.1	0.4	-17.8	-3.7	25.0	-14.5	13.7
January 2003 to July 2007	-1.1	15.8	10.7	18.5	-1.7	23.1	-10.5	20.3
July 2007 to April 2009	16.8	-13.7	-9.3	-30.6	-2.0	1.6	-4.4	-5.5

Note: Positive value indicates appreciation and negative depreciation of the index.

Source: Bank for International Settlements.

In brief, although net capital flows exhibited an unprecedented rise during 2003-07 to the EMEs in general, the experience of Asian EMEs was more varied. But they also did experience large increases in gross capital flows. What was common among Asian EMEs, with the notable exception of India, was the occurrence of sustained large surpluses in their current accounts. In contrast, the Eastern European countries exhibited large current account deficits and a corresponding increase in large capital account inflows, which finally could not be sustained, being subject to reversals in 2008 and 2009 with the onset of the global financial crisis. The large portfolio inflows experienced in 2007 have led to their reversal in 2008 and 2009. This high volatility in cross border capital flows

induces great macroeconomic and financial instability in EMEs. Unlike previous periods, the problem encountered by Asian EMEs has been the management of excess flows, either on the current account or capital account, not of shortage. Accordingly, most EMEs have been observed to manage their capital accounts somewhat actively, both through some forms of capital controls and through interventions in the forex market (Grenville, 2008).

II. Capital Flows to Emerging Market Economies: Theoretical Perspectives and Empirical Evidence

There has been a very active, contentious and continuing academic debate on the benefits to be gained from capital account liberalisation in terms of economic performance. In principle, free flow of capital across borders should lead to a more efficient allocation of resources between savers and investors across the world: capital would flow from countries with abundant capital (low returns) to capital scarce countries (higher risk-adjusted returns) and this cross-border flow of capital, along with technical know-how, should increase growth in the recipient countries. Availability of external capital should also help nations to smoothen consumption and investment in response to exogenous shocks. Thus, one should expect capital account liberalisation to be associated with higher growth and lower volatility in consumption and investment.

Whereas there is widespread agreement among economists on the desirability of open trade in goods, there is much more disagreement with respect to the virtues of financial openness. Even strong proponents of free trade such as Bhagwati (1998) have expressed considerable doubt with respect to the gains to be had from unfettered trade in assets. In his recent comprehensive review of capital account liberalization, Obstfeld (2009) concludes that "...concrete evidence of gains from financial

globalization - at least gains of the type traditionally claimed on the basis of simple economic theory – have proved hard to document in any definitive way”. Thus, although a good proportion of mainstream economists continue to support broad opening of the capital account, many such as Bhagwati (1998), Rodrik (1998), Cooper (1999), Stiglitz (2003), Obstfeld (2009), and Rodrik and Subramanian (2009) have expressed reservations on such broad based opening. Much of this thinking had been induced by the Asian crisis and, no doubt, the ongoing global financial crisis will give rise to further questioning of the merits of financial globalization. What is also of interest is that a review of actual policies followed shows that full capital account opening has been viewed with caution by almost all Asian EMEs.

The theoretical benefits expected from financial globalization are predicated on the assumption that with opening of the capital account resources would flow from developed capital-abundant economies to less developed capital-scarce economies. Capital would then flow towards activities exhibiting higher returns and higher productivity. As EMEs move towards the global production possibilities frontier, they would show higher productivity, higher profitability and higher growth. The recent experience of Asian economies has been the opposite: their savings rates have exceeded their investment rates so resources have been flowing in the “reverse” direction. In such a situation the traditional gains expected from full opening of the capital account in terms of greater investment and growth are clearly absent. In the presence of relatively high investment rates, it is difficult to argue that such benefits would have accrued if the exchange rate had adjusted enough to create a current account deficit, leading to absorption of capital flows, from which all the expected benefits would then follow. The evidence relating to the increase in two way flows does, however, suggest that there could be some microeconomic gains to

market participants through improved access to global capital markets, as long as the authorities are able to manage the macroeconomic effects of such excess flows.

Empirical Evidence

What has been the evidence with respect to the expected benefits of opening of the capital account? Empirical evidence does not seem to support the theoretical propositions on the expected benefits (CGFS, 2009). Prasad, Rajan and Subramanian (2007) find a positive correlation between current account balances and growth among non-industrial countries, i.e., a reduced reliance on foreign capital is associated with higher growth contrary to the theoretical case. This result could be attributed to the fact that even successful developing countries have limited absorptive capacity for foreign resources, either because their financial markets are underdeveloped, or because their economies are prone to overvaluation caused by rapid capital inflows. In a similar vein, Rodrik and Subramanian (2009) argue that developing economies are more likely to be constrained by investment opportunities rather than by the availability of savings; in such circumstances, foreign finance can often aggravate the existing investment constraint by appreciating the real exchange rate and reducing profitability and investment opportunities in the traded goods sector, which have adverse long-run growth consequences. Given the existence of relatively high levels of investment and growth rates in Asian economies, even this argument is difficult to sustain.

In view of the failure to find empirical evidence of the beneficial effects of capital account liberalization on growth, some have argued that benefits of financial globalisation may be indirect rather than direct. Indirect or “collateral” benefits of financial opening could be in the form of better financial sector development, institutions, governance, and

macroeconomic stability, which then help growth prospects. Such indirect effects are likely to be far more important than any direct impact via capital accumulation or portfolio diversification (Kose, Prasad, Rogoff and Wei, 2009). According to Kose, Prasad and Terrones (2009), indirect benefits of financial opening could collectively show in productivity growth. However, it is difficult to understand how there can be positive effects on productivity growth without corresponding positive effects on overall growth.

The indirect benefits are, however, not straight-forward: they are dependent upon certain “threshold” levels of financial and institutional development. The thresholds are lower for foreign direct investment and portfolio equity liabilities compared to those for debt liabilities (Kose, Prasad and Taylor, 2009). There is an important issue of causality here: is it the opening up of the capital account that leads to indirect benefits or is it the gradual development of domestic financial markets that allows the benefits of subsequent opening up of capital account to be reaped? Thus, a coordinated and calibrated approach to simultaneous movement in financial market and sector development on the one hand and gradual opening up of the capital account might be expected to lead to a better outcome. As such, unless the strengthening of local financial institutions and the improvement of macroeconomic policies are in place, the liberalisation of capital flows can entail dangers.

Rodrik and Subramanian (2009) and Obstfeld (2009) reach a sceptical conclusion on the benefits, whether direct or indirect, of financial opening. The former authors, for instance, note that “If you want to make an evidence-based case for financial globalization today, you are forced to resort to fairly indirect, speculative, and, in our view, ultimately unpersuasive, arguments” (page 136). Similarly, Obstfeld (2009), based on his comprehensive review, comes to the conclusion that there is

strikingly little convincing documentation of direct positive impact of financial opening on the economic welfare levels or growth rates of developing countries. There is also little systematic evidence that financial opening raises welfare indirectly by promoting collateral reforms of economic institutions or policies (Kim and Yang, 2008). Rather, opening the financial account does appear to raise the frequency and severity of economic crises. As Obstfeld (2009) notes: “financial openness is not a panacea - and it could be poison. The empirical record suggests that its benefits are most likely to be realized when implemented in a phased manner, when external balances and reserve positions are strong, and when complementing a range of domestic policies and reforms to enhance stability and growth” (pages 104-105).

Henry (2007) argues that the empirical methodology of most of the existing studies is flawed since these studies attempt to look for permanent effects of capital account liberalisation on growth, whereas the theory posits only a temporary impact on the growth rate. Once such a distinction is recognised, opening of the capital account within a given country is found to generate economically large and statistically significant effects, not only on economic growth, but also on the cost of capital and investment. The beneficial impact is, however, discernible only from liberalisation of equity flows. Free movement of debt flows is not found to be associated with any positive impact on growth. Rather, liberalization of debt flows—particularly short-term, dollar-denominated debt flows—may cause problems. On the other hand, empirical evidence indicates that countries derive substantial benefits from opening their equity markets to foreign investors (Henry, *op cit*). FDI and portfolio liabilities boost productivity growth, whereas debt liabilities have a negative impact (Kose, Prasad and Terrones, 2009). However, as Kose, Prasad, Rogoff and Wei (2009) argue, the significant positive impact of equity market liberalisation

on growth could be masking the impact of other supportive reforms since equity market liberalisation typically takes place only when governments are sure that supportive conditions are in place.

