

SM/05/340

September 2, 2005

To: Members of the Executive Board

From: The Secretary

Subject: **Asia and Pacific Department Regional Outlook—August 2005**

The attached APD Regional Outlook for August 2005 is being circulated as background for an informal Board seminar on Asia, which is tentatively scheduled for **Friday, September 16, 2005**. There will be no gray statements and no concluding remarks for this discussion.

It is expected that following the Board discussion, this paper will be posted on the Fund's external website.

Questions may be referred to Mr. Felman (ext. 34138) and Mr. Miniane (ext. 38791) in APD.

This document will shortly be posted on the extranet, a secure website for Executive Directors and member country authorities.

Att: (1)

Other Distribution:
Department Heads



Regional Outlook

August 2005



ASIA AND PACIFIC DEPARTMENT

| CONTENTS | PAGE |
|--|------|
| Executive Summary | 3 |
| I. Economic Developments and Outlook | 6 |
| II. Policy Developments and Issues | 14 |
| III. Saving and Investment | 21 |
| IV. Exchange Rates and the Current Account | 28 |
| V. Trade and Financial Integration | 35 |
| Boxes: | |
| 1. Electronics Exports | 43 |
| 2. Industrial Countries: Developments and Outlook | 44 |
| 3. The Impact of World Oil Price Increases | 45 |
| 4. The Impact of the Removal of Textiles Quotas | 48 |
| 5. Avian Influenza: Is It a Serious Threat? | 50 |
| Annex I. The Extent of the Oil Price Pass-Through | 51 |
| Annex II. Capital Inflows | 56 |
| Annex III. Impact of a Renminbi Appreciation on Output and Current Accounts | 64 |
| References | 70 |

Contributors:

This Regional Outlook was prepared by a team consisting of:

Varapat Chensavasdijai, Susan Creane, Giovanni Dell’Ariccia,
Joshua Felman, Tarhan Feyzioğlu, Kenneth Kang, Charles Kramer, Jacques Miniane,
Hélène K. Poirson, Andrea Richter-Hume, Romuald Semblat,
Nita Thacker, and Alexander Wolfson.

Agnes Isnawangsih, Anna Maripuu, and Fritz Pierre-Louis provided research assistance,
and Livia Tolentino and Yuko Kobayashi provided production assistance.

DEFINITIONS

In this Regional Outlook, the following country groupings are employed:

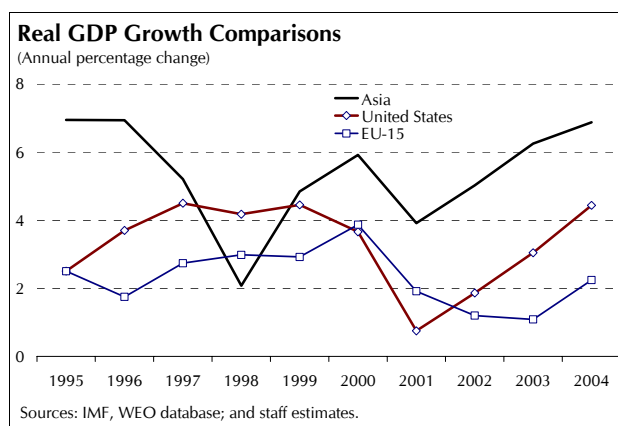
- Emerging Asia refers to China, India, Hong Kong SAR, Korea, Singapore, Taiwan Province of China, Indonesia, Malaysia, the Philippines, and Thailand.
- Industrial Asia refers to Japan, Australia, and New Zealand.
- Asia refers to emerging Asia plus industrial Asia.
- Newly industrialized economies (NIEs) refers to Hong Kong SAR, Korea, Singapore, and Taiwan Province of China.
- ASEAN4 refers to Indonesia, Malaysia, the Philippines, and Thailand.
- Low-income countries in Asia (LIAs) include Bangladesh, Cambodia, Lao P.D.R., Mongolia, Sri Lanka, and Vietnam

The following abbreviations are used:

- SAAR refers to seasonally adjusted increase at an annual rate.
 - y/y refers to a year-on-year increase.
 - q/q refers to a quarter-on-quarter increase.
-

EXECUTIVE SUMMARY

Asia's economic performance in recent years has been impressive. Despite considerable obstacles, including the legacy of the 1997–98 crisis and more recently surging oil prices, Asia's economic growth has been the fastest amongst the major regions in the world. Since 1999, growth in the region as a whole has averaged 5½ percent per year, with growth in emerging Asia averaging 6¾ percent per annum. As a result, Asia accounted for nearly half of world economic growth over this period. Meanwhile, inflation in the region has remained low and the external position strong.



Looking ahead, prospects are relatively bright (Chapter I). Regional growth is expected to amount to 6 percent both this year and next, propelled by vigorous exports and strong domestic demand in China and India. Meanwhile, headline inflation is expected to remain around 3 percent, as lower food prices offset the impact of higher oil prices.

At the same time, the region's current account balance is forecast to remain around 3 percent of GDP, albeit with large changes in its distribution. In most countries, external imbalances are expected to diminish. The current account surplus of emerging Asia excluding China is expected to fall by more than half to 1 percent of GDP in 2005, then narrow further to ¾ percent in 2006, the result

of sharp increases in oil import costs. And with capital inflows to most countries shrinking, reserve accumulation is forecast to slow dramatically in most countries. But in China the current account surplus is expected to increase by 2 percentage points to 6 percent of GDP in 2005, before falling back to 5½ percent of GDP in 2006.

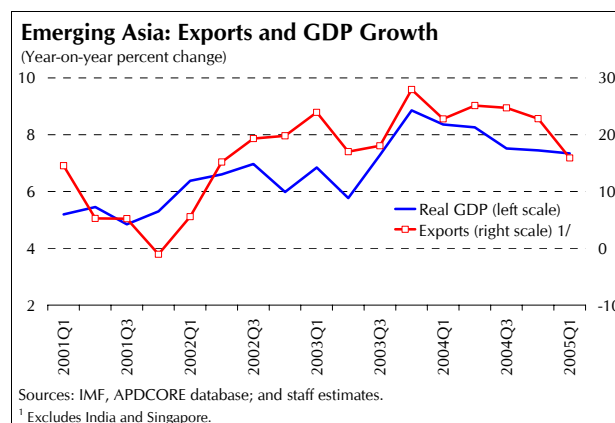
This favorable outlook, however, is not without risks:

- **The major risk comes from high petroleum prices, a particular danger in Asia because many of its economies are manufacturing-intensive and thus highly oil-dependent.** So far, the region has been able to cope with the global price increases, largely because the surge in export earnings has until recently been enough to offset higher oil import bills. However, with oil prices continuing to climb, the toll on income and demand is mounting. Meanwhile, monetary policy will need to limit any second-round impact of higher oil prices and keep inflation expectations well anchored—a task that will require vigilance since real interest rates in the region are currently at historically low levels.
- **In some countries, governments have shielded consumers from higher costs, by passing on only a portion of the world increases onto domestic prices.** But as world prices continue to rise the costs of subsidizing domestic prices is proving increasingly unsustainable. Domestic prices in these countries will need to increase, with inevitable effects on demand.

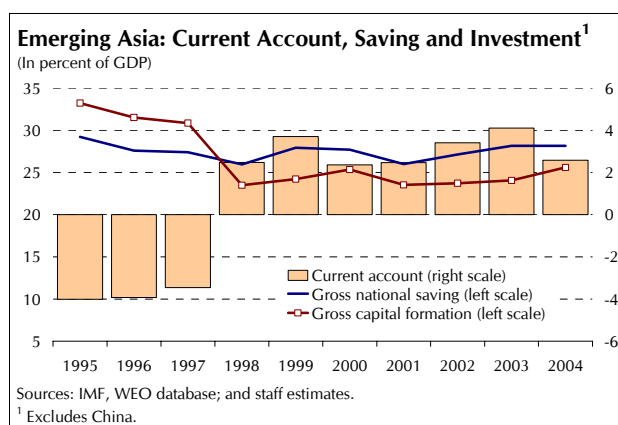
- **A second major risk comes from potential weaknesses in external demand.** According to WEO projections, growth in advanced countries will remain robust, while leading indicators suggest that the electronics sector, which accounts for a third of the region's exports, is set for a cyclical upswing. However, there are downside risks, again mainly from higher oil prices.
- **A third risk comes from the rise in protectionist sentiment, driven by global imbalances and growing fears of emerging market competition.** Already, the removal of quotas on textiles and clothing has triggered safeguard actions, and there are pressures for further restrictive measures.

Notwithstanding the generally bright outlook, some aspects of the region's economic performance create concern and pose policy challenges.

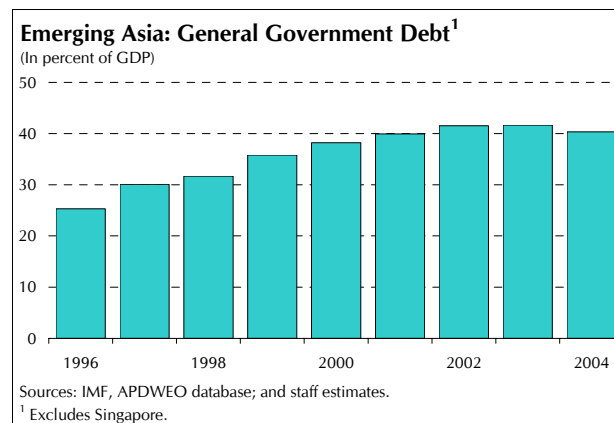
- **For all of Asia's impressive economic performance, the region remains highly dependent on economic developments in the rest of the world.** Exports of emerging Asia have grown by 10½ percent per year on average over the past decade, reaching 18 percent per annum during 2002–04, and now account for 45 percent of emerging Asia's GDP. But autonomous domestic demand has remained subdued in most countries, with the notable exceptions of China and India. (Chapter II). And partly for this reason, growing regional integration has not diminished Asia's dependence on the outside world; although the production of goods has become dispersed across borders, their ultimate destination typically continues to be OECD countries (Chapter V). Reviving domestic demand and developing broader regional integration are consequently major policy objectives.



- **Second, the central role of external demand has been reflected in a sustained current account surplus for the region, contributing to global imbalances.** Economies experiencing rapid economic growth typically experience a deterioration in their current account balances. However, since Asia's growth has been export-led, its current account surplus has been large and relatively stable in recent years, at around 3 percent of GDP. The mirror image of the strong current account has been a large savings-investment gap. In 1998, investment fell sharply and has not recovered significantly since (except in China, and more recently, India), partly reflecting a necessary adjustment after the unsustainable boom of the mid-1990s, but also reflecting structural weaknesses that still linger—with implications for the unfinished reform agenda (Chapter III).



government debt remains high (around 40 percent of GDP) while real interest rates are already exceptionally low.



- **Third, central banks have generally responded to large foreign exchange inflows by intervening, fueling a rapid rise in Asia's foreign exchange reserves.** Since 2001, Asian reserves have doubled, reaching \$2.6 trillion in mid-2005, an ample level by any standard measure of reserve requirements. Partly as a consequence, regional authorities—including Japan and Korea—have scaled back their foreign exchange intervention, allowing greater flexibility in exchange rates. Moreover, on July 21 China also moved in this direction, revaluing the exchange rate by 2 percent against the U.S. dollar and announcing that the rate would henceforth be set with reference to a basket of currencies. At the same time, the Malaysian authorities abandoned their dollar peg in favor of a tightly managed float.
- **As emphasized in recent WEOs, a further appreciation of Asian currencies will ultimately need to be part of the resolution of global imbalances.** However, studies suggest that appreciation, on its own, will only have a limited effect on current account positions (Chapter IV). For a significant and orderly adjustment to take place, domestic demand will also need to be strengthened. And this will need to be driven by structural reform; there is little room for activist macroeconomic policy, as

I. ECONOMIC DEVELOPMENTS AND OUTLOOK

GROWTH

Over the past several years, a number of factors have combined to lift growth in Asia. Starting in 2003, the OECD economies began to recover, spurring demand for Asia's exports. In particular, demand for electronics exports boomed as the sector finally recovered from its post-2000 slump (Box 1). Meanwhile, China's growth, together with its continuing development as a processing hub for regional exports, began to generate a growing demand for the region's products, with exports to China from the rest of emerging Asia rising by 45 percent y/y in 2004 alone. As a result, growth in Asia began to accelerate reaching 6 percent in 2003 and 6¾ percent in 2004—its highest level in almost a decade (Box 2).

Real GDP Growth

(Year-on-year percent change)

| | 2003 | 2004 | 2005 | | Proj. | |
|------------------------|------------|------------|------------|------------|------------|------------|
| | | | Q1 | Q2 | 2005 | 2006 |
| Industrial Asia | 1.7 | 2.8 | 1.1 | ... | 2.0 | 2.1 |
| Japan | 1.4 | 2.7 | 1.0 | 1.5 | 2.0 | 2.0 |
| Australia | 3.5 | 3.0 | 1.9 | ... | 2.2 | 3.2 |
| New Zealand | 3.6 | 4.4 | 2.5 | ... | 2.5 | 2.5 |
| Emerging Asia | 7.5 | 8.0 | 7.5 | ... | 7.4 | 7.1 |
| Hong Kong SAR | 3.1 | 8.1 | 6.2 | 6.8 | 6.5 | 5.0 |
| Korea | 3.1 | 4.6 | 2.7 | 3.3 | 3.8 | 5.0 |
| Singapore | 1.4 | 8.4 | 2.7 | 5.2 | 4.0 | 4.5 |
| Taiwan POC | 3.3 | 5.7 | 2.5 | 3.0 | 3.4 | 4.3 |
| China | 9.3 | 9.5 | 9.4 | 9.5 | 9.0 | 8.5 |
| India | 7.3 | 7.2 | 7.0 | ... | 7.1 | 6.3 |
| Indonesia | 4.9 | 5.1 | 6.2 | 5.5 | 6.0 | 6.1 |
| Malaysia | 5.4 | 7.1 | 5.8 | 4.1 | 5.5 | 6.0 |
| Philippines | 4.6 | 6.0 | 4.6 | 4.8 | 4.7 | 4.8 |
| Thailand | 6.9 | 6.1 | 3.3 | ... | 3.5 | 5.0 |
| Asia | 6.1 | 6.8 | 6.0 | ... | 6.1 | 6.0 |

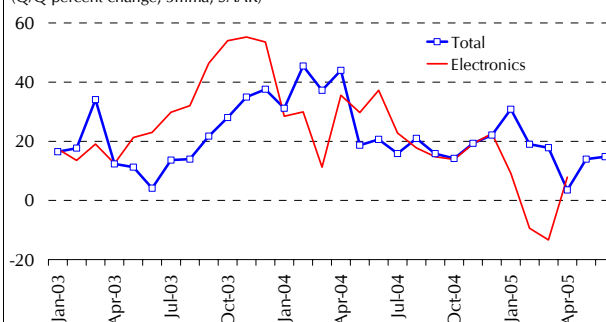
Sources: IMF, APDCORE database; and staff estimates.

By late 2003, however, the underlying impetus behind Asia's growth had already begun to weaken. In some regions of the global economy, notably the euro area, the recovery was starting to falter. The electronics boom gradually faded, as the expansion of capacity outstripped demand in advanced economies, saddling producers with unsold inventories and triggering sizeable declines in semiconductor

prices. In addition, China's imports decelerated sharply following the policy tightening in the second quarter of 2004, which curbed investment in a number of overheated sectors, such as steel and chemicals. Meanwhile, global oil prices were surging, with the price of Dubai oil—Asia's main type of crude oil import—increasing by 23 percent in 2004 and a further 65 percent in the first eight months of 2005, swelling the region's import bills (Box 3).

Emerging Asia: Exports

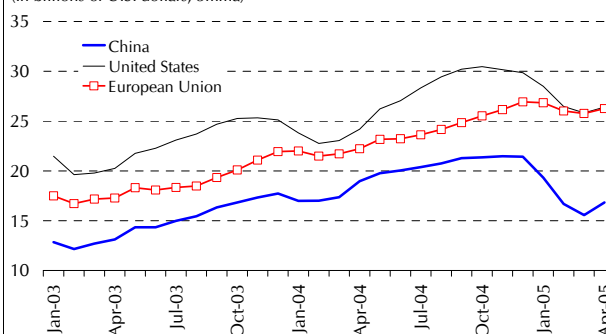
(Q/Q percent change, 3mma, SAAR)



Sources: CEIC Data Company Ltd; and IMF staff estimates.

Emerging Asia: Direction of Exports

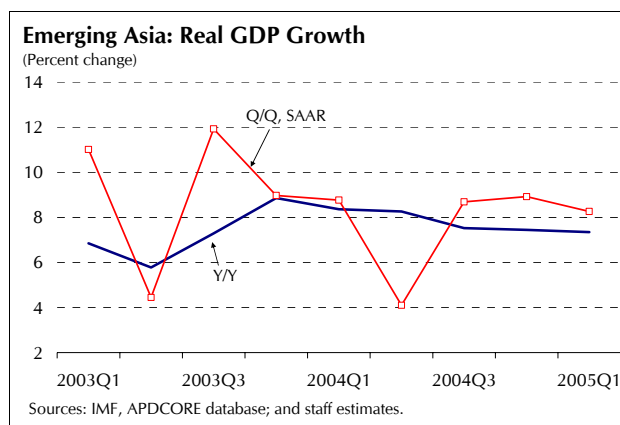
(In billions of U.S. dollars, 3mma)



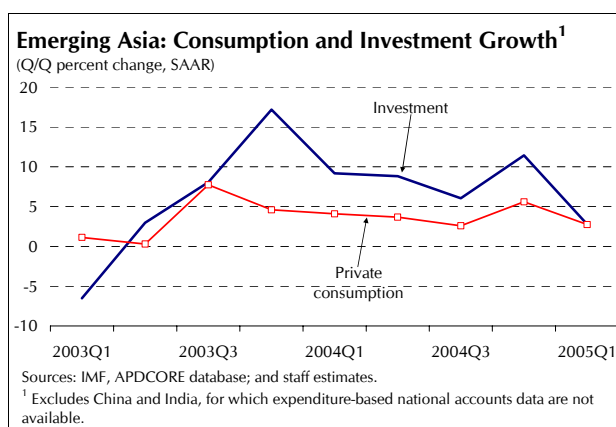
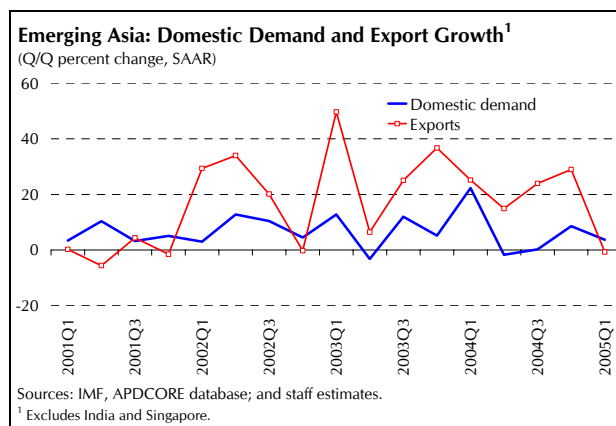
Sources: IMF, Direction of Trade Statistics; and staff estimates.

As all this occurred, emerging Asia's economies began to slow down. GDP growth in emerging Asia eased to 8¼ percent (q/q, SAAR) in the first quarter of 2005 from a peak of nearly 12 percent in the third quarter of 2003, with export growth essentially ceasing (q/q) in the first quarter of 2005. The slowdown was felt throughout the region, with the notable

exception of China, where growth was sustained by still-robust domestic demand. In the rest of emerging Asia, growth declined much more markedly, to 3¼ percent from 11¼ percent (q/q, SAAR) over the same period. The deceleration was particularly steep for the NIEs, reflecting their dependence on electronics exports.

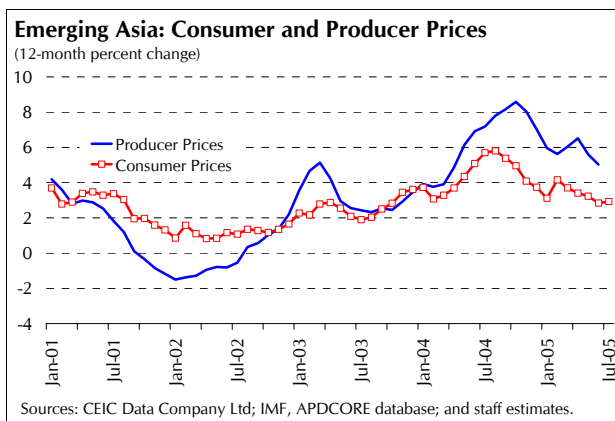


As growth decelerated, domestic demand in emerging Asia moderated in the latter half of 2004 and the beginning of 2005. In particular, investment growth fell sharply to 2¾ percent on average (q/q, SAAR) in the first quarter of 2005, from a peak of 17¼ percent in late 2003. The decline was again particularly pronounced in the NIEs, where the contribution of domestic demand to growth actually turned negative in the first quarter of 2005. In China, investment moderated somewhat in response to a tightening of administrative controls, and net exports became the leading contributor to output growth.



INFLATION AND OIL PRICES

In recent years, headline inflation in Asia has remained relatively modest, despite robust economic growth and a significant run-up in global oil prices since mid-2004. During 2004, headline inflation in emerging Asia rose by 3 percentage points to 5½ percent in the third quarter, primarily on account of high food price inflation, driven to a large extent by demand from China following a drought and the consequent reduction in harvest. By contrast, the impact of higher oil prices was much more limited, partly because pass-through was moderate in most countries and partly because the weight of energy in the region's price indexes was much smaller. Stiff competition—including from China—has also discouraged firms from passing on higher energy costs into output prices, cushioning the impact on CPI inflation (see Annex I).



CPI Inflation

(Year-on-year percent change, average)

| | 2003 | 2004 | 2005 | | Proj. | |
|------------------------|------------|------------|------------|------------|------------|------------|
| | | | Q1 | Q2 | 2005 | 2006 |
| Industrial Asia | 0.2 | 0.4 | 0.2 | 0.3 | 0.1 | 0.4 |
| Japan | -0.3 | 0.0 | -0.2 | -0.1 | -0.4 | -0.1 |
| Australia | 2.8 | 2.3 | 2.4 | 2.5 | 2.6 | 2.7 |
| New Zealand | 1.8 | 2.3 | 2.8 | 2.8 | 2.7 | 2.7 |
| Emerging Asia | 2.6 | 4.4 | 3.7 | 3.2 | 3.9 | 4.1 |
| Hong Kong SAR | -2.6 | -0.4 | 0.4 | 0.8 | 1.0 | 1.2 |
| Korea | 3.5 | 3.6 | 3.1 | 3.0 | 2.9 | 3.0 |
| Singapore | 0.5 | 1.7 | 0.3 | 0.1 | 1.5 | 1.5 |
| Taiwan POC | -0.3 | 1.6 | 1.6 | 2.1 | 2.0 | 1.8 |
| China | 1.2 | 3.9 | 2.8 | 1.7 | 3.0 | 3.2 |
| India ¹ | 5.4 | 6.6 | 5.1 | 5.1 | 5.2 | 6.3 |
| Indonesia | 6.8 | 6.1 | 7.8 | 7.6 | 8.1 | 6.5 |
| Malaysia | 1.1 | 1.4 | 2.4 | 3.0 | 3.0 | 2.5 |
| Philippines | 3.5 | 6.0 | 8.5 | 8.2 | 8.2 | 7.5 |
| Thailand | 1.8 | 2.7 | 2.8 | 3.7 | 4.2 | 2.7 |
| Asia | 2.0 | 3.5 | 2.9 | 2.5 | 3.0 | 3.2 |

Sources: IMF, APDCORE database; and staff estimates.

¹ Wholesale prices for India.

So far this year, CPI inflation has subsided to under 3 percent for Asia as a whole, and 3¼ percent for emerging Asia. Food prices have declined significantly as the drought in China ended, more than offsetting the continued rise in oil prices. With respect to the latter, Asia has been more exposed than other regions this year because Dubai oil prices have risen by roughly 65 percent in the first eight months of this year, more than average world prices, the reverse of last year's pattern when Dubai prices increased by only 23 percent. About half of the countries in the region have continued to limit the pass-through to domestic

prices, helping to contain the impact on headline inflation.

EXTERNAL DEVELOPMENTS

Asia's current account surplus increased marginally last year, despite a rising oil import bill, but this reflected a significant increase in surpluses of just two countries. Japan's current account surplus rose by ½ percentage point to 3¾ percent of GDP, on the back of robust export growth¹ and buoyant investment income, and China's current account surplus rose by 1 percentage point to about 4¼ percent of GDP, not only because Chinese exports continued to gain market share, but also because import growth slowed suddenly and sharply. The decline was particularly pronounced for imports of machinery and equipment, due to the moderation in investment growth, and also because the coming on stream of new manufacturing capacity enabled China to reduce its dependence on imports. Private transfers also rose, possibly reflecting expectations of a renminbi revaluation.

Current Account Balances

(Percent of GDP)

| | Current account | | | | | Non-oil current account | | | | |
|----------------------------------|-----------------|------------|------------|------------|------------|-------------------------|------------|------------|------------|------|
| | 2003 | 2004 | 2005 | Proj. | 2006 | 2003 | 2004 | 2005 | Proj. | 2006 |
| Industrial Asia | 1.8 | 2.1 | 2.3 | 3.2 | 2.9 | 3.0 | 3.5 | 3.8 | 4.0 | |
| Japan | 3.2 | 3.7 | 3.8 | 3.3 | 3.0 | 4.5 | 5.2 | 5.4 | 5.6 | |
| Australia | -5.9 | -6.5 | -6.2 | -5.7 | -5.1 | -5.7 | -6.0 | -5.2 | -4.5 | |
| New Zealand | -4.2 | -6.4 | -3.8 | -7.4 | -7.7 | -2.2 | -4.0 | -4.9 | -5.1 | |
| Emerging Asia | 3.5 | 3.5 | 5.3 | 3.6 | 3.3 | 5.8 | 6.6 | 7.8 | 8.0 | |
| Hong Kong SAR | 10.6 | 10.0 | 10.4 | 10.4 | 10.4 | 13.1 | 13.4 | 14.8 | 14.5 | |
| Korea | 2.0 | 4.1 | 3.3 | 1.9 | 1.3 | 7.6 | 10.9 | 10.8 | 11.3 | |
| Singapore | 29.2 | 26.1 | 27.0 | 25.0 | 22.6 | 30.5 | 28.5 | 28.1 | 25.8 | |
| Taiwan POC | 10.2 | 6.1 | 5.2 | 4.3 | 4.6 | 13.2 | 9.6 | 8.0 | 8.0 | |
| China | 3.2 | 4.2 | 7.8 | 6.1 | 5.6 | 4.7 | 6.5 | 9.6 | 9.8 | |
| India | 1.3 | -0.1 | 0.1 | -1.8 | -2.0 | 4.0 | 3.3 | 2.7 | 2.8 | |
| Indonesia | 3.4 | 1.2 | 3.6 | 1.2 | 1.4 | 3.4 | 2.2 | 2.6 | 3.1 | |
| Malaysia | 12.8 | 12.6 | 18.1 | 13.5 | 12.4 | 11.9 | 11.5 | 11.1 | 9.6 | |
| Philippines | 1.8 | 2.4 | 2.5 | 2.1 | 1.9 | 6.0 | 7.6 | 7.7 | 7.6 | |
| Thailand | 5.6 | 4.3 | -3.3 | -2.5 | -2.5 | 11.8 | 12.6 | 8.4 | 8.7 | |
| Asia | 3.1 | 3.1 | 4.6 | 3.2 | 2.9 | 5.1 | 5.9 | 6.9 | 7.1 | |
| Emerging Asia excl. China | 3.8 | 2.8 | 2.6 | 1.1 | 0.8 | 6.9 | 6.7 | 6.0 | 6.1 | |

Sources: IMF, APDCORE database; and staff estimates.

¹ Export values were up 20 percent in dollar terms for the year, with carryover from strong export growth in late 2003 offsetting an export slowdown since mid-2004.

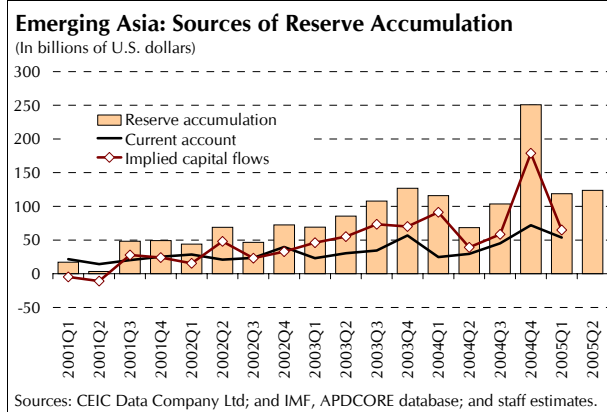
Excluding China, emerging Asia's current account surplus declined last year by 1 percentage point to 2¾ percent of GDP, on the back of a higher oil import bill and a marginal decline in the non-oil current account surplus. In some countries, such as Thailand and India, current accounts actually shifted into deficit, reflecting soaring import demand and rising oil prices.

