

# Part 1



**Developing Asia and the world**





# Developing Asia and the world

## Developing Asia and the Pacific: Performance and prospects

### Performance in 2006

Developing Asia grew at its fastest pace in 11 years in 2006 (Figure 1.1.1). Steady global expansion of output and trade, moderate inflation with low real interest rates, as well as the impact of earlier reforms on productivity, were all conducive to growth. In many countries, circumstances proved unusually benign, and risks failed to materialize.

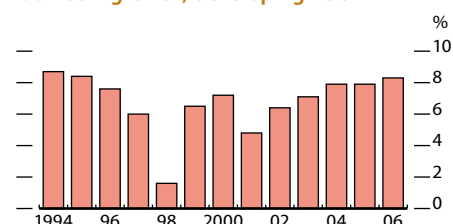
Asia's giants—the People's Republic of China (PRC) and India—alone accounted for just under 70% of the region's expansion. In 2005, the PRC accounted for 41% of regional output compared to just 35% in 2000. India's share in regional output increased by half a percentage point (Figure 1.1.2).

In both countries, fast growth coexists with stresses and imbalances. In the PRC, booming exports and fixed asset investment again propelled growth. The authorities—concerned about the pace and quality of fixed asset investment, fast credit growth in the banking sector, and rising asset prices—raised interest rates, increased reserve requirements for banks, and introduced a raft of administrative controls intended to discourage or defer new capital projects. As a consequence, the growth of fixed asset investment slowed in 2006, though it still advanced at double digits. Export growth showed no letup, and the current account surplus widened again. By December 2006, the PRC had amassed international reserves of close to \$1.1 trillion. To stem the leeching of reserves into domestic liquidity, the People's Bank of China sold additional sterilization bonds.

In India, agricultural productivity continued to languish, largely reflecting neglected infrastructure and poor rural extension services. Rising food prices contributed significantly to inflation. Tensions also surfaced as rapidly expanding industry and services activities encroached on agricultural land. Gaps continued to widen between the more prosperous coastal states and those in the interior of India—where population growth is fastest and the record on job creation weakest.

Many other countries also enjoyed vigorous growth. Azerbaijan and Kazakhstan again saw benefits from high oil prices. Favorable commodity prices helped expansion in Mongolia. Armenia's construction boom continued, and the services sector grew by 20% as rising wages and remittances bolstered private consumption. Cambodia saw double-

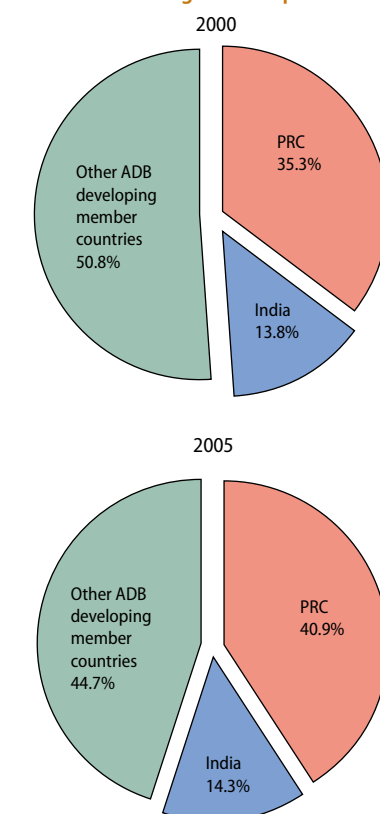
1.1.1 GDP growth, developing Asia



Source: Asian Development Outlook database.

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1.1.2 Shares in regional output



Source: Asian Development Outlook database.

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digit rates of expansion for the third straight year: textiles, tourism, and agriculture all performed well. Robust growth has become almost routine in Viet Nam, and 2006 was no different, with both exports and domestic demand making strong contributions. Growth in the Lao People's Democratic Republic (Lao PDR) accelerated, as large hydropower and mining projects progressed. The Maldives bounced back from the destruction of the tragic 2004 tsunami, growing at 18.2%. Although Pakistan could not repeat its record-breaking performance of 2005, growth in 2006 was above its recent pattern. Bangladesh, too, continued to see its trend up. Despite civil conflict, Sri Lanka grew at its quickest pace since 1979, buoyed by strong private sector activity and expansionary public spending. (Figure 1.1.3 gives a profile of growth in developing Asia.)

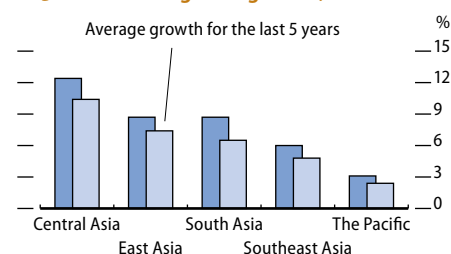
However, performance was patchy in the larger economies of Southeast Asia. High interest rates—aimed at bringing down the inflationary surge caused by the reduction of gasoline and diesel subsidies late in 2005—curtailed growth in Indonesia. Consumption and investment demand growth was insipid. In the Philippines, growth edged up from 2005, underpinned by a strong recovery in agriculture. But investment spending stayed weak. In Thailand, net exports lifted growth, but gathering political uncertainty dented domestic demand, and business and consumer confidence ebbed. Growth accelerated in Malaysia, largely primed by another year of robust consumption demand and greater public investment spending.

Growth in the Pacific countries followed a familiar sawtooth pattern, with growth accelerating in some countries but slowing in others. Growth accelerated in Fiji Islands and Papua New Guinea and, as these are the largest economies, lifted overall performance. The former benefited from a pickup in sugar production and in construction, and latter from favorable export prices.

Weak performance was seen in isolated cases. In Nepal, politics continued to dominate and growth was slow. Growth in the Kyrgyz Republic moved into positive territory, but recovery was hampered by weak gold production and by lingering political difficulties. Civil disorder in Timor-Leste caused its non-oil economy to shrink, but oil extraction activity (which is accounted for separately) was unaffected. Economic activity also contracted in the Federated States of Micronesia. Growth in the Cook Islands, Kiribati, and Tonga trailed in at less than 2%.

Despite exceptionally fast growth and rising oil prices, consumer price inflation did not, in general, accelerate in 2006. The outcome of 3.4% was less than the 4.0% projection made in *Asian Development Outlook 2006*. But this aggregate pattern disguises wide variations at the country and subregional level (Figure 1.1.4). In some countries, inflationary pressures rose as the year progressed. In India, wholesale price inflation accelerated, despite tightening measures by the Reserve Bank of India, which raised interest rates on four occasions in 2006, lifting the key policy rate from 6.25% to 7.25%. The central bank also imposed tighter reserve requirements on commercial banks and stricter conditions for lending to the property sector. In Bangladesh too, annual inflation accelerated. Fast credit growth, pass-through of earlier oil price rises, and rising prices of other commodities all contributed to inflation. Although inflation fell in Pakistan, it remained high and above the State Bank of Pakistan's target.

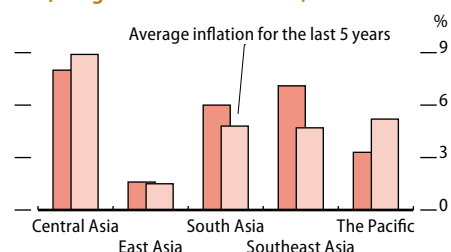
### 1.1.3 Profile of regional growth, 2006



Source: Asian Development Outlook database.

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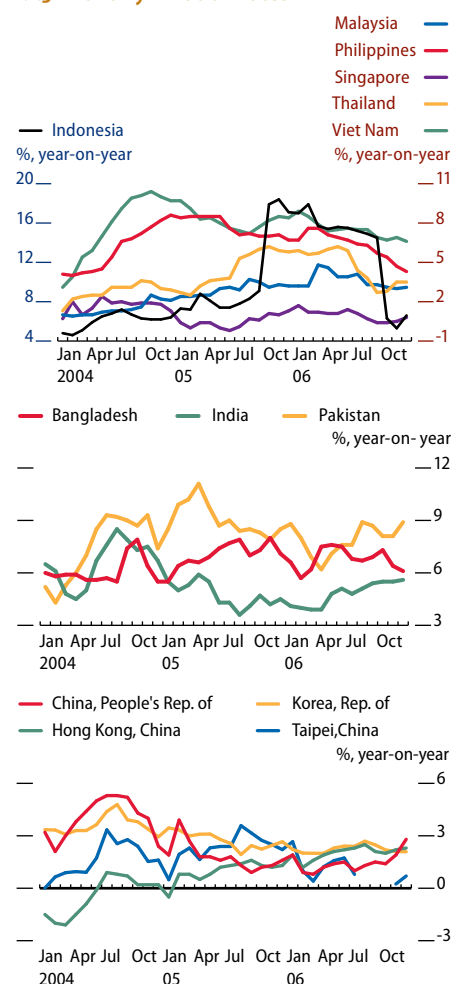
### 1.1.4 Regional inflation trend, 2006



Source: Asian Development Outlook database.

[Click here for figure data](#)

### 1.1.5 Monthly inflation rates



Sources: CEIC Data Company Ltd., International Monetary Fund, *International Financial Statistics* online database, downloaded 10 March 2007.

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In Sri Lanka, inflation accelerated over the course of the year to average 9.6%. Strong domestic demand in Central Asia, fed by high oil prices, lifted inflation to 8.0%.

In the PRC, food prices climbed toward the end of the year, and although monthly inflation picked up, the annual average remained low. Highly competitive supply conditions in industry helped restrain consumer price inflation, as did falling oil prices in the later months of the year. But overheating manifested itself in other ways. In particular, bank credit remained a concern, and equity and property prices soared. In response, the central bank lifted the key policy interest rate by 54 basis points in 2006, and increased reserve requirements on commercial banks on three occasions. It subsequently raised interest rates by another 27 basis points in March 2007.

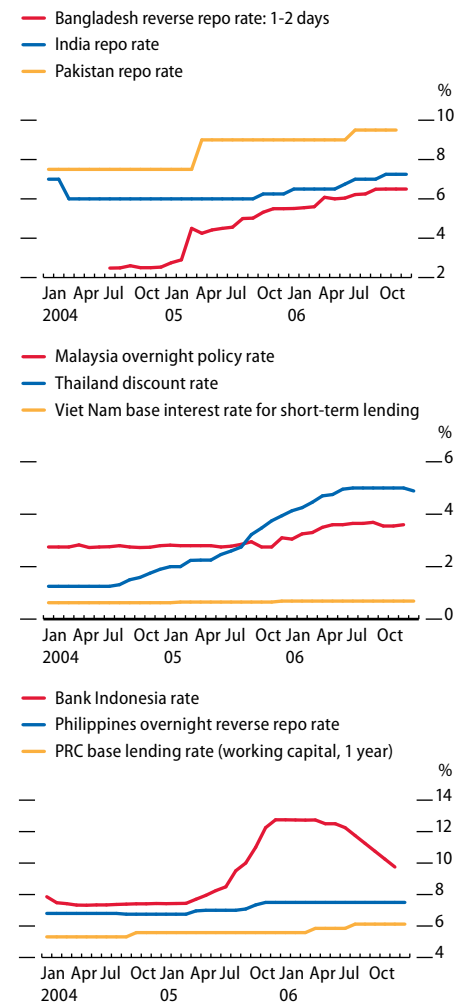
In Indonesia, Malaysia, and Thailand, annual average inflation rates rose. In large part, this reflected the effects of increases in oil prices and of reduced retail subsidies on gasoline and diesel. However, in the second half of the year monthly inflation rates began to slow, responding to tighter monetary conditions (Figure 1.1.5). Modest exchange rate appreciation also played a part. In the Philippines, where the pass-through of high oil prices was quick, annual headline inflation fell in 2006. In view of falling monthly inflation rates, a number of countries lowered policy interest rates—most notably Indonesia, where the central bank lowered its main policy rate by 300 basis points in seven steps during the year (Figure 1.1.6).

Fiscal risks were to the fore in some countries of Central Asia, as well as in Sri Lanka. Tajikistan's external debt position leaves little room for maneuver and the Kyrgyz Republic's debt indicators make it eligible for relief under the Heavily Indebted Poor Countries initiative. In Sri Lanka, rising public spending widened the deficit and was partly financed through domestic credit expansion. Pakistan also ran a sizable fiscal deficit in 2006, to support development programs and earthquake rehabilitation and reconstruction activities.

Elsewhere, deficits were generally modest, and were financed with comparative ease. Strong growth buoyed fiscal revenues. Various countries continued their efforts to bring down levels of public debt. In the Philippines, a legislative impasse in the approval for the 2006 budget led to nominal expenditures being frozen at 2005 levels. As a consequence, expenditures as a proportion of GDP fell. At the same time, revenues accrued from the newly expanded value-added tax. Reduced outlays and rising revenues cut the central Government's deficit to just 1% of GDP. In Indonesia and Malaysia too, deficits were modest in 2006 as governments sought to consolidate or reduce debt. Thailand's planned disbursements for infrastructure projects were delayed by political uncertainties.

In India, the Fiscal Responsibility Act is a centerpiece of the Government's economic stabilization and reform program. It calls for a reduction in the federal budget deficit by at least 0.3% of GDP a year, taking it to 3.0% of GDP by FY2008 (ending March 2009). In 2006, the federal budget deficit as a proportion of GDP again fell, despite rising expenditures on social programs and on rural infrastructure. Fast growth has done much to buoy revenues. Improved collection at the state level has also helped the overall fiscal position.

### 1.1.6 Policy interest rates



Sources: CEIC Data Company Ltd.; International Monetary Fund, *International Financial Statistics* online database; both downloaded 10 March 2007.

[Click here for figure data](#)



Developing Asia's trade surplus widened in 2006. Both the value of exports and imports grew quickly in United States (US) dollar terms, but as exports grew from a larger base, the trade surplus expanded. In some countries, export growth was extraordinary. In Azerbaijan, for example, it ballooned by 61% as new sources of oil and gas came on stream. Torrid growth of exports from Mongolia and Papua New Guinea reflected both higher volumes and better prices for their primary resources.

The PRC's merchandise exports again grew rapidly in 2006, barely down on 2005's expansion. Imports also grew briskly, but continued to trail export growth such that the PRC's trade surplus jumped to nearly \$200 billion dollars, or 7.4% of GDP. This pattern of strong import growth but even stronger export growth was repeated in a number of other countries. Thailand moved from a trade deficit to a trade surplus and surpluses widened in Indonesia and Singapore. In the Republic of Korea (hereafter Korea) and Malaysia, trade surpluses narrowed. In South Asia, trade deficits were again the norm, and in all countries but Bangladesh and Bhutan they widened (Figure 1.1.7). Nevertheless, they remain manageable.

Broadly, current account payments positions moved in step with trade balances. For the region as a whole, the current account surplus in 2006 was 5.3% of GDP in 2006, the largest on record. Central Asia, East Asia, and Southeast Asia all posted hefty surpluses, but South Asia's deficit stepped up to over 2% of its GDP. Pakistan's deficit is large and was partly financed through privatization receipts. Buoyant remittances provided a valuable source of foreign exchange for a range of countries in 2006. In Central Asia, remittance income climbed in the Kyrgyz Republic and Tajikistan. It is also important to many small Pacific islands. In Bangladesh, Nepal, and Philippines, inward remittances reversed trade deficits and generated current account surpluses. Remittances significantly helped the payments positions of Pakistan and Sri Lanka.

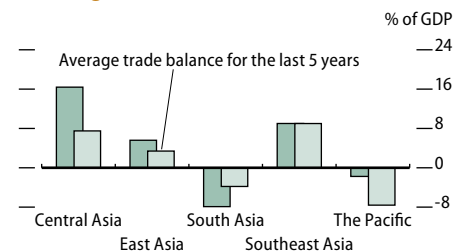
Large current account surpluses made a significant contribution to reserve accumulation (Box 1.1.1). Developing Asia's stock of foreign exchange reserves at end-2006 reached about \$2.3 trillion, up \$418 billion in a year. Although the region attracted gross capital inflows in 2006, it also invested significantly overseas, which helped stem the buildup of reserves. Of the increase in total reserves, just less than 80% was attributable to current account transactions.