Large volatility in sudden and substantial exchange rate movements constitutes an important channel through which capital flows can potentially have an adverse impact on the domestic economy. The impact of exchange rate changes on the real sector is significantly different for reserve currency countries and for developing countries. For the former which specialise in technology intensive products, the degree of exchange rate pass through is low, enabling exporters and importers to ignore temporary shocks and set stable product prices despite large currency fluctuations. Moreover, mature and well developed financial markets in these countries help to absorb the risk associated with exchange rate fluctuations with negligible spillover on the real activity. On the other hand, for the majority of developing countries which specialise in labour-intensive and low and intermediate technology products, profit margins in the intensely competitive markets for these products are very thin and vulnerable to pricing power by large retail chains. Consequently, exchange rate volatility has significant employment, output and distributional consequences (Mohan, 2004). These observations are supported by empirical evidence contained in Aghion, Bacchetta, Ranciere and Rogoff (2009). The paper finds that, in countries with less developed financial sectors, exchange rate volatility has a significant negative impact on productivity growth; the effects are, however, small or insignificant in countries with developed financial systems. For less developed economies, the effects can be large: they find that a country like Zambia (with credit to GDP ratio of 15 per cent in 1980) would have gained 0.94 per cent of annual growth had it switched from a flexible to a totally rigid exchange rate. A country like Egypt (credit to GDP ratio of about 27 per

cent) would have gained 0.43 per cent growth per year by adopting a uniform pegged exchange rate.

In the context of substantially large capital flows to the EMEs over the past few years, it is generally argued that deep financial markets would be helpful in channelling such capital flows efficiently. The merit of such an argument is subject to doubt in light of the recent experience. If capital flows reach levels as high as 10 per cent of GDP or more per annum, as they have for some countries over the past few years, it is arguable that even a highly advanced financial system could have intermediated such capital flows efficiently and in a stable manner. For such a large volume of capital flows to be fully absorbed, an equivalent current account deficit or large real appreciation or a combination thereof would be the immediate consequence. These outcomes would in turn be manifested in asset price and credit booms and financial imbalances. All these options are clearly unsustainable and can lead to future fragility as revealed by the developments in some Asian economies during the Asian financial crisis of 1997 and in East European nations and the Baltics in the current global financial crisis.

It is interesting to note that the large capital flows that came to the US to finance its large current account deficits during the most of this decade are argued by some to have contributed to the global financial crisis. Domestic demand growth in the US was stoked by the extended accommodative monetary policy, leading to higher overall growth than would otherwise have been expected, widening of the current account deficit and the consequent flow of private capital in the initial stages (Mohan, 2009 b and c). Had an accommodative monetary policy not been followed for an extended period and interest rates been higher, it is possible that US growth would have been lower leading to lower current account deficits and lower inward capital flows. IMF (2009a) notes that

global imbalances contributed to low interest rates and to large capital inflows into US and European banks, which then contributed to a search for yield, higher leverage, and the creation of riskier assets. In a similar vein, Bernanke (2009) observes that the United States and some other advanced countries experienced large capital inflows for more than a decade, even as real long-term interest rates remained low². In the later stages the inward capital flows were mainly official recycled capital flows.

The risk-management systems of the private sector and government oversight of the financial sector in these United States and some other industrial countries failed to ensure that the inrush of capital was prudently invested. “In certain respects, our experience parallels that of some emerging-market countries in the 1990s, whose financial sectors and regulatory regimes likewise proved inadequate for efficiently investing large inflows of saving from abroad” (Bernanke, 2009). If large capital inflows to the economies with the most advanced financial markets and intermediaries are believed to have led to inefficient intermediation culminating in the severest financial crisis since the Great Depression of the 1930s, then the pitfalls of advocating a free run for capital flows in the EMEs are not imaginary.

On balance, an assessment of the available empirical literature suggests that full capital account liberalisation *per se* does not lead to higher growth in EMEs: it can rather impart avoidable volatility and have an adverse impact on growth prospects of the EMEs. A majority of historical crises are preceded by financial liberalization. Surges in capital inflows often precede external debt crises at the country, regional, and

² This characterization of the problem ignores the fact that large capital inflows received by the US and other industrial economies merely reflected the recycling of the large excess flows received by the EMEs from these industrial economies themselves, which, in turn, could be attributed to the excessively accommodative monetary policy in the US and other industrial economies during 2002-04.

global level since 1800 if not before (Reinhart and Rogoff, 2008). Available evidence is strongly in favour of a calibrated and well-sequenced approach to opening up of the capital account and its active management by authorities, along with complementary reforms in other sectors and taking into account country-specific features (Mohan, 2007; CGFS, 2009; Obstfeld, 2009, Grenville, 2008).

Capital Account Liberalisation: Sequencing

There appears to be a great degree of consensus on the appropriate sequencing of opening of the capital account among both economists and practitioners (Obstfeld, 2009; Kim and Yang, 2008; Yu, 2008; Tarapore, 2007; among others). FDI flows should be the first to be liberalised since they are among the most stable flows and also provide enhanced management and technical know-how. Next to be liberalised should be portfolio equity inflows.

Greater caution is necessitated in the liberalisation of debt flows. Indeed, it is interesting to note that almost all studies and authors find that debt flows have an adverse impact on growth, especially in economies with underdeveloped financial markets. However, even if the domestic financial markets in the EMEs were well-developed, it is not apparent that a fully free regime in regard to debt flows would be stabilising. Given the relatively higher growth rates as well as higher inflation rates in the EMEs, it is apparent that interest differentials favour EMEs. Such growth- and inflation-induced interest rate differentials are likely to continue in the coming years and decades. During periods of low interest rates and yields in the advanced economies – the source countries for capital flows – a freer regime could potentially lead to large, sudden volume of capital inflows to the EMEs, which could reverse as monetary policy gets normalised in the advanced economies. This can impart large volatility to

capital flows and induce macroeconomic and financial instability. As Grenville (2008) notes, capital inflows reflect an ongoing structural disequilibrium: foreign capital will be attracted by the higher returns and the prospect of currency appreciation. In this environment, the exchange rate will be poorly anchored by fundamentals, which would then threaten the stability of the financial system. With the intensification of capital inflows and consequent exchange rate appreciation even greater inflows take place in the short term putting further upward pressure on the real exchange rate. With this overshooting of the exchange rate, the trade and current account deficits eventually begin to rise leading to a subsequent fall in international confidence, and consequent sudden reversal of capital flows. Thus, as long as interest differentials favour EMEs on a structural and sustained basis, a more cautious approach to liberalisation of debt flows, especially short-term, is warranted. In particular, investments by foreigners in government securities should be subject to some ceilings to avoid excessive arbitrage-led flows.

As regards debt flows, *ceteris paribus*, the policy preference could be in favour of local-currency denominated liabilities relative to foreign-currency denominated liabilities. In terms of various categories of resident entities, there may be a merit in more stringent prudential restrictions on access of financial intermediaries, especially banks, to external finance relative to corporates. Whereas the failure of a non-financial corporate entity does not have any systemic implications, bank failures do involve adverse substantial systemic consequences. The adverse implications for financial stability on the back of boom and bust pattern associated with capital inflows are created and exacerbated by the banking system. In boom periods, excess liquidity generated by capital inflows, if not sterilised effectively by the central bank, can lead to relaxation of lending standards, and generate credit and investment booms and financial imbalances.

For example, during 2002-08, banks in EMEs such as Russia, Korea and PRC raised copious amounts of external flows, mostly in the form of debt, which were mirrored in credit booms in these economies (Table 8) (CGFS, 2009). Whereas the official sector increased its foreign assets in the form of foreign exchange reserves, many private sector entities, both banks and non banks, contracted substantial foreign liabilities, which then led to difficulty when the capital reversal took place and foreign credit markets tightened. As capital flows reverse, on the back of domestic or exogenous foreign shocks, sharp adjustments in the real and financial sectors can result in large loan losses for banks, with the possibility of increasing non performing assets in the real economy. The failure in a particular bank leads to loss of trust in even healthy banks, which can freeze money and credit markets, and have a further downward spiral effect on real economic activity, as has occurred in the ongoing global financial crisis. It is well-known that banks are leveraged entities and are, therefore, special. As recent developments show, bank failures in one country lead to contagion effects in other countries. Accordingly, as in the current episode of financial stress, governments can be forced to extend the scale and scope of guarantees on bank deposits and even on non-deposit liabilities owed to foreigners. Thus, a liberal regime in regard to banks' access to foreign capital can be destabilising and lead to huge fiscal costs.