So far this year, current account balances in emerging Asian economies have generally deteriorated again, with the exception of China and India. In China, the trade balance swung into a large surplus during the first seven months of 2005, as soaring textile and clothing exports following the removal of MFA quotas in January 2005 helped buoy otherwise slowing exports, and continued import substitution led to slower import growth; in steel for example, the country shifted from being a net importer to being a net exporter. In India, the current account returned to a small surplus as invisibles earnings (including from outsourcing) increased sharply, more than offsetting an acceleration in imports to 40 percent y/y. In the rest of Asia, current account surpluses mostly narrowed, with export growth slowing and surging oil prices driving up the oil import bill.

Since late 2001, emerging Asia's foreign reserves have risen faster than the current account surplus, because of the contribution of capital inflows into the region (Annex II). The surge in inflows that started in 2003 has fuelled a \$765 billion rise in emerging Asia's international reserves over the past two and a half years.² Starting in early 2005, however, capital inflows have slowed considerably, the result of a strengthening in the U.S. dollar.

² Not including the \$45 billion used to recapitalize two Chinese banks at end-2003 and another \$15 billion used in late April for the capital injection into a third.

Consequently, reserve accumulation in Asia excluding China came to a virtual standstill in May and June.



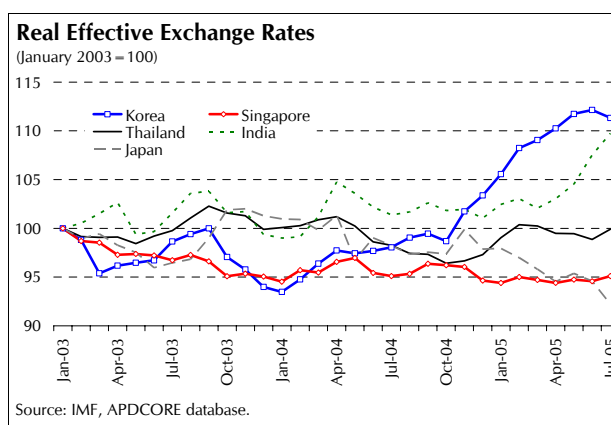
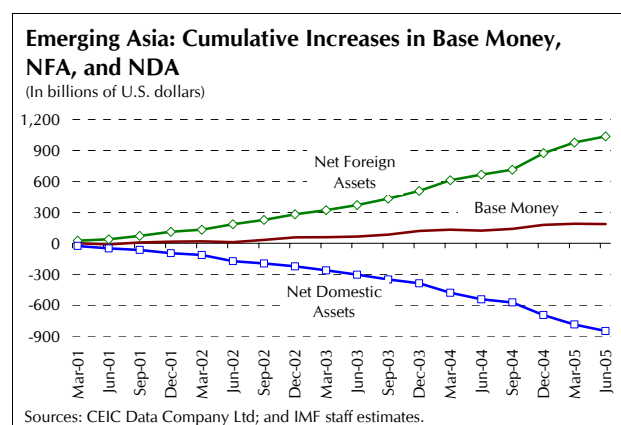
Gross International Reserves

| | US\$ billion | | | Percent of short-term external debt ¹ | | Percent of broad money | | |
|------------------------|--------------|--------------|--------------|--|--------------|------------------------|-------------|-------------|
| | Dec. 2003 | Dec. 2004 | June 2005 | Dec. 2003 | Dec. 2004 | Dec. 2003 | Dec. 2004 | June 2005 |
| Industrial Asia | 713 | 888 | 894 | ... | ... | 10.1 | 11.8 | 12.5 |
| Japan | 674 | 845 | 844 | ... | ... | 8.3 | 10.5 | 12.6 |
| Australia | 33 | 37 | 43 | ... | ... | 7.5 | 7.8 | 7.6 |
| New Zealand | 6 | 7 | 7 | 13.9 | 11.8 | 6.9 | 6.6 | 6.5 |
| Emerging Asia | 1,229 | 1,595 | 1,728 | 507.5 | 541.0 | 21.8 | 25.0 | 25.4 |
| Hong Kong SAR | 118 | 124 | 122 | ... | ... | 24.5 | 23.8 | 22.9 |
| Korea | 155 | 199 | 205 | 210.0 | 241.0 | 16.5 | 20.6 | 21.8 |
| Singapore | 96 | 113 | 115 | ... | ... | 79.2 | 84.1 | 89.0 |
| Taiwan POC | 207 | 242 | 254 | ... | ... | 27.7 | 32.7 | 33.3 |
| China | 412 | 619 | 719 | 535.4 | 593.1 | 13.2 | 15.4 | 20.2 |
| India | 103 | 131 | 139 | 736.8 | 711.4 | 20.3 | 24.7 | 26.6 |
| Indonesia | 35 | 36 | 34 | 148.5 | 195.7 | 31.9 | 31.2 | 32.6 |
| Malaysia | 45 | 67 | 75 | 326.3 | 418.0 | 26.2 | 31.0 | 41.0 |
| Philippines | 15 | 15 | 17 | 104.5 | 110.6 | 45.3 | 47.5 | 44.9 |
| Thailand | 42 | 50 | 48 | 221.8 | 230.7 | 30.4 | 28.7 | 31.5 |
| Asia | 1,942 | 2,483 | 2,622 | 503.9 | 537.3 | 19.0 | 21.9 | 22.5 |

Sources: IMF, APDCORE database; and staff estimates.

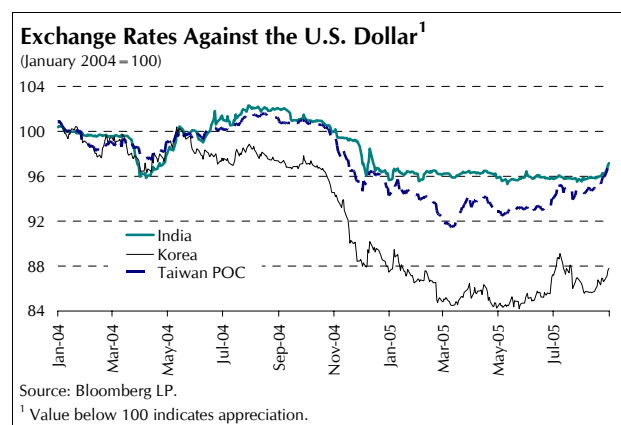
¹ Residual maturity.

Throughout most of 2003 and 2004, Asian authorities responded to these inflows primarily with broad-based sterilized intervention. Most countries were still then in an early stage of economic recovery. With domestic demand remaining weak, and deflation a threat in some countries, authorities were unwilling to allow a sizeable appreciation that could slow down the one vibrant motor of their economies – exports. This was reflected in the very large build-up in official reserves mentioned above, and a modest growth of base money.



As recovery took hold and reserves swelled to ample levels, some countries reduced their foreign exchange intervention. Starting in March 2004, Japan completely ceased intervening in the foreign exchange market, allowing the yen to appreciate by 4¼ percent against the U.S. dollar by January 2005. Similarly, Korea has scaled back its intervention, leading the won to appreciate by nearly 16 percent against the U.S. dollar between end-2003 and mid-August 2005. Appreciations of other currencies against the U.S. dollar since August 2004 have also been significant, including for India (6 percent). In real effective terms, however, only Korea's and India's exchange rates have appreciated significantly since late 2004.

The most recent market developments appear consistent with a greater degree of flexibility for regional exchange rates. On July 21, the People's Bank of China (PBC) announced that the renminbi would be revalued upward by 2 percent against the U.S. dollar and its value set with reference to a basket of currencies. Since then, the renminbi has traded in a tight range against the dollar. But in the non-deliverable forward (NDF) market, investors assume that the July revaluation is the first step toward greater exchange rate flexibility: premia in mid-August 2005 suggested that the renminbi would appreciate by around 5 percent within 12 months.



China's move had ripple effects across the region. Malaysia's central bank announced on July 21 that it would immediately move from its U.S. dollar peg to a managed float for the ringgit with reference to a currency basket; by mid-August the ringgit had appreciated by around 1 percent against the U.S. dollar. In addition, the yen, the won, and the Thai baht all gained more than two percent against the U.S. dollar.

| Exchange Rate Developments Since July 21 (July 21, 2005 to August 12, 2005) | | | | | | | |
|--|-----------------------------------|---------|-----------------------------------|---------|---------|-----------------------------------|---|
| | National currency per U.S. dollar | | | | | | Change since RMB revaluation ² |
| | July 20 | July 21 | Change in percent ¹ | July 21 | July 22 | Change in percent ¹ | |
| China | | | | | | | |
| Mainland | 8.2765 | 8.11 | 2.1 | 8.11 | 8.1111 | 0.0 | 2.1 |
| Hong Kong SAR | 7.7772 | 7.7657 | 0.1 | 7.7657 | 7.7697 | -0.1 | 0.1 |
| Taiwan POC | 31.98 | 31.56 | 1.3 | 31.56 | 31.63 | -0.2 | -0.3 |
| Japan | 112.90 | 110.26 | 2.4 | 110.26 | 111.33 | -1.0 | 3.1 |
| India | 43.52 | 43.18 | 0.8 | 43.18 | 43.49 | -0.7 | -0.2 |
| Korea | 1044.5 | 1019.0 | 2.5 | 1019.0 | 1020.0 | -0.1 | 2.2 |
| Singapore | 1.685 | 1.651 | 2.1 | 1.651 | 1.660 | -0.5 | 1.1 |
| ASEAN-4 | | | | | | | |
| Indonesia | 9828.0 | 9783.0 | 0.5 | 9783.0 | 9795.0 | -0.1 | -1.8 |
| Malaysia | 3.80 | 3.80 | 0.0 | 3.80 | 3.78 | 0.5 | 0.8 |
| Philippines | 55.78 | 55.75 | 0.1 | 55.75 | 55.89 | -0.2 | -0.2 |
| Thailand | 42.14 | 41.25 | 2.2 | 41.25 | 41.38 | -0.3 | 2.8 |

Source: Bloomberg LP.
¹ In terms of U.S. dollar per national currency.
² Exchange rate change from July 20 to August 22, 2005.

OUTLOOK FOR 2005 AND 2006³

Asia's growth is forecast to slow to about 6 percent in 2005, down $\frac{3}{4}$ percentage point from 2004, the result of decelerating exports. For emerging Asia, growth is forecast at 7½ percent, also slower than last year. Still, the current forecasts are $\frac{1}{4}$ percentage point higher than in the April WEO, reflecting upgraded forecasts for three key countries.

- **The growth outlook for Japan in particular has improved considerably—to 2 percent**, from only $\frac{3}{4}$ percent in the April WEO—as domestic demand is regaining forward momentum, following a soft patch during the latter part of 2004. Private consumption was up 4.9 percent q/q annualized in the first quarter, and recent indicators such as industrial production, retail sales, and foreign machinery orders all point to a continued expansion in private investment and consumption going forward.

³ All forecasts in this section are based on the September 2005 WEO assumptions for world oil prices: \$54.2 per barrel in 2005 and \$61.8 per barrel in 2006.

- **Growth in China is now forecast to slow only modestly to 9 percent**, with accelerating private consumption offsetting slower investment and export growth. Private consumption should be supported by rising rural incomes following a good harvest, strong job creation, and an expansion of credit to households. Investment is now expected to decelerate less than earlier anticipated, supported by high profitability, as productivity has soared while labor costs have remained relatively stable. And even export growth, while slowing, is expected to remain stronger than elsewhere because China has a more diversified export base and depends less on electronics.⁴
- **Growth in India is projected to hold up at 7 percent** on the back of a better-than-expected outcome for agriculture in the first quarter and continued buoyancy in the industrial and services sector.

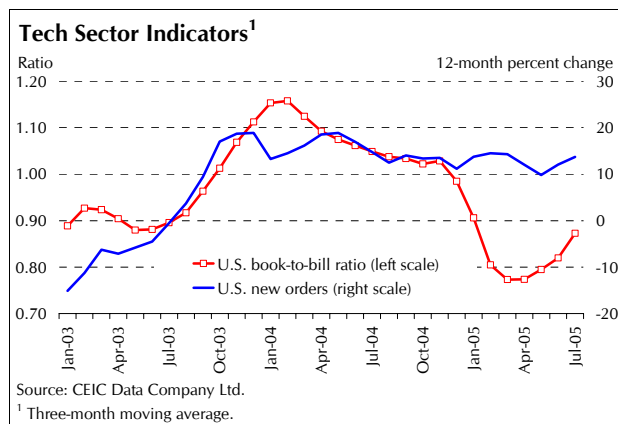
At the same time, significant decelerations in growth are foreseen for most other countries in emerging Asia, as export growth is expected to halve in both the ASEAN4 and the NIEs while domestic demand is expected to decelerate. Korea is the main exception, with domestic demand growth projected to rise by 1¾ percentage point to about 3½ percent, primarily because households are now finally in a position to increase their spending, after two years during which they focused on reducing excessive debt accumulated during a 2000-02 credit boom.

Growth for 2006 should remain steady at 6 percent. Japan's growth is expected to hold steady in 2006, at 2 percent, with domestic

⁴ The growth in textile exports is expected to depend on the extent of safeguard measures imposed by China's trading partners.

demand growth remaining at 2 percent and net exports accelerating. Emerging Asia's growth has been revised up by about $\frac{1}{4}$ percentage point, to about 7 percent, also about the same as last year.

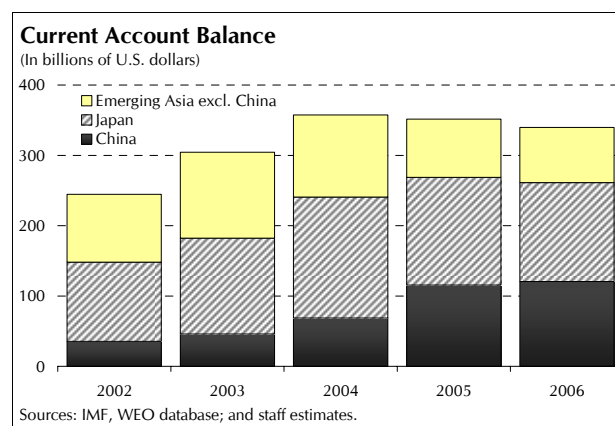
But there could be a shift in the distribution of growth. In most economies in the region, growth is expected to pick up in 2006, led by a recovery in external demand. The latest economic releases are consistent with this projected pick-up, with some electronics leading indicators (such as the U.S. book-to-bill ratio) showing signs of recovery and exports rebounding in several countries (e.g., Taiwan Province of China, Malaysia and Singapore). At the same time, the forecast also incorporates a further half-a-percentage point slowdown in growth in China to around $8\frac{1}{2}$ percent, as investment is expected to continue to decelerate to more sustainable levels. A slight reduction in growth is also projected for India (to $6\frac{1}{4}$ percent), resulting from higher oil prices and a possible tightening in short-term interest rates.



With governments increasingly deciding to pass on higher world oil prices as they try to limit the costs of oil subsidies, inflation is set to rise, albeit modestly. In economies with controlled petroleum product prices, staff estimates suggest that domestic prices need to be raised by an additional 43 percent on average to bring domestic prices (in dollar

terms) up to world market levels. Headline inflation in 2005 and 2006 for Asia as a whole is nonetheless expected to remain relatively flat at $3\text{--}3\frac{1}{4}$ percent y/y, thanks to the offsetting impact of lower food prices. For emerging Asia, inflation is projected at 4 percent, about the same as in 2004, but about $\frac{3}{4}$ percentage point higher than in the April WEO.

Meanwhile, the region's current account surplus is forecast to remain around 3 percent of GDP in both 2005 and 2006, but with a marked change in the distribution around the region. China's current account surplus is forecast to increase by 2 percentage points to 6 percent of GDP in 2005, and remain high at $5\frac{1}{2}$ percent of GDP in 2006, as the rapid expansion in manufacturing capacity should translate into greater exports, while allowing domestic production to substitute increasingly for imports. In contrast, the current account surplus for emerging Asia excluding China is projected to more than halve to roughly 1 percent of GDP in 2005 and to narrow further to $\frac{3}{4}$ percent of GDP in 2006, the result of growing oil deficits.

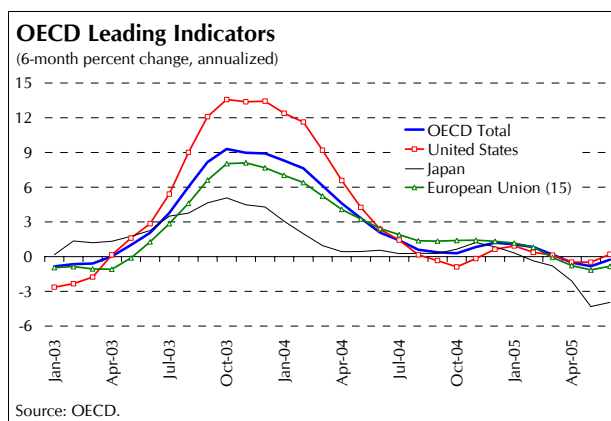


Risks to this mostly bright outlook stem mainly from rising energy prices at this stage.

- Oil prices (Dubai) are already up 65 percent this year and, based on futures prices, are expected to remain high over the near term, hurting regional

incomes and putting upward pressure on inflation. The latest WEO assumptions have revised oil prices up sharply, yet by end-August world prices were already above the 2006 forecast of \$61.8 per barrel. Asia's economies are quite vulnerable to oil price increases, as they are highly dependent on oil compared to countries in other regions. So far, incomplete pass-through has muted the impact on output, but rising fiscal and quasi-fiscal costs are likely to make this approach increasingly unsustainable, especially if energy prices keep rising. In countries with high public indebtedness and large gross financing requirements, higher oil prices could also increase short-term external vulnerability, especially if they lead to higher global interest rates, or if the rising costs of maintaining fuel subsidies have a negative impact on market sentiment.

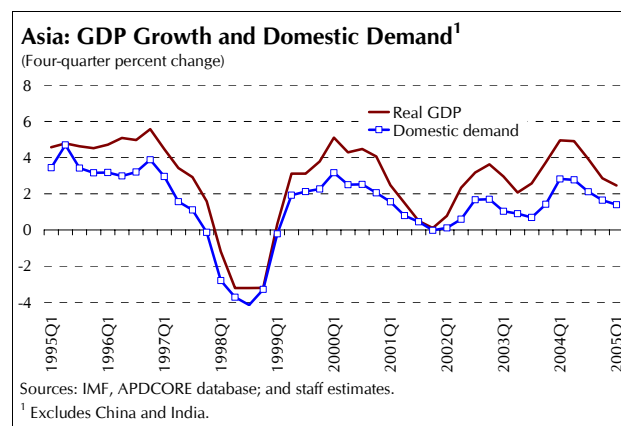
- **The near-term risks to growth in the advanced economies outside Asia, and therefore the risks to demand for Asian exports, are slanted to the downside, as rising energy prices could begin to weigh on advanced country growth.** Already, leading indicators for the OECD economies have deteriorated for much of this year—even before the further surge in world oil prices in August. In the event of a global slowdown, risks to Asia's outlook also stem from the limited scope for counter-cyclical policy, given the high levels of public debt.



- **The tech sector shows some upside potential.** The Semiconductor Industry Association has revised its forecast of worldwide semiconductor sales growth to 6 percent in 2005, up from a zero growth forecast at end-2004 and several recent leading indicators, including U.S. new electronics orders, the U.S. Purchasing Managers' Index, the PMI for Singapore for July, and the U.S. book-to-bill ratio, point to early signs of a recovery.
- **Another risk arises from the increase in protectionist sentiment in advanced countries—a potentially serious threat for Asia, given its dependence on exports.** Already, the expiry of multilateral quotas has led to safeguard actions on China's textile exports, and there are pressures for further restrictive measures (Box 4).
- **Finally, an outbreak of the avian flu could have a serious economic impact on Asia, as the experience of SARS in 2003 has amply demonstrated** (Box 5). If a pandemic were to develop, the impact on the region could be significant.

II. POLICY DEVELOPMENTS AND ISSUES

Since the late 1990s, a main policy focus of regional authorities has been to restore robust growth and reduce vulnerabilities. This has involved reforms to strengthen banking and corporate sectors, improve fiscal positions, and build up international reserve cushions. Over this period, and with the exception of China and India, external demand has been the main driver of growth. Domestic demand growth has been held down by weak investment, which dropped sharply during the financial crisis in many countries and has regained only limited ground since.



Looking forward, a challenge for much of the region is to further rekindle domestic demand, thereby reducing reliance on net exports. This must be done in a way that preserves strong macroeconomic positions, and is consistent with progress in reducing vulnerabilities. The room for maneuver on macroeconomic policies is limited, given that in many economies public debt levels are still quite high and interest rates remain near record lows. In addition, domestic policy decisions must now be weighed against the background of emerging external risks, including rising oil prices, global current account imbalances and higher U.S. interest rates, which have implications for inflation as well as growth. Much of the burden in strengthening domestic demand in Asia must

therefore rest on further progress with structural reforms, including those that may support strengthening consumption as well as improving the investment climate.

NEED FOR FISCAL CONSOLIDATION RULES OUT STIMULUS

In the late 1990s, fiscal positions deteriorated sharply in emerging Asia. In many cases, authorities incurred large financial sector restructuring costs as a result of the financial crisis and then had to cushion demand during the economic downturn that followed. The result was a large build-up in public sector debt, with the debt to GDP ratio in emerging Asia rising by 9¾ percentage points between 1996 and 1999, to 36½ percent of GDP.

Starting in 2000, authorities began rectifying their fiscal imbalances. The deceleration in growth in emerging Asia from early 2000 to mid-2001 was actually met by a very modest tightening, as authorities were becoming concerned about debt sustainability. The growth pick-up in mid-2001 gave countries more room to tighten, even if this did not happen in earnest until 2003. Between 2000 and 2004, central government deficits in emerging Asia were reduced by 1¾ percentage points of GDP on average. Fiscal consolidation was achieved through increases in revenue, with the ratio of revenue to GDP increasing by 2½ percentage points over the period and more than compensating for the observed increase in expenditure. Higher revenue came through a combination of additional tax measures, improved collection, and a significant rebound in economic activity over the period. Oil exporters (e.g., Indonesia, Malaysia, and Vietnam) received an additional revenue lift from high oil prices, although this was partially offset by sharply higher fuel subsidies.

Recent fiscal consolidation has not been strong enough to prevent increases in debt stocks. The debt to GDP ratio for emerging Asia increased by 1 percentage point between 2000 and 2004, with double-digit increases in the Philippines and Taiwan Province of China. Indonesia is a notable exception to this trend, with its debt to GDP ratio falling by 33 percentage points over this period. Looking more in detail, one can see two distinct sub-periods. From 2000 to 2002 fiscal consolidation was timid and countries maintained substantial primary deficits, resulting in rising debt stocks. Consolidation then accelerated in 2003 and debt stocks relative to GDP started falling, but have yet to reach 2000 levels.

Unlike emerging Asia, industrial Asia did not go through this pattern of fiscal expansion followed by consolidation over the period. Japan has incurred steady deficits of 6¼ percent of GDP on average since 1997, with the economy mired in deflation and weak growth. At the opposite end, Australia has achieved relatively steady surpluses of 1 percent of GDP on average, while New Zealand significantly raised its surplus in 2003 and 2004 to 5¼ percent and 4¼ percent respectively. As a result, both countries have experienced a substantial reduction in their debt stocks.

Selected Fiscal Indicators

(In percent of GDP)

| | General Government Gross Debt | | | | | | | | | | Central Government Fiscal Balance | | | | | | | | | |
|--------------------------|-------------------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| | | | | | | | | | Est. | Proj. | | | | | | | | | Est. | Proj. |
| Industrial Asia | 90.0 | 95.0 | 104.3 | 114.5 | 121.0 | 128.5 | 135.5 | 140.3 | 144.2 | 148.1 | -3.9 | -3.4 | -3.1 | -6.9 | -5.8 | -5.4 | -5.7 | -5.8 | -5.7 | -5.6 |
| Japan | 99.2 | 105.8 | 117.8 | 130.9 | 139.1 | 148.8 | 158.3 | 164.6 | 169.2 | 174.3 | -4.4 | -4.0 | -3.8 | -8.5 | -6.9 | -6.3 | -6.9 | -7.1 | -7.0 | -6.9 |
| Australia ¹ | 29.1 | 23.8 | 20.1 | 16.0 | 12.9 | 10.6 | 8.2 | 5.9 | 5.2 | 3.9 | -1.0 | 0.2 | 0.7 | 2.1 | 0.9 | -0.1 | 1.0 | 1.0 | 1.1 | 1.0 |
| New Zealand ² | 38.3 | 38.5 | 36.5 | 34.7 | 33.4 | 30.9 | 29.0 | 27.2 | 24.3 | 22.3 | 2.0 | 2.6 | 1.8 | 1.4 | 1.3 | 2.0 | 1.6 | 5.7 | 4.2 | 3.4 |
| Emerging Asia | 25.8 | 30.7 | 32.2 | 36.4 | 38.9 | 40.6 | 42.2 | 42.3 | 41.0 | 40.2 | -1.3 | -1.9 | -3.2 | -4.0 | -3.8 | -3.7 | -3.5 | -2.9 | -2.1 | -2.1 |
| Hong Kong SAR | — | — | — | — | — | — | — | — | — | — | 2.1 | 6.5 | -1.8 | 0.8 | -0.6 | -5.0 | -4.9 | -3.2 | -0.9 | -0.7 |
| Korea ³ | 8.2 | 11.7 | 22.7 | 28.9 | 29.2 | 33.8 | 32.4 | 32.6 | 31.2 | 30.8 | 0.0 | -1.5 | -3.9 | -3.0 | 1.1 | 0.6 | 2.3 | 2.7 | 2.0 | 2.2 |
| Singapore | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 9.3 | 9.2 | 3.6 | 4.6 | 7.9 | 4.8 | 4.0 | 5.8 | 3.9 | 4.5 |
| Taiwan POC | 13.0 | 12.5 | 15.0 | 20.5 | 24.4 | 31.5 | 35.1 | 37.6 | 39.6 | 41.6 | 0.3 | 0.6 | 2.1 | 0.1 | -0.5 | -2.8 | -4.3 | -4.0 | -3.3 | -3.0 |
| China | 7.1 | 8.4 | 11.0 | 14.5 | 16.9 | 18.7 | 20.6 | 21.3 | 20.0 | 19.2 | -1.6 | -1.9 | -3.0 | -4.0 | -3.6 | -3.1 | -3.3 | -2.8 | -1.7 | -1.7 |
| India ⁴ | 66.0 | 66.6 | 66.9 | 69.1 | 71.7 | 76.6 | 81.1 | 81.9 | 81.4 | 82.2 | -4.2 | -4.7 | -5.3 | -6.6 | -7.2 | -6.6 | -6.1 | -5.3 | -4.5 | -4.5 |
| Indonesia ² | 23.5 | 72.3 | 65.9 | 82.9 | 91.3 | 78.2 | 69.2 | 60.2 | 57.9 | 53.7 | 1.1 | -1.1 | -2.2 | -1.4 | -3.4 | -3.2 | -1.5 | -1.9 | -1.4 | -1.7 |
| Malaysia | 35.7 | 32.3 | 36.6 | 37.4 | 36.7 | 43.6 | 45.6 | 47.1 | 46.0 | 44.6 | 0.7 | 2.4 | -1.8 | -3.2 | -5.7 | -5.5 | -5.6 | -5.3 | -4.3 | -3.5 |
| Philippines ⁵ | 79.3 | 87.9 | 86.3 | 84.3 | 89.1 | 88.4 | 93.9 | 103.3 | 101.4 | 97.9 | -0.3 | -0.7 | -2.7 | -4.4 | -4.6 | -4.6 | -5.6 | -5.1 | -4.3 | -3.9 |
| Thailand ⁶ | 3.8 | 5.1 | 10.7 | 20.8 | 23.0 | 24.8 | 31.3 | 28.5 | 28.6 | 26.2 | 2.3 | -0.9 | -2.4 | -3.5 | -2.9 | -2.9 | -2.8 | 0.2 | 0.3 | 0.6 |
| Asia | 45.7 | 50.0 | 53.4 | 58.5 | 61.5 | 64.1 | 66.0 | 66.4 | 65.9 | 65.5 | -2.1 | -2.3 | -3.2 | -4.8 | -4.3 | -4.1 | -4.1 | -3.6 | -2.9 | -2.9 |

Sources: IMF, APDWE database; and staff estimates.

¹ Fiscal year ending June. Fiscal balance includes net surplus from state-owned enterprises.

² Central government only.

³ Consolidated central government debt including government guaranteed debt for financial sector restructuring.