## Outlook for 2007 and 2008

As usual, the outlook for developing Asia in 2007 and 2008 will hinge on prospects for the global economy. The idea that, because of its growing importance in global demand and strengthened intraregional trade linkages, developing Asia is now less susceptible to the vicissitudes of the international economy is at odds with the facts (see the chapter, *Uncoupling Asia: Myth and reality*, in Part 1).

As explained in the following section, *Prospects for the world economy in 2007 and 2008*, the outlook is broadly favorable. Although global growth is anticipated to slow, it will also become more balanced within the G3 (US, euro zone, and Japan). Growth is expected to come down in the US in 2007 before picking up in 2008, but output growth will

1.1.7 Regional trade balance trend, 2006



Source: Asian Development Outlook database.

[Click here for figure data](#)

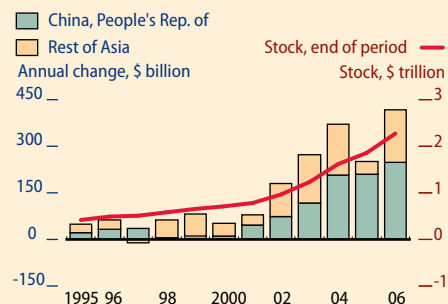
### 1.1.1 Developing Asia's foreign exchange reserves and the United States merchandise trade deficit

Developing Asia's foreign exchange reserves rose by \$417.6 billion during 2006 to \$2.28 trillion, according to preliminary data (box table). The advance was much larger than the \$250.7 billion seen in 2005 and represented a return to the pattern of steadily increasing large annual gains made by the region since 2001 (Box figure 1).

The rebound in accumulation in 2006 was mainly due to recovery from anemic increases in 2005 by some large reserve holders such as Hong Kong, China; India; Korea; and Singapore, as well as solid gains made by Kazakhstan, Malaysia, and Thailand. All countries but one appear to have increased their foreign exchange holdings in 2006.

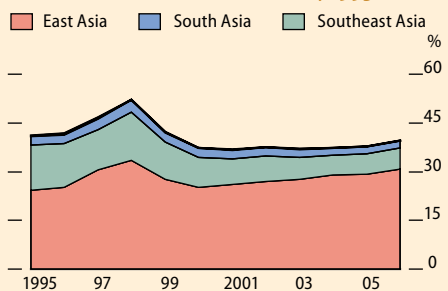
The larger increase in reserves of the People's Republic of China (PRC) in 2006 reflected a strengthening in its current account surplus during the year. At \$1.066 trillion, the PRC accounted for about 47%

#### 1 Developing Asia's foreign exchange reserves



Sources: International Monetary Fund, *International Financial Statistics* online database; Central Bank of China, available: <http://www.cbc.gov.tw>; Bank of Korea, available: <http://www.bok.or.kr>; all downloaded 8 March 2007.

#### 2 Share in total US trade deficit, 1995–2006



Source: US Census Bureau, available: [www.census.gov](http://www.census.gov), downloaded 16 February 2007.

with Southeast Asia accounted for the balance of 2006's increase.

The PRC's gain in share of the US deficits since 2000 reflects both the country's development as the lowest-cost producer of many goods, and the growth of specialization and intraregional trade, which features exports of components and supplies to the PRC for assembly into goods for export.

of developing Asia's stock of foreign exchange reserves at end-2006, up from 27% at end-2001, accumulating about 57% of the region's increase in reserves over this period (versus 59% in 2006).

Box figure 2 indicates that the region's share in the United States (US) merchandise trade deficit, which has been relatively stable since 2000, increased at a faster pace in 2006. The trade deficit with developing Asia amounted to \$323.9 billion, or 39.6% of the total trade deficit (\$818.1 billion), up by 1.8 percentage points from 2005.

In East Asia, the PRC accounted for \$232.5 billion, or 28.4% of the US deficit, up by 2.1 percentage points, while the share of other countries fell by 0.5 percentage points, to produce a net 1.6 percentage point increase for East Asia.

A deeper US trade deficit

#### Developing Asia's foreign exchange reserves (\$ billion)

	Stock end-2006	Change over the year	
		2006	2005
<b>Central Asia</b>	22.2	13.5	-2.0
Armenia	1.1	0.3	0.2
Azerbaijan	2.5	1.3	0.1
Kazakhstan	17.7	11.7	-2.4
Kyrgyz Republic	0.7	0.2	0.1
Tajikistan	0.2	0.0	0.0
<b>East Asia</b>	1,705.0	298.2	233.2
China, People's Rep. of	1,066.3	247.5	208.9
Hong Kong, China	133.2	8.9	0.7
Korea, Rep. of	238.4	28.4	11.8
Mongolia	0.9	0.5	0.2
Taipei, China	266.1	12.9	11.6
<b>South Asia</b>	190.3	42.0	6.3
Bangladesh	3.8	1.0	-0.4
Bhutan	0.5	0.0	0.1
India	170.2	39.2	5.9
Maldives	0.2	0.0	0.0
Nepal	1.6	0.1	0.0
Pakistan	11.3	1.5	0.3
Sri Lanka	2.6	0.0	0.5
<b>Southeast Asia</b>	358.1	63.3	13.3
Cambodia	1.2	0.2	0.0
Indonesia	40.7	7.9	-1.9
Lao People's Dem. Rep.	0.2	0.0	0.0
Malaysia	81.7	12.3	4.5
Myanmar	1.1	0.3	0.1
Philippines	19.9	4.1	2.8
Singapore	136.3	20.9	3.8
Thailand	65.1	14.6	2.0
Viet Nam	11.9	2.9	2.0
<b>The Pacific</b>	2.0	0.7	-0.1
Fiji Islands	0.2	-0.1	-0.2
Micronesia, Fed. States of	0.0	0.0	0.0
Papua New Guinea	1.4	0.7	0.1
Samoa	0.1	0.0	0.0
Solomon Islands	0.1	0.0	0.0
Tonga	0.0	0.0	0.0
Vanuatu	0.1	0.0	0.0
<b>Developing Asia</b>	2,277.6	417.6	250.7

Note: Foreign exchange reserves exclude gold, special drawing rights, and the reserve position in the International Monetary Fund.

Sources: International Monetary Fund, *International Financial Statistics* online database; Hong Kong Monetary Authority, available: <http://www.info.gov.hk/hkma/>; both downloaded 8 March 2007; staff estimates.

stay close to potential in both the euro zone and Japan. Global trade is expected to expand at about 7.5%, which is close to longer-term averages. Oil and other commodity prices are expected to come down in 2007, and again in 2008. But it is also possible that the global electronics cycle could turn in 2007, which would negatively affect export prospects particularly for East and Southeast Asia.

The baseline assumptions for individual economies are set out in each country chapter in Part 2. Monetary conditions are generally set to tighten in 2007 as a number of countries attempt to tame inflationary pressures. This is particularly true in South Asia but further tightening may also occur in the PRC if liquidity continues to wash through the economy. In Southeast Asia, as the pass-through effects of high oil prices come to an end, there may be scope for interest rates to come down. They have already been reduced in Indonesia and in Thailand.

Fiscal stances are tipped toward mild expansion but most countries are mindful of the costs that rising and high public debt brings. In the Philippines, a stronger fiscal position may allow some additional spending on priority programs, including infrastructure. Larger spending on infrastructure is also planned in Indonesia, Malaysia, and Thailand. In India, spending at the state level could threaten the commitments of the Fiscal Responsibility Act. Fiscal positions are more problematic in Pakistan and Sri Lanka, but it is expected that deficits will narrow in 2007. Fiscal consolidation is also needed in several Central Asian countries. In the PRC, the central Government's deficit is expected to stay below 1%, but spending for rural development and the environment may pick up.

Set against this background, robust growth is again expected in 2007 and 2008. Growth of 7.6% is projected in 2007, nudging up to 7.7% in 2008. These projections imply that growth will move onto a more sustainable footing and that overheating pressures that surfaced in 2006 will gradually abate. Table 1.1.1 summarizes projections by subregion for growth, consumer price inflation, and the current account balance (as a percentage of GDP).

Growth in all subregions, except the Pacific, is expected to slow in 2007. The biggest deceleration is likely in Central Asia, as lower oil prices work their way through to demand. The slowdown there partly reflects the removal of the one-time impact of large investment projects. Now that they are on stream, their effects register in a higher level of income, but not in a fillip to growth. In 2007, the pace of expansion is expected to moderate in Armenia, Azerbaijan, and Kazakhstan. A more stable political situation in the Kyrgyz Republic and new mining projects should help lift growth. There is also room for faster growth in Tajikistan.

In 2007, South Asia is expected to grow by 7.7%. Steps taken by the Reserve Bank of India to cool inflation are seen slowing India's pace of investment and consumption spending in 2007, and growth of 8% is forecast for 2007. But if inflation proves to be stubborn, further tightening by the central bank is likely to follow. In Pakistan growth

**1.1.1 Selected economic indicators, developing Asia, 2005–2008**

	2005	2006	2007	2008
<b>Gross domestic product (annual % change)</b>				
Developing Asia	7.9	8.3	7.6	7.7
Central Asia	11.2	12.4	10.3	9.4
East Asia	8.3	8.7	8.0	8.0
South Asia	8.7	8.7	7.7	8.0
Southeast Asia	5.6	6.0	5.6	5.9
The Pacific	2.5	3.1	4.5	2.8
<b>Consumer price index (annual % change)</b>				
Developing Asia	3.4	3.4	3.0	3.2
Central Asia	7.7	8.0	8.6	7.9
East Asia	2.0	1.6	1.9	2.2
South Asia <sup>a</sup>	5.3	6.0	5.5	5.3
Southeast Asia	6.3	7.1	4.2	4.0
The Pacific	2.4	3.3	3.5	3.3
<b>Current account balance (% of GDP)</b>				
Developing Asia	4.5	5.3	5.0	5.0
Central Asia	1.2	4.3	3.2	3.3
East Asia	6.0	7.0	6.8	6.9
South Asia	-1.2	-2.1	-2.2	-2.2
Southeast Asia	4.9	7.0	6.1	5.6
The Pacific	6.2	-2.0	-1.2	2.0

<sup>a</sup> India reports on a wholesale price index basis.

Sources: Asian Development Outlook database; staff estimates.



is expected to pick up on 2006: as stronger performance by agriculture is expected. There is also scope for expansion of the garment sector, but challenges are just over the horizon with the end of voluntary restraints on the PRC's textile and clothing exports to the US and European Union in 2008. In Bangladesh much will depend on how the interim Government performs economically, as well as on political developments. Growth in Sri Lanka will come off the record pace of 2006, but it is still expected to consolidate trend performance. If political conditions become more settled, Nepal may reap a modest dividend in 2007. Continuing recovery from the tsunami should see double-digit growth in the Maldives.

In 2007 and 2008, softer external demand and policy curbs are expected to pull growth down gradually in the PRC. But incentives for spending at the local and provincial level will remain strong in the lead-up to the Communist Party Congress later in 2007. Industrial expansion is also set to continue apace, as the PRC makes inroads into new markets and improves productivity. Growth of 10.0% is now forecast in 2007, with a further slowing to 9.8% in 2008. Outcomes have previously consistently beaten forecasts for the PRC, but if growth does not begin to slow, the authorities will most likely press harder on the brakes. Failure to moderate growth in the near and medium term would raise risks of painful adjustments later on.

Elsewhere in East Asia, growth is expected to soften in Hong Kong, China and in Taipei, China, partly because of their close economic ties to the PRC, though local factors will also play a part. Korea, too, is expected to slow as exports cool with the moderate slowdown in the US economy. Mongolia should continue to enjoy fast growth over the next 2 years as agriculture, mining output, and construction continue expanding. For East Asia as a whole, growth of 8.0% is projected in 2007 and 2008.

Overall, Southeast Asia will show little change in 2007 relative to 2006. Growth is put at 5.6%, edging up to 5.9% in 2008. But Indonesia, Southeast Asia's largest economy, is seen accelerating as lower interest rates and weaker inflation give a boost to domestic spending. Efforts to improve the investment climate may also begin to pay off. In Malaysia, growth is likely to ease a little in 2007. Electronics activity will remain susceptible to global developments and any slowing of durable goods demand in the US. The Philippines is expected to maintain steady growth of around 5.4%. The investment rate may stabilize and then pick up, and although expansion of infrastructure spending would be helpful, the benefits would unlikely be felt before 2008.

Cambodia, Lao PDR, and Viet Nam will again grow quickly in 2007 and 2008. But Cambodia will need to diversify its export base and improve productivity if it is to stand up to stiffening garments competition. In Thailand, prospects are dominated by political factors. Since the coup of September 2006, business and consumer confidence have declined. Shifts in policy and uncertainty about future direction have kept consumers and investors on the sidelines. Growth of 4.0% is penciled in for 2007, but has a larger than usual degree of uncertainty.

Growth is expected to accelerate briefly in the Pacific in 2007 before reverting to a more lackadaisical pace. The anticipated leap in growth in 2007 largely reflects the stimulus to demand provided by the deployment

of a large international force in Timor-Leste for peacekeeping and to assist in the conduct of elections. However, stronger growth in Papua New Guinea will also help lift the average. With the planned departure of peacekeepers in 2008 and slower growth in Papua New Guinea, the subregional average will drop back. A coup and the withdrawal of new aid have added to already difficult circumstances in Fiji Islands. Its economy may well contract in 2007, with growth remaining anemic in 2008.

Inflation is expected to ease in 2007 (Figure 1.1.8). Falling prices of commodities in international markets will help, as will vigilance from monetary authorities across the region. The largest reduction in inflation is expected to be in Southeast Asia: inflation will slow in nearly all subregional countries, but the largest contributor to the deceleration is likely to be Indonesia. Running at double digits in 2005 and 2006, inflation is expected to drop to 6.2% in 2007, stabilizing at about that level in 2008. Only in Singapore is inflation expected to pick up, and even then not by much.

In South Asia, falling inflation in India—prompted by slower credit growth and higher interest rates—will lead the headline figure down. Inflation in Pakistan is forecast to move closer to the State Bank of Pakistan's target, and is seen coming down to about 7% in 2007 and further to 6.5% in 2008. Despite rapid growth, inflation is expected to remain tame in the PRC. Any further currency appreciation would tend to restrain it. The main downside risk to inflation across developing Asia remains the possibility of a rebound in oil prices.

Developing Asia's current account is expected to remain firmly in surplus in 2007 and 2008 (Figure 1.1.9). In nominal US dollar terms, the surplus will widen but should steady as a share of GDP. Although some further appreciation of regional currencies is expected, both exports and imports are again likely to grow strongly. On the export side of the trade balance, productivity gains and lower unit costs will help offset impacts of any currency appreciation on prices. Remittances will stay an important source of foreign exchange for some countries. Import demand will be supported by stronger domestic spending, but lower prices for oil and other commodities will reduce import bills for some economies. The profile of the surplus is unlikely to change much, with South Asia continuing to run a deficit, and all other subregions in surplus. Southeast Asia's surplus is expected to close somewhat as expenditure switches more to domestic demand.

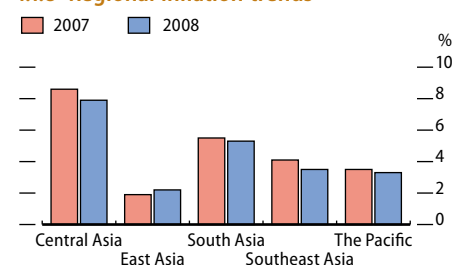
## Challenges

### Economic management

#### Macroeconomic stability

In many countries of developing Asia, “first generation reforms,” which focus on macroeconomic stability and opening markets, have progressed a lot. Achievements have contributed to favorable outcomes on inflation without damaging growth. For example, in Southeast Asia, the authorities have been quick to tame the inflationary pressures that occurred on the heels of large oil price increases. The enhanced credibility of monetary policy doused inflationary expectations and allowed many countries

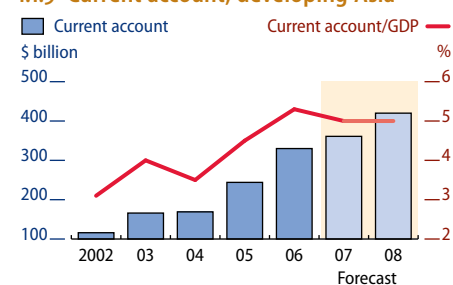
1.1.8 Regional inflation trends



Source: Staff estimates.