Table 8 : BIS Reporting Bank Flows to Banks in Emerging Markets (2002-2008)

(US \$ billion)

Top Recipient Economies					Top Lending Countries	
	Loans	Debt securities	Equities	Total		Loans
Russia	73.2	93.2	15.6	182.0	United Kingdom	83.7
Singapore	149.5	20.4	0.2	170.0	United States	76.2
Korea	89.5	64.1	10.2	163.7	Austria	63.7
PRC	80.4	20.2	47.2	147.7	Germany	52.1
Hong Kong SAR	54.4	34.1	6.2	94.7	France	44.7
India	58.7	14.5	15.7	88.9	Netherlands	38.0
Brazil	29.6	33.8	8.4	71.8	Belgium	31.8
Poland	46.4	-4.2	1.6	43.8	Sweden	22.3
Taipei,China	35.0	2.9	4.3	42.2	Switzerland	12.8
Turkey	28.6	8.1	3.3	39.9	Finland	10.9

Note: Data in this table are cumulative flows between 2002 and first half of 2008.

Source: CGFS (2009).

A related issue is of foreign ownership of domestic banks. The larger presence of foreign banks can increase the vulnerability of the domestic economy to foreign shocks, as happened in Eastern European and Baltic countries. Significant liquidity and capital shocks to the parent foreign bank can force it to scale down its operations in the domestic economy, even as the fundamentals of the domestic economy remain robust. Thus, domestic bank credit supply can shrink during crisis episodes, as is happening in some countries now.

In regard to liberalisation of outflows, restrictions can be relaxed for corporate entities, institutional investors and individuals in that order. The difficulty is that during periods of rising capital inflows resulting from the perception of higher financial returns in EMEs, including arbitrage flows, the liberalisation of outflows can actually result in even greater net inflows. Domestic residents tend not to take advantage of the diversification opportunity offered in the light of higher expected returns domestically.

Speculative inflows get strengthened by the increased confidence in repatriating these flows. Thus, it is important to liberalise outflows carefully, both in terms of timing and the categories of outflows.

Managing Large Capital Inflows

As argued above, the case for hasty and full capital account liberalisation is weak. There is rather a hierarchy in terms of capital flows that can be liberalised and those that need to be regulated. Even then, capital flows to EMEs can be fairly large and highly volatile. Moreover, even those flows that are sought to be regulated often find ways around the stipulated regulations. The key issue facing policymakers is, therefore, the management of large volatility in capital flows – long periods of large, persistent capital inflows followed by quick reversals. Authorities in the EMEs have, therefore, been managing capital flows, to varying degrees, in order to ensure domestic macroeconomic and financial stability.

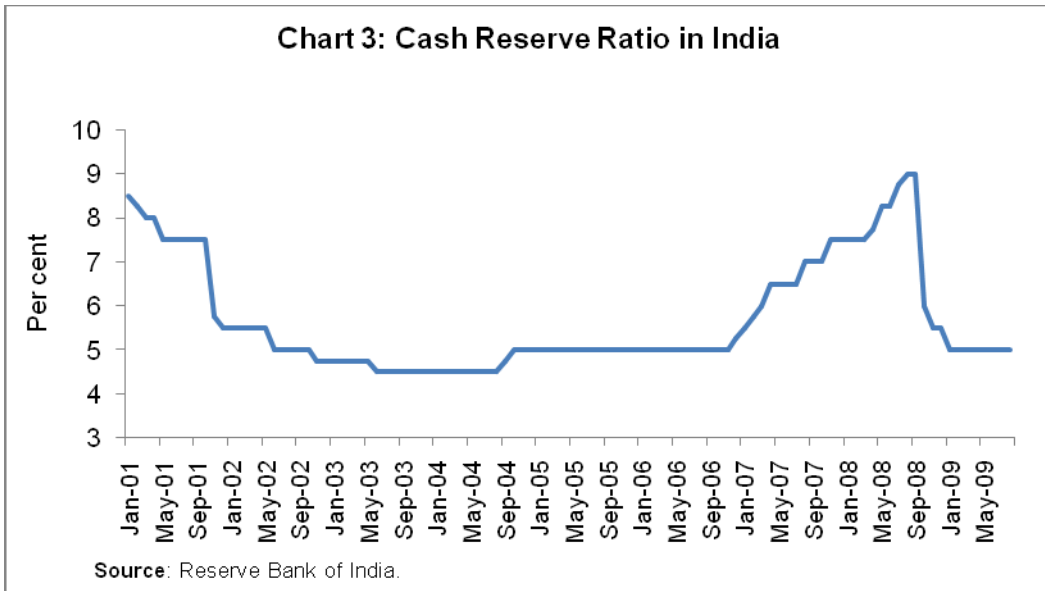
Most EMEs, including Asian EMEs, have used a judicious menu of options in trying to modulate the volume of net capital inflows, manage the volatility in currency, intervene in the market and sterilise the interventions, while simultaneously going ahead with structural reforms. Increasing flexibility of the exchange rate and using this as the *only* tool to manage capital inflows is likely to be ineffective, even though that is desirable in itself. As a catch-all solution to the problems posed by capital inflows does not exist, authorities need to use all the instruments available with them (Kim and Yang, 2008). Major Asian EMEs have continued with gradual and calibrated liberalisation of capital outflows, while continuing to retain restrictions on some categories of inflows, along with greater exchange rate flexibility.

Thailand imposed unremunerated reserve requirements (URR) – the only country in the Asian region to do so – on fixed income flows in December 2006; these requirements were withdrawn in March 2008 as

foreign capital flows moderated. URR on portfolio equity flows were also imposed in December 2006 but were immediately withdrawn as a consequence of immediate and extremely adverse market reaction. In India, access norms to external commercial borrowings were tightened in August 2007 in the wake of heavy inflows, but were relaxed in 2008 following the global financial crisis. Interest rate ceilings on non-resident deposits with the banking system were reduced during 2006-2007 to moderate the inflows, and were then raised again in 2008 when inflows had reversed in the wake of the global financial crisis. In April 2007, foreign banks in Korea were advised not to respond to strong arbitrage incentives to swap dollars for Korean won. Limits on lending in foreign currency to Korean firms were reimposed. The non-taxable amount that foreign bank branches can borrow from their parent companies was reduced from 6 times capital to 3 (“thin capitalization rule”), starting January 2008. The use of foreign exchange loans by banks was limited to real demand (financing imports and real investment), beginning August 2007. McCauley (2008) finds that these restrictions on capital flows were effective in the case of Korea, PRC and Thailand. (The effectiveness of restrictions in the Indian context was not examined in this paper).

India and PRC raised cash reserve requirement (CRR) ratios to moderate the expansionary impact of large capital inflows on domestic monetary and credit aggregates and prevent overheating between 2004 to around mid-2008 (Mohan, 2008a). The increases in these ratios were rolled back in late 2008 and early 2009 as capital flows reversed (Chart 3). The domestic banking system was thus largely insulated from both the large influx and the subsequent reversal of capital flows. Reserve requirements provided these central banks with a liquidity “cushion” that could be released when the banks faced greater funding difficulties in October and November 2008. Banks could be given back their own liquidity and there

was no need for any dilution of collateral accepted by the Reserve Bank for injection of liquidity into the system. In Indonesia, Malaysia and Philippines too, reserve requirements were cut in the aftermath of the global financial crisis and capital flows reversals to provide the banking system with adequate liquidity.



Central banks of PRC and Korea have also issued their own bills to sterilise capital inflows, while India introduced (in 2004) an innovation in the form of Market Stabilisation Scheme (MSS) for sterilisation. Under the MSS, the Reserve Bank of India issues/redeems/buys back Government Treasury bills/bonds to neutralise the impact of capital inflows. The fiscal impact is transparently borne by the Government. In the aftermath of the crisis, like the CRR, liquidity was injected into the banking system by normal redemptions as well as active buybacks of Government Treasury bills/bonds issued under the MSS. In the context of MSS operations, during times of excess foreign exchange inflows, there is a simultaneous increase in the holdings of the Reserve Bank's foreign currency assets and the stock of MSS. The former leads to higher earnings for the

Reserve Bank and these are mirrored in higher surplus profit transfers to the Central Government from the Reserve Bank. Thus, the interest expenses incurred by the Government on account of issuances under the MSS are offset by higher transfers from the Reserve Bank (Table 9). Moreover, since in a fast growing economy there is need for expansion of the monetary base, only part of the increase in the central bank's balance sheet through accretion of foreign assets needs to be sterilized. The cost of sterilization is therefore muted and lower than what has often been feared, and has to be traded off against the benefits of financial stability that are gained.