⁴ Fiscal year ending March; excludes privatization receipts from revenues.

⁵ Non-financial public sector debt.

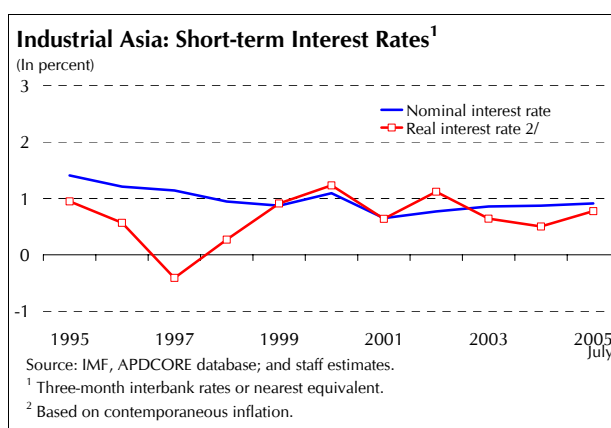
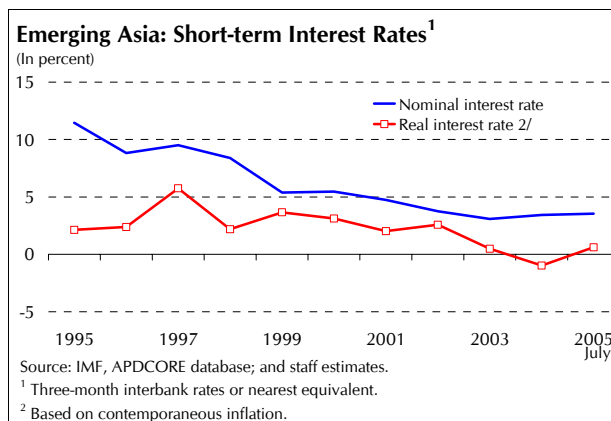
⁶ Fiscal year ending September.

For 2005, the general trend toward gradual fiscal consolidation is expected to continue in emerging Asia. Despite a slight deceleration in economic activity, staff expects modest improvements in the fiscal balance of almost all regional economies. The debt to GDP ratio in the region is expected to fall by one-half of 1 percentage point in 2005.

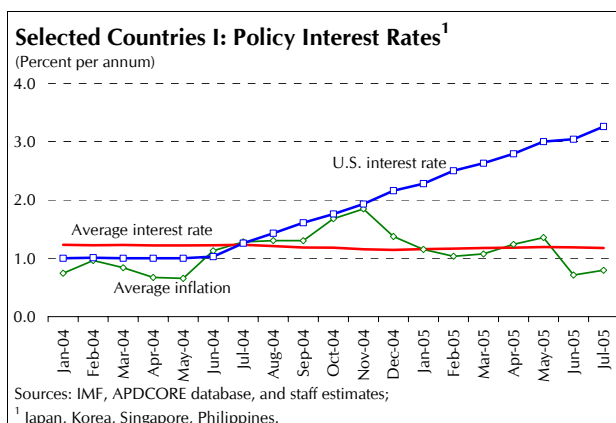
However, more needs to be done to meet the challenge of medium-term fiscal sustainability throughout Asia. Average debt stocks remain high relative to GDP, and coming decades will bring the added pressure of ageing populations in several countries. Moreover, fiscal flexibility in regional economies may be further limited by uncertainties surrounding off-balance sheet or contingent liabilities faced by governments, such as non-performing loans at state-owned banks in China. Staff has argued that now is a good time to act, given strong growth in the region.

MONETARY AND EXCHANGE RATE POLICY: A BALANCING ACT BETWEEN GROWTH AND INFLATION

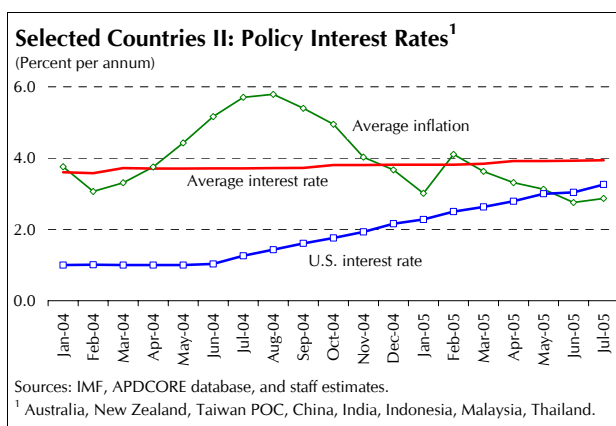
As growth faltered in the late 1990's and the need for consolidation limited the room for maneuver on fiscal policy, many authorities focused on monetary policy to stimulate the economy. Average nominal and real interest rates in emerging Asia fell by 5 percentage points between 1997 and 1999, as growth collapsed in the wake of the Asian crisis. What is perhaps surprising is that the monetary easing in emerging Asia continued through mid-2004 despite improving economic conditions, with real interest rates falling to zero or becoming negative. One key factor is that domestic demand remained weak in several countries even as output began to recover, with investment remaining low in much of the region. And partly for this reason, inflationary pressures remained very subdued, with some economies such as Japan, Hong Kong SAR, and Taiwan Province of China actually experiencing a period of deflation, on some price indices.



By 2004, the room for monetary stimulus to encourage stronger domestic demand was threatened by the rise in commodity prices. Fear of inflationary pressures began to emerge with higher world oil prices and domestic food prices, while interest rates in the U.S. were rising. In the event, authorities responded with only small increases in interest rates when they responded at all, judging that commodity price increases would not feed through to second round inflation, and that imported inflation pressures could be offset by allowing some exchange rate appreciation against the U.S. dollar. That judgment generally proved correct as inflation tailed off by the end of 2004. In 2005, economies are benefiting as food prices have dropped even as oil prices continue to increase, so that the net impact on overall inflation remains moderate.

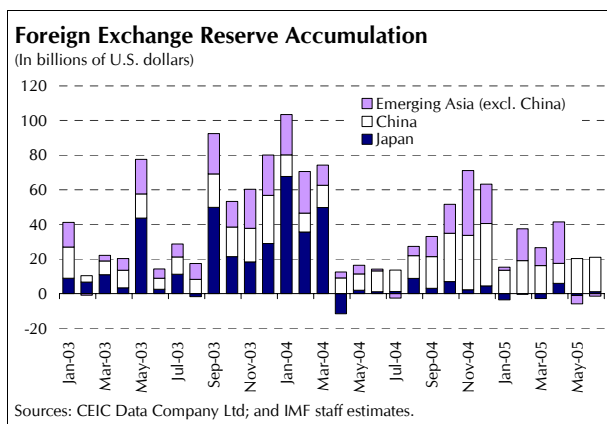


In those economies where domestic demand had successfully been reignited, monetary authorities initiated a policy tightening bias that continues today. Authorities began to raise interest rates gradually in small steps (Australia, India, Indonesia, Taiwan Province of China, and Thailand) or took other incremental steps to withdraw liquidity (China and Malaysia) as policy authorities sought at the same time to remain supportive of growth (the one exception was New Zealand, which has raised the official interest rate seven times since end-2003). Again, the reason authorities raised rates in small increments was the belief that economies would be able to absorb commodity price shocks with little lasting impact on headline inflation.

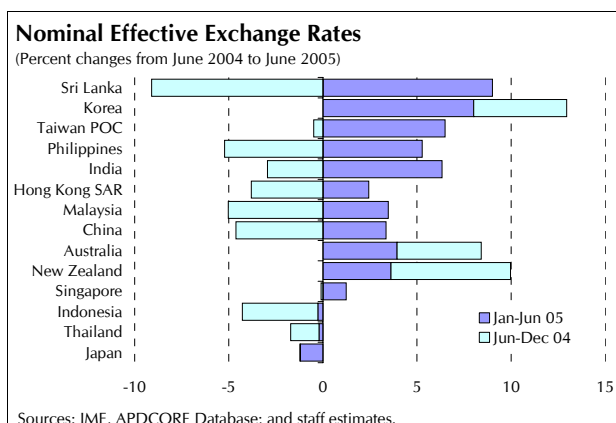


Given continued lackluster domestic demand growth and heavy reliance on net exports, countries were initially reluctant to allow exchange rates to appreciate in 2002–03 when

capital inflows into the region were heavy. Also, deflation was a concern in some countries. But in 2004, as growth resumed and in many cases domestic demand improved, the authorities in the region began to allow more exchange rate appreciation, in part as it helped offset inflation pressures from higher oil prices, thus providing support to the incremental approach to monetary policy tightening. In addition, the decision by the Japanese authorities to refrain (since March 2004) from intervening in the foreign exchange market meant that other currencies could also be flexible without losing competitiveness against Japan.



Starting in early 2005, appreciation against the dollar slowed or even reversed as capital inflows tailed off. In effective terms, however, regional currencies continued to appreciate throughout the period. Moreover, on July 21 the Chinese authorities decided to revalue the renminbi by 2 percent against the U.S. dollar, and to set its value subsequently with reference to a basket of currencies. The Malaysian authorities abandoned their dollar peg in favor of a tightly managed float the same day.

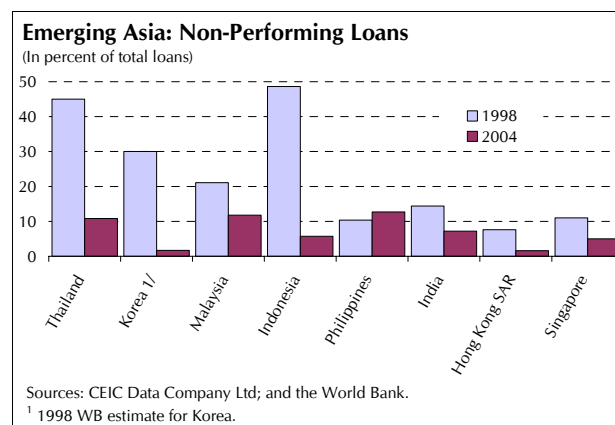


Looking forward, there is a need for monetary authorities to remain vigilant. While the recent decline in inflation has led to an effective rise in real interest rates, these remain near historic lows. Moreover, regional rate increases have not matched rises in global rates, a fact made easier by increased exchange rate flexibility in the region. Given that further oil price increases cannot be ruled out and that capacity utilization ratios are rising - and finally approaching pre-crisis levels in some countries, - monetary authorities will need to stay on guard if low inflation in the region is to be preserved.

SUPPORTING GROWTH THROUGH A REINVIGORATED STRUCTURAL REFORM AGENDA

Reflecting the importance of structural reform in encouraging investment, boosting productivity and strengthening economic resilience following the Asia crisis, many countries in the region launched a reform agenda aimed at stimulating strong and sustained growth over time. Key elements of the agenda have generally included reforms in the financial and corporate sectors, labor market, and trade policy. Important successes have been achieved, particularly in banking and corporate reform. Looking ahead, an important challenge for the region will be to improve infrastructure while preserving fiscal sustainability.

The most significant progress in structural reforms across the region has been in the financial sector. Authorities recognized that a well-developed financial system promotes growth, by mobilizing savings and channeling them to good business opportunities, in turn leading to more rapid accumulation of capital and faster technological progress. To that end, significant progress in bank restructuring has taken place across the region, as witnessed by the sharp declines in non-performing loan ratios. Foreign ownership of banks has increased in several countries, further aiding restructuring of distressed assets and bringing the potential to improve governance and accelerate the transfer of technology and management practices. However, for the region as a whole, there is still some catch up to do vis-à-vis other emerging markets in terms of bank profitability. Improvement in risk pricing and development of non-interest income activities are other important tasks for the future.



Corporate reforms have also advanced in several countries in the region. Trimmed labor costs and reduced excess capacity have led to a rise in profitability and corporate de-leveraging. In emerging Asia, debt-equity ratios have fallen from 204 percent in 1998 to 107 percent in 2003, while return on equity has gone from 4½ percent in 1999 to 6¾ percent in 2003. At the same time, new legislation was passed in several countries to improve corporate governance, notably strengthening the

independence of supervisory boards and increasing shareholders' rights. However, corporate governance still falls short of international best practice in most countries. Further privatization took place in the region. Yet in sectors such as energy more needs to be done if the region is to meet growing demand without unduly burdening government budgets.



Asia faces a very large infrastructure gap as investment in infrastructure has lagged recent rapid growth rates. Addressing this gap will be key if the region is to maintain its growth momentum. According to a joint study by the World Bank, the Asia Development Bank, and the Japan Bank for International Cooperation, infrastructure needs in East Asia will total \$200 billion a year for the next five years, 65 percent of which will be in the form of new investment and the remainder on maintenance of existing assets. Not surprisingly, a large share of this infrastructure demand will come from China. India also faces large infrastructure requirements, with needs estimated at \$27–\$45 billion per year over the next five years.

Some countries are increasingly resorting to public-private-partnership arrangements (PPPs) to finance infrastructure needs in times of limited fiscal resources. Korea, for instance, has recently announced a plan that would procure, through PPPs, infrastructure assets geared toward the delivery of social services, with the capital value of these assets amounting to 3 percent of GDP. PPPs present many

potential opportunities, ranging from better value for money relative to standard public procurement, to private and financial sector development. However, staff has warned that the benefits of PPPs should not be oversold, in particular their ability to provide infrastructure without affecting the government's balance sheet. PPPs can generate fiscal liabilities regardless of whether the financing of the asset entails gross borrowing by the government. As such, transparent reporting of the capital value of all PPPs and of the uncontingent and contingent liabilities associated with these projects is essential. Otherwise, PPPs may become an easy tool to bypass spending controls and to give the illusion of a larger fiscal envelope.

Proposals for more active investment of some foreign reserves in emerging Asia have suggested their use to finance public infrastructure. Official reserves can provide a new source of financing for domestic projects whose rate of return is likely to be considerably higher than that on foreign official assets. Beyond the financial rate of return, there are likely to be large social benefits to these projects. However, reserve-financed public investment is essentially just central bank credit to government, where the debt is in the form of liabilities issued by the central bank when purchasing the foreign reserves. This proposal also entails the risk that public investment decisions will take place outside the usual vetting framework. Potential transparency and governance problems would argue for keeping spending on such projects in the budget, rather than creating a separate entity capitalized by excess reserves. Last but not least, financing infrastructure through the use of reserves can impinge on the independence of the monetary authority.

While progress has been achieved in labor market reform, the agenda remains heavy. Australia, Japan and New Zealand have made significant progress, albeit to different extents, in easing labor market rigidities. Other

countries have not been so successful, and would benefit from removing restrictions on layoffs and contract work and easing employment protection. At the same time, there is a need for retraining programs and targeted safety nets in countries where outsourcing has reduced demand for low-skilled workers.

Intra-regional trade and financial integration has progressed, but in many ways Asian countries remain better integrated with the non-Asia rest of the world than with each other.⁵ Intra-regional trade has grown rapidly in the last ten years, but the pattern of trade is consistent with the positioning of Asian countries at various stages of a global production chain whose final demand resides ultimately in the United States and Europe. Similarly, the region continues to rely on the intermediation of non-Asia mature markets for the allocation of capital.

Whether recent and prospective free trade agreements can deepen regional integration remains to be seen. The region has recently experienced a proliferation of bilateral and regional free trade agreements, and more are at the negotiation stage. A key question is whether this complex web of FTAs will deepen the “global production chain” model of intra-regional trade, lead to European-style “horizontal” intra-regional trade (where countries export final goods to each other), or on the contrary slow integration. As regards financial integration, regional bond markets are developing, particularly under the auspices of the Asian Bond Market Initiative, but further progress can be achieved in other areas of capital markets such as intra-regional banking activity.

⁵ See Chapter V on Trade and Financial Integration in Asia for a thorough discussion on the subject.

III. SAVING AND INVESTMENT

Since the Asian crisis, the saving-investment balance in Asia has swung from a slight deficit to a significant surplus. This reflects mainly a sustained decline in investment, rather than an increase in saving. With the factors underlying the investment drought – notably excess capacity and corporate restructuring – ebbing, investment should pick up in coming years, and Asia's saving-investment surplus should decline.

BACKGROUND

Current account balances of Asian countries have swung widely over the past decade. In the years prior to the Asian crisis of 1997–98, emerging Asian economies were running current account deficits equivalent to over 1 percent of GDP on average, with a number of countries exhibiting current account deficits in excess of 5 percent of GDP. Japan generally ran current account surpluses, and Asia's overall current account was broadly in balance. After the crisis, current account balances in emerging economies swung to large and sustained surpluses, averaging 3 percent of GDP since 1998.

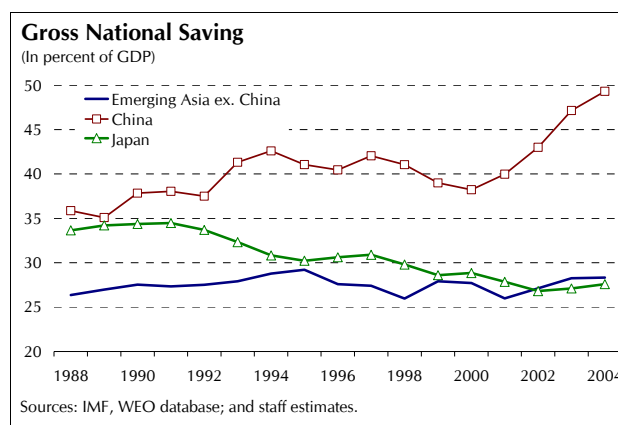
The counterpart to the adjustment in current account balances are movements in underlying saving and investment behavior:

Saving developments

- **Saving rates have been relatively stable in Asia, albeit at higher levels than in other regions.** Over the past fifteen years, gross saving in Asia has averaged around 30 percent of GDP, about double the level in the United States, and 50 percent higher than in the euro area.
- **In emerging Asia excluding China, saving dipped slightly during the Asian crisis, reflecting a sharp and sustained decline**

in public sector saving, partly offset by an increase in private saving above pre-crisis levels.

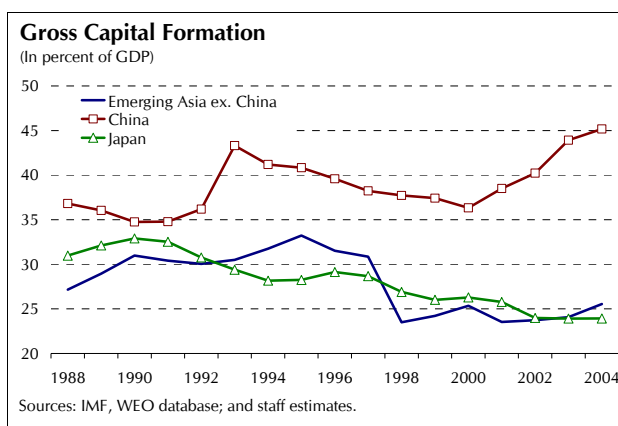
- **In Japan, saving has declined steadily in the past decade owing to a fall in public saving and the impact of population aging on private saving.** Given the economy's size, developments in Japan have helped push overall saving in Asia excluding China (see below) to slightly below the pre-crisis level.



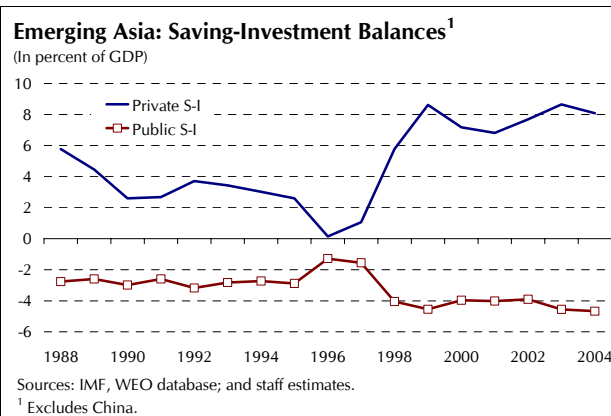
Investment developments

- **Investment in Asia as a whole has been higher than in other regions, averaging above 30 percent of GDP over the past fifteen years.** For Asia as a whole, investment dipped during the Asian crisis, but has since returned to pre-crisis levels.
- **Investment rates in emerging Asia excluding China, which had increased markedly in the years before the Asian crisis, collapsed sharply during the crisis** (by 8 percentage points of GDP between 1996 and 1998). Investment rates have remained depressed since the crisis, having risen by only 2 percentage points of GDP from 1998 levels.

- Both public and private investment declined, and are each still below pre-crisis levels. Domestically-financed investment has experienced the sharpest decline; after dipping slightly, FDI has returned to pre-crisis levels.



- These developments point to the emergence of an “investment drought”, rather than a “saving glut” in emerging Asia excluding China. As noted above, the adjustment in investment in the immediate aftermath of the crisis dwarfed the move in saving. In a longer perspective, the decline in investment of 3 percentage points of GDP between the 1990–97 average and 2004 almost fully explains the increase in the saving-investment balance over this timeframe, with saving up only marginally. The private sector has borne the bulk of the adjustment, with a sharp fall in investment complemented by an increase in saving. By contrast, the saving-investment balance of the public sector has deteriorated, driven by the adoption of looser fiscal policies in response to the crisis and by one-off costs associated with recapitalizing financial systems.



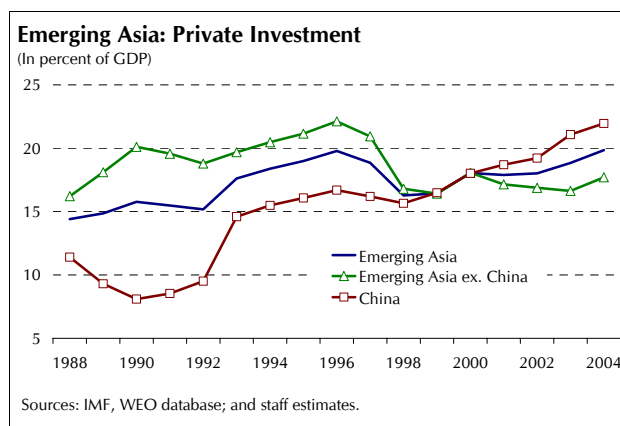
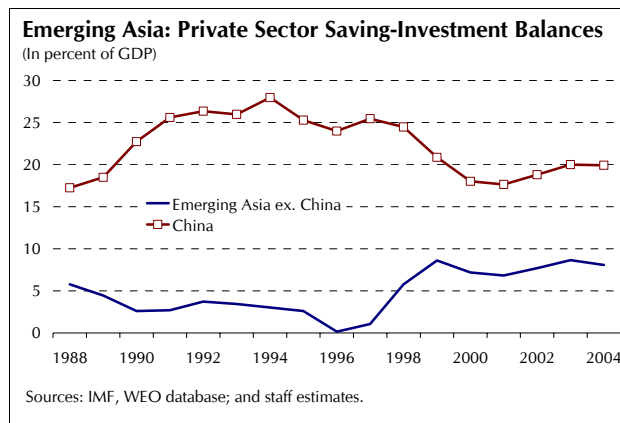
Emerging Asia: Change in Savings-Investment Balance¹
(In percent of GDP)

| | 1990-1997 | 2004 | difference |
|--------------------|-----------|------|------------|
| Private sector S-I | 2.4 | 8.1 | 5.7 |
| Savings | 22.8 | 25.8 | 3.0 |
| Investment | 20.4 | 17.7 | -2.6 |
| Public sector S-I | -2.5 | -4.7 | -2.2 |
| Savings | 5.2 | 2.5 | -2.6 |
| Investment | 7.7 | 7.2 | -0.4 |
| Total S-I | -0.1 | 3.4 | 3.5 |
| Savings | 27.9 | 28.3 | 0.4 |
| Investment | 28.0 | 24.9 | -3.1 |

Sources: IMF, WEO database; staff estimates.
¹ Excludes China.

Developments in China stand out from the rest of emerging Asia. Gross saving in China has increased sharply since the Asian crisis, reaching almost 50 percent of GDP in 2004. This reflects increased saving by the government and enterprises, particularly in natural resource sectors, due to low dividend payout ratios and high retained earnings in the context of rising profits. High enterprise saving has been in turn channeled into investment, which has also expanded sharply in recent years; unlike the rest of emerging Asia, the saving-investment surplus of the private sector is significantly lower than before the Asian crisis. These developments could be consistent with a shift in production and investment to China from other emerging Asian economies, possibly reflecting developments in relative competitiveness. Indeed, private sector investment in emerging Asia as a whole has

returned to near pre-crisis levels, with the increase in China offsetting the decline in the rest of emerging Asia.



WHAT FACTORS ACCOUNT FOR THESE DEVELOPMENTS?

Historically high rates of saving relative to other regions reflect largely institutional factors specific to Asia. Studies find that high household saving rates are largely a response to the lack of social safety nets, which leaves individuals dependent on their own saved resources to protect against negative shocks and old age expenditures. Underdeveloped financial systems reinforce these incentives, as the access to insurance and other risk-sharing products is limited. Demographic changes which have led to an expansion in working-age populations have further supported these trends. On the corporate side, high levels of

saving reflect the nature of corporate financing in Asia. In contrast to other regions, corporate bond markets in Asia though growing are small, and corporations tend to rely on bank loans or retained earnings to finance their operations. The importance of retained earnings may have increased since the crisis as banks pared corporate lending and overgeared corporates sought to repair their balance sheets.

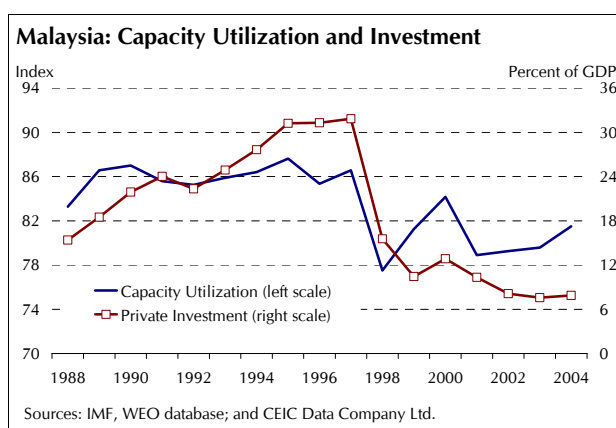
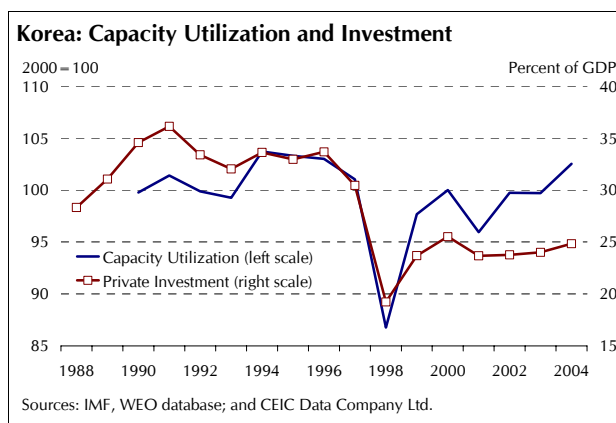
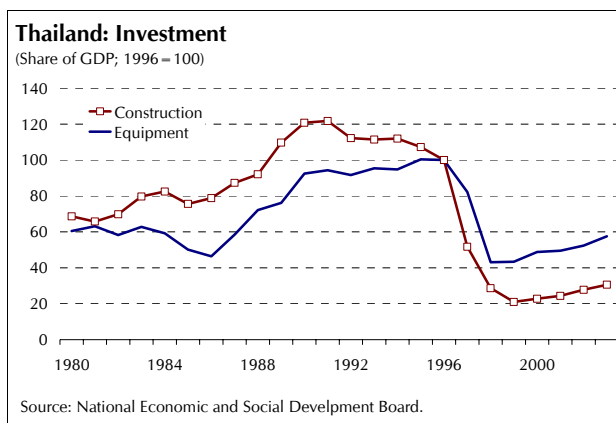
Recent movements in saving behavior have been broadly consistent with economic developments. Saving rates tend to rise with output growth and the extent of fiscal consolidation, and fall with the expansion of private sector credit and the rise in elderly dependency ratio. All told, as shown in the September 2005 WEO, a standard saving equation based on these elements predicts recent saving developments well.

However, it is difficult to account for the behavior of investment. In a standard model, the investment rate is related to output growth (through accelerator effects), credit availability, and the cost of capital. The WEO finds that applying such a framework would overpredict actual investment in emerging Asia by a significant margin. From this perspective, the stagnation of investment in emerging Asia since the crisis, despite a return to rapid growth and low real interest rates, is a puzzle.

While it is difficult to determine the equilibrium level of investment, it is likely to be somewhat above the current rate. A return to the peak pre-crisis level of investment is neither likely nor desirable, given the evidence of directed lending and overinvestment (discussed below). However, it may be difficult to sustain robust growth with the current low level of investment. For example, the average incremental capital-output ratio (ICOR) for emerging Asian economies (excluding China) was 4.7 for the period 1981–1996. A return to this level would imply that achieving an estimated potential growth of 6 percent per

year would require an investment rate of 28 percent of GDP, 3½ percentage points below the 1996 level, but some 3 percentage points above the current level. Consideration of a number of special factors may be needed to shed light on the factors behind this ongoing investment shortfall.