[Click here for figure data](#)

1.1.9 Current account, developing Asia



Sources: Asian Development Outlook database; staff estimates.

[Click here for figure data](#)

to absorb high oil prices more easily than would have been possible in the past. Equally, fiscal authorities, realizing the fiscal risks and high opportunity costs posed by rising gasoline, diesel, and kerosene subsidies, were quick to pare them back.

In South Asia, inflationary pressures have surfaced as a consequence of the pass-through of high oil prices but also because of accelerating growth. Growth has trended steadily upward in Bangladesh, India, and Pakistan. As sizable subsidies have been retained on oil products, and domestic prices remain well below international prices (*ADO 2006 Update*, Box 1.1.1), fiscal strains have been accentuated. Nevertheless, in all countries, policy frameworks governing interest rates, exchange rates, and fiscal regimes are acquiring greater clarity. The monetary authorities have set clear goals and have taken concerted measures to ease inflationary pressures. Fiscal problems and difficulties still lurk, but the overall direction is one of improvement. In Central Asia, International Monetary Fund programs have helped stabilize macroeconomic balances

But there are some countries where macroeconomic balances are more fragile. In Sri Lanka, for example, credit financing of expansionary government spending is directly stoking inflation. In Myanmar, the dual exchange rate system and monetization of government deficits keep inflation a perennial problem. In some of the small Pacific countries, an oversized government sector crowds out the space for private sector initiative and activity.

### *Foreign exchange reserves*

Since 2002, a particularly sharp buildup of foreign exchange reserves has been seen in developing Asia, largely in East and Southeast Asia, but also in India. Initially, reserve accumulation was motivated by a strong self-insurance motive and was intended to provide a buffer against speculative attacks. If the costs of a financial crisis in terms of lost GDP are large (as they appear to be), and the probability of a crisis occurring is significantly reduced by sizable reserves, then it may be worth paying a hefty insurance premium to do this (Rodrik 2006).

The need for reserves is influenced by a variety of factors, including exposure to short-term external liabilities, the nature of the exchange rate regime, country risk characteristics, and import financing requirements. A comparison of actual reserves with estimates of a broad measure of needs shows that actual reserves exceed “adequacy levels” by 50% or more (*Asia Economic Monitor*, December 2006). Although these ratios are by no means exceptional for emerging market economies, it is hardly surprising that there is now growing interest in how to make better use of international reserves. Asia’s reserves tend to be invested in short-term, secure assets that earn low yields that may be insufficient to compensate for even modest exchange rate appreciation.

The rewards from investing more actively are potentially large. For example, if just 50% of reserves were invested in a globally diversified portfolio, attracting a yield of 500 basis points above the current return, this would generate a fiscal dividend of about \$60 billion, equivalent to 0.9% of regional GDP. These additional resources could plug infrastructure gaps and increase the supply of essential public goods. Or

they could be used to retire public debt, creating larger fiscal space in the years ahead.

Some countries have already moved in the direction of more active reserves management. Capitalized by funds from the exchange equalization account, the mandate of the Korean Investment Corporation (formed in 2005) is “to achieve sustainable returns on foreign currency assets.” In March 2007, the PRC announced that it would take a more active approach to reserves management (Box 1.1.2). But while the rewards are certainly tempting, central banks and governments are rightfully wary of risks. If investments go bad, this could undermine confidence in government and/or the central bank. Having an appropriately regulated “fund,” operating at arm’s length, to manage some portion of reserves may have advantages. But setting up such an organization and attracting people with the right expertise is likely to take time.

### 1.1.2 New investment agency for reserves management in the People’s Republic of China

On the back of a surging trade surplus and rising foreign direct investment, the PRC’s foreign exchange reserves, already the world’s largest foreign reserves holding, hit \$1.07 trillion at the end of 2006, up \$247 billion from the end of 2005. All the (official) foreign reserves are now managed by the State Administration of Foreign Exchange (SAFE), an arm of the central bank.

They are conservatively invested in US treasury bonds and other government securities, and generally earn small yields. Standard Chartered Bank in Shanghai has estimated the investment return on the PRC’s reserves to be 3%, compared with, for example, an average 18% annual return for Singapore’s Temasek Holdings since it was established. In addition, the central bank may even lose from holding currency reserves in US dollars, including valuation losses as the yuan appreciates and opportunity costs due to the dollar depreciating against investment in alternative currencies.

In 2003, Central Huijin Investment Company Limited was established to be another investment arm of the central bank. It has used part of the foreign reserves to recapitalize major state banks and other state-owned financial institutions. It now holds a large proportion of state-owned financial assets. However, Central Huijin seems to be managed much like SAFE, which conservatively invests in low risk and return securities.

On 9 March 2007, the Government unveiled a plan to establish a state investment agency, to make better use of its reserves. The intention is to model operational aspects of the agency along the lines of Temasek Holdings and the Government Investment Corporation (GIC) of Singapore. Even though the proposal has not yet been finalized, it is likely that the foreign reserves will be divided into two parts—normal reserves that will continue to be managed by SAFE and others directed by the new investment

agency. The new agency is expected to manage at least \$200 billion of foreign reserves, and to adopt an asset management model in which reserves will be invested in higher-yielding products, such as stocks, corporate bonds, commodities, and technology companies abroad, in order to spread portfolio risks. It is still unclear if Central Huijin will be merged with the new agency. If it is, the new agency will be able to manage not only the currency reserves but also state-owned assets—reflecting the GIC–Temasek approach.

Temasek, one of the operational models for the new agency, was set up by the Singapore Government in 1974 to manage state-owned assets. Temasek owns stakes in many of Singapore’s largest companies, including Singapore Airlines, DBS Bank, and Singapore Power. It also holds investments in iconic Singaporean institutions like Raffles Hotel and Singapore Zoo. About half of its managed assets are held externally. As of 31 March 2006, Temasek had \$84 billion of assets under management, yielding around 24% for the year.

The Singapore Government established GIC in 1981 as another investment arm to directly manage its foreign reserves. GIC is run as a private investment company, although it is wholly owned by the Singapore Government. This arrangement allows GIC to operate as a global fund manager, while allowing the Government oversight over the management of the country’s reserves. GIC invests internationally in equities, fixed income instruments, money market paper, and real estate. It is also involved in some of Asia’s largest funds, such as the AIG Asian Infrastructure Fund, the largest private infrastructure fund in Asia.

Sources: Bloomberg 9, 10, 11 March 2007; *Financial Times*, 9 March 2007; [www.temasek.com.sg](http://www.temasek.com.sg); [www.gic.com.sg](http://www.gic.com.sg).

An alternative, more direct approach, recently proposed in India's FY2007 budget, would be to use foreign exchange to pay for the foreign currency costs of projects, or to back guarantees that would lower the costs of borrowing by special purpose investment vehicles.

Both proposals have their attractions. But in either case contingent fiscal liabilities would be likely to rise. If guarantees are used, the resulting debt inflows could exert pressure for an appreciation of the exchange rate. If inflows are sterilized, this will push interest rates up; with no sterilization, the inflows would add to credit expansion. Decisions on whether and how to put reserves to better use should be taken in the broader context of fiscal and monetary policy frameworks.

### Exchange rates

Figure 1.1.10 shows the movement of nominal exchange rates against the US dollar. Most currencies appreciated, Viet Nam's dong being an exception. The Malaysian ringgit and the PRC yuan, whose dollar pegs ended in July 2005, appreciated modestly in 2006. The appreciation of other currencies, including the Korean won, Philippine peso, and Thai baht, was more pronounced.

Changes in nominal effective (trade-weighted) exchange rates are compared with unweighted US dollar changes in Figure 1.1.11. Generally, movements of nominal effective exchange rates were smaller than their appreciation against the US dollar in 2006. This is because the currencies of most countries' major trading partners also appreciated against the US dollar. In nominal effective terms, the appreciation of the ringgit has been small. By December 2006, the Thai baht had appreciated in nominal effective terms by over 10%, and the Philippine peso by 4.5%.

Following the announcement of a near-record trade surplus in February 2007, the PRC authorities stated in March that they may now consider greater flexibility of the yuan. The sensitivity of other countries' nominal effective exchange rates to an appreciation of the yuan would be quite small (Figure 1.1.12). The main impact of its appreciation would most probably be seen in adjustments to market shares outside the region, not in terms of bilateral trade flows within. About 51% of the PRC's exports are to the US, EU, and Japan. Comparable shares for other countries range from 35% up. But these numbers may exaggerate the true extent of competition, concentrated in consumer goods industries that constitute a smaller share of total exports (Box 1.1.3). Also, firms in the PRC have already shown themselves adroit in improving productivity levels, which would help to offset any price and cost disadvantages created by a more expensive currency. There would be benefits at home. Consumers would gain from cheaper consumer goods imports, and the People's Bank of China would be better able to stem pressures on liquidity coming from rapidly accumulating foreign reserves. Pressures on the financial sector would be eased if the share of lowly remunerated reserves and sterilization bonds on their balance sheets were reduced.

### Capital controls

In December 2006, Thailand imposed controls on capital inflows with the intention of stemming the baht's appreciation. The initial rules were widely regarded as too stringent and triggered a rout in the equity

### 1.1.3 Trade and structural change in East and Southeast Asia

The chapter, *Trade and structural change in East and Southeast Asia: Implications for growth and industrialization*, in Part 1, provides an in-depth analysis of recent developments in international trade in manufactures in the region.

It shows that the rising share of the region, and especially of the PRC, in world exports and imports has been fueled by the explosive growth of intra-industry trade in parts and components in machinery sectors. Multinational enterprises are active in established production networks with a vertical division of labor leading to trade in goods in different stages of processing. The region's economies trade most intensively in the manufacturing industries that have the highest growth in world trade: electrical machinery, transportation equipment, chemicals and allied products, and precision instruments.

The region is also shown to be highly competitive in traditional labor-intensive manufactured products. Although intraregional trade is of increasing significance—with the PRC the point of assembly for final products—consumption of these final products is overwhelmingly in destinations outside the region. Final demand in the United States, Europe, and Japan and other extraregional markets is the driving force behind the rise of intraregional trade in East and Southeast Asia.

Hence, globalization is driving the process of regional integration and the processes are mutually reinforcing. So, although the region is partaking in the trend toward bilateral preferential trade agreements, it is market forces rather than tariff preferences that are more influential in determining what is produced and where it is produced.

The impact of the emergence of the PRC on industrialization and trade performance in other parts of the region, such as ASEAN, are also examined.



market (Figure 1.1.13). In response, exemptions have been widened. It has also been clarified that the aim is to eventually abandon the controls. Further relaxation of controls took place in mid-March 2007: the 30% nonremunerated reserve requirement for investors in debt securities and unit trusts, who fully hedge their investments through forward swaps of at least 3 months, was abrogated.

In principle, the case for a tax on *destabilizing* capital inflows is clear. As offshore investors do not consider or internalize the costs of any destabilizing effects of their behavior on the domestic economy, a tax on inflows could be beneficial.

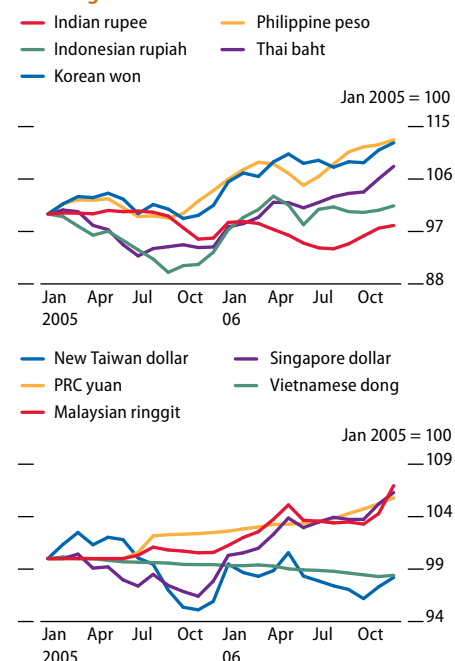
But theory and practice can differ. First, identifying conditions that warrant the imposition of a tax on capital inflows is not straightforward. Even if the Thai baht appreciated sharply against the US dollar in 2006 and reserves accumulated, it is uncertain that this threatened the economy or export businesses. The appreciation did not deter healthy export performance in 2006, and the trade balance moved from deficit to surplus.

When pressures for speculative capital inflows do need easing, the question arises of how to do this. Precisely because foreign exchange transactions are fungible, designing regulations that are not porous is extremely difficult. Simple approaches that are based on flat withholding taxes and that use existing taxation (and rebate) arrangements may have attractions (Box 1.1.4).

### Sustaining growth

Notwithstanding its considerable achievements, developing Asia still lags a long way behind rich industrial countries. Measured at market exchange rates, per capita GDP in developing Asia is estimated at US\$1,295 in 2006, compared with US\$31,230 in the OECD (Figure 1.1.14). As of 2002, there

#### 1.1.10 Nominal United States dollar exchange rate index



Sources: International Monetary Fund, *International Financial Statistics* online database; Central Bank of China, available: <http://www.cbc.gov.tw>; both downloaded 13 March 2007.

[Click here for figure data](#)

### 1.1.4 Withholding taxes on international capital flows

The idea of taxing international capital flows is not new, and was originally mooted as a way of taming the flow of “hot money” across borders. More recently, other objectives have been added, such as raising additional revenues for the provision of international public goods.

There has been extensive discussion of the “Tobin tax,” a proposed tax on all transactions entailing currency conversion. By taxing the amount of currency to be converted, the objective is to dissuade short-term capital movements. For a given tax rate, the effective burden would diminish with the horizon of the transaction. Two main criticisms have been leveled at the idea. The first is that by taxing all transactions involving currency conversions it will create distortions, and, for example, could discourage trade. The second is that the Tobin tax presents formidable coordination problems, requiring broad multilateral agreement about implementation and the use of tax proceeds.

Zee (2000) has proposed that if the goal is simply to inoculate an economy against the potential damage of speculative capital inflows, then national authorities

could impose a tax without worrying about international coordination. Zee’s proposal is to levy a withholding tax at source when inflows enter a country. Those taxes paid on current account transactions, including export receipts, would then be credited against domestic tax liabilities. By taxing inflows rather than outflows, and by refunding taxes paid on current account transactions, the idea is that capital flows would bear the burden of tax.

Spahn (2002) has observed that, like the Tobin tax, Zee’s withholding tax would entail a much smaller tax burden for long-term capital inflows. In this way it is different from the nonremunerated reserve requirements used by Chile as well as Colombia, Spain, and Slovenia. As practiced by Chile, nonremunerated reserves had the problem that they imposed a larger effective tax burden, the longer the holding period. Thailand’s arrangements allow for repatriation of nonremunerated reserves only after a year, thereby affecting short-term flows most.

Sources: Zee (2000), Spahn (2002).

were still 1.9 billion men, women, and children in developing Asia who subsisted on less than \$2 a day. Growth remains the surest means of tackling poverty and other forms of deprivation, but stresses are beginning to arise that may eventually undercut growth and worthy economic ambitions. These show up in different ways in different countries.

Asia is still not creating enough jobs for the burgeoning numbers of young workers that enter the labor market each year. Despite fast growth, open unemployment rates are rising. Today, at least 500 million workers, or about 30% of developing Asia's 1.7 billion labor force, are either unemployed or underemployed. As another 245 million workers will be added to developing Asia's labor force by 2015, 750 million new jobs will be needed if full employment is to be achieved within a decade. Developing Asia's future prosperity depends on its ability to use productively its most valuable resource—its people. Failure to create decent and productive jobs may come at high cost. If many workers get left behind, the legitimacy of growth, and, by extension, support for the reforms needed to sustain catch-up and modernization, could be threatened. The promise of developing Asia's "demographic dividend" could yet prove to be a "demographic curse."