Table 9: Fiscal Impact of the Market Stabilisation Scheme in India

<i>(Rupees billion)</i>				
Item	2004-05	2005-06	2006-07	2007-08
1	2	3	4	5
1. Balances under Market Stabilisation Scheme (MSS) (outstanding, end-March)	642	291	630	1,684
2. Interest paid by the Government on issuances under the MSS during the year (April-March)	21	34	26	84
3. Foreign Currency Assets of the Reserve Bank (outstanding, end-March)	5,931	6,473	8,366	11,960
4. Net Disposable Income of the Reserve Bank during the year (July-June)	54	84	114	150
5. Surplus Transfer from the Reserve Bank to the Central Government during the year (July-June)	54	84	114 @	150

@: Excluding profits on sale of shares of State Bank of India.

For mopping up enduring surplus liquidity, a policy choice exists between the central bank issuing its own securities versus the government issuing additional securities purely for sterilization purposes. A large number of countries, such as, Chile, PRC, Colombia, Indonesia, Korea, Malaysia, Peru, Philippines, Russia, Sri Lanka, Taipei, China and Thailand have issued central bank securities. However, central banks in some of

these countries have faced deterioration in their balance sheets. As such, there is merit in issuing sterilization bonds on government account. Moreover, in case of an already well established government debt market, the issuance of new central bank bills or bonds of overlapping maturity could cause considerable confusion and possible market segmentation. Such confusion could obfuscate the yield curve, reduce liquidity of the instruments and make monetary operations that much more difficult. In India, the MSS has considerably strengthened the Reserve Bank's ability to conduct capital account and monetary management operations. It has allowed absorption of surplus liquidity by instruments of short term (91-day, 182-day and 364-day T-bills) and the medium-term (dated Government securities) maturity. Generally, the preference has been for the short-term instruments. This has given the monetary authority a greater degree of freedom in liquidity management during transitions in liquidity conditions. In response to the tightening of domestic liquidity brought about by the global financial crisis, the MSS is being unwound; both on account of normal redemptions as well as through buy-back of MSS dated securities. These operations have provided another avenue for injecting liquidity of a more durable nature into the system and highlight the flexibility provided by the MSS (Mohan, 2008a and 2008b). In principle, sterilization is more effective when the excess capital flows are judged to be temporary and not "permanent". However, *ex ante*, it is difficult, if not impossible, to foresee the durability of the observed excess flows. The use of MSS instruments of varying maturities enables judgement of the durability of flows on an *ex post* basis.

Credit booms and asset price booms are often associated with large capital inflows and constitute an important concern for future financial fragility. In this context, apart from using monetary policy instruments such as policy rates and CRR, India also tightened prudential norms – risk

weights and provisioning norms – during 2005-2007 in regard to certain sectors such as real estate and stock markets where relatively high credit growth was being witnessed. The prudential norms were rolled back in late 2008 in the aftermath of the global financial crisis. Thus, provisioning requirements for standard assets which were increased from a uniform level of 0.25 per cent in March 2005 to 1.0-2.0 per cent in the case of some sensitive sectors by January 2007 were rolled back to 0.4 per cent in November 2008 (Table 10). Whereas these measures were taken in a judgemental ad hoc manner in India, a more systematic approach to dynamic provisioning is now being internationally accepted and recommended. Similarly, risk weights for capital adequacy purposes were raised for sectors such as commercial real estate, residential housing loans, consumer credit and capital market exposures during 2005-2007 (period of strong credit growth) and then scaled down in November 2008 as credit growth slowed down.

Such an approach to financial regulation helps to throw sand in the wheels in sectors witnessing high growth, possibly fuelled by the availability of abundant liquidity arising from excess capital flows, and helps to foster financial stability. Such an integrated approach combining monetary and prudential instruments in India was facilitated by the fact that both monetary policy and financial regulation responsibilities have been entrusted to a single agency (Reserve Bank of India) (Mohan, 2009a; 2009c). It is also important to strengthen financial regulation so as to avoid regulatory arbitrage. Thus, in India, the regulatory regime with regard to non-banking finance companies has been gradually tightened since 2004 so that weaknesses do not emerge in sectors which are weakly regulated. This use of prudential measures suggests that the management of capital inflows can also be done through such an approach, in addition to or supplementary to the more conventional use of

sterilization instruments. In the case of India in 2007-08, almost all possible instruments were used in the face of exceptional excess capital inflows amounting to almost 10 percent of GDP, which can now be seen as an outlier in the world.

Table 10: Standard Asset Provisioning Requirements for Commercial Banks in India

						(Per cent)
Sr. No.	Category of Standard Asset	March 2005	November 2005	May 2006	January 2007	November 2008
1	2	3	4	5	6	7
1.	Direct advances to the agricultural and SME sectors	0.25	0.25	0.25	0.25	0.25
2.	Residential housing loans beyond Rs. 2 million	0.25	0.40	1.00	1.00	0.40
3.	Personal loans (including credit card receivables), loans and advances qualifying as capital market exposures and commercial real estate loans	0.25	0.40	1.00	2.00	0.40
4.	Loans and advances to non-deposit taking systemically important non-banking finance companies (NBFCs)	0.25	0.40	0.40	2.00	0.40
5.	All other loans and advances not included above	0.25	0.40	0.40	0.40	0.40

Source: Reserve Bank of India.

Capital Account Management in Asia: An Assessment

It is interesting to note that Asian EMEs, despite large foreign exchange interventions, have been able to maintain monetary and price stability. Overnight market rates have generally remained within the corridor set by the policy rates (Ho and McCauley, 2008). Asian EMEs were also able to insulate the growth in their monetary aggregates from large purchase of foreign exchange (Grenville, 2008). With the possible exception of India, he does not find any close link between additions to net foreign assets and base money.

As regards India, the odd result reflects the fact that in the Reserve Bank has actively used cash reserve ratio (CRR) as one of the instruments of sterilisation: CRR has been raised during periods of heavy capital inflows and lowered during periods of capital outflows³. Banks' balances under CRR are a part of reserve money. Thus, increases in CRR, even as they impound excess liquidity from the banking system, end up showing as higher expansion in reserve money. The reverse happens when the CRR is cut. Thus, a casual look at the data, as in Grenville (op.cit), would show that periods of higher accretions to net foreign assets are associated with higher growth in reserve money, suggesting incomplete or ineffective sterilisation. Such an interpretation is misleading and incorrect. It is, therefore, important to analyse variations in reserve money adjusted for the impact of policy-induced changes in CRR. Such an analysis shows that growth in reserve money has been relatively stable even as net foreign assets had shown large increase/decrease (Table 11). Second, valuation changes in foreign exchange reserve holdings can also weaken the relationship between increase in net foreign assets and increase in base money. It is not the variation in the stock of net foreign assets but the market purchases of foreign exchange by the central bank that have implications for reserve money. At times, net foreign assets and market purchases can move in opposite directions; for example, during 2008-09, net foreign assets of the Reserve Bank increased by Rs.440 billion, while the Reserve Bank actually sold foreign exchange worth Rs. 1,786 billion during the year. Third, as already noted, in rapidly growing economies such as India, high real GDP growth needs concomitant growth in monetary aggregates, which also needs expansion of base money. To this extent, the accretion of unsterilised foreign exchange

³ CRR was increased from 4.5 per cent in September 2004 to 9.0 per cent in August 2008; it was then reduced to 5.0 per cent by January 2009 (see Chart 3).

reserves to the central bank's balance sheet is helpful in expanding base money at the required rate.