Overinvestment in the early 1990s may have led to overcapacity which continued to act as a drag on investment well after the onset of the Asian crisis and the Japan bubble. In the run-up to the crisis, a number of countries and sectors – for example, construction in Thailand and Malaysia, manufacturing in Korea—saw the emergence of bubbles. Investment in these sectors expanded rapidly—in some cases doubling as a share of GDP within ten years—before collapsing sharply in the crisis. Analysis in the WEO also concludes that emerging Asia experienced overinvestment in the pre-crisis period, and underinvestment in recent years. The overhang of capacity created during the boom may have depressed new investment for years. In addition, the tight relationship between capacity utilization and investment appears to have broken down in the post-crisis period, with investment remaining stagnant despite tightening capacity. Even as the consequences of past overinvestment on capacity wear off, new investment remains hesitant.



Corporate restructuring may also have depressed investment. The Asian crisis hit the corporate sector hard, leading to widespread bankruptcies, expanding debt burdens, and collapsing sales. The immediate priority for corporations was to restructure their finances and operations. This involved restructuring and paying down debts, revamping operations, and improving efficiency. In this situation, demand for new investment was reduced. Corporate restructuring has taken some time, but significant strides have been made in cutting debt levels and improving profitability. However, significant improvements were already apparent by 2003, and yet investment has remained depressed.

Indicators of Corporate Sector Health
(In percent)

| | 1995 | | 1999 | | 2003 | |
|------------------------------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|
| | Emerging Asia | Industrial Asia | Emerging Asia | Industrial Asia | Emerging Asia | Industrial Asia |
| Debt/equity ratio | 106.9 | 152.2 | 162.3 | 155.9 | 107.3 | 113.1 |
| Debt/assets ratio | 29.3 | 27.1 | 33.3 | 27.0 | 27.4 | 22.8 |
| Debt/sales ratio | 130.3 | 54.3 | 163.7 | 59.6 | 143.9 | 55.2 |
| Return on assets | 8.5 | 2.6 | 4.7 | 1.7 | 4.5 | 1.0 |
| Return on equity | 13.0 | 3.7 | 4.6 | 1.8 | 6.8 | 1.4 |
| Current assets/liabilities (ratio) | 1.7 | 1.7 | 1.7 | 1.8 | 2.0 | 2.1 |

Source: IMF Corporate Vulnerability Utility.

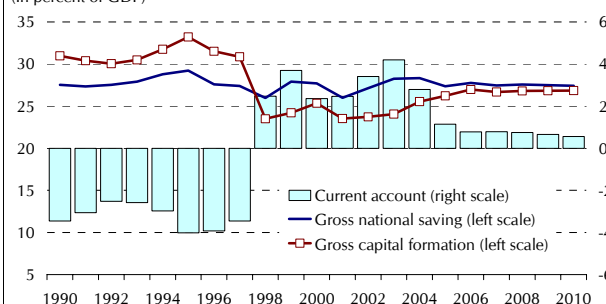
Despite the improvement in the health of the larger corporate sector, other key sectors remain weak. The small-and medium-sized enterprise (SME) sector was hit especially hard by the crisis and, given the domestic focus of its operations, benefited little from exchange rate depreciations. Moreover, SMEs' access to private financing dried up, as banks became particularly hesitant to lend to small-scale enterprises with relatively obscure balance sheets. For a number of reasons, including a squeeze on profits arising from reliance on domestic demand and competition from China, SMEs have made slower progress in restructuring than larger export-oriented corporations. Government programs to support the SME sector may also have inhibited restructuring (see Box). Lingered weaknesses in the SME sector may have depressed the aggregate investment rate despite the improvement in headline corporate indicators, which cover only listed firms and not SMEs.

HOW WILL SAVING AND INVESTMENT EVOLVE?

Underlying trends point to a narrowing of the saving-investment balance, as saving declines and investment recovers. The sharp swing in the saving-investment balance came in response to forces unleashed by the Asian crisis. As these forces dissipate further, underlying influences are likely to lower saving and raise investment. The WEO projections anticipate that the saving-investment balance in emerging Asia excluding China will decline by 2¼ percentage points of GDP by 2010 (from

2¾ percent of GDP in 2004), despite the maintained assumption of constant real exchange rates. The saving-investment balance in China is projected to decline by 1½ percentage points from a peak of 6 percent of GDP in 2005.

Emerging Asia: Savings and Investment Projections¹
(In percent of GDP)



Sources: IMF, WEO database; and staff estimates.

¹ Excludes China.

Private saving rates are projected to decline modestly. Household saving is projected to diminish as populations age, but these demographic changes may not hit in full force for many years. While the share of the workforce in the overall population is already past its peak in Japan and Korea, this share will peak in China between 2010 and 2015, and in India and the Philippines after 2035. Adding to the gradual drag from demographic changes, the continued expansion of consumer lending—from very low levels in many countries—should support private consumption at the expense of household saving. In all, WEO projections anticipate that private saving in emerging Asia will decline by 3½ percentage points of GDP by 2010.

Against this decline, public saving is expected to rise as fiscal policies tighten to deal with high debt levels. Japan offers a case in point, where an adjustment in the primary fiscal balance of some 7 percentage points of GDP is needed by the early 2010s to stabilize the debt ratio. Fiscal tightening is also needed in emerging Asia, with public saving projected to rise by almost 3 percentage points of GDP by

2010, although specific consolidation plans have not yet been elaborated in many countries. As individuals do not fully reduce their saving to offset increased public saving (i.e., full Ricardian equivalence does not apply), public sector developments in Asia will tend to support high saving rates.

With many of the inhibiting factors ebbing, investment should begin to pick up. Corporate restructuring appears well advanced with bankruptcy rates having fallen sharply and debt levels below pre-crisis levels in a number of countries. The process of operational restructuring is still ongoing, as firms seek to raise the return on assets and equity, but corporate balance sheets have been substantially rehabilitated. Ongoing problems in the SME sector remain a drag, but there is some evidence that the restructuring process is slowly reaching this sector as well. In addition, the overhang of excess capacity has narrowed, with capacity utilization rates approaching pre-crisis levels. Firms appear well placed to raise their investment levels; indeed, private investment increased in all emerging Asian economies in 2004. The WEO forecasts that investment in emerging Asia will rise an additional 1½ percentage points of GDP by 2010.

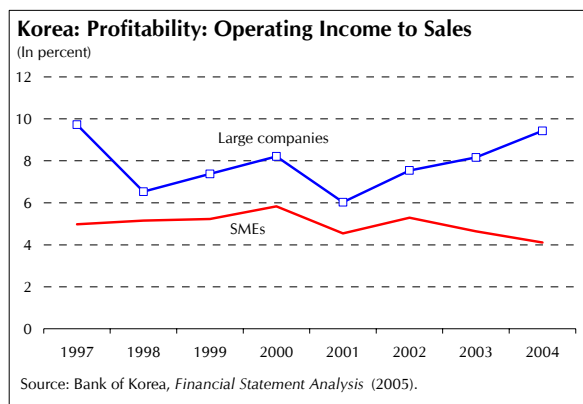
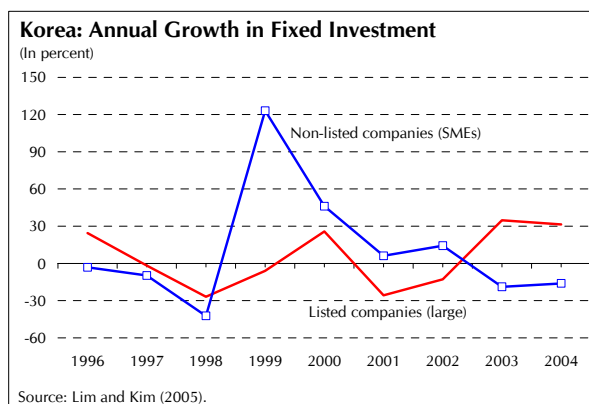
The potential role for macroeconomic policies to accelerate the process of adjustment in saving and investment may be limited. With high public debt levels still a concern in many countries, fiscal policy should maintain a tightening bias, strengthening the public sector saving-investment balance. Meanwhile, policies to promote private consumption at the expense of household saving can be risky, as the credit-card boom and bust in Korea demonstrates. Policies to stimulate private investment in the short term—for example, through directed lending or tax incentives—are not without risks.

However, there is a role for structural reforms which strengthen domestic demand. Reforms

to strengthen the social safety net, particularly in China, would allow households to reduce their precautionary saving. Financial sector reforms to extend the reach of financial services—with proper regulatory oversight—would also tend to stimulate household consumption and investment. In addition, policies have a key role to play in overcoming impediments to private investment. Ongoing steps to deepen capital markets will help broaden the sources of corporate financing. More generally, policies need to focus on addressing weaknesses in the investment climate, for example by reducing entry requirements, promoting a level playing field, and clarifying the framework for labor relations. Such steps will take longer to work, but could help support higher investment over time.

INVESTMENT IN KOREA: THE ROLE OF SMEs

- **As in other countries affected by the Asian crisis, investment in Korea collapsed and has remained below the pre-crisis level.** After falling by half from its peak of 17 percent of GDP in 1996, fixed investment has recovered to about 13 percent of GDP since 2000. The weak domestic economy and the process of corporate restructuring likely held back new investment in the immediate aftermath of the crisis. However, investment has stayed low even as corporate restructuring has advanced and the economy has improved.
- **Continued low fixed investment is largely a reflection of weaknesses in the SME sector.** While fixed investment by large companies increased by over 30 percent on average in 2003–04, it declined by nearly 20 percent annually among SMEs in the same period.¹ Overall investment was flat over this period, reflecting the importance of the SME sector in Korea (estimated by private researchers to account for over half of overall fixed investment).
- **Investment by SMEs is held back by deep structural problems in the sector.** While large companies have made significant progress in deleveraging and boosting profitability, SME profitability has worsened since the crisis, constraining the ability of the sector to invest. Weak profitability partly reflects cyclical factors, given the dependence of the sector on domestic demand (the correlation between SME production and private consumption is as high as 0.75). Structural problems have also constrained SME profitability, with rising competition from China squeezing labor-intensive SMEs, particularly in low-end manufacturing. In addition, the rapid expansion of government credit guarantees to existing SMEs—by threefold, to 6 percent of GDP—in the post-crisis period, have raised the barriers to entry and exit and inhibited restructuring. Following the example of large companies, such restructuring is likely to be a pre-requisite for a sustained increase in fixed investment.

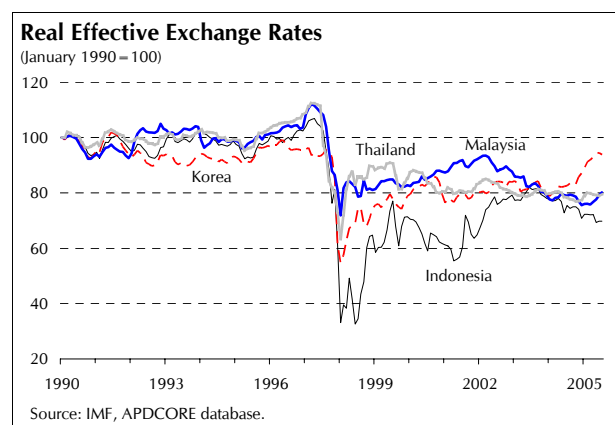
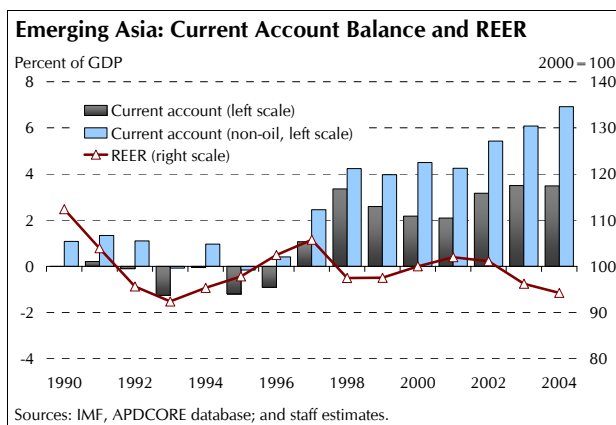


¹ The estimate by the Korean Development Institute is derived by relating investment accounted for by listed (i.e., large) companies to total investment in the national accounts.

IV. EXCHANGE RATES AND THE CURRENT ACCOUNT

Following on the previous chapter's analysis of the role of savings and investment in generating Asia's current account surpluses, this chapter examines the evolution of external accounts and exchange rates. This perspective is important because any future reduction in these surpluses will almost certainly be accompanied by adjustments in real exchange rates. Accordingly, this chapter reviews developments in exchange rates since the crisis, then examines illustrative evidence from two analytical models, with a view to assessing the role of real exchange rates in the past emergence of external imbalances and their future resolution.

declining by about 8 percent y/y for all emerging Asian countries or over 30 percent for those countries most affected by the crisis.⁷ Currencies then regained some ground in subsequent years. Still, for the period 1998–2004 as a whole, real exchange rates for emerging Asia have been on average about 5 percent weaker than the level during 1996–1997—or about 20 percent for the crisis-affected countries. Currencies in some key Asian countries, however, have not followed this general pattern. For China, India, and Japan, currencies have been slightly stronger on average than in the pre-crisis period, although the Japanese yen has experienced sizeable swings over recent years.



EXCHANGE RATES: KEY DEVELOPMENTS SINCE THE CRISIS

Two features stand out from a review of developments in Asian currencies since the mid 1990s. First, for the emerging markets as a group, real effective exchange rates have stayed at a level more depreciated than prior to the crisis.⁶ Exchange rates bottomed out in 1998,

Second, exchange rate regimes in the region have become more flexible.

- Most exchange rate regimes in Asia are now formally classified as independent or managed floats. All the advanced

⁶ The real effective exchange rate is an average of exchange rates vis-à-vis partner countries, adjusted by indicators of relative competitiveness such as unit labor costs, wages or prices, with weights proportional to trade shares. The measure of the real (continued...)

effective exchange rate discussed here employs consumer prices, owing to data limitations. Measures that used labor costs, for example, could produce different results.

⁷ Weighted average (using PPP GDP) for Korea, Indonesia, Malaysia, and Thailand.

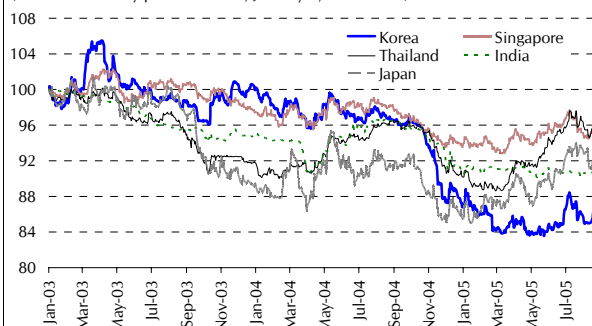
countries—Japan, Australia, and New Zealand—are classified as independently floating and have intervened relatively little in the market in the recent period.⁸ Of the nine large Asian emerging markets, six are classified as having floating exchange rate regimes, and two—China and Malaysia—moved toward more flexible regimes on July 21.

- **At the same time, most emerging markets in Asia have managed their exchange rates, at times quite heavily, undertaking significant foreign exchange intervention in recent years.** Intervention was initially motivated by a desire to build up a buffer stock after the Asian crisis had depleted levels of reserves, which had shown their value in reducing vulnerability to external financing shocks. By early in this decade, however, reserves in nearly all countries had reached comfortable levels, as measured by standard indicators such as the ratio of reserves to short-term debt.⁹ Rapid reserve accumulation nonetheless continued through late 2004, as countries sought to limit the impact of heavy capital inflows on external competitiveness, at a time when domestic demand generally remained subdued.
- **Notwithstanding this sizeable intervention, significant movements in exchange rates vis-à-vis the dollar have**

taken place during recent years in the flexible regimes (Chapter I). In particular, during August 2004–March 2005 a number of regional currencies appreciated significantly vis-à-vis the U.S. dollar, with the Korean won rising by about 15 percent, the Taiwan Province of China dollar by over 9 percent, and the Thai baht and Indian rupee by 7½ percent and 6 percent, respectively. In several instances these moves were reflected in significant real appreciations as well: for example, the Korean won appreciated in real effective terms by more than 10 percent over the same period.

Bilateral Exchange Rates

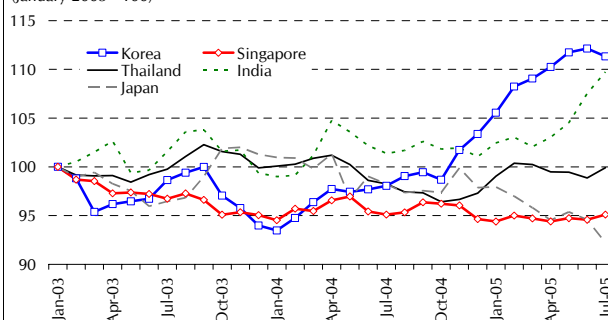
(National currency per U.S. dollar; January 2, 2003 = 100)



Source: Bloomberg LP.

Real Effective Exchange Rates

(January 2003 = 100)



Source: IMF, APDCORE database.

⁸ Classifications are based on the 2004 Exchange Arrangements and Exchange Restrictions. The nine emerging markets are China, India, Hong Kong SAR, Korea, Singapore, Indonesia, Malaysia, Philippines, and Thailand.

⁹ Analysis in the September 2003 *World Economic Outlook* found that Asian countries' accumulation of reserves during 2002 exceeded the forecasts of a fundamentals-based model.

The post-crisis depreciation, and the recent moves toward flexibility, raise two interrelated questions. What has been the relationship between currency depreciation and current

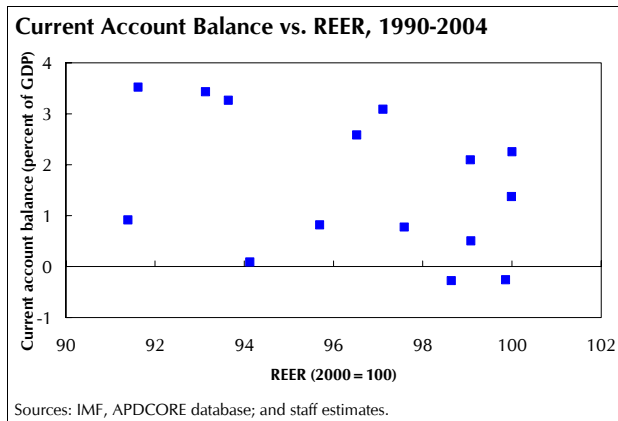
account surpluses in Asia? And how might that relationship look in the future, particularly as global imbalances unwind? The rest of this chapter looks at these issues.

RELATIONSHIP BETWEEN REAL EXCHANGE RATES AND THE CURRENT ACCOUNT IN ASIA

The relationship between real effective exchange rates and external current account positions is a complex one. The two are determined jointly, with the relationship between them influenced by a variety of factors.¹⁰ These influences include the strength of external and domestic demand, the terms of trade, and productivity growth across sectors. For example, more rapid productivity growth in the traded than in the non-traded goods sector would normally result in real effective appreciation as it reduces the relative price of traded goods. However, it would not necessarily foster a deterioration in the current account, because it would boost competitiveness (and thus exports) at the same time as it bolstered income (and thus imports). While it would nevertheless be expected that real exchange rate appreciation would generally be associated with a shift in the current account toward a larger deficit or a smaller surplus, given the range of influences, the observed relationship may vary considerably according to circumstances.

The complexity of this relationship is evident in the data. Examining aggregate figures for Asia as a whole, a scatterplot of the relationship between the current account balance and the real effective exchange rate shows a negative but very weak relationship over time, with a

more depreciated exchange rate only broadly associated with a stronger current account. Similarly, a regression of the current account on the log of the real exchange rate during 1990-2004 yields a statistically insignificant relationship.¹¹ In addition, the adjusted R-squared is only 9 percent, implying that other factors accounted for 91 percent of the variation in the current account.



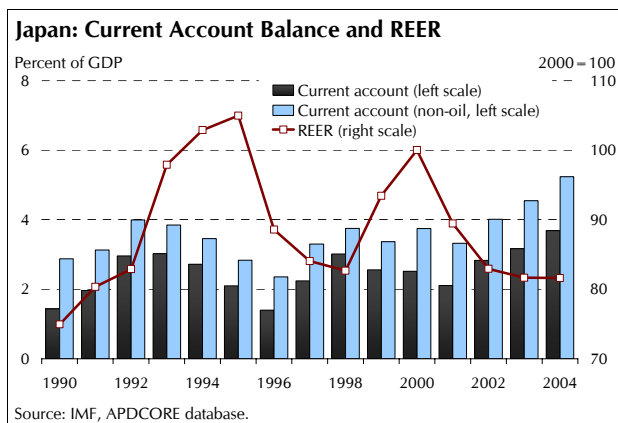
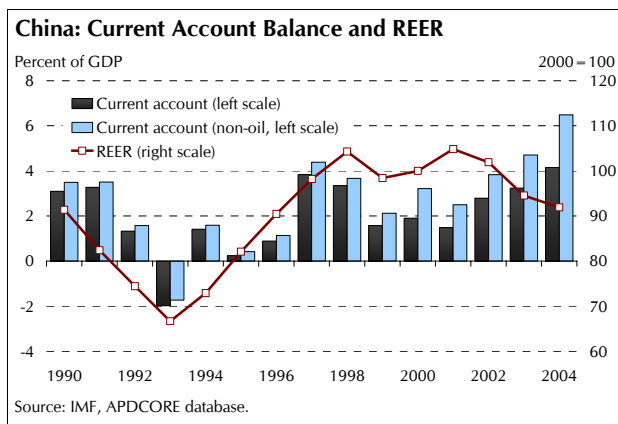
More specific experiences in Asia further illustrate the complex relationship between exchange rates and current accounts.

- **First, in Japan and China exchange rates and current accounts have had a very weak long-run relationship over the past 15 years.** Comparing 2004 to the early 1990s, both countries' currencies have appreciated while their current account balances have strengthened. Thus, other factors were clearly at play. In Japan, a prolonged period of domestic economic weakness was experienced following the early 1990s collapse of the asset-price bubble, limiting import growth and contributing to current account surpluses. In China, rapid productivity growth in the traded goods sector has contributed to

¹⁰ That said, when the nominal exchange rate is adjusted as a policy variable, the real exchange rate can be thought of as exogenous, at least over a short horizon before the full response of other relative prices to the change in the nominal rate has played out.

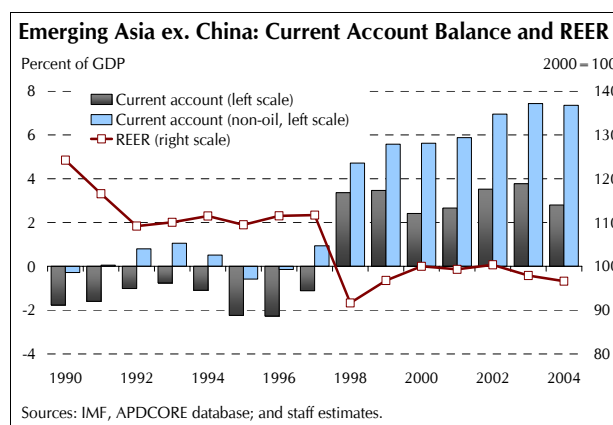
¹¹ The t-statistic on the slope coefficient is -1.53, insignificant at usual statistical levels. Including only emerging Asia produces a similar result.

expanding exports, although the resulting appreciation has been much less than might have been expected because the large supply of labor in the rural sector has held down wages.



- **Second, Asia's significant real depreciation during 1990–91 was not associated with a sizeable strengthening in the current account. For emerging Asia excluding China, exchange rates were 12 percent weaker in 1992 than in 1990.** However, the current account balance shifted only moderately, from an average of -1.7 percent of GDP during 1990–91 to -1.3 percent of GDP during 1992–95. With China included, the exchange rate depreciation was larger, but the aggregate current account deteriorated rather than improving. The

limited response of current accounts to depreciation may have reflected shifts in foreign and domestic demand: annual world growth slowed from an average of 4 percent during the second half of the 1980s to 3 percent in 1992–95 (following the early 1990s recession), whereas emerging Asia's domestic demand grew at around 9 percent over the latter period.



The Asian crisis provides a third perspective. In this case, real exchange rates and the current account moved together in the expected ways, but for complex reasons. Because the crisis was triggered by a collapse in confidence and capital flight, both the depreciation and the trade surpluses were manifestations of the ensuing financial stress. In particular, as capital flowed out of the crisis countries, currencies came under downward pressure, while the stress on bank and corporate balance sheets caused credit and investment to contract, thereby dampening domestic demand and compressing imports. That said, exchange rates also influenced domestic demand. For example, currency depreciation boosted the cost of servicing foreign debt, amplifying corporate and financial sector distress and further depressing domestic spending. At the same time, exchange rates also operated through traditional trade channels by changing the relative prices of imports and exports.

In sum, the emergence of current account surpluses and the depreciation of exchange rates in Asia has reflected a confluence of factors. The experience over the past 15 years illustrates that the relation between them has differed over time and across countries, reflecting trends in global economy activity, developments in specific countries, and features of the Asian crisis. (That said, current account balances would of course be higher if, all else equal, real exchange rates depreciated). To complement this historical analysis, the next section examines analytical models that attempt to illustrate more clearly the roles that exchange rates and domestic demand could have in the resolution of external imbalances.

HOW MUCH WOULD CURRENCY APPRECIATION AFFECT EXTERNAL IMBALANCES?

Recent complementary analyses by APD and RES staff shed some light on the relationship between currency adjustments and external imbalances. These exercises model in quite different ways the interaction of inter alia exchange rates, external imbalances and domestic demand. As with every model, simplifying assumptions are employed, and neither model captures every possible channel through which the exchange rate, domestic demand, and the current account interact.

APD staff have performed a partial-equilibrium simulation of the possible effects of a renminbi revaluation. The analysis incorporates country-specific details on the structure of imports and exports, distinguishing trade in inputs from trade in final goods to isolate the important role of the processing trade in Asia. Terms of trade effects are also taken into account and multiplier effects allowed to work through. The model thus captures some of the main channels through which a significant appreciation of the Chinese currency could affect current account balances in Asia in the short to medium run (Annex III).

The framework imposes exogenous changes in exchange rates, then assesses their effects in two rounds. Imposing exchange rate changes is a somewhat artificial simplifying device, given that most Asian exchange rates are flexible and most are not currently under pressure to appreciate. Such changes feed through the model as follows. In the first round, real exchange rate changes affect the volume of Asian countries' exports and imports. In addition, the revaluation is assumed to affect firm and household income—in China, for example, raising the real income of households and the profits of net-importing firms. In addition, China, Japan, and Korea are assumed to have some pricing power in third markets. In the second round, knock-on effects to output and the current account balance arising from first round effects are taken into account, using multipliers derived from assumptions about marginal propensities to consume, invest, and import. The estimates are based on medium-term trade and income elasticities and omit factors such as the effects of renminbi appreciation on output in the rest of the world, competition from third countries, and policy reactions.

A few caveats should be borne in mind when interpreting the results. First, the impact of renminbi revaluation on current account balances would be larger with offsetting policy responses that mitigated the reduction in income in the second round. Second, the impact on China's current account would also be larger if its pricing power was less than assumed, or if the trade elasticities, arguably relatively low especially from a longer run perspective, were larger. Third, the effects of revaluation on output in the rest of the world or of competition in third markets are not taken into account, both of which would tend to lower the current account impact. That said, other partial-equilibrium studies by and large reach broadly similar conclusions (see Annex III).

Two scenarios are simulated using this framework, and each finds a modest effect on current account surpluses in Asia.

- **In a first scenario, the renminbi is revalued by 10 percent against all other currencies.** In the first round, Asia's current account surplus would decline by only about \$8 billion (about 0.1 percent of GDP), with a sizeable decline in China's balance partly offset by a small improvement in the balance of industrial countries. In the second round, knock-on effects working through the multiplier trim the reduction in the current account balance for all Asian countries to \$4 billion.
- **In a second scenario, in addition to a renminbi revaluation of 10 percent, other Asian currencies are assumed to appreciate by 5 percent** (apart from the Hong Kong dollar). The first-round effect is to reduce Asia's current account surplus by \$33 billion (the surplus falls for both emerging markets and industrial countries). In the second round, accounting for income and output effects through the multiplier, the reduction is \$19 billion.

The net effects in these two scenarios are relatively modest in part because of the knock-on second-round effects. In particular, the first-round reduction in output and income significantly dampens import demand, reducing the overall impact of revaluation by about half. These reductions are sizeable—entailing a reduction in GDP growth for Asia as a whole of nearly ½ percentage point in the first scenario and about 1 percent in the second. Overall, these large knock-on effects highlight the importance of domestic demand in determining the current account balance and, by implication, the significant role that policies to support domestic demand could play in resolving global imbalances.