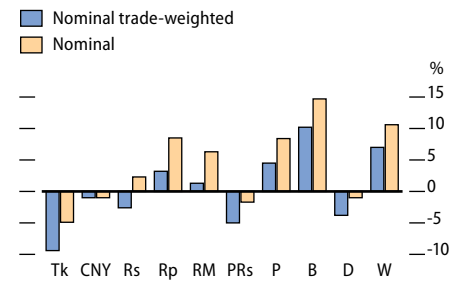
Linked to the problem of job creation is widening disparity in income distribution. Some widening of inequality may be "good" in the sense that it reflects rewards for enterprise and innovation and the incentives needed to apply resources to their most productive uses. But where widening inequality is a consequence of arrangements that restrict access to opportunity, that tolerate asset grabbing and rent seeking, and that perpetuate and widen social cleavages, it is more likely to be symptomatic of institutions that will also eventually stymie growth. The challenge is to formulate policies and to reform institutions in a way that creates and widens opportunities for those who might otherwise fail to share in the fruits of growth, without compromising on growth. *Key Indicators 2007* (ADB forthcoming) will focus on the issue of inequality.

Environmental stresses are also on the rise. Most people in developing Asia do not yet enjoy a level of affluence where they have a strong demand for improved environment quality. But failures of policy, and a lack of vision, as much as low incomes, are at the root of Asia's environmental problems. Integrating environmental objectives and concerns into broader development plans, giving a larger role to market-based instruments, and strengthening cooperation at a regional and international level, are some of the ingredients of a better approach to reconciling growth with environmental objectives.

In addition to these "macro" challenges are the "micro" challenges of building the markets and institutions needed to support growth, facilitate change, and improve social welfare.

As Asia's crisis painfully illustrated, macroeconomic stability and openness do not completely immunize countries against shocks. In East and Southeast Asia, the failure of institutions and structural policies to keep pace with fast expansion led to vulnerabilities that eventually derailed growth and caused reversals. To sustain growth, but also to improve lives, "second generation" reforms are needed. These reforms aim to develop markets and institutions that may be missing, incomplete, or inefficient. As these endeavors are necessarily shaped by political,

#### 1.1.11 Movements in exchange rates, 2006

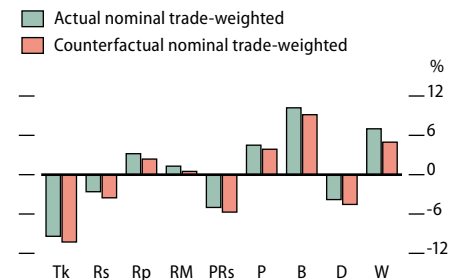


Note: Positive (appreciations)/negative (depreciations) movements computed using average rates in December 2005 and 2006.

Sources: International Monetary Fund, *International Financial Statistics* online database, downloaded 15 March 2007; staff estimates.

[Click here for figure data](#)

#### 1.1.12 Actual and counterfactual movements in exchange rates, 2006



Note: Impacts are calculated assuming a counterfactual 10% appreciation of the yuan, holding all other variables constant at December 2006 values.

Sources: International Monetary Fund, *International Financial Statistics* online database, downloaded 15 March 2007; staff estimates.

[Click here for figure data](#)

#### 1.1.13 Stock Exchange of Thailand equity price index



Source: CEIC Data Company Ltd., downloaded 15 March 2007.

[Click here for figure data](#)

social, and cultural factors, second generation reforms are inherently complicated and have a long time frame. Although desired outcomes are often clear—e.g., the elimination of corruption or better delivery of public services—there is much less clarity about how to achieve objectives. Priorities and sequencing are also likely to be sensitive to country context. An assortment of challenges fall within the ambit of these reforms: the building of efficient and safe financial and capital markets; the delivery of high-quality infrastructure services; improvement in the business investment climate and the development of arrangements that allow people, businesses, and countries to share risks and adapt to change. This list can easily be extended.

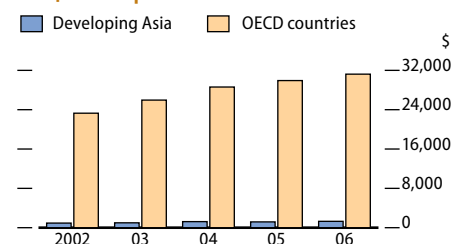
In the PRC, the Government has clearly laid out the challenges: to diversify and balance growth, spread its benefits more widely, and to “harmonize” economic and environmental objectives. But there are hard constraints. Diversifying growth will require a shift away from a bank-dominated financial system. Geared as they are for lending for enterprise investment, they do not do a good job of appraising risks or providing credit to households. Modernizing the PRC’s banking system will take time and is already drawing on foreign capital and expertise to support the extension of consumer credit and other new services.

The deepening of equity and bond markets also has a long way to go and will require significant support in terms of improved market infrastructure and better regulation. Widening access to social services, including health and education, is not simple either. In some ways, resources have run ahead of the capacity to deliver quality services. Well-trained nurses, doctors, teachers, and administrators are just as important as hardware but, in the short term, their supply is inelastic. And the solutions to the PRC’s environmental challenges do not lie with administrative measures alone. These are often blunt and can be circumvented. Markets have to be developed for environmental services and incentives appropriately geared to objectives.

In a number of countries—though not in the PRC or any longer in India—investment appears to be struggling. The ratio of fixed capital formation to income is falling in the Philippines and industry’s share in output is falling. In Pakistan, fixed investment is a constraint in pushing growth to the next level, and modernizing the economy. In Indonesia, the crisis and a comparatively slow recovery appears to have badly dented investor confidence. In Malaysia and Thailand, too, postcrisis investment rates have remained in the doldrums. Investment rates may have been too high before the crisis, but they are now too low. In important ways, low investment rates appear to be a consequence of deeply embedded regulatory and institutional difficulties that increase risks and uncertainty for potential investors. But blockages to private investment can occur in many shapes and forms (Box 1.1.5).

One factor that seems to be holding back private investment is poor delivery of infrastructure services. Across developing Asia, complaints are routinely voiced about gaps in infrastructure provision and bad service delivery. Good infrastructure is needed to connect villages and towns, to each other and to the global economy. Infrastructure is also needed to promote public health objectives, support reasonable levels of security and safety, and a decent quality of life. In India, poor

#### 1.1.14 Per capita GDP



Sources: Asian Development Outlook database; International Monetary Fund, *World Economic Outlook* September 2006 database, available: [www.imf.org](http://www.imf.org), downloaded 17 March 2007.

[Click here for figure data](#)

### 1.1.5 Ten years after the crisis: The facts about investment and growth

Ten years after Asia's crisis, an air of normality would appear to have returned and incomes in all the crisis countries now exceed their precrisis peaks. But a closer look shows that growth and investment rates have settled on a lower trajectory. On average in 2000–2006, growth in the five most directly affected countries (Indonesia, Korea, Malaysia, Philippines, and Thailand) ran some 2.5 percentage points behind performance in 1990–1996. Viewed over longer periods, performance also seems to have slipped a gear. Investment rates have tumbled. Although investment may have been too high before the crisis, on a variety of measures it now seems to be low. Slower growth and low investment rates may be linked.

A variety of possible explanations for slower growth and low investment rates are examined in *Ten years after the crisis: The facts about investment and growth* in Part 1. Different factors have been at work in different countries. Poor infrastructure may be holding investment back in Indonesia and the Philippines, and slower growth of employment and the labor force may be playing a role in Malaysia. In Korea, growth and investment may not be of such concern, given the country's high income levels and economic maturation.

An investigation of a range of possible explanations for low investment and slower growth draws out little that is concrete. Credit and loanable funds do not seem to be constraints, and capacity utilization rates appear to have returned to “normal” levels after a period of marked weakness. The idea that investment has been redirected to the People's Republic of China (PRC) is also difficult to square with the facts. As noted in several places in *ADO 2007*, the PRC and East and Southeast Asia show much complementarity in trade and investment.

The analysis then sifts through factors that might influence perceptions of risk and uncertainty. Information on risk ratings, equity prices, economic forecasts, corporate balance sheets, and the quality of governance in the crisis countries is presented. These data do not rule out the idea that, compared to the precrisis period, perceptions of risk and uncertainty in the crisis-affected countries (other than Korea) are now raised or that private sector investors have elevated precautionary motives (detering investments in hard projects, but not in more liquid assets). The analysis ends by identifying some of the things that might be done to stimulate investment, drawing on information from business investment-climate surveys.

rural infrastructure is taking its toll on agricultural productivity. In the Philippines, conspicuous infrastructure gaps have played a role in retarding industrialization and job creation. High levels of congestion, squalor, and grime in Asia's megacities are a result of years of sorely neglected infrastructure investment (and maintenance). By adding to costs, poor infrastructure services deter private investment. Indeed, the absence of upstream and downstream infrastructure can block altogether what might otherwise be lucrative private investments.

The neglect of infrastructure reflects a variety of deeper problems, including low levels of public sector revenue mobilization, misplaced public spending priorities, weak institutions, and regulatory failures. Private investors' enthusiasm for infrastructure investment, which could be detected in the early 1990s, has ebbed largely because of failures in policy and regulatory environments. By raising costs and risks and lowering expected returns, these failures have discouraged private investors. Business investment climate surveys point to a raft of impediments. These vary widely in nature and by degree across countries. Some countries, such as Malaysia, do well by international standards, but many do not. Heavy regulation, corruption, onerous and costly administrative requirements, and difficulties with contract enforcement can quickly turn profits to losses, and assets into liabilities. A stable and predictable macroeconomic environment is critical, but without complementary micro and institutional reforms, investment is unlikely to prosper.

In *Growth amid change* (Part 3), it is seen that rapid growth in developing Asia has not simply been about economies replicating

themselves on a larger scale. Countries become different as they grow, not only in terms of *what* they produce, but also *how* they produce. And the ways in which they change matter for growth. It is therefore important that countries develop systems that allow them to activate, manage, and capitalize on change. Policies for growth are policies that allow countries to learn, become more diverse, build on their successes, and, not least, put their failures behind them.

Approaches will have to be sensitive to country circumstances but some familiar ingredients will be important. High investment rates are required to build, expand, and upgrade economic activities. Support for infrastructure and a variety of other services is vital for economies of scale. Relevant and purposeful education is needed (Box 1.1.6). Labor mobility and flexibility need to be complemented by affordable social insurance and protection. As businesses create wealth, obstacles that raise costs and risks need to be removed. And economic openness is needed not just to enlarge markets, but also to increase variety and expose countries to modern technologies and new institutional designs.

Yet markets alone cannot be expected to instigate all these changes, and catalytic elements may be required. In particular, so as to remove obstacles to innovation and to the creation of new activities, partnerships between government and the private sector will be needed. Among other elements, viable operational approaches must embody learning, strong

### 1.1.6 Education and structural change in four Asian economies

Labor force surveys from India, Indonesia, Philippines, and Thailand are used to examine the linkages between rising education levels and changes in the structure of economic activity. The chapter in Part 3, *Education and structural change in four Asian economies*, documents what workers of different education levels do for a living, what they are paid for doing it, and how this has changed over time.

From an employment perspective, the importance of the “knowledge economy” is often overstated. Most workers labor in agriculture and lower-status services—activities that pay modest premiums to educated workers. While high-end services produce a rapidly growing share of GDP, especially in India, this reflects rocketing labor productivity, not a boom in their employment share. Overall, educational attainment has steamed ahead of job creation in sectors that historically hired the educated. These results are ambiguous, as they are consistent with at least two distinct views: the labor force is becoming more educated than is necessary given the jobs available; and the labor force was initially undereducated, so rapidly rising education levels are necessary to ensure competitiveness.

The correct interpretation differs across countries and is hard to pinpoint. However, a more detailed examination of the wage premiums received by educated workers in different activities is revealing. Returns to basic education have fallen over time. This is especially

true in industrial jobs, and among junior workers. This implies that if inadequate education levels have been inhibiting industrialization, the constraint has eased over time. Moreover, the least educated countries—India and Thailand—are industrializing the fastest. In contrast with findings during the “green revolution,” returns to education in agriculture are generally low, consistent with the notion that education carries returns when it facilitates the adoption of new technologies and activities. More positively, returns to basic education in services and tertiary education everywhere have typically risen.

In all jobs, Filipinos are the most educated, followed by Indonesians, and then Thais and Indians, including some in which more-educated workers do not command a premium. Such jobs are becoming more common and are employing increasingly educated workers in the Philippines, suggesting that the country is “overeducated.”

These results suggest that the benefits of schooling depend as much on conditions outside the classroom as inside it. They also leave open the possibility that raising the quality of education will carry greater benefits than increasing the quantity of workers with various levels of education. Education policy makers and development agencies are therefore strongly urged to measure the effects of education policies on quality and relevance, rather than focusing exclusively on raising attainment.



incentives, and mechanisms that minimize risks of moral hazard and rent seeking, and remove subsidies for failed experiments (Rodrik 2004).

## Risks

The outlook naturally rests on a large number of assumptions. It is always possible that events could evolve in surprising and unexpected ways, and derail projections. Given underlying economic momentum, risks remain tilted down.

Markets have moved to reprice risks so far this year in a calm manner, but this could yet give way to less settled conditions. Policy mistakes, geopolitical or other shocks, or unexpectedly bad news about economic direction could lead to a much bumpier time for markets. If asset prices get badly punctured and decisively reverse, the chill would soon be felt.

Although dissonance about the US outlook seems to be receding, the possibility of a sharper slowdown cannot be ruled out. A particular source of uncertainty is in how nonconstruction investment will hold up. If the US were to slow sharply, there would be knock-on effects on global industrial output growth and trade. Developing Asia would certainly not be insulated from such developments (Box 1.1.7). Failure of the Doha Round, too, could easily aggravate any slowdown in trade caused by slower global demand growth. In this regard, the condition of the Doha Round remains critical. Although negotiations are continuing among a small group of key members, time will finally run out at the end of June 2007, and even if an agreement can be brokered, it may not get the go ahead from the US Congress. In the growing vacuum left by any failure of Doha, preferential trade agreements would thrive further and already audible protectionist calls would be amplified.

The overall geopolitical and security situation remains a source of uncertainty. The price of strategic commodities, such as oil, could be hit by negative developments. The relief that lower prices are currently bringing to budgets, to inflationary pressures, and to import bills is welcome, but should not be counted on. In the event of a human flu pandemic, developing Asia would bear a disproportionately large cost.

Finally, recent developments have brought country risks to the fore. Security issues across Asia are largely unresolved. In some countries, important elections are scheduled and their outcomes will be crucial for confidence and prospects.

## References

- Asian Development Bank. 2006. *Asia Economic Monitor*. December. Manila.
- . Forthcoming. *Key Indicators 2007*.
- Rodrik, Dani. 2004. "Industrial Policy for the Twenty-First Century." *CEPR Discussion Paper No. 4767*. Center for Economic Policy Research, London.
- . 2006. "The Social Cost of Foreign Exchange Reserves." *NBER Working Paper No. 11952*. National Bureau of Economic Research, Inc.
- Spahn, Paul Bernd. 2002. "On the Feasibility of a Tax on Foreign Exchange Transactions." Report to the Federal Ministry for Economic Cooperation and Development. OECD, Bonn. February.
- Zee, Howell. 2000. "Retarding Short-term Capital Inflows Through Withholding Tax." *IMF Working Paper No. 00/40*. International Monetary Fund. Washington, DC.

### 1.1.7 Uncoupling Asia: Myth and reality

Is developing Asia uncoupling from the global business cycle? The chapter, *Uncoupling Asia: Myth and reality* in Part 1, presents evidence to show that the global business cycle is still important for Asia.

Recently, some commentators have argued that the fast-growing Asian economy and its potentially large spending power might represent the emergence of a powerful regional economy that can sustain its own momentum, largely independently of the business cycle in industrialized countries.