Table 11: Variation in Net Foreign Assets, Reserve Money and CRR for India

Item	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
1	2	3	4	5	6	7
1. Cash Reserve Ratio (CRR) (end-period)	4.5	5.0	5.0	6.0	9.0	5.0
2. Net Foreign Assets of Reserve Bank						
Variation (Rs. Billion)	1262	1284	602	1932	3700	440
Variation (per cent)	35.2	26.5	9.8	28.7	42.7	3.6
3. Reserve Money						
Variation (Rs. Billion)	675	526	839	1359	2194	595
Variation (per cent)	18.3	12.1	17.2	23.7	30.9	6.4
4. Reserve Money (adjusted for CRR)						
Variation (per cent)	19.2	10.0	17.2	18.9	25.3	19.0
<i>Memo:</i>						
Net Market Purchases(+)/Sales(-) of Foreign Exchange by the Reserve Bank (Rs. Billion)	1408	911	329	1190	3121	-1786

The success of the central banks in the Asian EMEs in keeping short-term interest rates within the respective policy corridors and containing monetary aggregates to desired trajectories is also reflected in meeting the key final objectives. Ho and McCauley (op.cit.) find that these economies succeeded in containing inflation in contrast to the common fear that large reserve accumulation may be inflationary (Table 12). In fact, they find an inverse relationship between reserve accumulation and inflation in Asian EMEs. Countries with higher reserve accumulation had lower inflation and vice versa. Inflation rose in many Asian EMEs, as elsewhere, in 2007 and 2008 on the back of higher food and fuel prices.

Table 12: Inflation Rates in Asian EMEs

Country	(Per cent)				
	1990-96	1997-02	2003-06	2007	2008
1	2	3	4	5	6
PRC	11.0	0.2	2.1	4.8	5.9
India	10.1	6.2	4.5	6.4	8.3
Indonesia	8.5	18.7	9.1	6.0	9.8
Korea	6.4	3.6	3.0	2.5	4.7
Malaysia	3.7	2.6	2.3	2.0	5.4
Philippines	10.7	6.0	5.8	2.8	9.3
Taipei,China	3.7	0.6	1.1	1.8	3.5
Thailand	2.9	3.0	3.4	2.2	5.5
<i>Memo:</i> Emerging and Developing Countries	24.6	4.9	3.7	4.0	6.0

Source: World Economic Outlook Database (April 2009), IMF; Directorate General of Budget, Accounting & Statistics, Taipei,China.

In the context of the ongoing financial crisis, it is interesting that none of the major EMEs have resorted to imposing controls on capital outflows or tightening of existing measures. What has been done is to relax some of the restrictions on inflows. However, countries that have had higher dollarisation of their liabilities such as Korea came under more pressure.

Global Financial Crisis and Impact on Asian EMEs

All the economies in the region witnessed significant slowdown in late 2008 and to date in 2009 on the back of the global financial crisis. In Asia this slowdown can largely be seen as the outcome of weak external demand and sudden disruption in external flows, especially trade related capital flows, due to global deleveraging. According to World Trade Organisation (WTO) estimates, world merchandise exports (US \$ terms) declined by 21 per cent in the quarter ended December 2008 and by another 22 per cent in the quarter ended March 2009 – a cumulative decline of 38 per cent between the quarters ended June 2008 and March

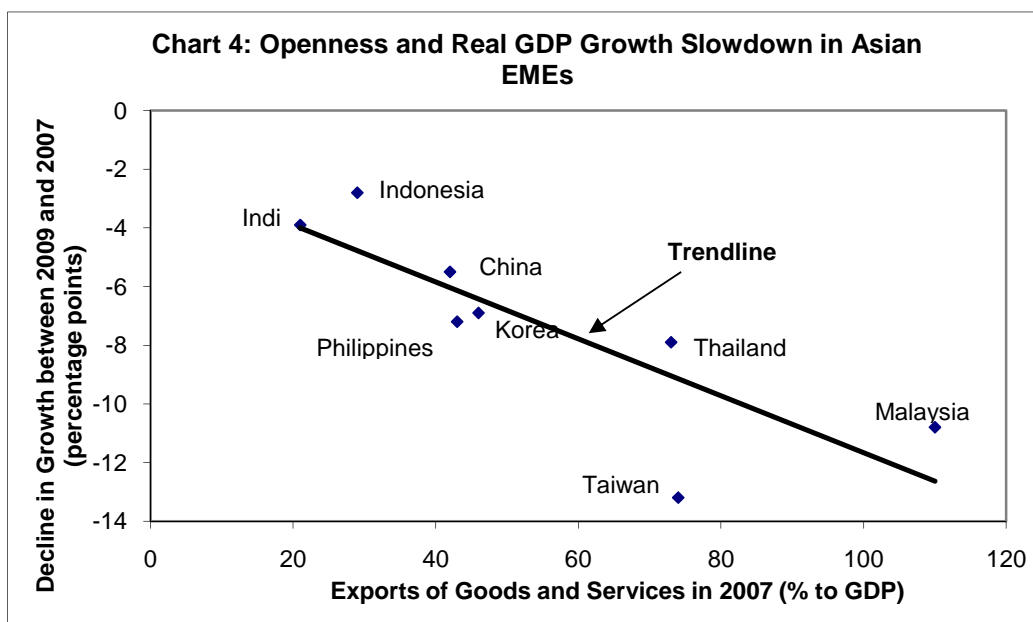
2009. Given this massive order of decline in external demand as well as the high degree of external openness, the relatively more export-oriented Asian EMEs such as Korea, Malaysia, Taipei,China and Thailand (Table 13) were more adversely affected than PRC, India and Indonesia. While PRC, India and Indonesia are expected to record positive growth in 2009, Korea, Malaysia, Taipei,China and Thailand are expected to contract by 2-7 per cent. The decline in output in the latter group of economies is even more than the likely contraction of 2.6 per cent in the US (see Table 4). The magnitude of growth slowdown between 2009 and 2007 appears to be closely related to the degree of openness (Chart 4). Unprecedented fiscal and monetary stimuli have been able to offset only a part of the dramatic decline in external demand and sudden drying of trade financing.

Table 13: External Trade Openness in Asian EMEs

(Exports of Goods and Services as per cent to GDP)

Country	1990-96	1997-02	2003-06	2007
1	2	3	4	5
PRC	22	22	35	42
India	9	12	19	21
Indonesia	26	38	32	29
Korea	27	39	42	46
Malaysia	83	111	114	110
Philippines	33	51	49	43
Taipei,China	n.a.	50	64	74
Thailand	38	60	71	73

Source: World Development Indicators Online, World Bank; and Central Bank Taipei,China.



The downturn in growth that has occurred this time, in the wake of the global financial crisis, can largely be attributed to external causes, rather than domestic ones. This is in contrast to the Asian financial crisis, when internal weaknesses – large current account deficits, exchange rate misalignments, external sector vulnerability, and weaknesses in corporate and financial sector balance sheets – led to the currency and banking crisis, culminating in severe output losses and an overall crisis of confidence. In response to the lessons of the Asian crisis, the external and financial sectors of the major Asian EMEs have seen significant strengthening in the decade since the crisis. Policies encompassing enhanced exchange rate flexibility, current account surpluses, cautious approach to full capital account opening accompanied by accumulation of foreign exchange reserves have characterised the overall macro and monetary management of these economies in the period prior to the current crisis. Large foreign exchange reserves have acted as effective buffers in the face of reversals in capital flows.

This time the domestic financial sectors in the Asian EMEs, unlike the advanced economies, did not exacerbate the crisis in these economies. In general, banking sectors in the Asian economies have been strengthened considerably— capital adequacy ratios are above the international norms and non-performing loans have witnessed a significant decline from their post-Asian crisis levels (Table 14). Direct exposures of the Asian EMEs to sub-prime assets were negligible. Corporate balance sheets are also reported to have been robust. These features provided a certain degree of resilience to these economies. Nonetheless, as the governments in major advanced economies and elsewhere proceeded to enhance coverage for deposit insurance and guarantees for other bank liabilities in the face of public confidence in the banking systems, many governments in the region, barring India and PRC, were also forced to extend similar sort of guarantees and insurance. While the ongoing slowdown in external demand could see some deterioration in the banking sector in 2009, high levels of capital adequacy ratios should provide comfort to absorb the likely rise in non-performing assets.