Analysis in the autumn 2005 World Economic Outlook also sheds light on the possible adjustment of external imbalances and exchange rates, using a different framework with a much longer run focus. The analysis employs the Global Economy Model (GEM), a multi-country multi-sector general equilibrium framework that treats emerging Asia as a block (Japan is grouped with Europe). In the model, current accounts, exchange rates and domestic demand—as well as a range of other endogenous variables—are jointly determined by parameters and assumptions of the model. One key variable is the desired long-run holding of net foreign assets, which essentially determines the path of the current account and strongly influences domestic demand and the exchange rate.

In GEM, the resolution of global imbalances entails an increase in U.S. saving, which is matched by a corresponding decline in the saving-investment balances in the rest of the world. In the Asia block of the model, this shift prompts an increase in consumption spending, and in turn a rise in Asia's imports and a corresponding reduction in its current account surplus. Rising consumption is accompanied by a real exchange rate appreciation and is reflected in a decline in the current account surplus.¹² Investment initially rises (reflecting the current low levels of investment in several emerging Asian economies) but eventually declines over the medium term, as productivity levels approach those of more advanced economies.¹³

¹² The counterpart adjustment in the U.S. economy is an increase in saving (including public saving), a reduction in consumption, and a fall in the U.S. dollar.

¹³ The initial rise in inflation and investment in GEM may also partly reflect an imperfect fit to the historical data, as the model predicts higher than actual outcomes for these variables (see footnote 11 in Appendix 1.2 of the WEO).

More specifically, the GEM analysis studies three types of scenarios: a benign baseline adjustment; a more abrupt adjustment; and scenarios with policy adjustments, including increased exchange rate flexibility in Asia.

Under the benign baseline adjustment scenario, emerging Asia's external surplus declines gradually over time, with the trade balance falling on the order of 3 percent of GDP while the real exchange rate appreciates by 15 percent. The more abrupt adjustment scenario simulates a sudden decline in demand for U.S. assets, accompanied by abandonment of the assumed pegs in emerging Asia: it entails sharper up-front adjustments in exchange rates and current accounts, and a generalized decline in global economic activity. Under the increased exchange rate flexibility scenario, it is assumed that emerging Asian economies reduce their desired rate of accumulation of net foreign assets (for example, by curtailing reserve accumulation). As a result, the real exchange rate and the current account adjust more rapidly than under the baseline scenario.

In sum, the GEM simulations imply that adjustment of global imbalances would involve sizeable movements in exchange rates and current accounts in Asia. In assessing these results, a few features of the model should be borne in mind. First, the exchange rate adjustment is endogenous. In particular, the sizeable movements in consumption—and hence in the current account and real exchange rate—reflect adjustments to adapt to a sudden shift in the desired long-run level of asset holdings. Second, in GEM, trade is highly responsive to relative prices, much more so than in APD's exercise. This feature reflects the focus of the GEM exercise on a longer-term horizon during which important aspects of the economy, such as resource utilization in different sectors, will have time to adjust. Third, the rise in consumption might in reality be more modest or play out more gradually, in light of frictions and inefficiencies in the real world. Indeed, the large response in domestic

demand simulated in the model might be more likely to occur if structural reforms were pursued to strengthen the underpinnings for consumption and investment. As discussed in Chapter II, these needed policies include pursuing further corporate and financial sector reforms, liberalizing trade, enhancing labor market flexibility, and addressing infrastructure gaps. More generally, policy reforms to stimulate domestic demand could help to narrow the current account imbalance and thereby reduce the required exchange rate adjustment.

CONCLUSIONS

The relationship between real exchange rates and current accounts has shifted over the last 15 years, reflecting a confluence of factors that have affected both of them. Nevertheless, one would expect that a reduction in Asia's current account surplus over time would be associated with an appreciation of the real effective exchange rates in the region. As emphasized in recent WEOs, exchange rate appreciation of Asian currencies will need to be a part of a resolution of global imbalances. But appreciation on its own, however, will have only a limited effect on current account positions, and strengthening domestic demand in Asia is necessary for an orderly adjustment to take place. As noted earlier, this will need to be driven by structural reform rather than macroeconomic policies.

V. TRADE AND FINANCIAL INTEGRATION

Interest in trade and financial integration has intensified in the aftermath of the Asian crisis, as countries sought to strengthen self help and support mechanisms, and deepen capital markets. Intra-regional trade has in fact become increasingly important in recent years, strengthening the linkages among Asian economies. However, this has reflected primarily a reorganization of the production chain spurred by the integration of China with the rest of the region, and a large share of final demand still resides elsewhere. Similarly, with respect to financial flows, Asia remains more integrated with the rest of the world than within the region. As a result, it continues to rely primarily on the intermediation of mature markets for the cross-country allocation of capital. However, several initiatives are underway that could foster trade and financial regional integration and change these patterns over the medium run.

THE RISE OF INTRAREGIONAL TRADE AND EXTRA-ASIA EXPORT DEPENDENCE

Emerging Asia relies heavily on global trade. Many countries in the region stand out for their openness, as measured by the ratio of total trade (imports plus exports) to GDP. Some countries, such as Malaysia and Thailand, have exceptionally high openness ratios of over 100 percent of GDP. Furthermore, Asia's trade openness has increased over the years. Partly due to outward-oriented growth strategies, most countries in the region have experienced high trade growth resulting in increased shares in world trade. The aggregate share of emerging Asia in world trade has increased from about 13 percent in 1990 to 20 percent in 2004.

Trade Openness

(In percent of GDP)

| | Exports | | Imports | | Total trade | |
|-------------------------------------|---------|-------|---------|------|-------------|-------|
| | 1990 | 2004 | 1990 | 2004 | 1990 | 2004 |
| U.S. | 9.2 | 9.8 | 10.6 | 15.1 | 19.8 | 24.9 |
| Euro Zone | 27.1 | 36.5 | 27.6 | 34.5 | 54.7 | 71.0 |
| Japan | 10.6 | 13.6 | 9.8 | 11.6 | 20.4 | 25.2 |
| Emerging South America ¹ | 24.9 | 30.0 | 18.7 | 25.7 | 43.7 | 55.8 |
| China | 14.8 | 39.7 | 12.0 | 36.7 | 26.8 | 76.3 |
| India | 7.2 | 17.9 | 9.4 | 20.7 | 16.6 | 38.6 |
| Indonesia | 23.9 | 34.1 | 24.5 | 30.1 | 48.4 | 64.3 |
| Korea | 29.0 | 43.6 | 30.2 | 39.3 | 59.2 | 83.0 |
| Malaysia | 74.6 | 121.2 | 72.6 | 99.9 | 147.2 | 221.1 |
| Philippines | 25.9 | 51.4 | 31.6 | 60.6 | 57.5 | 112.0 |
| Thailand | 36.6 | 69.9 | 45.2 | 65.5 | 81.8 | 135.4 |
| Vietnam | 32.6 | 67.3 | 30.9 | 74.6 | 63.6 | 141.9 |

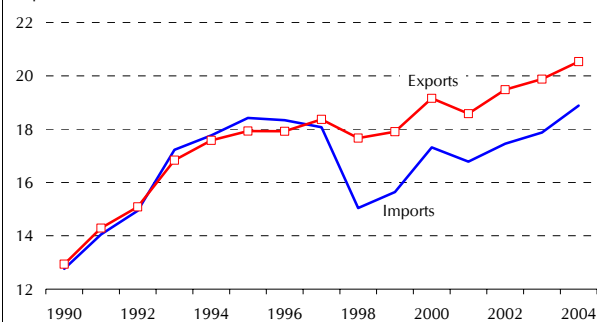
Source: IMF, *World Economic Outlook*.

¹ Argentina, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, and Venezuela. Simple average.

At the same time, intraregional trade has also risen sharply. Over the past two decades, its share of total trade nearly doubled to about 41 percent, a level comparable to that in NAFTA countries. Over the same period, the number of emerging Asian countries with another country in the region as main partner has increased from zero to four (excluding the case of Hong Kong SAR and China). Intraregional trade in emerging Asia is now somewhat more than what is predicted by a "gravity model" taking into account the economic size and the geographical proximity of the countries in the region.¹⁴

Emerging Asia: Imports and Exports

(In percent of world total)



Sources: IMF, *Direction of Trade Statistics*; and staff estimates.

¹⁴ Thornton and Goglio (2002) estimate that the regional bias in Southeast Asia has been higher than in the EU, but lower than that of NAFTA.

As elsewhere, the rise in intraregional trade has been driven by growth in intra-industry trade. The average total trade growth due to intra-industry trade growth rose from 42.5 percent in 1986–90 to 75 percent in 1996–2000.¹⁵

The nature of intra-industry trade in Asia, however, is very different from that elsewhere. In Europe, for example, intra-industry trade has been driven primarily by horizontal product differentiation, i.e. trade in products of similar quality but different varieties, such as cars of different brands, and has been largely oriented to serve domestic demand for final products. On the contrary, in Asia the rise in intraregional and intra-industry trade has been the result of greater vertical specialization and the relocation of production processes across borders. In other words, Asia has integrated into a global production chain. Nowhere is this more visible than in the electronics sector, where capital intensive processes, such as the production of microchips, are located in higher-income economies (Korea, Singapore, and Taiwan Province of China), and labor intensive processes, such as the assembly of personal computers, are located in lower-income ones (China).

Intra-industry Trade (IIT) in the EU and Emerging Asia
(In percent of total trade)

| | Emerging Asia | | European Union | |
|------|----------------|--------------|----------------|--------------|
| | Horizontal IIT | Vertical IIT | Horizontal IIT | Vertical IIT |
| 1996 | 4.7 | 16.6 | 28.5 | 37.5 |
| 1997 | 6.1 | 17.8 | 26.1 | 38.9 |
| 1998 | 5.1 | 20.0 | 26.5 | 40.0 |
| 1999 | 5.1 | 24.6 | 26.2 | 40.6 |
| 2000 | 7.6 | 23.7 | 25.8 | 40.0 |

Source: Fukao, Ishido, and Ito (2003).

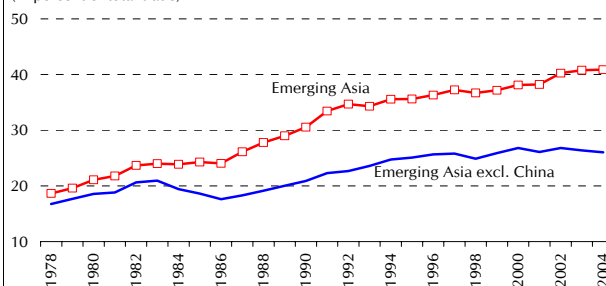
¹⁵ The share of intra-industry trade is measured as imports and exports in the same SITC 2-digit category as a percentage of total imports and exports.

This vertical specialization can be seen in the heavy concentration of trade in intermediate goods. The share of exports of intermediate products in exports to other emerging Asian economies has nearly doubled since the late 1970s to 47 percent in 2002. This pattern is consistent with evidence that intra-industry trade in Asia is largely “vertical”, that is, trade in goods at different stages of the production chain, as measured by products that belong to the same statistical group but have different relative export/import unit values.¹⁶

China’s progressive integration with the rest of the region has magnified this process, while also providing genuine demand for final products. The steady growth in intraregional trade over the past 25 years can be divided into two periods. During the first period, lasting roughly until the mid 1990s, increasing links among countries other than China explained about 80 percent of the increase in intraregional trade. Since 1995, however, the rise in intraregional trade has been almost exclusively a by-product of the progressive integration of China with the rest of the region, with intraregional trade excluding China remaining broadly stable.

Emerging Asia: Intraregional Trade¹

(In percent of total trade)



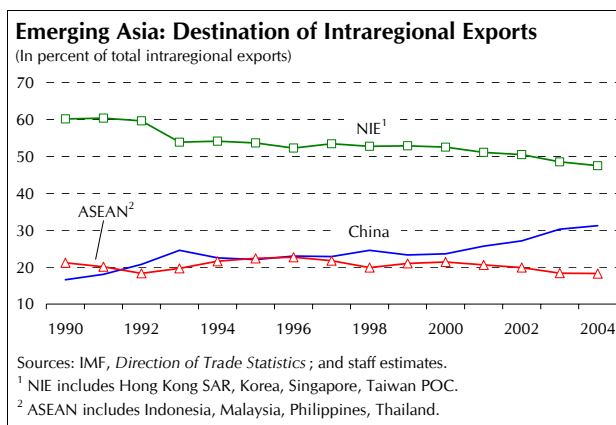
Sources: IMF, *Direction of Trade Statistics*; and staff estimates.

¹ Defined as the share of intraregional exports plus imports over the region's total exports plus imports.

In particular, exports to China from the rest of the region have risen dramatically, reaching

¹⁶ Fukao, Ishido, and Ito (2003).

35 percent of total intraregional exports in 2004. Similarly to what happened for the rest of intra-Asia trade, this acceleration in regional trade with China has reflected to a large extent a supply-side driven reorganization of production processes, with China emerging as a regional assembly hub—countries in the region export inputs to China for final assembly and shipment to the EU, Japan, and the United States. Developments in the trade patterns between the region and the rest of the world are consistent with this picture. For example, while China's share in U.S. imports increased sharply from 6 percent to 14 percent between 1995 and 2004, the share of non-China emerging Asia declined by a similar amount, leaving the total weight of emerging Asia in U.S. imports broadly unchanged.



Despite the increase in intraregional trade, Asian exports continue to rely on final demand from industrial countries. Indeed, to the extent that intraregional trade has increased as a result of countries in the region shipping inputs to China for assembly and re-export to the United States, the EU, or Japan, the region's reliance on final demand in these economies has not diminished. A few statistics make this dependence on OECD demand clear. In 2004, the G3 accounted for more than half of Chinese exports, up from about a third in 1990. Conversely, Chinese exports to emerging Asia, had decreased to less than a third from over 50 percent in 1990, while imports remained

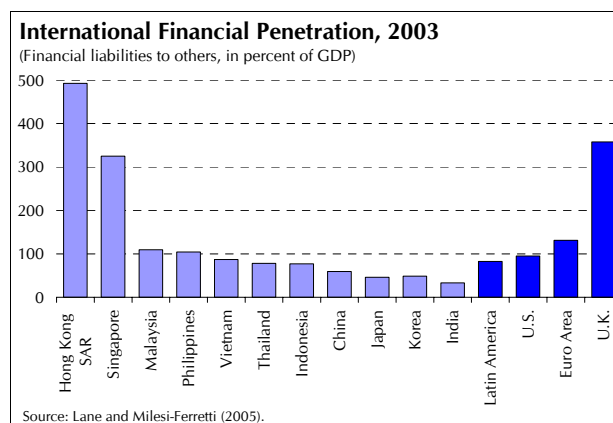
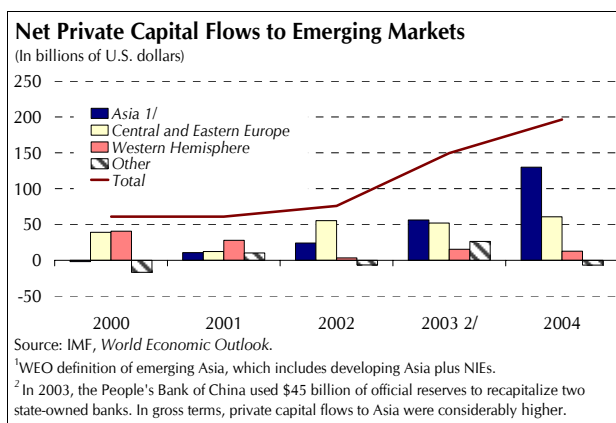
broadly stable at about 40 percent of total. Based on 1995 input-output data, Zebregs (2004) estimates that extra-Asia demand (including Japan) still accounts for about 78 percent of total exports from emerging Asia.

That said, China's size and continued strong growth have been also providing the region with genuine domestic demand. Indeed, China has been developing as an export market in its own right. According to recent estimates in Rumbaugh and Blancher (2004), about half of China's imports from the region were destined for internal consumption.

FINANCIAL INTEGRATION IN ASIA¹⁷

As with trade, the financial integration of most Asian countries into the global financial system is well advanced. In recent years, Asia has been the major beneficiary of a surge in net private capital flows to emerging markets, receiving half of the global supply of such flows in 2003 and two-thirds in 2004. At the same time, the large accumulation of foreign reserves associated with this trend and the current account surpluses in the wake of the financial crisis have turned many Asian countries into major holders of advanced economies' sovereign bonds. Foreign participation in Asian stock markets has become significant with foreign shareholding accounting for about 30 percent of total turnover in some markets.

¹⁷ This section draws on Belaisch (2005).



Other measures, however, paint a slightly different picture. Foreign liabilities in Asia—the combined stock of FDI, foreign loans and equity holdings—total about 60 percent of aggregate GDP. This is somewhat less than in Latin American emerging markets, where these liabilities reach 80 percent of GDP, or the United States and the euro area, where they add up to over 100 percent of GDP. Furthermore, financial integration varies in extent and character across countries in the region, reflecting differences in financial development and macroeconomic conditions. While in some Asian economies, for example the Philippines, large foreign financial liabilities reflect official borrowing, in others, such as Hong Kong SAR and Singapore, the significant international presence reflects the high degree of integration of these economies with global financial markets. For Hong Kong SAR, this also stems from its role as an intermediary of inflows to mainland China. By contrast, the relatively low ratios of financial liabilities to GDP for India and China suggest that financial integration for these economies has still some way to go.

In contrast to emerging Asia's integration into the global financial system, regional integration is still at an early stage. Although lack of data on bilateral cross-border flows makes it difficult to paint an exact picture of the status of financial integration at the regional level, it appears that most cross-border financial flows are with countries outside the region. Furthermore, indirect measures of regional financial integration, such as cross-border correlation of consumption growth,¹⁸ place emerging Asia closer to Latin America than to the European Union, suggesting that there is room for further integration to help smooth the effect of idiosyncratic shocks within the region.

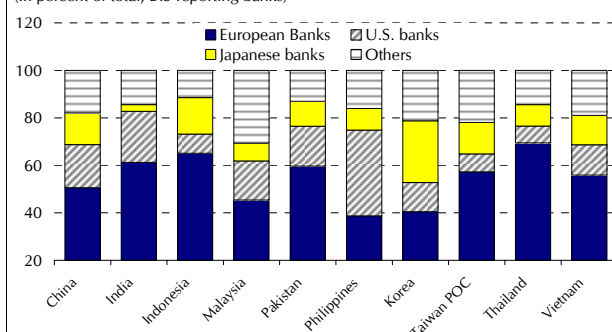
Regional cross-border banking activity appears relatively limited. As in other regions with universal-bank regulatory frameworks, Asian banks play a central role in their domestic financial systems, but not in those of their neighboring countries. In most countries in the region, the major foreign lender is a European or American institution, with even Japanese

¹⁸ To the extent that economies are not synchronized, cross-border holding of assets may reduce the volatility of disposable income and, hence, of consumption. Then, the cross-border correlation of consumption growth (especially if corrected for the cross-border correlation of income) can proxy the degree of financial integration across countries.

banks typically ranking only third. There is some evidence, however, of a growing interest in cross-border acquisitions, especially by Singapore's banks, a trend consistent with rising outward FDI in the region. Given the bank-centered nature of most financial systems in the region, the development of more interconnected banking markets would likely be an important channel to further regional financial integration.

Foreign Banks' Claims on Asia by Origin, 2004

(In percent of total, BIS reporting banks)



Source: Bank of International Settlements, 2005.

Financial Systems, 2004

(In percent of GDP)

| | Banking System ¹ | | | Outstanding Domestic Debt Securities by Issuer | | | | Stock Market Capitalization ² |
|--------------------------|-----------------------------|---------|--------|--|-----------|------------|---------------|--|
| | Deposits | Private | | Total | Corporate | Fin. Inst. | Public Sector | |
| | | Credit | Assets | | | | | |
| China | 55 | 141 | 198 | 27 | 1 | 9 | 17 | 27 |
| Hong Kong SAR | 257 | 149 | 480 | 27 | 3 | 15 | 9 | 522 |
| India | 57 | 38 | 65 | 32 | 0 | 0 | 32 | 109 |
| Indonesia | 42 | 23 | 46 | 21 | 1 | 1 | 18 | 30 |
| Korea | 70 | 89 | 108 | 72 | 22 | 28 | 22 | 52 |
| Malaysia | 102 | 105 | 128 | 91 | 38 | 14 | 38 | 154 |
| Philippines | 51 | 30 | 69 | 31 | ... | ... | 31 | 34 |
| Singapore | 108 | 103 | 189 | 59 | 5 | 15 | 39 | 197 |
| Thailand | 85 | 75 | 103 | 37 | 11 | 4 | 21 | 68 |
| <u>Memorandum items:</u> | | | | | | | | |
| Advanced economies | | | | | | | | |
| United States | 34 | 46 | 70 | 159 | 22 | 91 | 46 | 138 |
| Japan | 122 | 106 | 153 | 174 | 16 | 25 | 133 | 119 |
| Euro area | 87 | 115 | 315 | 120 | 12 | 40 | 68 | 84 |

Sources: IMF, *International Financial Statistics*; Bank for International Settlements; bank supervisors; and central banks.

¹ Only deposit-taking, commercial banks.

² The market capitalization figures exclude investment funds; derivatives; foreign companies; companies whose only business goal is to hold shares of other listed companies.

A few stock markets in the region have attracted a large international presence, but not from Asia. On the demand side, while foreign participation has become significant in some markets, few non-resident players are

from Asia. In Hong Kong SAR trading by non-residents represented more than a third of total turnover in 2004, but only a fifth of this activity could be ascribed to Asian nationals. In Japan, Thailand and Korea, stock markets have also been benefiting from a large international presence, with foreign shareholders accounting for almost 30 percent of total turnover, but again, with only a few of them reportedly from another Asian country. On the supply side, at least 95 percent of listed companies on Asian exchanges are of domestic origin, as opposed to about 85 percent in the United States and in the euro area. Furthermore, recent years have witnessed a notable delisting of foreign companies from Asian exchanges, probably at the profit of a listing in New York or London through depositary receipts. Limited cross-listing is likely to have exacerbated the home bias in residents' equity portfolios that, with few exceptions, are heavily weighted toward domestic stocks. Against this background, the high correlation of stock market indices in the region is likely due to the fact that they often share American and European investors as their main source of foreign capital, rather than to bilateral linkages.

Foreign Participation in the Stock Market (2004)

(In percent)

| | Foreign shareholder activity ¹ | Share of foreign listings |
|--------------------|---|---------------------------|
| Singapore | | 3.9 |
| Japan | 28.7 | 1.3 |
| Hong Kong SAR | 36.0 | 0.9 |
| Philippines | ... | 0.9 |
| Taiwan POC | 11.3 | 0.7 |
| Malaysia | ... | 0.4 |
| China ² | 2.7 | ... |
| India | 20.7 | ... |
| Korea | 22.5 | ... |
| Thailand | 28.9 | ... |

Sources: Stock exchanges and World Federation of Exchanges.

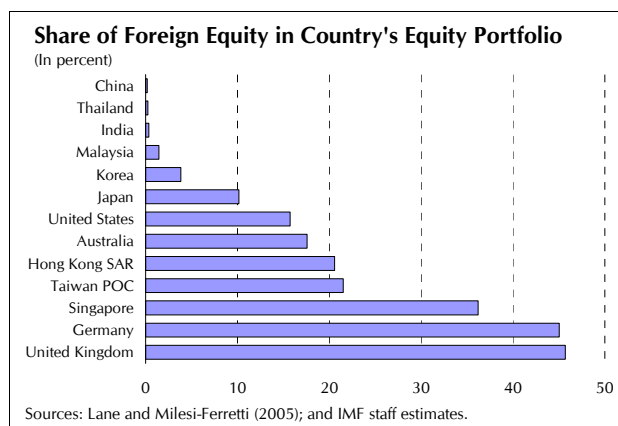
¹ In percent of trading.

² Shenzhen.

Regional integration of bond markets is also limited. According to the Bank for International

Settlements, most of the growing foreign currency-denominated bond issuance of Asian sovereign and corporate borrowers has been in dollars and marketed outside of Asia—around 80 percent of it in the United States and Europe. There is evidence, though, that East Asian investors present in such markets absorb large amounts of these issues. The degree of integration of foreign currency-denominated bond markets, however, does not carry over to Asia's markets for local currency-denominated bonds. There is little evidence so far of investment by Asian investors in the bonds of other economies in the region, notwithstanding initiatives underway to promote cross-border holdings.

Asian countries would benefit from greater financial diversification. Since their economies are not perfectly synchronized and are subject to country-specific shocks, greater investment in foreign assets would provide insurance against these idiosyncratic risks. This would reduce income and consumption volatility with potentially large welfare gains.¹⁹



While Asia has been the recipient of strong capital flows, it has been to a large extent unable to allocate this liquidity within the region. As a result of improving fundamentals in much of the region and the emergence of

China as an FDI destination, Asia has been a major beneficiary of the recent surge in international capital flows. The composition of these inflows has also been favorable, with the bulk as non-debt creating investments. That said, a large portion of the foreign exchange inflows has left through public capital outflows (reserve accumulation). Local financial markets have not been able to retain much of these savings within the region. This could change with greater regional financial integration, especially in view of the evidence that Asian investors are among those who buy Asian assets marketed in mature markets. The development of more liquid and well-functioning local financial markets would reduce the need to recycle domestic savings through the markets of advanced economies.

As with trade, things have been changing recently and regional financial linkages are gradually developing. Particularly notable and associated with the trade patterns discussed above is the emergence of a regional FDI activity, with corporates from more advanced economies in the region (especially Korea, Singapore, and Taiwan Province of China) relocating segments of their production chain across the region to exploit local comparative advantages.

RECENT POLICY DEVELOPMENTS

Asian policy makers are well aware of the benefits that greater regional trade and financial integration would bring to their countries. They have launched a number of initiatives to reap these benefits, ranging from regional and bilateral trade agreements to regulatory changes towards greater capital liberalization and measures to promote the development of regional capital markets.

On the trade side, the move towards greater trade liberalization in the region has gained momentum in recent years. Asia has had a successful history of intraregional trade

¹⁹ See Mercereau (2005)

liberalization. The ASEAN Free Trade Area (AFTA) was established in January 1992 by Brunei, Indonesia, Malaysia, Singapore, the Philippines, and Thailand as a cooperative agreement to reduce intraregional tariffs and nontariff barriers. More recently, however, there has been a proliferation of bilateral free trade agreements (FTAs). Underlying their popularity are factors such as (1) the lack of progress under the Doha Round of multilateral trade liberalization; (2) the need to supplement WTO rules in areas such as services trade, cross-border investment, and labor mobility; and (3) the interest in some Asian economies in using FTAs as an instrument to promote structural reforms and deregulate domestic markets. Despite this recent trend, efforts toward intraregional liberalization continue. An agreement to form the South Asian Free Trade Area (SAFTA) was signed in January 2004 by Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka with the objective to gradually reduce regional tariffs.

Major Bilateral FTAs in Asia

| Countries | Year of Implementation |
|-----------------------|------------------------|
| Japan-Singapore | 2002 |
| China-Hong Kong SAR | 2004 |
| Singapore-India | 2005 |
| Singapore-New Zealand | 2001 |
| Singapore-Australia | 2003 |
| Singapore-EFTA | 2003 |
| Korea-Chile | 2004 |
| Singapore-U.S. | 2004 |
| Singapore-Jordan | 2004 |
| Thailand-Australia | 2005 |
| Thailand-New Zealand | 2005 |
| Japan-Mexico | 2005 |

Concerns have emerged over the proliferation of FTAs, especially given increasingly complicated rules of origin, which could act to delay broader integration. At the same time, FTAs can become building blocks for more

comprehensive trade agreements and act as an incentive for other countries to enhance regional cooperation. It remains to be seen how these bilateral and regional trade agreements will evolve in the long term.

Greater openness to regional trade may foster competition in domestic markets, leading to an increased role for final demand in the region. To the extent that horizontal intra-industry trade has been hampered by trade barriers, further liberalization will provide an opportunity for reducing emerging Asia's dependence on final demand from outside the region. However, freer trade will also allow further relocation of production processes across borders, fostering the same pattern of intraregional trade that has prevailed so far.