However, no evidence points to Asia's uncoupling, either structurally or cyclically. In fact, a renewed process of rapid economic growth and development has been accompanied by increasing economic integration, both intraregional within Asia and interregional with G3 (United States, European Union, and Japan).

Investigating the structure of Asian trade, the chapter demonstrates the close relationship between intra- and interregional trade, with the PRC playing the crucial role. The G3 economies are still the main export destinations for final goods leaving the region. Asia's economy is increasingly integrated both regionally and internationally. These are connected facets of globalization.

# Prospects for the world economy in 2007 and 2008

## Outlook for the major economies

### United States

The United States (US) economy grew by a solid 3.3% in 2006, reflecting an upturn in business investment and robust private consumption (Figure 1.2.1). However, quarterly GDP figures demonstrated a visible slowdown in the second half and the year ended on a less positive note. The weak spot was mainly associated with housing sector retrenchment. Residential investment contracted for five consecutive quarters from the last quarter of 2005, and both new and existing home sales fell significantly in the latter half of 2006. Although home sales are showing signs of stabilizing, housing starts and permits continue to slide (Figure 1.2.2), reflecting an excess supply of unsold homes. With falling house prices, these indicators suggest that expectations of an early resolution to the housing-induced slowdown are premature.

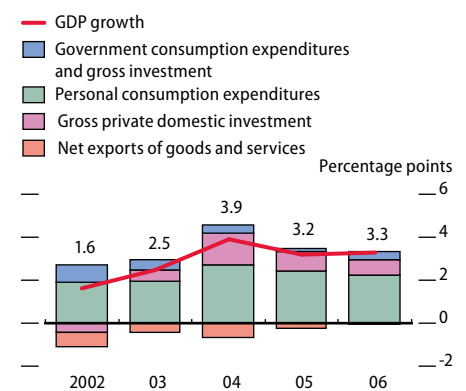
Several factors stopped the economy from going into a steep slide. Personal consumption expenditure remained buoyant and grew by 3.2% in 2006, underpinned by relatively healthy job gains and rising incomes. Household discretionary income was boosted by falling oil prices and easing inflation. Solid business investment in several quarters, on the back of strong corporate profits, was another factor.

But there are signs that the housing market trouble is spilling over into both the real economy and the financial market. Industrial production figures are slipping, with manufacturing activity slowing sharply in the last quarter. Falling orders for cars, household appliances, and construction materials could generate ripple effects. All of these added up to a contraction in business investment in the fourth quarter. The emergence of marked increases in payments delays on subprime mortgage loans since late February revealed further elements of weakness.

A pause in monetary tightening since last June has turned into a hiatus. Consumer price inflation has been ebbing, partly in reflection of the tightening, but also thanks to sharp declines in gasoline prices since the fall of 2006. Given the lessened pressure from inflation, combined with slowing economic activity, futures markets expect that the Federal Reserve may start to cut interest rates in the second half of this year. On the fiscal side, strong revenue increases reduced the 2006 US budget deficit for the second year in a row. The Congressional Budget Office projects the deficit to decline over the next 2 years.

The ongoing slowdown in US growth is expected to be moderate. The economy is projected to expand by still a respectable rate of 2.5% in 2007, followed by a quick recovery in 2008. Sustained income growth and low inflation will continue to underpin private consumption growth. A relatively benign business outlook is predicted, based on good corporate earnings and firm demand. While exports are seen maintaining recent

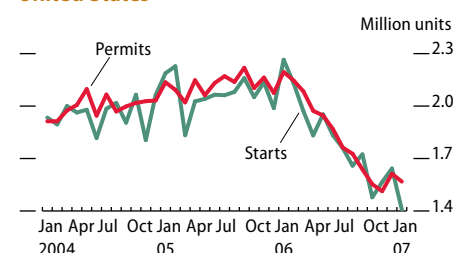
**1.2.1 Contributions to growth (demand), United States**



Source: Bureau of Economic Analysis, available: <http://www.bea.gov>, downloaded 1 March 2007.

[Click here for figure data](#)

**1.2.2 New residential construction, United States**



Source: US Census Bureau, available: <http://www.census.gov>, downloaded 15 March 2007.

[Click here for figure data](#)

gains, robust consumer spending will likely rekindle growth in imports this year. The current account is expected to deteriorate further, though the pace of growth in the trade deficit has stabilized.

### Japan

The Japanese economy continues a moderate but steady recovery, registering 2.2% growth in 2006 (Figure 1.2.3). Although the latest revisions (February 2007) reveal less than expected strength of domestic demand, it does not alter the underlying sweep. Strong exports and export-induced business investment are underpinning the recovery, since private consumption is trudging along only slowly. Exports rose by 9.5%, contributing 1.4 percentage points to growth. The pace of private consumption visibly weakened in 2006, posting only 0.9% growth. Stagnating labor market conditions and flattened wage growth contributed to a retrenchment in consumer spending, although a strong rebound in the final quarter was encouraging.

Industrial production rose substantially, pushing capacity utilization higher. Corporate profits set yet another record, offering strong impetus to business spending. Meanwhile, firms have remained cautious in both investment and hiring decisions. Despite the improved industrial activity and job conditions of the past few years, unemployment has stayed relatively high at 4.1%, reflecting firms' reluctance to hire. This picture should brighten over the forecast period, but not markedly given heightened labor productivity and continued corporate efforts to contain rising input costs. Further out, strong corporate profits and tight capacity should eventually exert a positive influence on the job market.

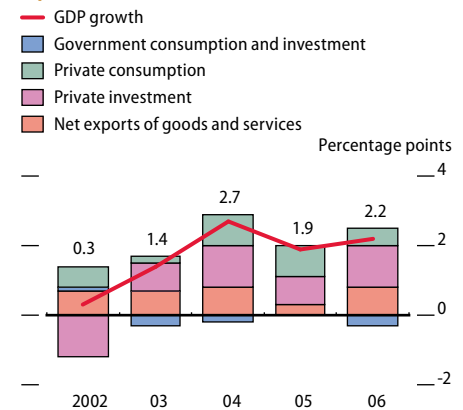
The Bank of Japan raised policy rates by another quarter point in February 2007, the second step since July 2006 in its intended move to a neutral policy stance. However, the slow pace of consumption recovery combined with weak inflation suggests little likelihood of the central bank acting aggressively, and it will probably leave the policy rate at under 1% for most of this year. Consumer price inflation barely made it into positive territory (Figure 1.2.4). If the yen strengthens and oil prices continue to fall, deflation could become a problem again.

The Japanese economy is expected to continue its modest recovery. Projected growth is 2.0% in 2007 on the ground of gradually strengthening domestic demand. Record export earnings should underpin the expansion in business capital spending, while strengthening the job market. The key to sustaining the recovery lies with consumers spending more. The country's aging demographic profile and related high pension burden continue to be a significant drag. Moreover, weakness in the domestic sector could persist, if the inevitable ending of macroeconomic stimuli over the medium term weighs down on consumer sentiment.

### Euro zone

A steady recovery is under way in the euro zone, which grew by 2.6% in 2006 on strong exports and firming domestic demand (Figure 1.2.5). Despite the sustained strength of the euro, exports surged by 8.4%. This boosted industrial production across the zone, particularly in Germany, Italy, and Spain. Business and consumer sentiment has improved (Figure 1.2.6). Strong corporate profits and cheap credit bolstered

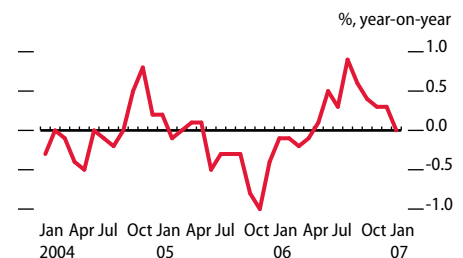
#### 1.2.3 Contributions to growth (demand), Japan



Source: Economic and Social Research Institute of Japan, available: <http://www.esri.cao.go.jp>, downloaded 12 March 2007.

[Click here for figure data](#)

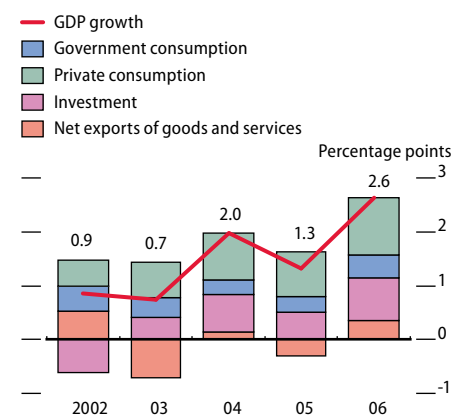
#### 1.2.4 Inflation, Japan



Source: CEIC Data Company Ltd., downloaded 13 March 2007.

[Click here for figure data](#)

#### 1.2.5 Contributions to growth (demand), euro zone



Source: Eurostat, available: <http://europa.eu.int>, downloaded 8 March 2007.

[Click here for figure data](#)

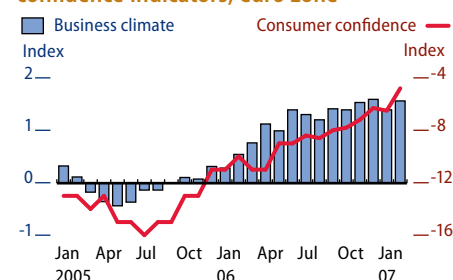
capital spending. This upward trend in turn exerted a positive influence on consumer spending, underpropping sound and balanced growth. Unemployment rates have trended down, and are now firmly under 8%.

A major downside risk is how consumers will react to tax increases. Long-term fiscal sustainability is a significant concern for the euro zone. The major economies of France, Germany, and Italy, have persistently exceeded the fiscal deficit ceiling of the stability and growth pact (3% of GDP). These economies have announced fiscal consolidation plans, combined with significant tax hikes. In both Germany and Italy, fiscal tightening is taking effect in 2007, amounting to an estimated 1% of GDP. So far, consumers appear to be relatively unswayed and their upbeat sentiment remains intact.

Although pressure is easing with falling oil prices, inflation stayed slightly above the European Central Bank (ECB) target rate of 2% in 2006. With the latest rise in March 2007 having lifted the policy rate to 3.75%, continued compression in interest rate differentials has strengthened the euro. While this curbs inflation, it may start to pinch exports. Given the improved growth outlook, ECB is expected to adopt a neutral stance after one more rate increase, perhaps in the middle of the year.

The euro zone is expected to grow by 2.2% in 2007. Prospects for exports and related business investment, as well as consumer spending, are positive. The investment outlook seems set to stay firm, reflecting the strength of corporate balance sheets and tight manufacturing capacity. A modest deceleration in world growth is not likely to seriously undermine performance of the external sector.

### 1.2.6 Business climate and consumer confidence indicators, euro zone



Source: European Commission, available: <http://ec.europa.eu>, downloaded 12 March 2007.

[Click here for figure data](#)

## World trade and commodity prices

World trade expanded rapidly in 2006, in volume terms accelerating to 9.7% from 7.7% in 2005 (according to World Bank estimates). Improved demand conditions in major industrial countries, along with firming consumer spending in Japan and the euro zone, buttressed strong industrial production both for major industrial countries and for developing Asia. Robust export performance from developing Asia also shored up world trade growth. The PRC continues to play a catalytic role in linking regional production chains with final demand from the rest of the world: regional partners' exports to the PRC again rose strongly, where they are processed and reexported to the rest of the world.

With a less buoyant economic performance slated for 2007, world trade growth is projected to moderate to 7.5% in export volume terms (Table 1.2.1). Industrial activity in major industrial countries has eased, with US industrial production slowing markedly. Japan and the euro zone are expected to take up some slack in demand

### 1.2.1 Baseline assumptions for external conditions

	2005 Actual	2006 Actual	2007 ADO 2007 projection	2008 ADO 2007 projection
<b>GDP growth (%)</b>				
Industrial countries <sup>a</sup>	2.4	2.9	2.3	2.6
United States	3.2	3.3	2.5	3.0
Japan	1.9	2.2	2.0	2.3
Euro zone	1.4	2.6	2.2	2.1
<b>Memorandum items</b>				
US Federal Funds rate (average, %)	3.2	5.0	5.1	4.9
Brent crude oil spot prices (\$ per barrel) (annual average)	54.4	65.4	57.0	54.0
Nonfuel commodity prices (% increase)	13.4	24.7	-4.5	-8.4
CPI inflation (OECD) (annual average)	2.6	2.3	2.1	2.0
World trade volume (% change)	7.7	9.7	7.5	8.0

<sup>a</sup> Growth rates for industrial countries are a GDP weighted average for the US, EU, and Japan.

Sources: US Bureau of Economic Analysis, available: <http://www.bea.gov>, downloaded 28 February 2007; Eurostat, available: <http://europa.eu.int>, downloaded 8 March 2007; Economic and Social Research Institute of Japan, available: <http://www.esri.cao.go.jp>, downloaded 12 March 2007; CEIC Data Company Ltd., downloaded 8 March 2007; World Bank, Commodity Price Data, available: <http://web.worldbank.org>, downloaded 8 March 2007; OECD Main Economic Indicators, available: <http://www.oecd.org>, downloaded 8 March 2007; World Bank, *Prospects for the Global Economy Forecast Summary*, available: <http://web.worldbank.org>, downloaded 8 March 2007.

from the anticipated moderation in the US, but much strengthening in private consumption in these two economies seems doubtful.

Even with slowing momentum though, the world economy remains relatively buoyant, given the underlying strength of the corporate sector and the gradual tightening of the labor market in most countries in the Organisation for Economic Co-operation and Development. Industrial production for the major economies may surprise to the upside if consumer spending gels this year.

The strength of the global economy in 2006 boosted global sales of consumer electronics. Worldwide semiconductor sales set another record (\$247.7 billion) in 2006, an increase of 8.9% from the previous year (Figure 1.2.7), while sales in the Asia-Pacific region registered a 13% expansion, driven by strong PRC demand. Although some slackening in economic activity has been seen in major industrial countries, a modest demand-driven expansion is expected in global high-technology industries in 2007. The Semiconductor Industry Association projects global semiconductor sales to grow by about 11% in 2007.

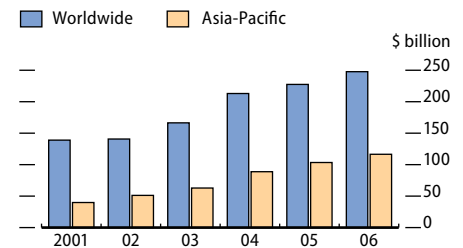
Demand for consumer electronics is partly supported by relentless global competition and falling prices. Dynamic random access memory (DRAM) prices, a proxy for global high-tech prices, have been slipping on fierce global competition and improved production capacity (Figure 1.2.8). Falling prices of popular consumer electronics have started to weigh on profit margins of the world's largest producers. Given the buoyancy of global demand, producers have maintained profits by expanding the volume of sales. But as the US economy, which is the largest market for end products, is expected to slow, further erosion of profits seems inevitable and could precipitate a downturn in the industry cycle.

The Brent crude oil price averaged \$65.4 a barrel in 2006, despite a sharp fall in the second half of the year. Global oil prices have declined by more than 20% since the peak of nearly \$80 a barrel in early August. The slump was mainly due to softening demand and rising inventories. The latest data on oil production and consumption show moderate increases in global spare capacity and inventory levels, as the supply/demand balance improves, despite lower output from the Organization of the Petroleum Exporting Countries (OPEC). However, underlying demand fundamentals remain strong, with a potential pick up in PRC demand.

On the supply side, periodic disruptions will likely continue given the political situations in major producer economies. The Brent crude oil price is expected to average about \$57 a barrel in 2007 based on futures prices adjusted for the cost of carry (Figure 1.2.9). Fundamental tightness, given the supply-demand outlook, suggests upside risks to the outlook, though.