Table 14: Banking Sector Indicators in Asian EMEs

							(Per cent)
Country	1998	2000	2005	2006	2007	2008	
1	2	3	4	5	6	7	
Capital to Risk-weighted Assets Ratio							
PRC	12.8 a	13.5	2.5	4.9	8.4	8.2	
India	11.6	11.1	12.8	12.3	12.3	13.0	
Indonesia	-13.0	21.6	19.3	21.3	19.3	16.8	
Korea	8.2	10.5	13.0	12.8	12.3	10.9	
Malaysia	11.8	12.5	13.7	13.5	13.2	12.6	
Philippines	17.7	16.2	17.6	18.1	15.7	15.5	
Taipei,China	n.a.	10.6 c	11.2	10.9	10.8	10.9	
Thailand	10.9	11.9	13.2	13.8	14.8	15.3	
Non-performing Loans to Total Loans							
PRC	n.a.	29.8 b	9.8	7.5	6.7	2.5	
India	14.4	12.7	5.2	3.3	2.5	2.3	
Indonesia	48.6	18.8	7.6	6.1	4.1	3.5	
Korea	7.4	6.6	1.2	0.8	0.7	1.1	
Malaysia	18.6	15.4	9.6	8.5	6.5	5.1	
Philippines	19.5	19.5	10.3	7.5	5.8	5.2	
Taipei,China	n.a.	8.9 c	2.2	2.2	1.8	1.6	
Thailand	42.9	17.7	9.1	8.4	7.9	6.5	
Return on Assets							
PRC	0.1 a	0.1	0.6	0.7	1.0	n.a.	
India	0.8	0.7	0.9	0.7	0.9	1.0	
Indonesia	-19.9	0.3	2.5	2.6	2.8	2.6	
Korea	-3.2	-0.6	1.3	1.1	1.1	n.a.	
Malaysia	0.7 a	1.5	1.4	1.3	1.5	1.6	
Philippines	0.8	0.4	1.1	1.3	1.3	1.1	
Taipei,China	n.a.	-0.5 c	0.3	-0.1	0.3	0.4	
Thailand	-5.6	-1.7	1.4	0.8	0.1	n.a.	

Source: Global Financial Stability Report, IMF (April 2009); and Central Bank of Taipei,China)

Note: a: Data pertain to 1999; b: Data pertain to 2001; c: Data pertain to 2002;
n.a.: not available.

Another factor which should minimize the adverse impact of the global financial turmoil on the Asian EMEs is that banks in the region rely more on domestic funding sources to finance their domestic loans. The ratio of loans to domestic deposits is typically less than one in most of Asia (Table 15). A ratio less than one indicates that domestic deposits are sufficient to fund the banking system's loans and problems in global financial markets should not have any direct impact on domestic lending. On the other hand, a ratio above unity suggests reliance of the banking system on foreign sources for funding. In such cases, the global credit crunch can cause liquidity problems for banks in such countries. The only major Asian country where the loan-to-deposit ratio is high enough to cause some concern is Korea, which has indeed experienced some financial instability, especially evident in the foreign exchange markets. A further factor for Korea is its exceptionally open capital account (ADB, 2009).

Table 15: Liquidity Ratios in Banks in Asian EMEs (end-2008)

(Per cent)

Country	Loans to Domestic Deposits	Loans to Total Liabilities	Foreign Liabilities to Domestic Deposits
1	2	3	4
PRC	0.69	0.68	0.01
Hong Kong	0.50	0.28	0.78
India	0.82	0.79	0.07
Indonesia	0.80	0.75	0.07
Korea	1.36	1.05	0.30
Malaysia	0.96	0.86	0.11
Philippines	0.78	0.69	0.14
Singapore	0.85	0.51	0.66
Taipei, China	0.77	0.71	0.08
Thailand	0.98	0.94	0.04
Vietnam	0.98	0.91	0.07

Sources: Asian Development Outlook 2009, Asian Development Bank; and Reserve Bank of India

Global Financial Crisis: Asian and Emerging European EMEs

It is interesting to compare the impact of the crisis on Asian and European EMEs. In the years leading to the crisis, Emerging European economies witnessed a fast pace of external and financial liberalisation. Market shares of foreign banks increased, more than doubling from one-third to over two-thirds in Bulgaria, Romania and the Czech Republic. Foreign capital inflows rose sharply as noted earlier (see Tables 1-2), primarily driven by foreign borrowings by banks, which boosted domestic credit at lower interest rates. Many of the loans were granted in foreign currencies, primarily for housing and consumer credit. In 2007, foreign currency-denominated loans were as much as 80 per cent of outstanding credit to households and business enterprises in Latvia and Estonia (Christensen, 2009).

Bank-related capital inflows in Emerging European economies reached almost 9.7 per cent of GDP in 2007, significantly higher than that of 1.4 per cent in non-European EMEs (except PRC). The outcome of external and financial liberalisation was large foreign borrowings by domestic subsidiaries of foreign banks, credit boom, higher growth and higher inflation. Households, traditionally relatively debt free, have become dependent on bank credit for their consumption. This exacerbated demand in the upswing; now, the reverse dynamics are playing out in the ongoing phase of capital retrenchment and credit slowdown. In the face of credit boom, host country supervisors in emerging Europe were reluctant to impose tougher prudential rules on provisioning and higher capital buffers – fear of retaliation by parent banks, and the perceived high quality of home country supervision of these institutions may have led to this behaviour (IMF, 2009d). Strong domestic demand was mirrored in high and rising current account deficits. Current account deficits in Central and Eastern European (CEE) economies jumped from an average of US \$ 18

billion (1.7 per cent of GDP) during 1997-2002 to US \$ 54 billion (5.1 per cent of GDP) during 2003-06 to US \$ 142 billion in 2008 (7.6 per cent of GDP). Indeed, even as each of the other major EME regions (Asia, Africa, CIS and Western Hemisphere) recorded growing surpluses, the CEE was the only region to record persistent and rising deficits, financed by short-term foreign debt. Thus, the EMEs in the CEE were characterised by high and rising current accounts deficits on the one hand and large reliance on bank borrowings and short-term debt on the other hand. These characteristics broadly resembled the Asian EMEs in 1997.

Sudden reversal of capital flows, therefore, has had a more severe impact on these economies than on the Asian EMEs in the current episode. Many economies in the CEE region have had to take recourse to IMF assistance. It is noteworthy that in the current crisis none of the Asian EMEs had to turn to the IMF for any assistance. The CEE countries also face additional challenges of maintaining the involvement of foreign banks, which themselves are under funding and solvency pressures. The increasing non-performing assets that have emerged from the currency mismatches of the foreign banks' lending activities in these countries have resulted in significant capital erosion in the balance sheets of these banks. The home countries of these banks are therefore suffering from the spill over of these problems in CEE countries. Countries such as Czech Republic with lower inflation, smaller current account deficits and lower dependence on bank-related capital inflows have so far fared better.

Overall, according to the IMF estimates (July 2009 WEO update), output is expected to contract by 5.0 per cent in the CEE countries as compared with declines of 2.6 per cent in the Western Hemisphere and 0.3 per cent in ASEAN-5 (Indonesia, Malaysia, Philippines, Thailand and Vietnam). Other EME regions will record deceleration, but growth is expected to be positive: Developing Asia (including ASEAN-5) (5.5 per

cent), Africa (1.8 per cent) and Middle East (2.0 per cent). In brief, sound macroeconomic and financial policies, accompanied by prudent capital account management, practised by the Asian EMEs over the past decade have ensured that their financial and external sectors have acted as buffers in the current global financial crisis.

Capital Controls and Efficacy

Despite the widespread and relatively successful practice of active capital account management by many EMES, particularly those in Asia some economists continue to question the efficacy of such capital account management. It is argued that capital controls are ineffective except over a short time horizon; and that capital controls are often leaky with potential capital flows even showing up as current account flows, or as permissible capital flows. For instance, a recent IMF Working Paper (Cardarelli, Elekdag and Kose, 2009), while observing that episodes of large capital inflows are often associated with real exchange rate appreciation, deteriorating current account balance, and significant drop in subsequent growth concludes that (1) resisting nominal exchange rate appreciation through sterilization is likely to be ineffective when the influx of capital flows is persistent and (2) tightening capital controls has not in general been associated with better outcomes. Rather, the paper suggests that keeping expenditure growth steady is helpful in limiting currency appreciation and foster better growth.