Regulatory changes favoring the development of greater regional financial integration are also underway. As recently as 2000, capital account restrictions were still high across emerging Asia, especially when compared with advanced economies. However, many countries have since moved toward liberalization. Although there are some limits on foreign entry, regulations for most segments of the financial system appear broadly receptive to international presence and residents are generally allowed to invest and raise funds abroad. That said, there are differences among countries. In China and India, capital accounts are more restricted than in the rest of emerging Asia—a finding consistent with the limited foreign participation in their capital markets.

| Freedom of Entry into Regional Financial Markets | | | | | | | | | | |
|---|-----------|---------------|-------|-------|-------------|----------|----------|-----------|-------|-------|
| | Singapore | Hong Kong SAR | Japan | Korea | Philippines | Malaysia | Thailand | Indonesia | India | China |
| Stock Markets | | | | | | | | | | |
| Foreigners can : | | | | | | | | | | |
| Buy locally | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓cap | ✓ | ✓cap | ✓cap |
| Issue locally | ✓ | ✓ | ✓ | ✓ | ✓ | ± | ✓ | ✓ | X† | ✓ |
| Locals can : | | | | | | | | | | |
| Buy abroad | ✓ | ✓ | ✓ | ✓ | ✓ | ✓cap | ✓ | ✓ | ± | X |
| Issue abroad | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ± | ✓ | ± | ± |
| Bond Markets | | | | | | | | | | |
| Foreigners can : | | | | | | | | | | |
| Buy locally | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | ✓ | X |
| Issue locally | ✓ | ✓ | ✓ | ✓ | ✓ | ± | ± | X | ~ | X |
| Locals can : | | | | | | | | | | |
| Buy abroad | ✓ | ✓ | ✓ | ✓ | ✓cap | ✓cap | ± | X | X | ± |
| Issue abroad | ✓ | ✓ | ✓ | ✓ | ✓ | ± | ✓ | ✓ | ± | ± |
| Credit Market | | | | | | | | | | |
| Foreigners can | | | | | | | | | | |
| borrow locally | ✓ | ✓ | ✓ | ✓cap | ✓ | ✓ | ✓cap | X | ± | ✓ |
| Locals can borrow | | | | | | | | | | |
| abroad | ✓ | ✓ | ✓ | ✓ | ✓ | ~ | ✓ | ✓ | ~ | ~ |
| Notation: ✓ : Allowed (may be subject to caps); ± : Requires approval; ~ : Carries restrictions; X : Prohibited | | | | | | | | | | |
| Notes: † Allowed for Sri Lanka. | | | | | | | | | | |
| Source: IMF, <i>Annual Report on Payment Arrangements and Exchange Restrictions</i> , 2004. | | | | | | | | | | |

Notation: ✓ : Allowed (may be subject to caps); ± : Requires approval; ~ : Carries restrictions; X : Prohibited
 Notes: † Allowed for Sri Lanka.
 Source: IMF, *Annual Report on Exchange Arrangements and Exchange Restrictions*, 2004.

denominated bonds issued by Asian sovereigns and quasi-sovereign entities) have been successfully launched. Pan-Asian bonds (collateralized bond obligations using small- and medium-sized enterprise bonds as underlying assets) have been created through a collaboration between Korea and Japan; and Thailand has put in place the legal underpinnings for a Thai baht Asian bond. In addition, extensive work is underway to study the scope for a regional guarantee mechanism and for a clearing and settlement system (Asia Link). Finally, ways to strengthen the role of local credit rating agencies are being explored.

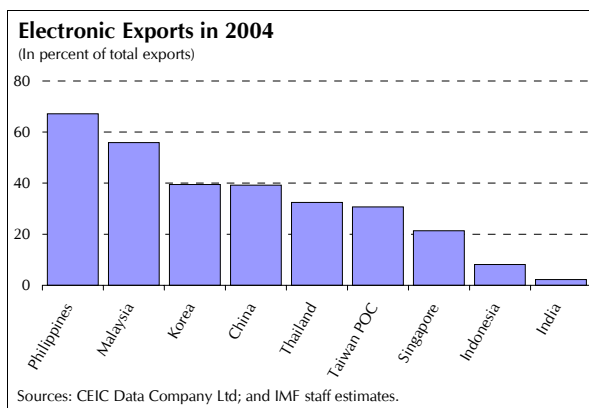
Asian policymakers are trying to foster the development of regional financial systems.

They have launched several initiatives to deepen domestic markets, and establish a pan-Asian financial system for countries that lack the minimum scale needed to support liquid national financial markets. Other steps aim at setting up self-help mechanisms for crisis management or prevention, and at putting in place appropriate fora to chart the path forward. Collaboration with international financial institutions is also helping to advance the adoption of best practices and strengthen governance.

Under the aegis of ASEAN+3 and other fora, the focus so far has mostly been on strengthening bond markets in the context of the Asian Bond Market Initiative. Issuance has benefited from governments' steps to extend the yield curve (Malaysia and Korea), as well as from larger tranches of benchmark government bonds (Indonesia, Korea, Malaysia, the Philippines, and Singapore), and the growth of asset-backed securities, Islamic bonds, and local-currency bonds offered by multilateral development banks and Japan's Bank for International Cooperation. Two Asian Bond Funds (to invest in dollar- and local currency-

BOX 1. ELECTRONICS EXPORTS

- **Electronics have been a key component of external trade in emerging Asia.** In the last three years, exports of electronics from emerging Asia have grown rapidly—more than 20 percent on average annually—and, by 2004, comprised 30 percent of total exports. In a number of countries, this share exceeded 50 percent. While intra-regional export growth has been strong, advanced economies remained the final destination for most of these exports (about two-thirds), as companies based in emerging Asia continued to penetrate these markets.



- **Underneath this strong performance, a fundamental change in the production chain has been taking place.** Historically, production of semiconductors and final assembly of electronics destined in large part for advanced economies was concentrated in a number of newly industrialized and ASEAN economies. But in recent years China has become a major player in this chain, as its manufacturing and assembly capacity increased rapidly. Other economies in the region have adjusted by increasing their exports of higher-value added products to China, and China, after final assembly, has increasingly exported these to advanced economies. As a result, China's share in total electronics exports of emerging Asia to the rest of the world has doubled in the last four years to more than 35 percent in 2004. So far, not all types of production have moved to China and, while

the number of foundries (factories that produce chips designed by others) have increased, leading edge production has remained mostly outside China, and high-end chip design has remained mostly in the hands of advanced economies.

- **Following more than two years of exceptional growth, emerging Asia's electronics exports began to decelerate in mid-2004 and, by the first quarter of 2005, shrunk 14 percent (q/q, saar) as orders from the United States and Europe slowed down.** Semiconductor production capacity utilization declined to 85 percent from 93 percent in the first quarter of 2004, as capacity expansion outpaced increases in production. Foundries in particular experienced a sharp decline in capacity utilization, while leading edge production remained close to full capacity. More recent figures suggest, however, the beginning of a turnaround, as U.S. new orders growth turned positive in mid-2005, and electronics exports of a number of economies—notably Korea, Singapore, and Taiwan Province of China—started to pick up.
- **Looking ahead, there are reasons to be cautiously optimistic.** While it is unreasonable to expect the return of strong growth rates observed in the past couple of years, the leading indicators remain relatively healthy. In particular, U.S. order books suggest that U.S. tech demand is rebounding, especially with new products coming to the market and the cyclical replacement of technology initially purchased during the Y2K scare. Also, inventories in the semiconductor industry are relatively lean, capacity utilization rates are increasing at the foundries, and pricing across the component sectors have been stable. Moreover, Asian firms may benefit from a shift in the locus of production out of the United States and Europe. However, competition in the market remains strong, with brand names taking market share from some Asian suppliers.

BOX 2. INDUSTRIAL COUNTRIES: DEVELOPMENTS AND OUTLOOK

Japan

- **Japan's economy has regained momentum after a pause during the latter part of 2004.** Exports seem to be accelerating again and recent data—including the national accounts for the first half of 2005—point to a revival of domestic demand. These conjunctural developments, together with significant underlying progress in bank and corporate restructuring, have positioned Japan to embark on a period of sustained growth.
- **With the economy now more resilient, fiscal consolidation has become a policy priority.** Achieving the authorities' objective of primary balance excluding social security by early in the next decade will require strong efforts, and an even more substantial adjustment may be needed to stabilize the debt.
- **The priority for monetary policy remains conquering deflation.** Staff has recommended sustaining the BoJ's quantitative easing framework until deflation—and deflation expectations—is eliminated.
- **Meanwhile, further structural reforms are needed to raise the economy's trend growth rate and deal with the pressures associated with population ageing.**

Australia

- **After a brief pause, Australia's economy looks set to accelerate again.** Growth was 2¾ percent (q/q, saar) in the first quarter, a pace which is expected to continue for the remainder of the year. But with exports rising rapidly, growth is expected to quicken to about 3½ percent in coming years. Prospects are underpinned by high investment, particularly in the resource export sector, responding to an historically high terms of trade. Export commodity prices are up almost 50 percent in the past 18 months, with strong Chinese demand for iron ore and coal being a key factor.
- **Meanwhile, the housing market seems to be staging a "soft landing", diminishing a major threat to growth.** House prices were flat in the year to March 2005 after rising by

17½ percent annually in the three preceding years.

- **Macroeconomic policies are well placed.** The monetary stance is broadly neutral, with the target cash rate at 5½ percent compared with CPI inflation of 2½ percent. The fiscal surplus is projected to average almost 1 percent of GDP in the medium term, even after allowing for increases in income tax thresholds and for a significant decline in export commodity prices in the next few years.

New Zealand

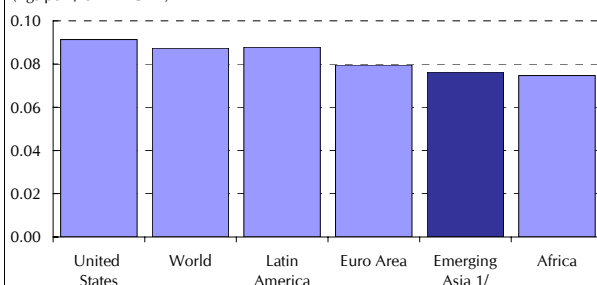
- **New Zealand's economy has also slowed, but for different reasons than in its trans-Tasman neighbor.** In New Zealand, house prices are rising, supporting solid growth in domestic demand. But net exports are declining, partly reflecting the influence of the high level of the New Zealand dollar. Accordingly, growth is expected to slow to about 2½ percent in 2005 and 2006, from almost 5 percent in 2004.
- **Despite the slowdown, the economy is still operating close to potential, stoking inflationary pressures.** With CPI inflation rising to 2¾ percent (y/y) in June 2005, the central bank has raised interest rates by 175 basis points since early 2004 to 6¾ percent, aiming to moderate domestic demand and thereby assure that inflation remains in line with the 1–3 percent medium-term objective.
- **The fiscal surplus has soared, sparking debate ahead of the September 17 election.** Buoyant revenues have increased the underlying operating surplus to an estimated 5¼ percent of GDP in 2004/05, prompting the Government to propose tax relief targeted to families, coupled with higher social spending. The main opposition party has proposed general increases in personal income tax thresholds and a reduction in the company tax rate.

BOX 3. THE IMPACT OF WORLD OIL PRICE INCREASES

- Asia's dependence on oil is similar to that of other regions, although oil intensity varies quite significantly from country to country. The NIEs are particularly oil-dependent, mainly because their manufacturing is concentrated in energy-intensive industries, such as petrochemicals, steel, and cement. And while the rest of Asia is more oil-efficient, most of these countries are still oil-dependent in another sense: they rely on imports to satisfy the bulk of their petroleum needs.

Oil Intensity, 1998-2000

(Kgs per \$ of PPP GDP)

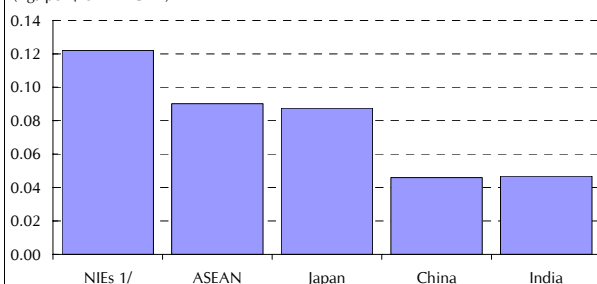


Source: IMF staff estimates.

1 Emerging Asia includes China, India, NIEs (except Singapore and Taiwan POC), and ASEAN countries.

Oil Intensity, 1998-2000

(Kgs per \$ of PPP GDP)

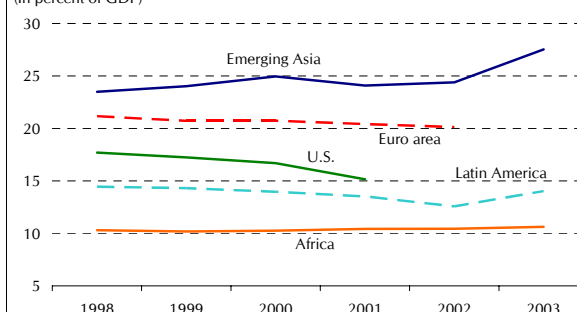


Source: IMF staff estimates.

1 NIEs exclude Taiwan POC, for which data are not available, and Singapore, which imports oil for re-export.

Asia and Comparators: Size of Manufacturing

(In percent of GDP)

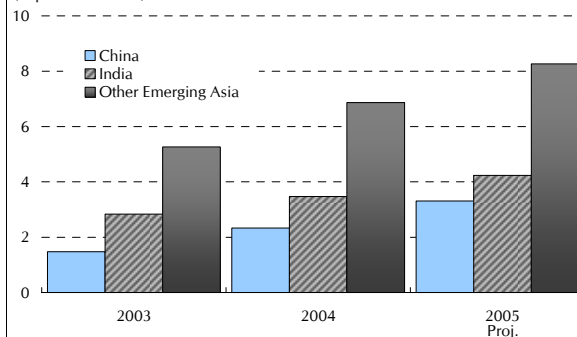


Source: World Bank, WDI database.

- The sharp increase in oil prices over the past two years has consequently resulted in a large increase in Asia's oil import bill. Initially, the region was spared the full brunt of the world market increase, as the price of Dubai oil—its main type of import—was slower to rise than that of other types of crude. But this year the reverse has been true, and now the cumulative increase for all types is now around the same, some 105 percent between end-2003 and August 2005. This increase is expected to raise the cost of Asia's net oil imports from 1¼ percent of GDP in 2003 to 3¼ percent of GDP in 2005.

Emerging Asia: Oil Imports

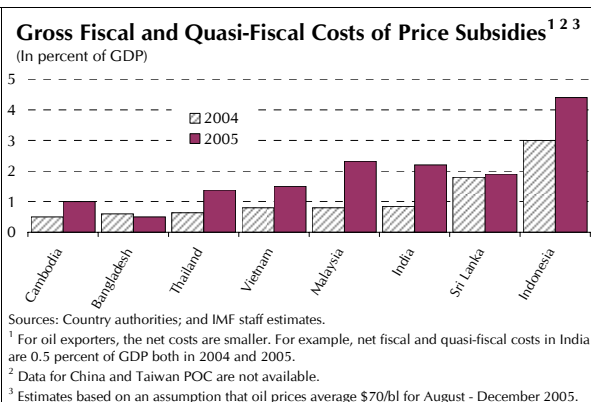
(In percent of GDP)



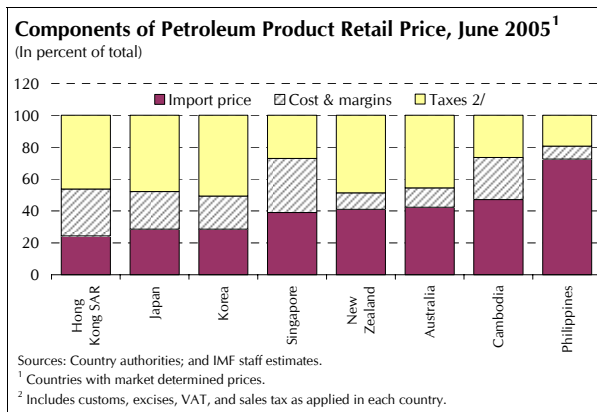
Sources: IMF, WEO database; and staff estimates.

BOX 3. THE IMPACT OF WORLD OIL PRICE INCREASES (CONT.)

- **In principle, the oil price increase should have had a significant impact on regional growth.** According to staff estimates, a sustained \$10 per barrel increase in oil prices *ceteris paribus* reduces full-year Asian GDP growth by an average $\frac{3}{4}$ percentage point, and by an average of $1\frac{1}{4}$ percentage points once feedback effects from lower growth in the rest of the world take hold. With the cumulative increase in prices having reached \$25 per barrel by mid-2005, even the first-round estimates would imply a nearly 2 percentage points reduction in Asia's growth rate.
- **The apparent impact, however, has been much more modest.** One reason is that strong growth in demand for Asia's exports has until recently been sufficient to offset the negative impact of higher oil prices. Another reason is that from end-2003 through June 2005 domestic petroleum product prices had only risen by less than one-third of the increase in crude oil prices.
- **In many instances, the limited pass-through reflects state intervention in petroleum product price setting.** About one-half of the countries in the region have some degree of state controls, which have limited the average domestic price increases in these countries to about 34 percent (in dollar terms) on average from end-2003 through August 2005. In so doing, some countries have incurred significant fiscal costs, notably India and Malaysia, where subsidies are expected to amount to $2\frac{1}{4}$ percent of GDP this year assuming domestic fuel prices and international oil prices stay at current levels for the rest of the year; and Indonesia, where they are expected to reach $4\frac{1}{2}$ percent of GDP.



- **Even among the economies with freely-determined prices, however, domestic petroleum product prices have risen by much less than world crude prices.** A key reason is that taxes, as well as refining and distribution costs, have remained relatively stable—and they make up a substantial fraction of prices at the pump, up to two-thirds of the total in some countries. In some cases, domestic prices have also been held down by the appreciation of local currencies against the U.S. dollar.



BOX 3. THE IMPACT OF WORLD OIL PRICE INCREASES (CONT.)

- **There have also been factors cushioning the impact at the next stage of the pass-through—from higher oil prices onto CPI inflation.** The direct impact has been relatively small, since the weight of gasoline in regional CPIs is only 3 percent on average; and even once transport and electricity prices are added, the weight only reaches 10 percent. Meanwhile, the indirect impact has also been limited because strong competition, especially from China, has forced many firms to absorb the higher oil costs rather than raise output prices.
- **That having been said, high world prices may yet put pressure on inflation rates, because substantial price increases are still required in those countries with administered prices.** Since many of these countries had subsidized petroleum products even before the recent run-up in world prices, they would need to raise domestic prices by an additional 43 percent on average to bring them up to end-August world price levels, according to staff calculations (Annex I). Particularly large increases are needed in India and Indonesia, exceeding 60 percent and 120 percent respectively.

BOX 4. THE IMPACT OF THE REMOVAL OF TEXTILES QUOTAS

- **China has been the major beneficiary of the removal of textiles and clothing quotas in January 2005, but many low-income countries in Asia (LIAs) have also fared reasonably well.**¹
- **The expiry of textiles and clothing quotas has allowed China to gain substantial market share.** During the first five months of this year, China's textile exports to the United States expanded by around 60 percent according to U.S. data, with exports in the newly liberalized product lines tripling. Similarly, exports to the EU rose by nearly 40 percent, and by around 80 percent in the liberalized categories. As a result, China now accounts for about 25 percent of both the U.S. and EU textile imports, up from 17 percent a year ago.
- **India has also benefited significantly.** India's textile exports increased by 30 percent to the United States and 10 percent to the EU during the first five months of this year, as liberalization enabled India to take advantage of its relatively low labor costs, niche markets, abundant supply of cotton, and strong textile and apparel base. In addition, the country continues to benefit from trade preferences: although the EU will remove preferential market access for textile exports beginning in January 2006, it has maintained access for clothing exports, which account for three-quarters of India's total textile and clothing exports. India's market share of the U.S. and EU textile imports remains modest, however, at only 7 percent. Moreover, India does not have preferential access to the U.S. market, and its exports still face many constraints including poor infrastructure, lack of scale economies, a ban on foreign direct investment in the retail sector, and an unsupportive tax regime.
- **Meanwhile, exports in some LIAs have held up relatively well.** During the first five months of this year, Bangladesh, Cambodia and Sri Lanka all recorded double-digit growth in textile exports to the United States, a marked improvement from 2004. Bangladesh has gained from its exports of knitwear, which are priced lower than those of China. Export performance in Cambodia has been supported by its relatively high labor standards, while Sri Lanka has relied on long-established relationships with certain large U.S. buyers.
- **Other LIAs, however, have experienced sharp declines in exports.** During the first five months of this year, Lao P.D.R., Mongolia and Nepal all witnessed steep downturns in textile exports, as production shifted to neighboring countries with greater comparative advantage. And looking ahead, there are further ominous signs. Prices have fallen, by 18 percent on imports of liberalized textile products from China into the EU and by 13 percent on imports of apparel products from China into the United States. Over time, this will squeeze the profit margins of LIA exporters and erode their overseas orders.
- **Prospects for LIAs will also be affected by the recent re-imposition of quantitative restrictions on selected Chinese textile products.** In mid-year, the United States and the EU responded to the surge in China's exports by invoking safeguard clauses, with the United States capping annual growth in seven textile categories at 7½ percent and the EU limiting growth in 10 categories to 8–12½ percent. Since these restraints affect one-quarter of the U.S. and EU imports of Chinese textiles, they will have a significant impact on the market. As a consequence, distortions in global textile trade would be maintained and potential savings to the world's consumers would not be fully realized.

¹ Low-income countries in Asia (LIAs) include Bangladesh, Cambodia, Lao P.D.R., Mongolia, Nepal, Sri Lanka, and Vietnam.

² Unless otherwise indicated, all references to "textiles" include both textiles and clothing.

BOX 4. THE IMPACT OF THE REMOVAL OF TEXTILES QUOTAS (CONT.)

- **The implications for LIAs, however, are unclear.** On the one hand, the restraints may aid LIAs by encouraging industrial country importers to diversify their sources of textile suppliers. However, they could also hurt LIAs by forcing Chinese exporters to divert production into the remaining liberalized product categories or into other countries which have not imposed quotas, thereby intensifying competition in these markets.
- **LIAs have responded to these challenges by taking steps to bolster their competitiveness.** These have included encouraging textile firms to shift to high value-added or more specialized products; implementing measures to increase labor market flexibility; and adopting programs to improve infrastructure, such as roads and energy supplies to factories. In addition, LIAs have lobbied for preferential access to the U.S. and EU markets. So far, the United States has reduced import tariffs by granting normal trade relations status to Vietnam in 2001 and Lao P.D.R. in 2004. Meanwhile, since 2001, the EU has eliminated duties and quotas for nearly all products originating from least developed countries, which include several LIAs.³
- **During this adjustment period, the Fund stands ready to provide assistance through its Trade Integration Mechanism (TIM), as has already been done for Bangladesh.**

Value of Textiles and Clothing (T&C) Exports

(Percentage change year-to-date)

| | T&C exports to the U.S. ¹ | Liberalized T&C exports to the U.S. ¹ | T&C exports to the EU ¹ | Liberalized T&C exports to the EU ¹ | T&C exports to the World ² |
|-----------------------------------|---|--|---------------------------------------|--|--|
| Low-income Asian countries | | | | | |
| Bangladesh | 24.3 | 29.6 | -7.2 | -7.5 | 8.0 |
| Cambodia | 17.1 | 13.8 | -1.9 | -4.7 | 7.3 |
| Lao P.D.R. ³ | -57.2 | -60.4 | -10.6 | -9.3 | ... |
| Mongolia ⁴ | -22.9 | -18.9 | 220.0 | 440.9 | 13.4 |
| Nepal | -27.8 | -41.8 | -21.9 | -40.1 | -50.3 |
| Sri Lanka | 18.8 | 18.4 | -12.0 | -15.1 | 8.8 |
| Vietnam | 4.4 | 4.2 | -14.8 | -20.2 | 0.1 |
| Other Asian countries | | | | | |
| China | 60.1 | 208.7 | 36.4 | 80.2 | 27.6 |
| India | 29.5 | 34.3 | 11.0 | 10.6 | ... |

Sources: United States International Trade Commission; Eurostat; and IMF staff estimates.

¹ Data are for January through May 2005.

² Data are for January through April for Mongolia, January through May for Bangladesh and Sri Lanka, and January through June for Cambodia, China, Nepal and Vietnam.

³ Data for Lao P.D.R. are highly sensitive to fluctuations in export orders given the low export base to the U.S.

⁴ Data for Mongolia are highly sensitive to fluctuations in export orders given the low export base to the EU.

³ Including Bangladesh, Cambodia, Lao P.D.R., and Nepal.

BOX 5. AVIAN INFLUENZA: IS IT A SERIOUS THREAT?

- **Avian influenza viruses normally affect only birds and pigs.** However, in 1997 an epidemic of the highly pathogenic H5N1 strain jumped to humans in Hong Kong SAR, inflicting severe respiratory disease on 18 people, of whom 6 subsequently died. In response, the authorities destroyed the territory's entire poultry population of 1½ million within three days, thereby helping to prevent a pandemic.
- **Nevertheless, the disease continued to spread.** In late 2003/early 2004, there was a major regional outbreak, affecting livestock in Cambodia, China, Indonesia, Japan, Korea, Lao P.D.R., Thailand, and Vietnam. More than 120 million chickens died or were culled, and in Thailand and Vietnam humans deaths were reported as well.
- **In December 2004 a third wave began, and it continues to date, mainly in Cambodia and Vietnam.** The number of human cases increased, exceeding those infected in the first and second waves.
- **Experts believe that eventually a pandemic will occur.** The World Health Organization notes that many farmers in the region live in close proximity to their poultry, making it easy for infected animals to transmit their flu to humans. Moreover, since avian flu virus mutates easily it may eventually become readily transmissible from human to human, greatly amplifying its scope for propagation among people. Preventing a pandemic would thus require major changes in livestock management, as well as improvements in the monitoring and reporting of outbreaks.
- **The economic consequences of a pandemic are difficult to predict.** Nevertheless, the main channels through which an economy could be affected are clear and numerous. They include: poultry production, export and consumption; tourism; and industrial production, since factories could be forced to stop operation to slow the outbreak of the flu. Within Asia, the largest poultry sectors are found in China, Indonesia, and India, while tourism is important for countries such as Cambodia, Malaysia, Thailand, and Hong Kong SAR, all of which have earnings equivalent to 5½ percent or more of GDP.
- **A comparison with the SARS outbreak is instructive.** SARS is not as contagious as avian flu, and its outbreak in 2003 was confined to a relatively small geographical area. Nonetheless, its effect on economic activity in the afflicted countries was dramatic and immediate. GDP fell in the second quarter of 2003 at an annualized rate of around 5 percent in Taiwan Province of China, 8½ percent in Singapore, and 10 percent in Hong Kong SAR (q/q, seasonally adjusted). As the outbreak subsided, however, production rebounded sharply in all of these economies.

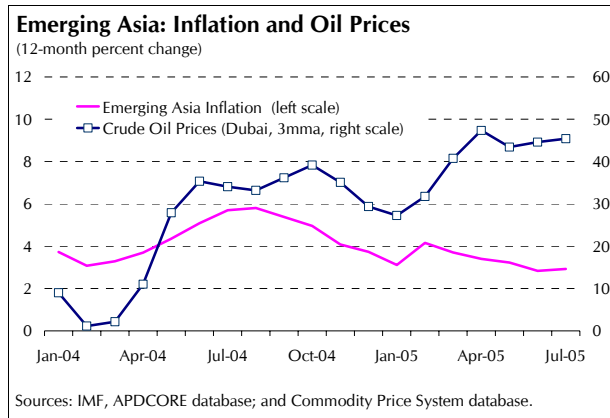
ANNEX I. THE EXTENT OF THE OIL PRICE PASS-THROUGH¹

From December 2003 to August 2005, world crude oil prices rose by more than 100 percent. Asian countries with administered prices have passed on some of this increase to domestic petroleum product prices, which rose by about 34 percent on average over this period. But calculations suggest that an additional 43 percent average increase is needed to complete the pass-through in these countries, assuming that world prices remain at their end-August level. In some countries, much larger increases are required, as domestic prices have been held significantly below world market levels, resulting in sizable fiscal costs.

Crude oil prices have been on an upward trend, with the pressure being more pronounced since 2003. Strong global output growth, rapid increases in oil demand from China and India, and limited spare capacity have all contributed to this upward pressure on oil prices. Although Dubai crude prices did not rise quite as sharply as average world prices in 2004 (23 percent compared to 30 percent), they rose more rapidly than the average in the first eight months of 2005 (65 percent compared to 58 percent). Over the December 2003-June 2005 period as a whole, then, the cumulative increase for all types has been about the same, over 100 percent.

How much pass-through onto domestic prices has there been, and what has been the impact on inflation? The large difference between the sharp increase in world oil prices in 2004–05 and the path of Asian inflation—downward since mid-2004—might suggest that there has been little pass-through.

²⁰ The economies covered include Australia, Bangladesh, Cambodia, China, Hong Kong SAR, India, Indonesia, Japan, Korea, Malaysia, New Zealand, Philippines, Singapore, Sri Lanka, Thailand, and Vietnam.