Prices of non-oil commodities have been showing signs of stabilization since mid-2006 (Figure 1.2.10). Driven by double-digit growth in metals prices, non-oil commodity prices posted strong gains in 2006. Strong manufacturing production, particularly in the developing world, continued to support industrial demand, while supply-side difficulties persisted in production of major metals. Prices of zinc, copper, and nickel surged again in 2006 on sharp drawing-down on inventories and supply disruptions, though the combination of improving supply conditions and the prospect of slowing demand were moderating forces in the second half of the year.

### 1.2.7 Sales of semiconductors



Source: Semiconductor Industry Association, available: <http://www.sia-online.org>, downloaded 12 March 2007.

[Click here for figure data](#)

### 1.2.8 DRAM prices

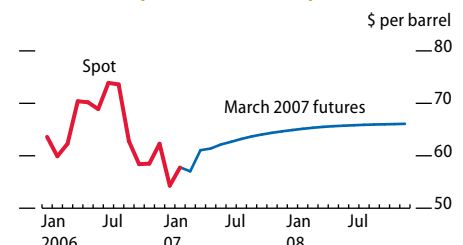


Note: US\$/256MB 333 MHz DDR (32M x 8) (Taipei, China).

Source: Bloomberg, downloaded 13 March 2007.

[Click here for figure data](#)

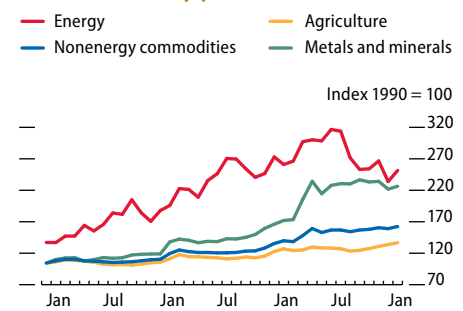
### 1.2.9 Brent spot and forward prices



Sources: Asian Development Outlook database; FutureSource.com, available: <http://www.futuresource.com>, downloaded 15 March 2007.

[Click here for figure data](#)

### 1.2.10 Commodity prices



Source: World Bank Commodity Price Data (Pink Sheets), various issues, <http://web.worldbank.org>, downloaded 13 March 2007.

[Click here for figure data](#)



Agricultural commodity prices also rallied, but not uniformly. Some agricultural food commodities enjoyed strong gains on weather-related supply shortfalls, declining stocks, and surging demand for biofuels. Sugar prices rose to a record high before moderating in the second half of 2006, while maize and wheat prices also made significant advances. Strong industrial demand bolstered by the PRC drove up prices of agricultural raw materials, including rubber.

After the spectacular rise in 2006, non-oil commodity prices are expected to stabilize. Some metals prices such as copper and zinc moved lower in early 2007 on the slower growth outlook. Although the supply-side constraints in some non-oil commodities are unlikely to disappear overnight, easing demand pressure along with gradual improvement in inventories should limit further price gains. Softer energy prices may also keep a lid on sugar and other oilseeds prices.

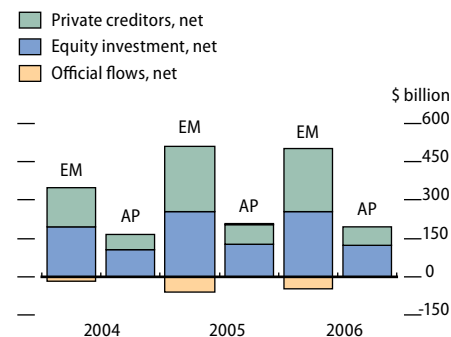
## Capital flows and financial markets

The global investment climate for developing Asia remains favorable. Despite the most recent correction in February–March, emerging market asset prices have kept their earlier large gains. In 2006, emerging market equity prices again staged a strong rally after a brief midyear sell-off. The strong performance of emerging Asian market equities partly reflected external demand and was accompanied by robust capital inflows (Figure 1.2.11). Net private capital flows to emerging Asia amounted to \$197.3 billion, only slightly down by 3.9% from the previous year, due to slightly smaller foreign direct investment flows. However, with its strong growth outlook, the region continues to be the primary recipient of private equity investment, attracting again more than 60% of net portfolio equity investment flows to emerging market economies in 2006.

Relatively low interest rates and benign liquidity conditions in capital markets have kept private credit flows generally buoyant, benefiting emerging Asian borrowers. Credit spreads remained near record lows for emerging market issuers through most of 2006 (Figure 1.2.12). While the region's strong fiscal position limited the need for new issuance of sovereign debt, corporate issuers took advantage of low funding costs. Foreign investors' Asian bond purchases (which account for a majority of private creditor nonbank flows) were boosted by expectation of currency appreciation. Although Asian corporate borrowers will have ready access to bank credit, borrowing from banks abroad is expected to slow in 2007, mainly due to government measures to curtail investment in the PRC.

Asian currencies strengthened further against the US dollar in 2006. Gains ranged from 1.9% for the Indian rupee to 13.8% for the Thai baht (Figure 1.2.13). Robust performance of both current and capital accounts underpinned the strength of most Asian currencies. Narrowing interest rates continued to weigh on the dollar, which fell by 11.7% against the euro in 2006. Significant interest rate differentials between the US and Japan limited the dollar's fall against the yen to only 0.8%. Expectations for strong growth will continue to underpin the strength of Asian currencies in 2007, as will narrowing interest rate differentials, due to monetary tightening in some countries.

### 1.2.11 Net capital flows to emerging markets and Asia-Pacific



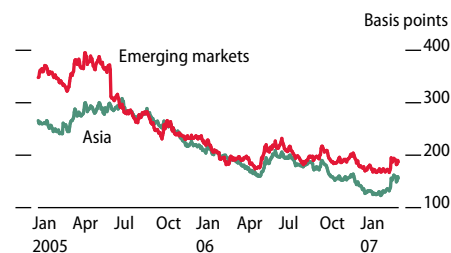
EM = emerging markets; AP = Asia-Pacific.

Note: Emerging markets and Asia-Pacific follow the definition of the Institute of International Finance Inc.

Source: Institute of International Finance Inc., *Capital Flows to Emerging Market Economies*, various issues, available: <http://www.iif.com>.

[Click here for figure data](#)

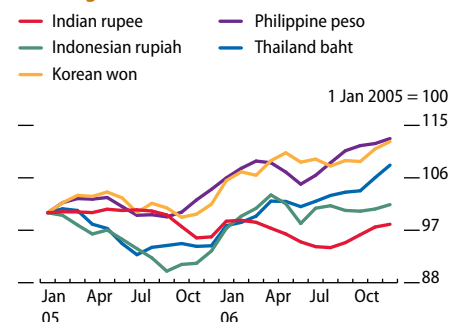
### 1.2.12 Sovereign credit spreads



Source: Bloomberg, downloaded 15 March 2007.

[Click here for figure data](#)

### 1.2.13 Nominal United States dollar exchange rate index



Sources: International Monetary Fund, *International Financial Statistics* online database; Central Bank of China, available: <http://www.cbc.gov.tw>; both downloaded 13 March 2007.

[Click here for figure data](#)

# Subregional summaries

## Central Asia

### Subregional performance

Subregional growth in gross domestic product (GDP) was boosted by a favorable external environment as oil and non-oil commodity prices rose. GDP growth strengthened to 12.4% in 2006 (Figure 1.3.1), up from 11.2% in 2005, and from an average of 9.4% over 2000–2005. The hydrocarbon exporters—Azerbaijan, Kazakhstan, Turkmenistan, and Uzbekistan—accounted for much of the growth. Most non-oil exporters also saw higher growth, benefiting from stronger non-oil commodity prices, and from workers’ remittances from, primarily, Kazakhstan and the Russian Federation. Only the Kyrgyz Republic’s growth was anemic.

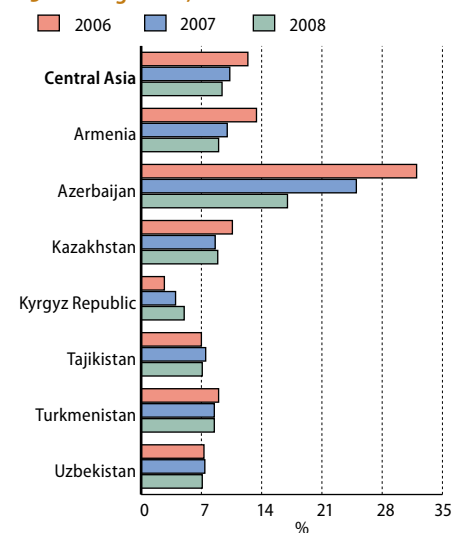
While vibrant external demand is the proximate cause of the growth upturn, domestic demand, in particular private consumption growth, has also been buoyant, stimulated by higher wages, remittances, and credit expansion. The rapid expansion in construction and services across the subregion is bifurcated, from the oil boom on the one hand, and from remittances on the other.

Strong domestic demand, together with rising net foreign assets, put upward pressure on prices and the money supply. Subregional average consumer price inflation rose slightly to 8% in 2006, with higher inflation reported in four countries (Tajikistan, Kyrgyz Republic, Kazakhstan, and Armenia) and a fall reported in two official estimates (Azerbaijan and Uzbekistan).

For countries that experienced higher inflation, contributory factors include wage and pension increases, higher food and fuel prices, and credit expansion. Azerbaijan’s officially reported decline in inflation is at odds with alternative estimates that are more consistent with the last couple of years’ surge in spending. Reflecting expansion in credit to the private sector and accelerating official reserves accumulation, broad money has grown strongly in several countries. Monetary tightening measures taken by central banks, including raising refinancing rates and reserve requirements, have not been very effective so far.

Fiscal positions showed diverging patterns as oil exporters’ soaring revenues were used to ramp up public spending while the non-oil exporters’ were accompanied by expenditure restraint. Azerbaijan and Kazakhstan pursued an expansionary fiscal policy, spurred by burgeoning oil revenues: Azerbaijan’s non-oil fiscal deficit as a share of non-oil GDP in 2006 was estimated at an unsustainable 36%. Kazakhstan’s

1.3.1 GDP growth, Central Asia



Sources: Asian Development Outlook database; staff estimates.

[Click here for figure data](#)

non-oil fiscal deficit was much lower. The saving factor (literally) was the large increases in net assets of the oil funds of the two countries. With improved tax collections and expenditure restraint, the Kyrgyz Republic and Tajikistan managed to improve their fiscal positions despite the severely constrained fiscal space they had to contend with, while Uzbekistan and Turkmenistan maintained a more or less balanced recorded budget. Of concern are the still sizable energy sector quasi-fiscal deficits in Azerbaijan, Kyrgyz Republic, and Tajikistan, that reflect weak public resource management and that narrow the fiscal space.

External performance reflected differing dynamics of trade and invisibles accounts. Large current account surpluses were recorded in Azerbaijan, Turkmenistan, and Uzbekistan, as commodity price-driven surges in export revenues outpaced imports. There was a notable slowing of import growth in Azerbaijan as hydrocarbon-related imports of machinery and equipment tapered off with the completion of a number of large projects. Kazakhstan's more modest current account surplus as a share of GDP was due to the sizable trade surplus being offset by hydrocarbon-related services and income payments.

On the capital account, hydrocarbon-related net foreign direct investment (FDI) inflows fell in Azerbaijan but picked up in Uzbekistan. Export growth recovered in the Kyrgyz Republic and accelerated in Tajikistan but slackened in Armenia. All three countries saw acceleration in import growth fueled by higher energy costs and strong remittance-driven growth in demand for consumer imports. Trade deficits were partially offset by strong remittance inflows in other accounts of the balance of payments.

On the financing side, net FDI covered around one third (Kyrgyz Republic) to one half (Armenia and Tajikistan) of the current account deficit. Gross official reserves across the subregion have grown. This has proved to be a mixed blessing in that the resulting thicker import cushion comes with pressure on money supply from surging foreign exchange inflows. This is problematic in an environment where, in many cases, sterilization options are limited. Among low income countries that depend largely on official concessional assistance, currently, external debt sustainability is a concern for the Kyrgyz Republic. Among countries with access to capital markets, Kazakhstan's external borrowing by private commercial banks has risen steeply.

The subregion has seen some headway on structural reforms in certain areas such as small-scale privatization, banking reform, and infrastructure reform but in other areas such as governance and enterprise restructuring, the reform backlog is significant. Several countries have continued to improve the private sector incentive framework by streamlining the tax regime (Kyrgyz Republic and Uzbekistan), competition law (Kazakhstan), and business registration and licensing (Armenia and Azerbaijan). Uzbekistan's slow steps in trade reform (both external and domestic) continues to be an impediment to private sector development.

Several countries took measures to tighten bank regulation and supervision. In addition, Tajikistan made tangible progress in deregulating foreign participation in banks, strengthening minimum capital requirements, and delicensing banks. Kazakhstan continued to

develop its securities markets and nonbank financial institutions. Areas to be looked at with renewed vigor include ownership transparency and related lending (Armenia), stalled bank privatization (Azerbaijan), and performance by banks of functions inappropriate for financial intermediaries (Uzbekistan).

With regard to sector reforms, in agriculture Uzbekistan continued to transform *shirkats* (farm cooperatives) into leaseholds, a contributory factor to reported higher productivity in the cotton subsector. In energy, Tajikistan undertook corporatization of the state electricity company and the formulation of a restructuring and unbundling strategy for the sector. Progress on public sector reform was mixed. While small-scale privatization has come on well (and is largely complete in several countries), large-scale privatization has made but a few, faltering steps. Corporate governance in public enterprises is also hobbled. Recent reform of the social protection system include improved social assistance targeting and pension reform (Azerbaijan).

### Subregional prospects

Subregional growth is expected to remain strong with subregional growth at about 10% in 2007 and 2008. The external environment is likely to remain favorable even though oil prices are easing and non-oil commodity prices are softening. The subregion's hydrocarbon producers are expanding capacity that will meet higher demand from the larger Asian economies, particularly the People's Republic of China (PRC). Meanwhile, the hydrocarbon-importing countries now seem likely to get a respite from high oil prices. After a pause, hydrocarbon-related FDI inflows to the subregion's two largest oil producers (Azerbaijan and Kazakhstan) are likely to resume, while Uzbekistan is set to see a further pickup in FDI, particularly from the PRC and the Russian Federation.

Although non-hydrocarbon commodity prices are now softening, growth in demand, especially from the PRC, is seen sustaining export growth rates, while import growth rates could decelerate (as easing oil prices relieve pressure on trade balances).

Private consumption in the two big oil producers could moderate if domestic credit conditions tighten and greater wage restraint is exercised to check inflationary pressures. Private consumption in remittance-generating countries could remain strong if the pace of inflows keeps up.

Some downside risks are seen in: further surges in foreign exchange inflows, so creating excess liquidity and feeding through into very high inflation; deteriorating quality of loan portfolios as credit expansion continues unabated; tighter regulation of foreign migrants in the Russian Federation adversely affecting remittance inflows; worsening current account balances among oil-importing countries; and narrowing of fiscal space in countries with external borrowing constraints.

### Country highlights

#### Armenia

Largely on account of the rapidly growing nontradable sectors of construction and services, the economy continued to grow beyond expectations at 13.4% in 2006. The fiscal deficit was kept in check through expenditure rationalization and tax reforms. Higher

remittances, public spending, and private investment supported growth in domestic demand. Rising fuel prices and a poor agricultural harvest put some pressure on prices, but inflation remained contained. A moderate deceleration in GDP growth to 9–10% is expected in 2007–2008 as production capacity limits are reached and the pace of expansion in construction and services eases. Prospects are promising, but structural reforms have to continue, parliamentary and presidential elections must be seen to be democratic, and subregional conflicts need to be resolved to allow closed trade routes to open.

#### *Azerbaijan*

Phenomenal economic growth at 32% was recorded in 2006, powered by soaring production and exports of oil and gas. Very rapid expansion in government spending and the money supply are putting increasing pressures on prices and inflation in the last quarter of the year accelerated to 11%. Oil and gas production from recent investments will continue to underpin remarkable growth projected at 25% in 2007 and 17% in 2008. Foreign investment, primarily for hydrocarbons, is beginning to taper off as large projects in the sector become operational. The Government is bullish that much higher domestic public investment, especially non-oil, will partly offset this decline. Yet rapid and deep structural reform is imperative for such investment and—along with controlling inflation and preventing excessive exchange rate appreciation—is the key challenge.