Findings and conclusions in the IMF and related papers are subject to a number of comments. First, it is not clear what is meant by “persistent” flows. It is not apparent in real time to determine with certainty as to whether capital inflows are permanent or temporary. Illustratively, with hindsight, the unprecedented surge in capital inflows to the EMEs during 2003-07, especially in 2007, was not permanent, although during these

years, it was considered by many commentators to be permanent. Many policymakers, on the other hand, appeared to have treated the capital flows boom as temporary and uncertain, subject to reversal, and hence intervened in the markets. Second, the case for fiscal restraint is based on the assumption that it will contain aggregate demand and hence reduce interest rates. Therefore, fiscal restraint, may be useful if capital inflows are entirely in the nature of debt flows looking for interest rate arbitrage. Even then, fiscal prudence may turn out to be ineffective if private demand replaces government demand in the economy so that aggregate demand is unchanged. If the surge in capital inflows reflects the push factors – low interest rates and yields in the advanced economies – it is not clear if fiscal restraint would be of much help. Fiscal policy decision-making is subject to long decision lags, while capital flows are highly volatile. By the time fiscal contraction is implemented, capital inflows surge may have given way to outflows and the policy response may be destabilising (Kim and Yang, 2008). Third, the IMF paper talks about hazards of preventing nominal appreciation, but, in practice major EMEs have permitted growing flexibility in the nominal exchange rate. Moreover, in many Asian countries current and capital account surpluses have also been accompanied by fiscal surpluses. The relevance of the IMF paper's observations is, therefore, questionable in the present circumstances in Asian countries.

Finally, on the finding of inefficacy of capital controls on inflows, most of the studies are handicapped by the use of binary, or similar sort of, indices to capture capital controls. Furthermore, information on such measures is available on an annual basis, whereas policy actions are taken more continuously while also undergoing intra-year fluctuations. Existing measures of cross-country differences are crude and misleading in many cases, often leading to incorrect conclusions (Kose, Prasad, Rogoff and Wei, 2009). Available measures of capital controls on inflows,

thus, may not successfully capture the nuances of the policy measures and their efficacy or otherwise. As regards firm-based micro studies reaching the conclusion that capital controls hurt, it should be true by definition: such controls, if effective, would indeed raise the cost of financing for the affected firms. The key issue, however, is not the micro impact but the macro impact. Capital controls tend to moderate the influx of foreign capital so that domestic macroeconomic and financial stability can be maintained. Thus, while individual firms may be hurt by controls, the economy, at the aggregate level, may reap benefits, which are rather harder to capture. As Rodrik and Subramanian (2009) point out, studies based on individual firms “cannot address the counterfactual question of what would have happened to aggregate investment in the absence of the controls, especially once the induced real exchange rate changes are factored in. It is entirely possible for aggregate investment to be higher in the equilibrium with restricted capital mobility (and therefore a more competitive real exchange rate) than in the equilibrium with full capital mobility, even though some firms are in effect facing higher costs of finance in the latter equilibrium” (pages 126-127). It is also often argued that financial market development can enable firms to minimise the adverse impact of volatility in exchange rates through hedging. Whereas this may indeed benefit individual firms, the macro economy can still suffer since hedging only transfers the risk to other domestic players if it is mostly done in domestic financial markets (Grenville, 2008).

The quasi-fiscal and other costs of sterilization are more likely to be outweighed by the benefits that may emanate from the maintenance of domestic macroeconomic and financial stability. With hindsight, the large build-up of forex reserves by the major EMEs over the last decade, especially since 2003, appears to have been a useful first-line of defence in the current episode of reversal of capital flows.

However, a prolonged period of large-scale intervention, as the sole policy response to manage large and growing volume of capital inflows, can create expectations of future exchange rate appreciation and runs the risk of creating distortions in the local financial system. There are, however, good grounds for believing such dangers can be reduced when forex intervention is combined with a policy orientation that allows currency flexibility over a medium term perspective in conjunction with continuous development and strengthening of the domestic financial sector. Sterilization may also be limited by the availability of the stock of Government securities with the central bank. For example, in the case of the Reserve Bank of India, in the face of large capital flows beginning early 2000s, continuous open market operations led to a diminishing stock of Government securities for further sterilization by late 2003. Moreover, the Reserve Bank of India Act prohibited issuance of central bank bills for this purpose. Accordingly, as noted earlier, a new mechanism of MSS was instituted in 2004 to issue Government Treasury bills/bonds to neutralise the impact of capital inflows, with the fiscal impact (servicing of interest payments on the bonds) borne by the Government. In view of the large volume of capital flows, the burden of sterilization is borne not only by the fisc but also by the banking system (due to cash reserve requirements, which since 2007 are not remunerated) and the Reserve Bank of India (in the form of interest payments paid on excess liquidity absorbed through reverse repos in the daily liquidity adjustment facility). In view of the differences between return on domestic securities and that on foreign securities, there is an issue of quasi fiscal cost. Such costs may however be outweighed by the likely benefits from confidence and financial stability provided by the existence of substantial reserves. As mentioned earlier, even the pecuniary costs of sterilization can often be exaggerated by analysts.

To sum up, modulation in the volume of capital inflows, through active capital account management, can, at least, reduce the amplitudes in the various economic variables in both the upswing and the downswing of the capital flows cycle and contribute to domestic stability. Authorities need to respond symmetrically and keep their options open in managing the volatility in capital flows and their subsequent consequences on the domestic economy. If capital flows are indeed found to be persistent and unidirectional over a long time period policy will indeed have to respond to such a development. If such persistent flow is not deemed to be disruptive, there would be little need for intervention. In principle, the objective of capital account management is to manage the departures from fundamentals that such flows may entail. The flows would be “persistent” or “permanent” only if they are responding to economic fundamentals, in which case there would be little need for intervention. That capital account management can be leaky has to be recognised. When excess flows take place they respond to perceived potential gains to be reaped from such flows. It is then axiomatic that they will attempt to circumvent any attempts to curb the flow, including through current account transactions.

As Rodrik and Subramanian (2009) note, “the appropriate role of policy will be as often to stem the tide of capital inflows as to encourage them. Policymakers who view their challenges exclusively from the latter perspective will get it badly wrong” (page 136). Thus, while it is true that countries facing a surge in capital flows have to live with “an appreciating (and) fluctuating currency, and strengthening the financial system” (Kawai and Takagi, 2008), their latter observation that “there is no effective and sustainable policy measure either to reduce the size of inflows or to prevent the adverse consequences of such inflows” appears to be much more agnostic than what the policymakers believe.

III. Concluding Observations

A good deal of discussion on management of the capital account and foreign exchange intervention has been influenced by the existence of the open economy trilemma. No country can simultaneously enjoy free capital mobility, operate a fixed exchange rate and practice independent monetary policy directed at managing domestic objectives. In fact, most Asian countries have actually managed this open economy trilemma successfully since the 1990s crisis. Whereas they have operated managed exchange rates, they have allowed increased flexibility: their exchange rates no longer exhibit rigidity. Similarly, whereas they have actively managed their capital accounts, they have been neither totally open nor totally closed at any time. This middle ground of managed but flexible exchange rates and managed but mostly open capital accounts have enabled Asian EMEs to operate independent monetary policies despite high volatility in external capital flows during the post Asian crisis period. By and large, Asian countries have been able to set their own policy interest rates even in the presence of persistent interest rate differentials with advanced countries. The practice of adequate sterilization has been successful in preventing the unwarranted growth of base money and other monetary aggregates in the face of rising foreign exchange reserves. Hence, by and large, they have also been successful in containing inflation.

Capital account management can be made more effective by appropriate use of prudential regulation, given that it is financial sector weaknesses that ultimately cause financial crisis. Some countries have, therefore, used prudential regulatory measures to limit the intermediation of foreign inflows through domestic banks and financial institutions (Reddy, 2009). Restrictions on use of capital flows in speculative activities such as real estate can also be helpful. Thus, capital account

management and prudent regulation of financial sector go hand in hand and countries following such an approach can minimise the adverse impact of exogenous shocks. Those who did not use such measures have indeed experienced difficulty as did some Emerging European countries.

The flow of capital between nations, in principle, brings benefits to both capital-importing and capital-exporting countries. But the historical evidence, reinforced by the current global financial crisis, shows that it can also create new exposures and bring new risks. The failure to analyse and understand such risks, excessive haste in liberalising the capital account and inadequate prudential buffers to cope with the greater volatility in more market-based forms of capital allocation have at one time or another compromised financial or monetary stability in many emerging market economies. On the other hand, rigidities in capital account management can also lead to difficulties in macroeconomic and monetary management. As can be expected, whereas theory has much to say on the conditions desirable for an end state equilibrium, it has little guidance to offer on the sequencing of capital account liberalisation.