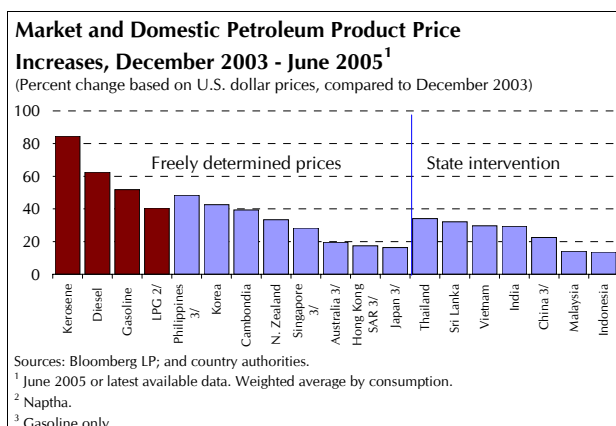
However, a closer look at the individual country experiences suggests a more nuanced interpretation. In most countries domestic petroleum product prices have indeed increased significantly, but by less than world crude oil prices, for a variety of reasons. And in many economies a range of factors have cushioned the impact on inflation.

The 17 economies examined fall into two groups. About one-half have free domestic markets for petroleum products.²¹ The remaining have some degree of direct or indirect state intervention and prices are set administratively (Bangladesh, China, India, Indonesia, Malaysia, Sri Lanka, Taiwan Province of China, Thailand, and Vietnam).²² But in no country have prices

²¹ In Cambodia retail prices are market-determined, although for the purpose of tax calculations the government uses a reference price which is generally below the market price. We include Cambodia in the list of countries with market-determined prices.

²² Thailand liberalized the price of gasoline in October 2004 and diesel in July 2005, so for the purpose of this exercise it is grouped with countries with state intervention in price setting.

risen by as much as world oil prices. From end-2003 through end-June 2005, for example, Dubai crude oil prices increased by 83 percent and internationally-traded petroleum product prices rose by 60 percent on average. But domestic petroleum product prices in Asia increased on average by 28 percent, with an increase of 31 percent in economies with market pricing and 25 percent in those with administered prices (all in dollar terms).²³



SOME REASONS FOR THE LIMITED PASS-THROUGH IN COUNTRIES WITH MARKET-DETERMINED PRICES

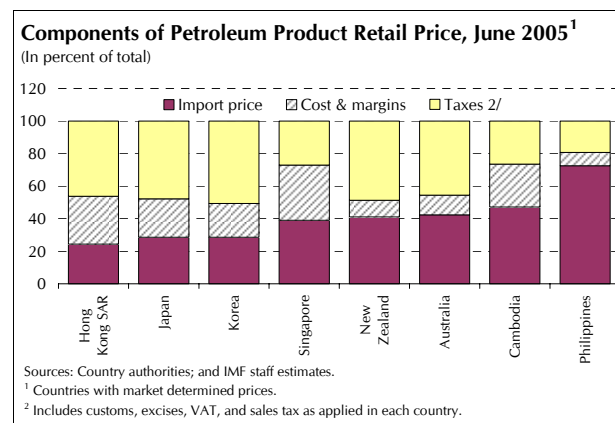
Several factors explain the limited pass-through from crude import prices to domestic petroleum product prices in countries with market-determined prices.

First, pre-existing contracts or domestic stocks of petroleum may have helped delay the impact of international price increases in some countries. To assess the role played by these factors in the absence of data on contracted prices and domestic stocks, actual import prices were examined. This data showed that import prices (in dollar terms)

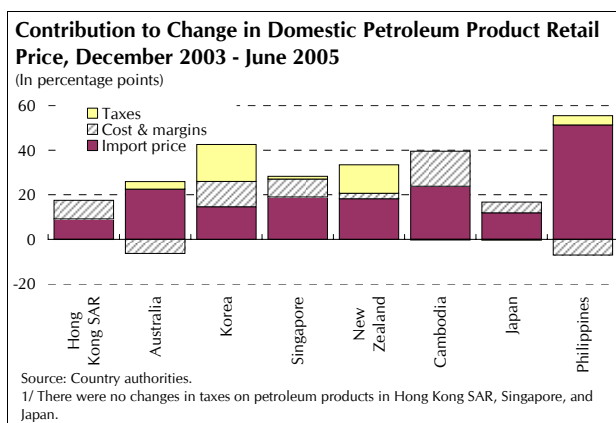
²³ This note considers average domestic petroleum product prices, weighted by each country's respective consumption patterns. In cases where adequate data are not available, reference is to domestic gasoline prices only.

varied widely, but in most cases increased by much less than the rise in international oil prices (exceptions include Thailand and the Philippines)

Second, crude import costs have a relatively low weight in domestic petroleum product prices in most countries. For example, in Hong Kong SAR and Japan the cost of imported crude makes up less than one-third of the retail price of petroleum products. The remaining two-thirds comes from taxes, refining and distribution costs, and profit margins, all of which are relatively fixed (Table 1).²⁴ Therefore, although crude import prices for Hong Kong SAR and Japan went up by an average of 45 percent between December 2003 and June 2005, domestic petroleum product prices only increased by an average of 17 percent. In the Philippines, where crude import costs make up the bulk of the retail price, pass-through has also been much higher.



²⁴ Most petroleum product taxes in Asia are a mix of specific and ad valorem; exceptions include Hong Kong SAR, Korea, and Japan which have only specific taxes; and India which has only ad valorem taxes.

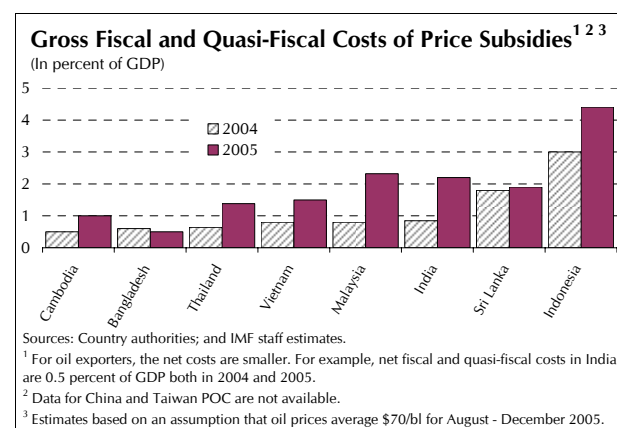


Finally, local currency price increases have been mitigated in some cases by currency appreciation against the U.S. dollar. This was a significant factor for Taiwan Province of China, New Zealand, and Korea.

PASS-THROUGH IN COUNTRIES WITH PRICE CONTROLS

In countries with price controls, governments have decided to shield consumers from the full force of the international price increases. This decision to subsidize domestic prices, however, has generated substantial fiscal and quasi-fiscal costs in some countries. During 2004, measured costs have ranged, in the 8 countries for which such data exist, from ½ percent of GDP in Cambodia to 3 percent of GDP in Indonesia. And on unchanged domestic prices they would increase further during 2005 assuming that world prices remain at end-August levels. Moreover, beyond the measured fiscal burden, there are unquantified costs, since countries also often require transportation and electricity companies to absorb the higher oil costs from their profit margins. For example, transportation and electricity prices are state-controlled in Bangladesh, Cambodia, China, Indonesia, Lao P.D.R., Sri Lanka, Taiwan Province of China, Thailand, and Vietnam.

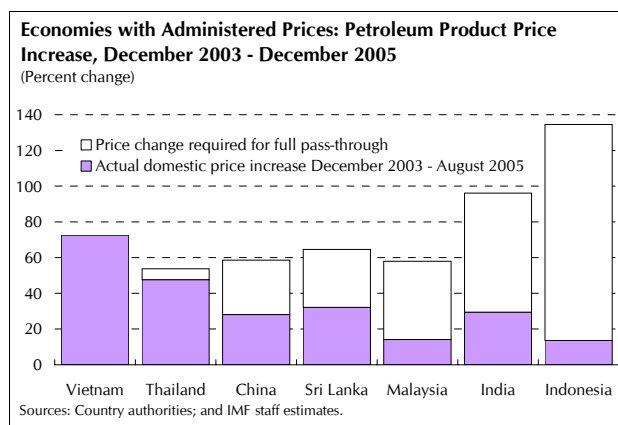
As these costs began to accumulate, many country authorities decided that they had to share an increasing portion of the true oil cost with consumers. For example, after keeping prices unchanged since January 2003, Indonesia raised domestic fuel prices by an average 29 percent in March 2005, with a further increase of 115 percent in industrial diesel in August. Similarly, the Malaysian government, after allowing only small increases in gasoline prices in 2004, raised diesel prices by 6 percent in March 2005, then by another 23 percent in May plus a 7 percent hike in gasoline prices. Sri Lanka also raised domestic fuel prices by an average of 7½ percent in mid-May, bringing the cumulative price increase to some 48 percent, while prices in Vietnam, which were also far below world market levels, have been increased by a cumulative 30 percent.



Future Pass-Through

Despite these large increases, calculations suggest that countries with administered prices still need to raise petroleum product prices by 43 percent on average (in dollar terms) to bring them up to internationally-traded prices—mainly because domestic prices were below market levels in some

countries even before December 2003.²⁵ The increases in some countries are considerably larger: an additional 120 percent would be needed in Indonesia.



Impact on Inflation

Given that many Asian countries have been reasonably prompt in adjusting domestic oil prices, why has inflation remained so low? On average, only about 0.8 percentage point was added to inflation from higher oil prices in 2004 and a further 1.3 percentage point is expected for 2005, for those countries for which disaggregated data are available. One reason is that the percentage increases in domestic petroleum product prices have been smaller than those in crude oil prices, as discussed above. Another reason is the relatively small weight of gasoline prices in consumer price baskets, either directly (on average 3.3 percent) or indirectly through transportation and electricity prices (which have an average weight of 6.5 percent).

Policy Considerations

As high oil prices persist, authorities in countries with controlled prices are increasingly reassessing their pass-through policies. Thailand liberalized gasoline prices in October 2004 and diesel in July 2005. Other countries, such as Malaysia and Indonesia, have begun to adjust domestic petroleum product prices. Reported disruptions in energy supplies in China are raising expectations of further fuel and power price increases. In general, given the distortions to consumption and production patterns that occur when prices are not allowed to reflect market conditions, as well as the potentially significant fiscal costs of subsidies, staff will continue to advise authorities to let domestic petroleum prices reflect international prices, while alleviating the burden on the poor through targeted subsidies.

²⁵ The needed increases in countries with controlled prices are measured as the difference between the actual price increases during December 2003-June 2005 (in dollar terms) and the average increase in internationally-traded petroleum product prices over the same period, weighted by each country's consumption patterns.

Characteristics of Domestic Petroleum Sector in Countries with Administered Prices

| | Change in Petroleum Products Prices (December 2003/June 2005) ¹ | Fiscal and Quasi-fiscal Costs ² (In percent of GDP) 2005 | | State Ownership | Description of Price Controls | Transport/ Electricity Price Controls | Tax Impact |
|------------|---|--|-----|--------------------|--|---|---------------|
| Bangladesh | 6.7 | 0.6 | 0.5 | Yes | Pricing adjustment formula adopted in 2003, but not strictly followed. Domestic prices of kerosene and diesel have been increased several times since then, by 33 and 15 percent between 2003 and end-2004, respectively, and by a further 13 percent in mid-2005; however these adjustments lag behind that implied by the pricing formula. | Yes | Large |
| China | 22.6 | NA | NA | Yes | Ad hoc adjustments; prices passed on to consumers generally with a six to twelve month lag. | Yes | Small |
| India | 29.4 | 0.8 | 2.2 | Yes | Set administratively, ad hoc adjustments. | Yes | None |
| Indonesia | 13.6 | 3.0 | 4.4 | Yes | Price of premium gasoline market determined. All other prices of petroleum products set administratively with ad hoc adjustments. No adjustments in 2003 and 2004, in March 2005 average prices increased by 29 percent, and from July price of industrial fuel | Yes, in August 2005 the government announced that the SOE electricity company could determine prices it charges to industrial users based on costs. | Small |
| Malaysia | 14.1 | 0.8 | 2.3 | Yes | Petroleum retail prices are administered under the Control of Supplies Act (1961). | No | Small |
| Sri Lanka | 32.1 | 1.8 | 1.9 | Yes | The pricing formula implies complete pass-through, but monthly price increases are capped at 2 Rupees and the pricing formula suspended for more than a year. | Yes | Medium |
| Thailand | 34.1 | 0.6 | 1.4 | Yes | No longer set administratively (administrative setting of prices for gasoline eliminated in October 2004 and for diesel in July 2005.) | Yes | Small |
| Vietnam | 29.7 | 0.8 | 1.5 | Yes | Administered by decree, fixed, and changed on an ad hoc basis. | Yes | Small |

Sources: Country desks; and IMF databases.

¹ Measured in U.S. dollars.

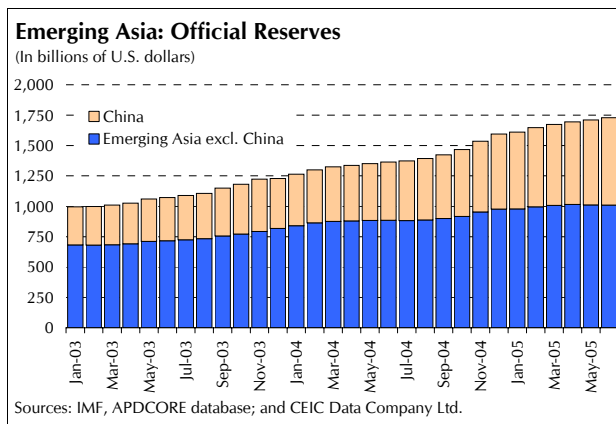
² Assumes no change in current policy and includes power and transportation subsidies, where available.

ANNEX II. CAPITAL INFLOWS

Since early 2003, emerging Asia has experienced a surge in private capital inflows. These inflows have contributed to the further buildup in foreign reserves, and have presented challenges to regional policymakers. This chapter provides a brief overview of the characteristics and dynamics of these capital flows, takes stock of the policy responses, and identifies the differences between this episode and the previous one in the 1990s.

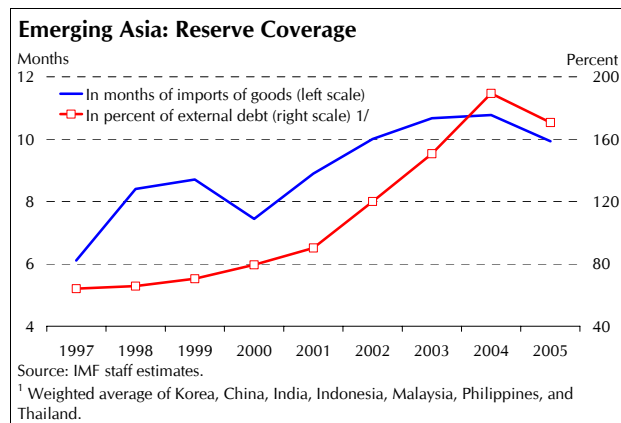
WHY HAVE EMERGING ASIA'S FOREIGN RESERVES SURGED RECENTLY?

Over the past few years, emerging Asia has accumulated sizable foreign exchange reserves. Official reserves have increased rapidly, doubling between 2001 and June 2005 to reach \$1.7 trillion. The increase has been especially marked for China and India, where reserves have roughly tripled during the same period; and Malaysia, where they have increased nearly two and one-half times.



Official reserves in nearly all countries in the region are now ample, as measured by most of the standard measures of reserve adequacy. Reserves now cover about 9 times short-term debt on average, with ratios ranging from 3 times in the Philippines to 22 times in India. Other indicators, such as the ratio of foreign reserves to imports or to total external debt,

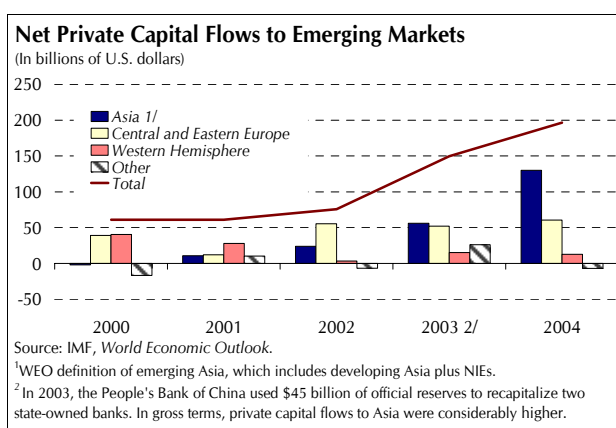
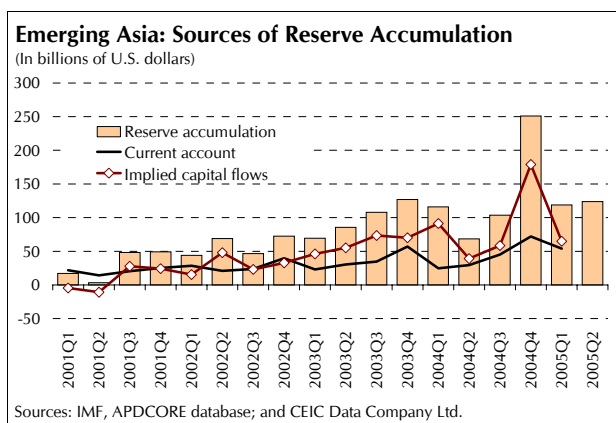
also suggest that reserves are more than comfortable. However, reserves generally cover a smaller fraction of broad money, with the ratio in China, for example, amounting to only 21 percent.



The buildup of reserves is partly attributable to the region's current account surpluses. Emerging Asia has consistently recorded current account surpluses of about 3 percent of GDP in recent years, the result of large declines in investment and a concomitant depreciation of real exchange rates following the Asian crisis. These surpluses were responsible for the bulk of reserve accumulation during 2001–02, but even subsequently they have accounted for more than a third of the reserve increase.

Over the last three years, however, reserve accumulation has also been driven by large capital inflows. After a long lull following the financial crises of the late 1990s, there has been a renewed surge in capital flows to emerging markets. And Asia has been a major beneficiary, receiving nearly two-thirds of the \$350 billion in net capital inflows that went to emerging markets from 2002 to 2004.²⁶

²⁶ These data represent the net of private capital flows registered as liabilities and assets in the balance of payments.



WHAT WERE THE KEY DRIVERS OF PRIVATE CAPITAL FLOWS TO EMERGING ASIA?²⁷

Emerging Asia was able to attract this capital primarily because its fundamentals have improved considerably. Since the crisis period, the region's banks have rebuilt their capital adequacy and reduced their non-performing loans, while its corporations have scaled back their leverage and improved their profitability and corporate governance. Meanwhile, governments have improved their fiscal positions by raising revenue and cutting deficits. Moreover, as noted above, current account surpluses have contributed to the accumulation of considerable foreign exchange

reserves, thereby reducing the region's vulnerability to external shocks. All these improvements have helped to restore investor confidence, encouraging them to channel investments once again into the region.

In addition to these structural improvements, cyclical developments have also attracted capital to the region. Starting in 2003, the global economy began to recover, triggering a boom in Asian exports, especially from the electronics sector. As this occurred and regional growth began to accelerate, capital flowed into emerging Asia, to take advantage of the expected improvements in stock prices. Inflows have subsequently remained strong, notwithstanding a temporary sell-off in regional equity markets in the spring of 2004.

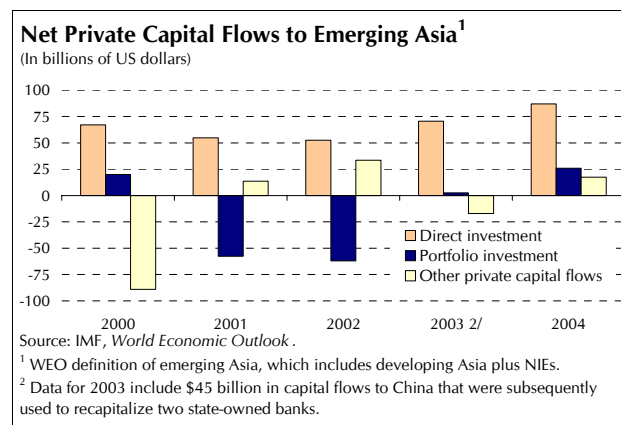
Finally, supportive global financial conditions have also played an important role. The largely accommodative monetary policy stance in major industrial countries has kept risk aversion relatively low and pushed investors to search for more attractive risk-adjusted returns, including in emerging markets. And, among these markets, emerging Asia has looked particularly attractive, since expectations of appreciation in regional currencies, and in particular of the renminbi, further raised the possibility of increasing dollar returns.

WHAT HAVE BEEN THE CHARACTERISTICS AND DYNAMICS OF THESE CAPITAL INFLOWS?

A notable feature of the capital inflows has been the sharp increase in the share of portfolio investment since 2003. Net portfolio investment was actually negative—substantially so—during 2001–02. Flows then turned positive in 2003, and by last year they, together with bank lending, accounted for nearly half of total capital inflows. Equity issuance and inflows to purchase existing shares accelerated as Asian growth rebounded, while debt issuance was stimulated by low interest rates and international investors' search for yield.

²⁷ Unless otherwise noted, "private capital flows" are defined here as gross private capital flows registered as liabilities in the balance of payments.

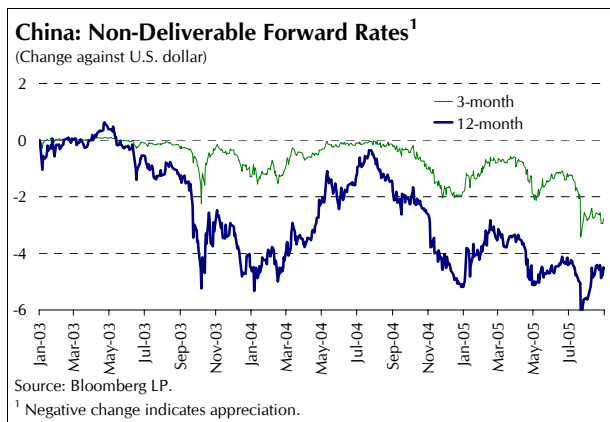
Last year, emerging Asia's external bond issuance reached \$50 billion, its highest level since the crisis.



The recent surge in portfolio flows has come in two waves. The first wave began as the global economy began to recover in the second half of 2003. It then intensified after the 2003 G8 meeting in Dubai, as the ministerial statement, which emphasized the need for greater exchange rate flexibility in order to facilitate adjustments in global imbalances, triggered speculation about exchange rate appreciation in Asia. By the second quarter of 2004, however, investors had become concerned about the impact on Asia's export-led growth of a soft patch in the global economy and of tightening measures in China. In addition, interest rate increases in the U.S.

reduced the yield differential on emerging market assets, setting off a massive unwinding of carry trade positions across global equity, bond, and currency markets. As a result, portfolio flows to emerging Asia were relatively subdued for the next six months.

Capital inflows began to pick up again in October 2004. The main drivers this time around were renewed concerns about the U.S. current account deficit, the sharp weakening of the U.S. dollar, growing expectations of a revaluation of the Chinese renminbi, and concomitantly expectations of regional currency appreciation.



“CARRY TRADE”

The term “carry trade” defines short-term investment plays on interest rate spreads.

“Carry trade” activities occur when investors see a positive expected return in borrowing short-term in a currency offering a low interest rate to invest in a higher-yielding currency, adjusted for expectations of changes in bilateral exchange rates.

These techniques were used extensively before 1997, contributing to an increase in short-term capital inflows to Asia.

Because there was a high positive yield differential between mature markets and emerging Asia at that time, and given the rigidity in U.S. dollar exchange rates that was prevalent in the region, expected returns by borrowing in dollar or yen and on-lending in local currency were seen by investors as attractive. The surge of these inflows led to a buildup of unhedged short-term foreign exchange liabilities of financial institutions and corporates, which left them vulnerable to changes in international financial conditions. As sentiment shifted in 1997, the flows suddenly reversed causing exchange rates to depreciate and interest rates to soar, triggering a major corporate and banking crisis.

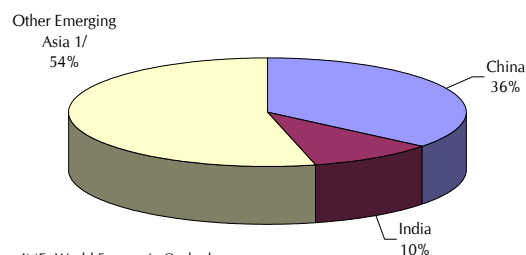
WHICH ECONOMIES BENEFITED MOSTLY FROM THIS SURGE IN CAPITAL INFLOWS?

Almost half of the capital inflows to emerging Asia in 2003–04 went to just two countries—China and India. China alone received more than one-third of the inflows, as the country has become a magnet for foreign direct investment following its admission into the WTO. More than half of all FDI into emerging Asia went into China. In the last two years, China has also received sizable portfolio and other non-FDI flows (primarily lending), largely reflecting growing expectations of a renminbi revaluation. India, meanwhile, has captured one-tenth of regional inflows, as portfolio investors have been attracted by the country’s acceleration in growth, based on burgeoning domestic demand. Investors have also increasingly recognized India’s corporate sector, not only for its profitability but also for its relatively

good corporate governance and accounting standards.

Destination of Private Capital Flows to Emerging Asia, 2003-2004

(In percent of total)



Source: IMF, *World Economic Outlook*.

¹ Hong Kong SAR, Indonesia, Korea, Malaysia, the Philippines, Singapore, Taiwan POC, and Thailand.

“CHINA PLAYS”

“China play” is a term which has been used in many ways by analysts and investment houses. While, in the past, it has been generally associated with investment strategies to benefit from China’s rapid growth, its use recently has become more closely associated with strategies to benefit from a revaluation of the renminbi. Given the capital account restrictions in China’s balance of payments, and the relatively limited liquidity of the renminbi NDF market, investors have turned to proxy plays, using other currencies.

The renminbi is seen by market analysts as a key to unlock rigidities in regional currencies. One of the arguments suggested for the reluctance of policymakers in the region to allow their currency to appreciate against the dollar was that it would cause their economies to lose competitiveness against China. A revaluation of the renminbi was therefore seen as triggering a round of currency appreciation in the region. Several regional currencies were seen as good bets on a revaluation of the renminbi. In particular, Korea and Taiwan Province of China were seen as the most attractive because these economies are integrated with China while their financial markets are highly liquid.

Capital flows to other economies have also been significant, relative to their size. With investors believing that a shift toward a more flexible exchange rate regime in China could unlock greater flexibility in other regional exchange rates, “China plays” became attractive. Movements in the rates of several regional currencies became highly correlated in 2003–04 with those of the renminbi’s non-deliverable forward (NDF) premium.²⁸ Currencies of economies with a high degree of trade and financial integration with China were seen as the most likely to appreciate along with the renminbi. Consequently, during 2004, Korea recorded inflows amounting to 5 percent of GDP, while Taiwan Province of China

experienced inflows of 12 percent of GDP. Malaysia, too, received large inflows, some 5 percent of GDP, as investors expected that a renminbi revaluation would induce that country to abandon its exchange rate dollar peg.

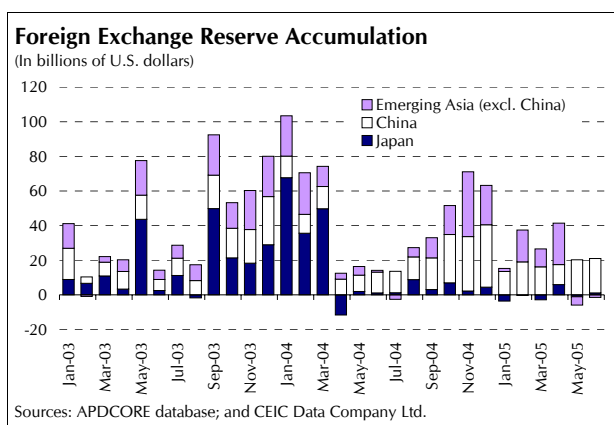
HOW HAS THE REGION MANAGED THESE CAPITAL INFLOWS?

Managing these capital inflows has presented challenges to regional policymakers. The policy responses taken have varied, depending on the exchange rate regime, monetary conditions, and the economic outlook. The responses to inflows have also differed in the two recent waves of inflows, reflecting the changes that have occurred in economic and financial settings.

During the first surge in capital inflows, regional monetary authorities intervened heavily in the foreign exchange market to contain their impact on exchange rates. In economies with pegged exchange rates (China,

²⁸ A NDF is a short-term foreign exchange contract whereby on the contracted date, the two parties settle in cash based on the difference between the contracted rate and the spot rate at maturity. NDF contracts are widely used for currencies which do not have a forward market for nonresidents.

Hong Kong SAR, and Malaysia), such intervention was mandated by the exchange rate regime. In the rest of the region, heavy intervention was undertaken to counter appreciation pressures. This was motivated in large part by competitiveness concerns (especially vis-à-vis China), and also by a desire to maintain export-led growth at a time when the recovery of domestic demand was still fragile in most regional economies. As a result of this policy stance, official reserves in the region rose sharply.