#### *Kazakhstan*

Strong prices for oil and gas, rapid growth of domestic consumption, and a rebound in investment continued to propel the economy. Money supply grew by 80% over the year, fueled by a huge increase in credit to the private sector. GDP growth in 2006 was 10.6% and is projected to stay high at nearly 9% in 2007 and 2008. But these very strengths carry within them the seeds of future challenges—immediately, keeping rising inflation in check, and improving banks' risk management of their loan portfolios; further out, diversifying the economy, pushing through structural reforms, enhancing competitiveness, and ensuring more equitable development. These measures, plus fiscal and monetary policy coordination, are needed to ensure sustainable growth.

#### *Kyrgyz Republic*

Nearly 2 years after the Tulip Revolution, political stability remains elusive. Although the new Government made real efforts to maintain macroeconomic stability, tensions between the different power centers have distracted the authorities and hampered structural reforms, including the passage of key economic legislation. In addition, an accident at the Kumtor gold mine, the largest industrial contributor, kept growth slow at 2.7% in 2006. The medium-term outlook, though positive, is clouded by governance concerns, a poor business climate, and political uncertainty.

#### *Tajikistan*

The economy expanded at 7% in 2006, despite higher costs of oil and gas. Burgeoning remittances spurred demand, as supply shocks from higher



oil, utility, and food prices pushed inflation back into two-digit territory. Implementation of large infrastructure projects and a favorable outlook for aluminum production (the dominant industry) should propel growth to 7.5% in 2007. Medium-term economic prospects are promising, if the expansion in externally financed infrastructure projects is supported by the broad development reforms.

### *Turkmenistan*

The economy continued to grow rapidly in 2006, but the exact figure was likely lower than the official estimate. It is uncertain whether the newly elected president will embrace reform and engage with the international community. The country is heavily dependent on exports of gas and oil, a situation unlikely to change soon. Growth in 2007 is seen coming in at 8.5%, little changed from a year earlier. The key development challenges are to effectively channel oil and gas revenues toward productive investment, implement market-oriented reforms, and rebuild human capital.

### *Uzbekistan*

Continued strong—but narrowly based—growth was driven by increased net exports, a pickup in workers' remittances, and productivity gains in agriculture. Major challenges over the medium term are to continue managing monetary and fiscal policies to cope with inflationary pressures, integrate the economy with the rest of the subregion, advance structural reforms in banking, restructure state enterprises, and remove state controls hindering private development. Economic growth in 2007 is projected at somewhat higher than 7%, a rate maintained for the past 3 years. Further diversification from commodities and energy would also help sustain growth.

### **Development challenges**

Despite differences in resource endowments, in sources of growth, and in the pace of structural reforms, the countries of Central Asia face three main common challenges. First, all of them are undergoing transition-induced structural change. From overindustrialization before transition (as measured by industry's disproportionate share in employment), these economies are undergoing industrial restructuring that has entailed job destruction in old, inefficient state enterprises, and resource reallocation and job creation in new private firms. Some countries (e.g., Armenia) are quite advanced in the process of industrial restructuring, while others are still lagging. In the latter, a weak business environment is delaying the exit of inefficient state enterprises and new entry by private firms.

Second, much of the new industrial activity in the subregion involves the natural resource industries: energy (Azerbaijan, Kazakhstan, Turkmenistan, and Uzbekistan), gold (Kyrgyz Republic and Uzbekistan), aluminum (Tajikistan), and copper and other base metals (Armenia). On the positive side, the subregion's natural resource wealth has attracted FDI and spurred growth of related construction and services industries. The downside is that the subregion's share of skilled labor-intensive and capital-intensive manufacturing exports is on the decline. The subregion's policy makers recognize the inherent risks in being overly

dependent on natural resource-based industries, not the least of which is heightened vulnerability to price shocks. Economic diversification is therefore high on their agendas. The challenge is to pursue this within an industrial policy framework based on a level playing field, and on transparency and accountability.

Third, surging foreign exchange inflows, whether due to oil revenues or remittances, are generating excess liquidity across the subregion. Thus far, the burden of mopping up the excess liquidity has fallen on central banks. Indeed in several cases, the fiscal stance has been part of the problem, not the solution. The challenge for policy makers is to pursue an effective strategy for price stability and enhance economic competitiveness.

## East Asia

### Subregional performance

A fourth consecutive year of double-digit expansion (10.7%) in the People's Republic of China (PRC) lifted aggregate subregional growth to 8.7% (Figure 1.3.2), easily exceeding the average of the previous 5 years. Buoyant demand for East Asia's manufactured exports helped underpin the growth acceleration: subregional exports grew by 19.0% in nominal terms (the PRC's by 26.0%). Net exports contributed significantly to GDP growth in the major subregional economies. Domestic demand also grew, with private consumption picking up in the PRC; Hong Kong, China; and Korea. However, private consumption decelerated in Taipei, China because of a tightening of consumer credit. Private investment strengthened in all those economies, as well as in Mongolia, which is attracting investment into mining. With a boost from the growth in exports, the subregional current account surplus vaulted to 7.0% of GDP, double the level of 4 years earlier. Inflation was low at 1.6% as generally favorable weather helped limit food price increases.

### Subregional prospects

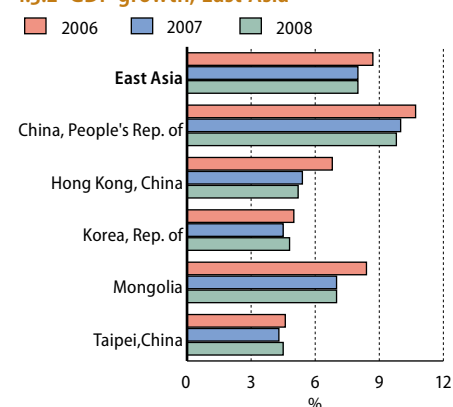
Measures taken over the past 2 years by PRC authorities to rein in fixed asset investment are expected to bite in 2007, trimming growth in that economy to about 10%. This will bring down aggregate growth to 8.0%. All the economies in the subregion are forecast to slow, but still achieve solid growth. External demand will soften as growth rates subside in industrial nations. Domestic demand will strengthen, though, in Hong Kong, China; Korea; and Taipei, China. In the PRC, consumption demand is projected to rise, providing some counter to the targeted reduction in fixed asset investment. The subregional current account surplus will be marginally lower than 2006. Inflation will stay around 2%, assuming normal weather patterns.

### Country highlights

#### People's Republic of China

This economy expanded at a cracking 10.7% in 2006, the fastest rate in 10 years. Industry, including manufacturing and construction, was the main contributor, but services also grew robustly. On the demand

1.3.2 GDP growth, East Asia



Sources: Asian Development Outlook database; staff estimates.

[Click here for figure data](#)

side, investment accounted for much of the growth, though net exports and consumption both made substantial contributions. Investment was driven largely by firms reinvesting profits into new industrial activity. The Government's efforts to restrain fixed asset investment pulled its growth down from about 30% in the first half of the year to 21% in the second. In particular, investment slowed sharply in industries that have built excess production capacity, such as textiles, coal mining, and electricity.

Faster growth in exports than imports boosted the trade surplus by \$60 billion to \$194 billion in 2006. Bilateral surpluses with the United States (US) and European Union (EU) surged, sparking trade friction and accusations of an undervalued yuan. The rising trade surplus, coupled with higher tourism receipts and interest income on the large official foreign reserves, boosted the current account surplus to 8.6% of GDP. Foreign direct investment (FDI) reached \$69.5 billion and speculative capital flowed into property and stock markets. Foreign exchange reserves shot past the \$1 trillion mark by year-end. In the job market, 11.8 million new jobs were created in urban areas last year, but millions of migrants from the countryside, new graduates, and laid-off workers still went without work. As a result of the excess capacity and strong competition in manufactured products, inflation moved down to 1.5%.

Steps taken to cool the economy included a raft of administrative measures to restrain investment, such as raising downpayment requirements for housing purchases to curb speculation and sending inspection teams to provinces to check if new investment projects violate land-use and environmental regulations. Market-oriented tightening included five increases in the reserve-requirement ratio for commercial banks between mid-2006 and February 2007, and three hikes in the benchmark 1-year lending rate through March 2007. These measures moderated growth in domestic credit, but actual lending and broad money increased faster than targets set by the central bank. To ease upward pressure on the yuan from the surging trade surplus and strong capital inflows, the authorities allowed the currency to appreciate by 2.4% against the US dollar between July and December, a little faster than 0.9% in the first 6 months.

In 2007, the PRC's economic growth is projected to moderate to 10.0%. Growth of industry is forecast to edge down by about 1 percentage point to 11.0% because of significant oversupply in some sectors; slower growth in investment as a result of tightening measures; and easing export growth as external markets weaken a little. Agriculture is expected to benefit from a new official emphasis on rural development and services from higher incomes, both of which should maintain growth in private consumption.

Responding to various restrictions, especially those targeted at energy use and pollution, and others curbing property speculation, fixed investment growth is forecast to decelerate to 20%. The softening in export markets and a reduction in PRC tax rebates for exports are expected to reduce the growth of merchandise exports to 18% in 2007. Import growth will ease to about 18% as investment decelerates. The large export base and the moderation in import growth suggest that the trade surplus in goods will climb to about \$257 billion by 2008, and the

current account surplus will increase further. Inflation will likely stay below 2% in 2007. Over the next 5 years, GDP growth is expected to average about 9%.

### *Hong Kong, China*

This economy grew robustly by 6.8% in 2006, a third successive year of above-trend growth, though the rate decelerated from the previous 2 years. Domestic and external demand supported this performance. Closer links with the booming PRC benefited the economy in several ways: most importantly through reexports of PRC goods, and through now-substantial financial services exports to the PRC. (Services account for more than 90% of the economy's GDP.) In 2007, GDP growth is projected to come down to 5.4%, given the expected slowing in the PRC and US economies. Consumer spending is expected to strengthen on the back of generous budget givebacks announced in early 2007. Inflation is seen easing from 2.0% to 1.6% in 2007 as budget initiatives exert downward pressure on prices.

### *Republic of Korea*

Growth accelerated to 5.0% in 2006, the fastest rate in 4 years. It was spurred by a recovery in domestic demand and strong exports, though momentum slowed over the course of the year. Private consumption posted the best rate of expansion since the credit-card crisis of 2003. The recovery broadened with a pickup in capital investment as companies invested in machinery and equipment.

This year is likely to see a continued expansion of investment in manufacturing, joined by greater housing investment. Private consumption growth, weighed down by high levels of household debt, is expected to continue, albeit at a moderate pace. However, growth in exports will ease as a consequence of the slowdown in the US. Rapidly rising imports, driven in part by demand for overseas travel and education, will halve the contribution of net exports to growth. The economy is forecast to grow by 4.5% this year, a half percentage point down from 2006. Inflation will inch up to 2.4% from 2.2%, reflecting the strengthening domestic demand.

### *Mongolia*

This narrowly based economy depends heavily on agriculture and mining. But as the winter was mild and copper and gold prices were high in 2006, the economy performed well. GDP growth rose to 8.4%, marking the fourth straight year of 6%-plus expansion. Growth is forecast to decelerate in 2007, since mineral prices are expected to stabilize, the rate of economic expansion in the PRC (Mongolia's main export market) will be tempered, and livestock growth rates will likely slow. Inflation, which often runs at relatively high levels in this economy, receded to just over 5% in 2006, but will come in a bit higher in 2007.

### *Taipei, China*

On the back of stronger exports, the economy accelerated in 2006, recording growth of 4.6%. Exports of optical equipment, electronics, and machinery gained from the stronger international trade environment.

Domestic demand was subdued for most of the year, damped by a tightening of consumer credit that followed the bursting of a credit-card bubble in late 2005. This year, consumption and investment demand are expected to pick up, cushioning the economy from an expected slowdown in external demand. On balance, that will leave GDP growth slightly below last year's pace, at 4.3%. Inflation will remain at low levels (1.6% in 2007 compared with just 0.6% in 2006).

### Development challenges

East Asia faces various challenges. In the PRC, concerned that rapid industrial and export-led growth has caused imbalances in the economy, the authorities aim to rebalance the economic structure. This will involve, on the demand side, reducing reliance on investment and exports for growth in favor of private consumption, and on the production side, a shift from industry-led growth to more emphasis on services. Planners view economic rebalancing as a social, as well as economic, objective. This policy has evolved over several years, but progress is slight: the dependence of growth on external demand is still high; the surge in investment and commercial bank lending has not yet been brought under control; and the share of gross capital formation in expenditure-based GDP rose in 2006, while that of consumption fell. Furthermore, the share of services in total GDP remains low, and actually declined in 2006. Environmental protection targets were not met, either.

On social metrics, income inequalities in the PRC have worsened and unemployment and underemployment have become serious concerns for policy makers. The Government is trying to steer policies in directions that will gradually achieve a rebalancing, while maintaining high enough rates of economic growth to absorb large numbers of people moving to the cities in search of higher living standards.

Korea faces the challenge of raising services productivity, since lagging productivity is holding back improvements in the labor market and damping consumption growth. This reflects, in part, incomplete structural reforms in services and, more broadly, in the labor market.

For its part, Taipei,China needs to nurture new sources of economic growth, given that much of its labor-intensive manufacturing has migrated to the PRC. Services firms in Taipei,China are mainly oriented toward the domestic market. The challenge is for manufacturers to move further up the value chain and for services firms to turn outward for expansion.

One challenge facing Hong Kong, China is how to broaden the tax base. It must also attend to environmental issues and an aging population. Perhaps the biggest test is to maintain the high institutional standards that support its financial services industry at a time when these services are increasingly tied to mainland companies that have operated according to different standards.

Mongolia, at an earlier stage of development than the other economies, still confronts a poverty incidence estimated at nearly one third. An important challenge is to use government revenues from mineral resources to set the country on a sustainable development path, while addressing social and environmental problems.



## South Asia

### Subregional performance

South Asia's GDP grew by 8.7% in 2006 (Figure 1.3.3), the second year above 8.5%, having averaged more than 7.5% a year growth since 2003. The GDP of nearly every country in the subregion grew at over 6.0% in 2006. India turned in the highest growth rate of 9.2% among the large economies and the Maldives grew at 18.2%, fastest among the small economies. The services sector contributed most to growth in South Asia, but industry sector growth accelerated in India and Bangladesh, buttressing the sustainability of high growth rates in the future. High levels of consumption and investment boosted growth rates. Domestic demand expanded because of rising incomes, credit expansion, and strong workers' remittances. World economic expansion kept external demand strong fostering export growth, while an improved business climate attracted increased domestic private investment and foreign direct and portfolio investment, both reaching the highest historical levels in the large economies.

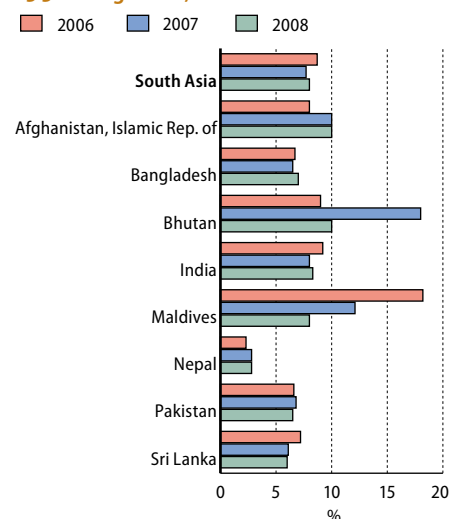
Demand pressures and high world oil and commodity prices led to an increase in the subregion's inflation rate to 6.0% in 2006. Inflation picked up in Bangladesh, India, and Nepal, but came down in Pakistan and Sri Lanka (though from much higher levels). Despite several central banks' monetary policy measures that increased nominal interest rates to tighten liquidity, rising inflation rates kept real interest rates low. Simultaneously, government budget deficits remained at elevated levels to reinforce credit expansion, partly because of the increased subsidy to buffer rising oil prices, reconstruction efforts following natural disasters, and high development expenditures.