Overall, as the CGFS (2009) concludes, it is a combination of sound macroeconomic policies, prudent debt management, exchange rate flexibility, the effective management of the capital account, the accumulation of appropriate levels of reserves as self-insurance, purposive use of prudential regulation, and the development of resilient domestic financial markets that provides the optimal response to the large and volatile capital flows to the EMEs. Individual countries have used different combinations of measures at from time to time. If the pressure of excess flows is very high, as it was in India in 2007, it becomes necessary to use almost all the possible measure available. Thus how these elements can be best combined will depend on the country and on the period: there is no “one size fits all”.

Such a discretionary approach does put great premium on the skill of policymakers in both finance ministries and central banks. It also runs the risk of markets perceiving central bank actions to become uncomfortably unpredictable. If, however, as many Asian countries have demonstrated in recent years, the actions of the authorities do result in the virtuous circle of high growth, low inflation and financial stability, such an approach has much to commend it.

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Annex 1: Current Account Balances and Capital Flows to Select Asian EMEs (contd.)

(US \$ billion)

Item	1990-96	1997-02	2003-06	2007	2008
1	2	3	4	5	6
PRC					
Current account	5	27	132	372	
<i>Current account (% to GDP)</i>	1.2	2.3	5.8	11.0	
Financial account, net	21	15	56	70	
Inflows	25	48	121	241	
Outflows	-4	-34	-64	-171	
Direct investment, net	20	40	56	121	
Inwards	22	43	65	138	
Abroad	-2	-3	-9	-17	
Portfolio investment, net	1	-7	-10	19	
Liabilities	2	3	21	21	
Assets	0	-10	-32	-2	
Other investment, net	0	-18	10	-70	
Liabilities	1	2	35	82	
Assets	-1	-21	-24	-151	
Overall BOP Surplus	16	31	194	462	
India					
Current account	-4	-1	-2	-17	-30
<i>Current account (% to GDP)</i>	-1.4	-0.4	-0.2	-1.5	-2.6
Financial account, net	7	10	25	108	9
Inflows	7	11	36	117	29
Outflows	0	-1	-8	-10	-20
Direct investment, net	1	3	4	15	18
Inwards	1	4	10	34	35
Abroad	0	-1	-6	-19	-17
Portfolio investment, net	2	2	10	29	-14
Liabilities	2	2	10	29	-14
Assets	0	0	0	0	0
Other investment, net	4	5	15	63	6
Liabilities	4	5	16	56	8
Assets	0	0	-2	7	-2
Overall BOP Surplus	2	8	22	92	-20

Annex 1: Current Account Balances and Capital Flows to Select Asian EMEs (contd.)

(US \$ billion)

Item	1990-96	1997-02	2003-06	2007	2008
1	2	3	4	5	6
Indonesia					
Current account	-4	5	5	10	1
<i>Current account (% to GDP)</i>	-2.4	3.2	1.8	2.4	
Financial account, net	7	-5	0	3	-2
Inflows	7	-5	5	17	15
Outflows	0	0	-6	-14	-17
Direct investment, net	2	-1	1	2	2
Inwards	3	-1	4	7	8
Abroad	0	0	-3	-5	-6
Portfolio investment, net	2	-1	4	6	2
Liabilities	2	-1	4	10	3
Assets	0	0	-1	-4	-1
Other investment, net	2	-3	-6	-5	-6
Liabilities	2	-3	-3	0	4
Assets	0	0	-2	-4	-10
Overall BOP Surplus	2	0	4	13	-2
Korea					
Current account	-7	14	15	6	-9
<i>Current account (% to GDP)</i>	-1.5	3.3	2.0	0.6	
Financial account, net	10	3	13	9	-51
Inflows	21	9	35	85	-103
Outflows	-10	-6	-22	-76	52
Direct investment, net	-1	2	1	-14	-11
Inwards	1	5	6	2	2
Abroad	-2	-4	-5	-15	-13
Portfolio investment, net	7	7	2	-25	-15
Liabilities	9	9	16	30	-38
Assets	-2	-2	-14	-55	23
Other investment, net	4	-5	12	41	-10
Liabilities	11	-5	18	60	3
Assets	-7	-1	-6	-18	-13
Financial Derivatives, net	0	0	-1	5	-14
Liabilities	-1	-1	-4	-7	-69
Assets	-	1	3	12	55
Overall BOP Surplus	2	14	27	15	-56

Annex 1: Current Account Balances and Capital Flows to Select Asian EMEs (contd.)

(US \$ billion)

Item	1990-96	1997-02	2003-06	2007	2008
1	2	3	4	5	6
Malaysia					
Current account	-4	7	19	29	
<i>Current account (% to GDP)</i>	-5.7	8.0	13.9	15.4	
Financial account, net	6	-3	-5	-11	
Inflows	5	3	6	21	
Outflows	1	-6	-11	-32	
Direct investment, net	4	2	1	-3	
Inwards	4	3	4	8	
Abroad	0	-1	-3	-11	
Portfolio investment, net	-1	-1	2	5	
Liabilities	-1	-1	3	9	
Assets	0	0	-1	-4	
Other investment, net	3	-5	-9	-14	
Liabilities	2	1	-1	4	
Assets	1	-5	-7	-17	
Overall BOP Surplus	3	2	11	13	
Philippines					
Current account	-2	-2	2	7	4
<i>Current account (% to GDP)</i>	-3.9	-2.1	2.2	4.9	
Financial account, net	5	3	0	3	-5
Inflows	6	3	4	11	-10
Outflows	-1	0	-3	-7	5
Direct investment, net	1	1	1	-1	1
Inwards	1	1	1	3	1
Abroad	0	0	0	-3	0
Portfolio investment, net	1	1	2	5	-3
Liabilities	1	1	3	4	-4
Assets	0	0	-1	1	1
Other investment, net	3	1	-3	-1	-3
Liabilities	3	0	-1	4	-7
Assets	0	1	-2	-5	4
Overall BOP Surplus	2	0	2	9	-3

Annex 1: Current Account Balances and Capital Flows to Select Asian EMEs (concl.)

(US \$ billion)

Item	1990-96	1997-02	2003-06	2007	2008
1	2	3	4	5	6
Taipei,China					
Current account	7	12	24	33	25
<i>Current account (% to GDP)</i>	<i>n.a.</i>	<i>4.1</i>	<i>7.0</i>	<i>8.6</i>	<i>6.3</i>
Financial account, net	-6	1	-1	-39	-2
Inflows	8	13	38	19	-13
Outflows	-14	-12	-39	-58	11
Direct investment, net	-2	-2	-4	-3	-5
Inwards	1	3	3	8	5
Abroad	-3	-5	-7	-11	-10
Portfolio investment, net	0	-2	-8	-40	-12
Liabilities	3	7	25	5	-16
Assets	-2	-9	-33	-45	3
Other investment, net	-4	5	12	5	14
Liabilities	4	4	13	11	4
Assets	-9	1	-14	-6	10
Overall BOP Surplus	1	13	22	-4	26
Thailand					
Current account	-9	7	1	14	0
<i>Current account (% to GDP)</i>	<i>-6.8</i>	<i>6.1</i>	<i>0.4</i>	<i>5.7</i>	
Financial account, net	13	-8	4	-3	13
Inflows	15	-7	9	14	7
Outflows	-1	-2	-5	-17	7
Direct investment, net	2	5	6	7	7
Inwards	2	5	7	9	10
Abroad	0	0	-1	-2	-3
Portfolio investment, net	2	0	3	-7	-6
Liabilities	2	1	4	3	-3
Assets	0	0	-1	-10	-2
Other investment, net	10	-13	-5	-3	11
Liabilities	10	-12	-2	1	0
Assets	-1	-1	-3	-5	12
Overall BOP Surplus	4	-2	6	17	25

Note: Overall BOP surplus is inclusive of errors and omissions. For Taipei,China, data in column (2) pertain to the period 1993-96. n.a: not available.

Source: International Financial Statistics, IMF; Reserve Bank of India; Bank of Thailand; and Central Bank of Taipei,China.