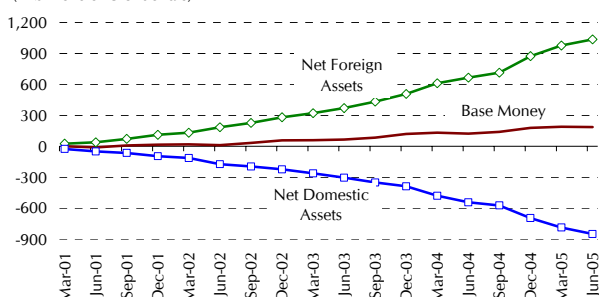


In order to contain the inflationary impact of intervention, monetary authorities largely sterilized the inflows. As a result, in most regional economies, base money grew much more slowly than the growth in foreign reserves would otherwise have entailed. Price pressures were consequently fairly well contained and inflation remained relatively modest on average in mid-2004.²⁹ And in most cases, asset prices also remained relatively subdued. In China, however, risks of over-investment began to build in late 2003, and local property market bubbles emerged.

²⁹ In many economies, inflation remained relatively insulated from the sharp run-up in global oil prices, thanks to price controls on oil-related products.

Emerging Asia: Cumulative Increases in Base Money, NFA, and NDA

(In billions of U.S. dollars)



Sources: CEIC Data Company Ltd; and IMF staff estimates.

Fiscal policy was not used extensively to counter the aggregate demand impact of capital inflows. In some countries (China, India, and Thailand), fiscal deficits turned out to be lower than expected, though this was largely due to better-than-expected economic growth, rather than to additional fiscal tightening. In some cases, some proactive measures to help sterilize foreign exchange inflows were taken: in China, the government built up deposits at the central bank, while in India and Thailand, the repayment of public external debt was accelerated.³⁰

In some countries, administrative measures were adopted to reduce net private capital inflows, though in most cases the impact of such measures was relatively minor. To discourage inflows, various measures were adopted across the region, including tighter restrictions on the NDF market (Korea, Thailand), and steps to make nonresident deposits less attractive (India, Thailand). Some measures to encourage outflows were also taken, including loosening restrictions on overseas investment (China, India), and increasing the limits on resident purchases of foreign securities (Thailand, Korea).

³⁰ In net terms, emerging Asia (including China) reduced its liabilities to official creditors by roughly \$10 billion in 2003.

During the more recent private capital inflows episode, the policy response has changed somewhat and regional currencies have been allowed to appreciate. This policy shift has been motivated by several considerations. As domestic demand has strengthened in the region, policymakers have become more confident in their ability to sustain growth, hence reducing regional economies' reliance on exports growth alone. Moreover, allowing some currency appreciation has helped offset the impact of higher world oil prices on regional economies.

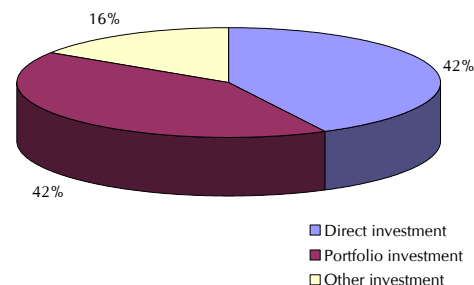
HOW DOES THE CURRENT EPISODE OF CAPITAL INFLOWS COMPARE WITH THE 1990-96 EPISODE?

For many economies, capital inflows are smaller than they were during the early 1990s.³¹ In 1996, net private capital flows to emerging Asia amounted to \$119 billion, equivalent to 4 percent of GDP. By comparison, in 2004, such flows amounted to \$130 billion, or 3 percent of GDP. More stark are the comparisons for the crisis-affected countries: whereas in 1996, gross capital inflows to Indonesia, Korea, the Philippines and Thailand reached on average 10 percent of GDP, last year they averaged only 2 percent of GDP. Meanwhile, gross capital inflows to China are much larger now than before, representing 7 percent of GDP, compared with 5 percent of GDP in 1996.

For emerging Asia as a whole, the composition of capital inflows is better this time around. There is less short-term external borrowing and the share of FDI and portfolio equity investment is larger. By contrast, during the earlier episode, especially starting in 1995, inflows were concentrated in the form of short-term portfolio inflows and bank lending to the region. Many

of these flows were motivated by plays on interest-rate spreads—the so-called “Asian carry trade”—an unhedged form of short-term borrowing which proved costly when sentiment changed and exchange rates depreciated.

Distribution of Net Private Capital Flows to Asia Across Types, 1990-1996



Source: IMF, *World Economic Outlook*.

But the improvement in composition has not occurred in every economy. This is because the bulk of the FDI inflows has gone to China, while FDI flows into other emerging Asian economies, especially in the ASEAN region, have not fully recovered from the levels of 1996. In particular, FDI flows into the ASEAN4 were in 2004 still half in dollar terms what they were in 1996.

Most important, capital flows have had a more modest impact on regional economies. Whereas in 1996 capital inflows fueled an economic overheating of the region, creating asset price bubbles in a number of economies, there are few signs of such pressures today, apart from in China. One reason is that the inflows themselves have been smaller this time. Another reason is that, during the recent episode, the inflows have been to a large extent sterilized, a policy that is more feasible than before because domestic interest rates have come down sharply, resulting in small differentials with foreign rates, thereby narrowing the quasi-fiscal costs of such operations.

³¹ During 1990-96, emerging Asia received about 40 percent of the more than \$1 trillion net private capital flows to emerging markets.

Not only are the inflows and the impact smaller than in the 1990s, but the risks are smaller as well. Regional economies are now more resilient to a sudden reversal of inflows than a decade ago, because their economic fundamentals have improved, and because exchange rates in the majority of economies are more flexible. Furthermore, risks to the banking systems in the region have diminished because only a small portion of the flows, this time, have been intermediated through banks, leaving their balance-sheets largely unaffected. However, not all economies have moved at the same pace in reducing domestic and external vulnerabilities. Some economies still possess underlying weaknesses, which leave them vulnerable to a sudden reversal of capital flows that can be brought by changes in sentiment and international financial conditions.

ANNEX III. IMPACT OF A RENMINBI APPRECIATION ON OUTPUT AND CURRENT ACCOUNTS

This note looks at the effects on output and the current account balance in Asia of an appreciation of China's currency.³²

Two scenarios are considered: in the first, the renminbi is assumed for illustrative purposes to appreciate by 10 percent against all other currencies, including those of Asian economies; in the second scenario, the renminbi appreciates by 10 percent against non-Asian currencies, while other Asian currencies are assumed to appreciate by 5 percent against non-Asian currencies.³³ The second scenario is designed to capture the likely upward pressure on most Asian currencies following renminbi appreciation, and is broadly consistent with developments following the change in China's exchange rate system on July 21. The first exercise implies a 10 percent real effective exchange rate appreciation for China and real effective depreciations ranging from ½ to 4¼ percent for the rest of Asia.³⁴ In the second exercise, the renminbi would appreciate by 7¼ percent in real effective terms and other Asian currencies by ¾ to 3 percent.

The exercise used a partial-equilibrium framework that, while rudimentary, captures the main channels through which exchange rate changes could affect output in Asia and

trade flows between Asia and the rest of the world and within Asia. In particular, the role of processing trade in the region, especially in China, is taken into account. Because economic relationships in the framework are linear, the results represent a simple "rule of thumb" for a 10 percent renminbi appreciation that can be adjusted for appreciations of different magnitudes.

The results reported below suggest that the impact on output in the region as a whole of a renminbi appreciation alone of 10 percent would be moderate. The impact on the region's current account position, however, would be small, especially in relation to global imbalances. If other Asian currencies also appreciate along with the renminbi (scenario two), this increases the impact on regional output and the current account balance, while softening the impact on China itself. Policy actions to boost domestic demand so as to soften the otherwise significant impact on regional output, would also increase the current account adjustment, though it would remain quite small in relation to global imbalances. It could be argued that the trade elasticities used in the study are on the low side, especially from a longer-run perspective, and hence the current account implications understated. Even so, the point remains that what is required is a rebalancing of aggregate demand across regions and not just exchange rate adjustment.

FRAMEWORK

The two exercises were done using a common framework. Key parameters in this framework are income and price elasticities for exports and imports. For the three countries assumed to have pricing power in foreign markets (Japan, Korea, and China), a key parameter is the extent of exchange rate pass-through to U.S. dollar export prices. Other countries were assumed to

³² This work was done in conjunction with a study of the impact of a renminbi appreciation on China prepared for the Article IV consultation (Wang, 2005).

³³ An exception is the Hong Kong dollar, which is assumed to remain unchanged against the U.S. dollar.

³⁴ These estimates are based on bilateral trade shares, which are calculated using averages from 2002 to 2004.

be price-takers. The income elasticities used, which are based on estimates provided by APD country desks, tend to be around one. Price elasticities, also based on estimates provided by desks, range from 0.4 to around 1 (China). For countries with pricing power, the pass-through of exchange rate changes to U.S. dollar export prices was assumed to be around half, consistent with simulations done for the Chinese economy.³⁵ To calibrate the effect of exchange rate changes on GDP and the current account, it was assumed that the full exchange rate changes, in both scenarios, took place at one point in time, rather than occurring gradually over a period of time. For simplicity, all the effects, including second round multiplier effects, were assumed to occur in the single period following the change. In practice, given plausible estimates of lags, the multiplier effects would likely be spread over 1½ to 2 years.³⁶

Two important exceptions were made in the use of price elasticities to estimate trade effects in order to reflect the importance of the processing of imported inputs in the production of exports for several of the economies in Asia and the importance of “entrepot” trade originating from China for Hong Kong SAR.

- **“Processor” economies were defined as countries whose ratios of exports and imports in GDP are greater than 50 percent.** For these countries, which

³⁵ See Wang (2005). For Japan and Korea, empirical evidence presented in Marazzi et al. (2005) suggests that pass-through has declined from more than 0.5 to less than 0.2 in recent years. Nevertheless, assuming lower pass-through coefficients for these two countries would not materially change the estimates.

³⁶ See Wang (2005) for estimates of lags for the Chinese economy.

include the Asian NIEs, the ASEAN4, and Vietnam, imports were divided between imported inputs for exports and imports for domestic consumption. The former were assumed to change one-for-one with changes in exports and to have a lower price elasticity (about 0.1).³⁷ The latter were estimated to change based on the change in a country’s real effective exchange rate and the price elasticity of imports.

- **An additional adjustment was made to reflect Hong Kong SAR’s particular trade structure, with entrepot and transshipment trade accounting for 90 percent of total exports, half of which originates from China.**³⁸ These exports were adjusted on a one-for-one basis with the impact of the exchange rate change on China’s exports.

Calculation of the full impact of a 10 percent appreciation of the renminbi was broken down into two rounds of effects.

- **First round effects reflect the direct impacts of real effective exchange rate changes and relative prices on Asian countries’ exports and imports and the implications of these impacts for real GDP and the current account balance.** They are based on (1) trade volume changes derived using price elasticities for exports and imports for each country (with the exceptions for “processing” and “entrepot” trade noted above) and

³⁷ In most countries, these goods are not produced domestically, resulting in little or no potential for import substitution, at least in the short term.

³⁸ Entrepot and transshipment exports account for 90 percent of Hong Kong’s exports, half of which originate from China.

(2) income effects resulting from changes in U.S. dollar prices of Chinese exports.³⁹ The total first round impact is derived by summing up the estimated direct output effect resulting from changes in trade volumes and the estimated income effect.

- **Second-round effects include the knock-on impacts on output and the current account balance arising from the first-round effects.** They are calculated by multiplying the change in first-round GDP in each country by a GDP multiplier, which is derived based on assumptions regarding each country's marginal propensity to consume, invest, and import. Given this "total" change in GDP, import volumes are recomputed using income elasticities, and new current account effects are calculated.

The estimates presented here can be seen as conservative, as they omit several factors which could reduce the final impact on Asia of a renminbi appreciation. First, the effects of the renminbi appreciation on output growth in the rest of the world are not accounted for. Simulations of global economic models suggest that there could be a small positive impact on output outside Asia in the short term, which should not materially alter the estimates.⁴⁰ Second, the framework considered omits third-country effects and foreign exporters' pricing power. India, for instance, which competes with China mainly in third markets, could gain market share following a renminbi revaluation. Australia, Indonesia, and other commodity

exporters to China, could raise U.S. dollar prices of their exports in response to a significant increase in Chinese import demand following a revaluation of the renminbi. Although for each individual country, such effects are unlikely to be large enough to materially change the estimates presented here,⁴¹ the total impact for Asia as a whole could be significant. Finally, counteracting policy responses are not accounted for in the present framework. These could significantly dampen the second-round impact of exchange rate changes on countries in the region.

ESTIMATED RESULTS

The aggregate impact on Asia in the first scenario would be modest, as the impact on China would be partially offset by positive effects on the rest of Asia. For Asia as a whole, growth would only be reduced by ¼ percentage point in the first round and ½ percentage point after multiplier effects.⁴² Asia's current account balance would narrow only marginally by 0.1 percent of GDP

³⁹ For China, the income effect is positive and large (2 percent of GDP in the first scenario), while it is generally small and negative for the other Asian countries (reflecting the extent to which they import goods from China).

⁴⁰ See IMF (2005), JP Morgan (2005), and Deutsche Bank (2005).

⁴¹ In particular, foreign exporters' pricing power is likely to increase only in the event that a renminbi revaluation leads to a significant rise in Chinese import demand. But even a 10 percent appreciation of the renminbi, according to the estimates presented here, would have only a limited impact on Chinese import demand (after accounting for processing trade and multiplier effects). As for third-country effects, even for India, the degree of competition with China in third markets is relatively low. According to calculations in Cerra et al. (2005), India and China compete in only 25 percent of their products exported to world markets. Hence, accounting for the individual impact on India alone would likely not materially change the estimates presented here.

⁴² This exercise was conducted in July 2005 and measures the impact relative to the staff's projection at that time. Since then, the projections may have changed.

(\$9¼ billion) in the first round and the current account balance reduction would be lowered to \$5 billion after factoring in multiplier effects. The direct impact on the Chinese economy would be to reduce growth by ¾ percentage point and narrow the current account balance by nearly 1 percent of GDP (roughly \$17 billion). The full impact, after factoring in multiplier effects, would reduce growth in China by 1½ percentage points, assuming no offsetting policy actions are taken, and lower the reduction in the current account balance to ½ percent of GDP. The impact on other Asian countries would be positive, reflecting competitiveness gains, and would vary across countries, depending on price elasticities for exports and imports, the relative importance of trade with China, and the size of initial current account balances.

The aggregate impact of a 10 percent renminbi appreciation on Asia is likely to be larger in the second scenario, although still broadly manageable—even in the absence of a policy response. For Asia as a whole, growth could decline by nearly ½ percentage point in the first round and the current account balance could narrow by ⅓ percent of GDP (roughly \$32 billion). The full impact, after multiplier effects, would be to reduce Asia's growth by nearly 1 percentage point and lower the current account balance reduction to 0.2 percent of GDP (about \$18 billion). The direct impact on China in this scenario is a reduction by ½ percentage point in growth and a narrowing of the current account balance by 0.6 percent of GDP (nearly \$12 billion). After multiplier effects, China's growth would be reduced by a full percentage point and the current account reduction would be lowered to 0.4 percent of GDP (accounting for 40 percent of the current account balance reduction for Asia as a whole).

| Estimated First Round Impact of a Ten Percent Renminbi Appreciation ¹ | | | | | | |
|---|-----------------------|---|-----------------------------------|-----------------------------------|----------------------------|----------------------------|
| A. Other Asian Currencies Remain Unchanged (in percentage points, unless otherwise specified) | | | | | | |
| | Real GDP growth | Current account balance (US\$ billion) | Export value (US\$ billion) | Import value (US\$ billion) | Export volume growth | Import volume growth |
| Asia | -0.2 | -9.2 | -0.1 | 9.1 | -1.9 | 0.5 |
| Industrial countries | 0.1 | 4.5 | 4.1 | -0.3 | 0.6 | -1.0 |
| Japan | 0.1 | 3.9 | 3.7 | -0.2 | 0.6 | -1.0 |
| Asia NIEs | 0.2 | 2.1 | -1.1 | -3.2 | 0.5 | -0.8 |
| Other Asia | -0.4 | -15.7 | -3.1 | 12.6 | -3.1 | 1.1 |
| China | -0.7 | -16.7 | -5.0 | 11.7 | -5.8 | 2.2 |
| Asia excluding Industrial countries | -0.3 | -13.6 | -4.2 | 9.4 | -2.7 | 0.9 |
| Asia excluding China | 0.1 | 7.6 | 4.9 | -2.6 | 0.5 | -0.6 |
| B. Other Asian Currencies Appreciate by Five Percent; Hong Kong SAR Unchanged (in percentage points, unless otherwise specified) | | | | | | |
| | Real GDP growth | Current account balance (US\$ billion) | Export value (US\$ billion) | Import value (US\$ billion) | Export volume growth | Import volume growth |
| Asia | -0.4 | -32.2 | -11.9 | 20.3 | -2.2 | 1.2 |
| Industrial countries | -0.1 | -7.3 | 2.0 | 9.3 | -0.4 | 1.1 |
| Japan | -0.1 | -4.7 | 2.8 | 7.4 | -0.3 | 1.1 |
| Asia NIEs | -0.4 | -4.8 | -5.9 | -1.1 | -0.5 | 0.1 |
| Other Asia | -0.5 | -20.1 | -8.1 | 12.0 | -3.0 | 1.4 |
| China | -0.5 | -11.6 | -3.7 | 7.9 | -4.3 | 1.5 |
| Asia excluding Industrial countries | -0.5 | -24.9 | -14.0 | 10.9 | -2.7 | 1.2 |
| Asia excluding China | -0.3 | -20.6 | -8.3 | 12.3 | -0.9 | 1.0 |

Source: IMF staff estimates.

¹ First round impact estimates, including income but excluding multiplier effects.

| Estimated Total Impact of a Ten Percent Renminbi Appreciation ¹ | | | | | | |
|---|-----------------------|---|-----------------------------------|-----------------------------------|----------------------------|----------------------------|
| A. Other Asian Currencies Remain Unchanged (in percentage points, unless otherwise specified) | | | | | | |
| | Real GDP growth | Current account balance (US\$ billion) | Export value (US\$ billion) | Import value (US\$ billion) | Export volume growth | Import volume growth |
| Asia | -0.4 | -5.1 | -0.1 | 5.0 | -1.9 | 0.1 |
| Industrial countries | 0.1 | 3.6 | 4.1 | 0.6 | 0.6 | -0.8 |
| Japan | 0.1 | 3.3 | 3.7 | 0.4 | 0.6 | -0.9 |
| Asia NIEs | 0.5 | 1.1 | -1.1 | -2.2 | 0.5 | -0.2 |
| Other Asia | -0.8 | -9.8 | -3.1 | 6.7 | -3.1 | 0.5 |
| China | -1.5 | -10.4 | -5.0 | 5.4 | -5.8 | 1.0 |
| Asia excluding Industrial countries | -0.6 | -8.7 | -4.2 | 4.5 | -2.7 | 0.4 |
| Asia excluding China | 0.2 | 5.3 | 4.9 | -0.4 | 0.5 | -0.4 |
| B. Other Asian Currencies Appreciate by Five Percent (Except Hong Kong SAR) (in percentage points, unless otherwise specified) | | | | | | |
| | Real GDP growth | Current account balance (US\$ billion) | Export value (US\$ billion) | Import value (US\$ billion) | Export volume growth | Import volume growth |
| Asia | -0.9 | -17.8 | -11.9 | 5.9 | -2.2 | 0.3 |
| Industrial countries | -0.3 | -4.8 | 2.0 | 6.8 | -0.4 | 0.7 |
| Japan | -0.2 | -3.8 | 2.8 | 6.5 | -0.3 | 0.9 |
| Asia NIEs | -0.8 | -1.7 | -5.9 | -4.1 | -0.5 | -0.4 |
| Other Asia | -1.1 | -11.2 | -8.1 | 3.2 | -3.0 | 0.2 |
| China | -1.0 | -7.5 | -3.7 | 3.9 | -4.3 | 0.7 |
| Asia excluding Industrial countries | -1.1 | -13.0 | -14.0 | -1.0 | -2.7 | 0.1 |
| Asia excluding China | -0.9 | -10.3 | -8.3 | 2.0 | -0.9 | 0.0 |

Source: IMF staff estimates.

¹ Second round estimates, including income and multiplier effects.

As noted above, these estimates do not incorporate any policy responses that countries might engage in to stabilize GDP. In the event such policy responses occur, the impact on Asian countries' GDP of the renminbi appreciation would be lower and the

impact on their current account balances would be larger.

The estimates also do not account for third-country effects and pricing power of foreign exporters to China. These could potentially lower the impact on both output and the current account of the region by a significant amount, as noted earlier.

COMPARISON WITH OTHER STUDIES

Relatively few studies have been undertaken of the impact of an exchange rate appreciation on China and even fewer studies have examined its impact on the rest of Asia. In addition, most of the studies tend not to disclose key parameter assumptions (e.g., export and import price elasticities) and methodologies used, complicating the comparison of the estimates. Further, some studies factor in counteracting policy responses, without specifying their contribution to the overall economic impact. Finally, some studies account for factors such as third-country effects and pricing power of foreign exporters to China which are not fully specified and, hence, make it difficult to disentangle their contribution to the overall effects.

For China, estimates across studies vary considerably. Some studies rely on simulations using computable general equilibrium models, while others adopt a partial equilibrium framework similar to that presented here. An illustrative 10 percent appreciation of the renminbi against the U.S. dollar reduces output growth by $\frac{1}{2}$ to $4\frac{1}{2}$ percentage points. The impact on the current account also varies quite widely (\$7½ to \$58 billion), although in most cases the impact is small in relation to global imbalances. Factors accounting for the differences include: (1) the extent to which other Asian currencies are assumed to appreciate following a move by China; (2) the size of assumed trade elasticities; (3) whether or not processing trade is included; (4)

assumptions made about the pricing power of exporters (both in China and in the rest of Asia); (5) whether or not income and second-round effects are included; and (6) whether or not a policy response is included.

Impact on China of a Ten Percent Renminbi Appreciation Against the U.S. Dollar: Comparison of Different Estimates

| Models | Author(s) | Real effective appreciation (% change) | Real GDP growth | Inflation (%) | Current account (US\$ billion) |
|-----------------------|---|--|-----------------|---------------|--------------------------------|
| Dynamic models | McKibbin & Stoekel (2003) | 10.0 | -4.5 | -8.0 | -12.0 |
| | Deutsche Bank (2005) ¹ | 7.6 | -0.7 | -0.7 | -58.2 |
| | Park (2005) ² | 10.0 | -1.9 | -1.2 | -15 |
| Trade models | Noland & al. (1998) | 10.0 | ... | ... | -50.0 |
| | Goldstein (2004) | 10.0 | ... | ... | -26.0 |
| | JP Morgan (2005) ¹ | 10.0 | -0.5 | ... | -56.9 |
| | Wang (2005) | 10.0 | -1.5 | ... | -10.0 |
| | This study (first exercise) ⁴ | 10.0 | -1.5 | ... | -10.4 |
| | This study (second exercise) ⁵ | 7.3 | -1.0 | ... | -7.5 |

¹ The reported growth impact takes into account a policy response.

² The reported appreciation is vis-à-vis the U.S. dollar (other Asian currencies are assumed to remain unchanged, except for the Malaysian ringgit, which appreciates by 5 percent vis-à-vis the U.S. dollar).

³ Derives a range of estimates of the impact on exports from a range of estimates of export price elasticities.

⁴ Assumes that the renminbi alone appreciates by 10 percent against all other currencies, including Asian currencies.

⁵ Assumes that other Asian currencies, except the Hong Kong dollar, partially match China's move and appreciate by 5 percent against all non-Asian currencies.

For the rest of Asia, estimates also differ substantially across studies depending on the underlying assumptions and methodology used. Existing studies generally assume that other Asian currencies would appreciate following a move by China, although not by the full extent of the Chinese appreciation (equivalent to scenario two in the framework presented here). Results based on a partial equilibrium approach similar to the framework used here suggest that a renminbi revaluation accompanied by appreciations of other Asian currencies would have a limited impact on the current account balance of Asia as a whole. For every 5 percent rise in the currencies of all Asian nations against the U.S. dollar, the broadest measure of the trade gap would decline by about \$18 to \$20 billion (0.2 percent of GDP).⁴³ These results are consistent with second-round estimates obtained in the framework considered here.

⁴³ See Blustein (2005) for references.

In contrast, simulations using computable general equilibrium models suggest that an appreciation of Asian currencies following a move of the region toward greater exchange rate flexibility would have a much larger economic impact. Simulations using a four-region version of the IMF Global Economy Model (GEM) imply that GDP growth of emerging Asia as a whole would be reduced by about 2 percentage points and the region's current account balance would narrow by ½ percent of GDP, for every 5 percent real effective appreciation of Asian currencies (see IMF, 2005).⁴⁴ For output, the estimated impact is about twice as large as in the framework considered here, and for the current account balance, it is nearly three times as large. The more significant effects in the GEM simulations can be explained, to a significant extent, by the omission of processing trade in the model set-up and by the higher assumed trade elasticities. The latter are consistent with the much longer time horizon of GEM, that allows for structural changes (e.g., investments in infrastructure) to occur in response to exchange rate changes.

⁴⁴ The impact is computed relative to a scenario with unchanged exchange rates.

REFERENCES

- Belaisch, Agnès, 2005, "Rewards and Challenges from Asian Financial Integration," mimeo (Washington: International Monetary Fund).
- Blustein, P., 2005, Putting Pressure on China's Peg, *WashingtonPost.com*, May 5.
- Cerra, V., S.A. Rivera, and S. C. Saxena, 2005, "Crouching Tiger, Hidden Dragon: What Are the Consequences of China's WTO Entry for India's Trade?," IMF Working Paper 05/101 (Washington: International Monetary Fund).
- Deutsche Bank, 2005, *Quantifying the Global Impact of RMB Appreciation* (May 27).
- Feridhanusetyawan, T., 2005, "Preferential Trade Agreements in the Asia-Pacific Region," IMF Working Paper 05/149 (Washington: International Monetary Fund).
- Fukao, K., H. Ishido, and K. Ito, 2003, "Vertical Intra-industry Trade and Foreign Direct Investment in East Asia," *The Japanese and International Economies*, Vol. 17, pp. 468–506.
- Goldstein, M., 2004, "Adjusting China's Exchange Rate Policies," paper presented at the IMF seminar on *China's Foreign Exchange System*, Dalian, China (May 26–27).
- International Monetary Fund, 2005, "Global Savings and Investment," Chapter II in *World Economic Outlook*, forthcoming (Washington).
- , 2005, "How Will the Global Imbalances Adjust?" Appendix 1.2 in *World Economic Outlook*, forthcoming (Washington).
- JP Morgan, 2005, "JP Morgan's View on China's Revaluation: Impact on Markets," special topic report (May).
- Lane, Philip R. and G.M. Milesi-Ferretti, 2005, "The External Wealth of Nations Mark III: Revised and Extended Estimates of External Assets and Liabilities, 1970–2003," unpublished manuscript (Washington: International Monetary Fund).
- Marazzi, M., N. Sheets, and R. Vigfusson, 2005, "Exchange Rate Pass-through to U.S. Import Prices: Some New Evidence," *International Finance Discussion Papers* No. 833, Board of Governors of the Federal Reserve System (April).
- McKibbin, W. and A. Stoekel, 2003, "What If China Revalues Its Currency?" *EconomicScenarios.com*, Issue 7.
- Mercereau, B., 2005, "Financial Integration in Asia: Estimating the Risk-Sharing Gains for Australia and Other Countries," *Australia Selected Issues Paper*, forthcoming (Washington: International Monetary Fund).
-

Miniane, J., 2004, "A New Set of Measures on Capital Account Restrictions," *Staff Papers*, International Monetary Fund, Vol. 51, No. 2, pp. 276–308.

Noland, M., 1998, *Global Economic Effects of the Asian Currencies' Devaluation*, Washington DC: IIE.

Park, C., 2005, "Coping with Global Imbalances and Asian Currencies," *ERD Policy Brief*, No. 37 (May) (Asian Development Bank).

Rumbaugh, T., and N. Blancher, 2004, "China: International Trade and WTO Accession," IMF Working Paper 04/36 (Washington: International Monetary Fund).

Thornton, J., and A. Goglio, 2002, "Regional Bias and intra-regional trade in Southeast Asia," *Applied Economic Letters*, Vol. 9, pp. 205–208.

Wang, Q., 2005, "The Economic Impact of an Exchange Rate Change," *China Selected Issues Paper*, forthcoming (Washington: International Monetary Fund).

Zebregs, H., 2004, "Intra-regional Trade in Asia," IMF Policy Discussion Paper 04/1 (Washington: International Monetary Fund).