South Asia's current account deficit increased marginally in 2006 to 2.1% of GDP. Although merchandise exports grew at a robust rate of 18.8%, imports grew at an even higher rate of 24.9%, induced by domestic demand pressures and high world commodity prices. Exports of services and the surge in workers' remittances brought the current account to a narrow deficit. The subregion's foreign exchange reserves increased because of large net capital inflows. Real effective exchange rates remained stable.

### Subregional prospects

Economic growth in developed countries is expected to slow in 2007 and stage a modest recovery in 2008. The world price of oil and other commodities is likely to fall. With this backdrop, South Asia's prospects still remain bright due to strong domestic demand and investment. Nevertheless, regional economic performance is likely to modulate in step with developed-country trends, though at robust levels of GDP growth of 7.7% in 2007, rising to 8.0% in 2008. Larger countries in the subregion are forecast to maintain high rates of growth, with India averaging about 8% a year and Pakistan and Bangladesh around 7% a year over the next 2 years. GDP growth in the smaller countries over the same period is likely to be varied, ranging from yearly average growth rates of 14% in Bhutan to 3% in Nepal. The services sector is anticipated to lead economic growth, backed by accelerated growth in manufacturing.

1.3.3 GDP growth, South Asia



Sources: Asian Development Outlook database; staff estimates.

[Click here for figure data](#)

Monetary policy measures taken in 2006 by several countries are likely to curb credit growth to the private sector for consumption and investment, reinforcing sluggish demand from developed countries. Moreover, improving fiscal balances resulting from increased tax revenues and lower subsidies to buffer high oil prices are also expected to rein in credit growth to the public sector. These developments will probably dampen the pace of economic growth and reduce the subregion's rate of inflation to about 5% a year during 2007 and 2008.

Despite the reduction in world commodity prices, South Asia's growth of merchandise imports is likely to outstrip exports because of high regional growth rates and lower demand in developed countries. Vigorous growth in exports of services and workers' remittances is expected to substantially compensate for the trade shortfall, leaving the current account with small deficits of about 2% of GDP for the next 2 years. High growth rates in the subregion will continue to attract large capital flows. Countries are likely to add to their international reserves and maintain stable exchange rates.

## Country highlights

### *Islamic Republic of Afghanistan*

In the licit economy, economic growth slowed to 8.0% in 2006 as agriculture was hit by another drought, while reconstruction-linked construction and services continued to expand. Growth is expected to recover to 10% in 2007, assuming normal rainfall.

The Government continued along its track of solid macroeconomic policy and structural reforms. Yet popular discontent with slow reconstruction, pervasive corruption, as well as sharply deteriorating security, institutional and human resource constraints, a heavy reliance on aid, and a very low domestic revenue base, all remain formidable challenges. As does the impact of opium production, which reached record levels in 2006. Since current, licit, drivers of growth cannot provide sustained growth, creating a private sector enabling environment and diversifying the economy remain crucial tasks.

### *Bangladesh*

At 6% over the past 4 years, strong GDP growth has been underpinned by more market-oriented economic policies, a dynamic garment sector, and substantial inflows of overseas workers' remittances. The lead-up to the parliamentary elections in January 2007 was generally expected to be a rough patch given the country's contentious political environment; the constitutional mechanism of a neutral caretaker government was expected to help smooth the way. Deepening political deadlock culminated with the president in January declaring a state of emergency and calling off the elections.

The new caretaker Government has continued with established economic policies and expedited structural and sector reforms. It has taken a broad agenda of activity, including an extensive anticorruption drive that it sees necessary to establish better foundations for holding the elections. GDP is forecast to maintain its recent momentum and grow by 6.5% in 2007. Inflation, which has trended upward in recent

years, is expected to keep inflation in check at 7% by a tightened monetary policy.

### *Bhutan*

The huge Tala hydropower project started commercial production in July 2006 boosting GDP growth for the year to 9.0%. Tala is forecast to double electricity export capacity, boosting GDP growth to 18% in 2007, raising government revenues significantly and pushing the current account into surplus. This is all highly beneficial, however, the employment elasticity of hydropower is low and has little impact on creating jobs for the many tens of thousands of young people entering the labor market or migrating to urban areas. While some progress has been made, Government policies need to stimulate further greater private sector activity and to diversify the economy.

### *India*

Two years of above-trend growth at around 9% are causing inflation. Optimism over growth prospects has brought high capital inflows and currency appreciation pressure. Manufacturing and construction growth have stimulated a voracious appetite for credit, which in turn complicates attempts to control the money supply.

Agricultural stagnation is the key structural challenge. Rising food prices contribute to inflation. Stagnation also widens inequality, as industry accelerates and services pull on robustly. It also raises pressures to transfer land out of agriculture into industry, and highlights the importance of industrial job creation for growth, labor absorption, and poverty reduction. Yet land transfer from agriculture to industry implies significant worker displacement, and has caused serious social unrest. With inflation high, and serious structural hurdles for the economy to overcome, the Reserve Bank of India finds itself in a precarious position, since it must damp expenditures in the short run, while also ensuring adequate credit supply to promote manufacturing and agricultural investments in the medium term.

However, interest rates have risen, construction growth has already tapered, and the rupee is appreciating slightly. Agricultural planting has responded to rising prices. These trends will help moderate inflation. A soft landing therefore appears likely as growth is expected to decelerate smoothly to 8% in 2007.

### *Maldives*

The economy took a downturn in 2005, largely due to the impact of the December 2004 tsunami but growth rebounded sharply in 2006 as tourist arrivals essentially reached their earlier peak level. However, the Government's expansionary fiscal policy adopted in response to the disaster, building on long-standing structural issues, is worsening the fiscal indicators. This deterioration could threaten long-term prospects. Nevertheless, tourism is expected to expand further in 2007 and growth is projected at 12.1%.

### *Nepal*

Economic growth in 2006 remained hobbled at 2.3% by the long-running

insurgency, political instability, and poor weather. Yet there is now guarded optimism on the political, and thus economic, front, due to major political breakthroughs starting in April 2006. These brought a comprehensive peace agreement that officially ended the 11-year armed insurgency and started a political process that holds promise of peace and a transition to a more productive economy. Nevertheless, the challenges are huge, and include widespread poverty, pervasive social inequality, low economic growth, and the legacy of a quasi-feudal political structure.

### *Pakistan*

Buoyant growth, improved macroeconomic fundamentals, and strengthened international credit ratings have been the economy's hallmarks in recent years. In 2006, high oil prices, a weak agricultural performance, as well as the effect of the October 2005 earthquake, trimmed the expansion to 6.6%, while strong demand-side pressures have exposed macroeconomic stresses.

The economy is expected to pick up slightly in 2007 to grow by 6.8%, reflecting some strengthening in agriculture and manufacturing. Inflation is set to moderate to 7.0% (from 7.9% a year earlier), after a further tightening of monetary policy, but still come in above the central bank's target (6.5%). Spurred by an expansionary, pro-growth fiscal policy, the budget deficit will widen slightly (to 4.5% of GDP), as will the current account deficit (also to 4.5% of GDP). The medium-term outlook remains positive, but macroeconomic stability has to be maintained and structural issues addressed.

### *Sri Lanka*

Despite resurgence of the civil conflict, the impact of the Asian tsunami, and near doubling of oil prices since 2004, the economy in 2006 grew at 7.2%, its fastest rate since 1978. This strength was fueled by buoyant private activity and expansionary macroeconomic policies that, though, accelerated Colombo consumer price inflation to 20.5% by January 2007. Growth is forecast to moderate to 6% over the next 2 years, given the conflict, slow pace of structural reform, and need to cool the economy. Further out, if the fiscal consolidation and increased investment envisaged in the new 10-year development framework are achieved, growth is expected to pick up substantially.

### **Development challenges**

South Asia's recent economic performance shows it can match East Asia's growth rates. To sustain this accelerated growth, the subregion faces challenges and opportunities at global, regional, and country levels. Although the world price of oil is expected to decline somewhat with the slowdown of the US and EU economies, it may not happen because of political developments in the Middle East. The earlier oil price hike hit South Asian economies hard, imposing a burden of about 20% of export earnings. Moreover, governments shielded their economies from the full impact of rising prices with subsidies, which are unsustainable. South Asia needs to develop an energy policy aimed at reducing demand, supporting the expansion of local energy supplies, and developing

regional distribution networks that allow cost-effective transfers of power and gas among countries.

Growing global payments imbalances pose a risk to South Asia as a disruptive correction could abruptly check capital flows, increasing the cost of funds, and possibly deflating the ballooning asset prices in the subregion. To buffer such an eventuality, reforms of the subregion's financial systems, which started in the early 1990s, must continue apace, especially in the inefficient public sector banks that still predominate in several countries.

The incomplete pass-through of oil prices implies that inflationary tendencies remain suppressed throughout the subregion. If domestic demand pressures are not successfully checked by tightening monetary and fiscal policies, inflation and the current account deficits could rise to acute levels. Macroeconomic policies therefore have to be carefully crafted to sustain economic growth and maintain price stability to insure the regional economies a soft landing.

Moreover, the structural policy reforms that have spurred recent private sector-led growth should continue with emphasis on reducing barriers to employment growth that would alleviate poverty. In South Asia, the agriculture sector provides the most employment, but falling levels of public investment, deterioration in support services and inappropriate output pricing, marketing and subsidy policies in several countries have led to erratic performance.

As industrial growth is picking up, policies that improve the business climate and infrastructure are needed to sustain that accelerated pace. Despite recent liberalization policies, South Asia's regulations for industry, trade, labor, finance and taxes are limiting its growth and employment potential. A recent analysis concluded that improving these regulations to the level of Thailand would generate additional GDP growth of 0.8% in Bangladesh and Pakistan, and 1.6% in India. Electricity, water, road, rail, airports, and port services are poor throughout the subregion. Improvements within every country and in intraregional connections would yield substantial dividends by reducing costs of production and trade.

India accounts for 80% of South Asia's GDP, and so its accelerated growth can benefit the subregion by policies to integrate regional economies. South Asia has not done well in integrating with the rest of the world and, although steps for regional integration have been taken, the subregion is still far behind Southeast Asia on both counts, achieving only about one fourth of its total trade to GDP and intraregional trade penetration levels.

Through integration, enhancing efficiency and improving product quality offers immense opportunities for sustaining rapid growth and reducing poverty. As India shares borders with most South Asian countries, it could be the hub for expanded trade and investment for goods and services in the subregion. Obstacles to intraregional trade remain high, but can be overcome by following the example of the ASEAN group of countries, which eliminated nontariff barriers, reduced tariffs, and simplified and harmonized customs procedures.



## Southeast Asia

### Subregional performance

The economies of Southeast Asia expanded by 6.0% in aggregate in 2006 (Figure 1.3.4), above the average growth of the previous 5 years. Most countries grew at a faster rate than in 2005, reflecting strong external demand, supportive monetary conditions, and for some, the beneficial impact on agriculture of favorable weather conditions for most of the year.

For the subregion, export growth accelerated to nearly 18% in nominal terms, with exports from Cambodia, Lao People's Democratic Republic (Lao PDR), and Viet Nam rising at faster rates than this. Exports from several economies were boosted by the upturn in global demand for electronics (Malaysia, Philippines, Singapore, and Thailand), others from high prices for oil or natural gas exports (Indonesia, Malaysia, Myanmar, and Viet Nam), and many gained from high prices of agricultural commodities, such as natural rubber and palm oil. Agricultural production also benefited from favorable weather conditions, although floods and typhoons had an adverse impact for parts of the year in Philippines, Thailand, and Viet Nam.

Economic growth in general was supported by ample domestic liquidity, reflecting buoyant inflows from the external balance of payments. Central banks' accommodative monetary policies also kept liquidity flush in several countries. Fiscal policy was more mixed: the general bias was to maintain fiscal consolidation, even if some governments began to shift more of their budgets to development expenditures.

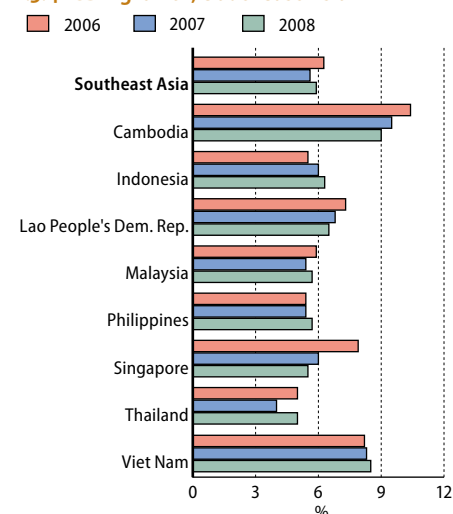
As exports surged, current accounts strengthened across the subregion. Furthermore, investment was weak in Indonesia, Philippines, and Thailand, which moderated growth of imports. Southeast Asian inflation averaged 7.1% in 2006, up from 6.3% the previous year. The average was raised by high 13.1% inflation in Indonesia—the biggest economy in Southeast Asia—which saw price pressures surge from late 2005 when the Government reduced subsidies on fuel.

### Subregional prospects

Growth is projected to slow modestly to 5.6% in 2007, primarily reflecting the likely softening in some major export markets. Only in Indonesia and Viet Nam is growth projected to be higher this year. Inflationary pressures are forecast to subside significantly (to average 4.2%) on the expectation of a moderation in world fuel prices and appreciation of subregional currencies.

The aggregate current account balance for the subregion as a whole is projected to deteriorate slightly. The deceleration in growth of global trade and the expected easing of some commodity prices will contribute to lower export growth. Imports are likely to record a solid expansion despite the expected decline in world fuel prices, as investment is set to pick up, especially in Indonesia. Continued buoyancy of remittances from overseas workers and in tourism receipts should provide support to current accounts in several countries.

1.3.4 GDP growth, Southeast Asia



Sources: Asian Development Outlook database; staff estimates.

[Click here for figure data](#)

## Country highlights

### *Cambodia*

Consolidating rapid growth over the previous 2 years, the economy expanded strongly by 10.4% in 2006, reflecting strong clothing exports, tourism receipts, and construction activity. Forecast growth averaging just over 9% in the next 2 years will be more dependent on strengthened domestic economic activity, itself underpinned by improved rural incomes, larger inflows of FDI, and greater government capital spending.

### *Indonesia*

Moderate economic growth of 5.5% last year was based on private consumption and exports, while fixed investment growth dwindled. Inflation eased from high levels as the year progressed, enabling a reduction in interest rates. Economic growth is expected to pick up by a half percentage point in 2007, supported by greater development spending and some improvement in the poor investment climate. If the Government can accelerate reforms, it could pave the way for a significant lift in investment and a boost in growth, which in turn would make headway in job creation and poverty reduction.

### *Lao People's Democratic Republic*

Foreign investment in hydropower and mining, together with rising exports of minerals in 2006, continued to drive double-digit expansion in industry, the major contributor to the GDP growth rate of 7.3%. Inflation slowed to levels not seen for 12 years. Economic growth is projected to decelerate moderately this year to 6.8%, mainly because export markets and mineral prices will not be as strong as in 2006.

### *Malaysia*

Consumption spending produced a pickup in growth to 5.9% in 2006. Private and public investment also strengthened with support from the Ninth Malaysia Plan. Growth is projected to slow by about a half percentage point in 2007 as export markets soften and both household spending and private investment decelerate. Higher government investment is expected over the Ninth Plan period as the Government encourages firms to climb the value chain, but constraints such as gaps in skills will need to be overcome for private investment to increase substantially.

### *Myanmar*

High prices for natural gas exports and a good harvest led to a modest pickup in economic activity. But macroeconomic stability remains elusive with monetized fiscal deficits feeding high inflation, which returned to double-digit levels and could go higher.

### *Philippines*

Achievements included another year of moderate economic growth (5.4%), a downtrend in inflation, and stronger fiscal and external positions. This year, still-high levels of remittances and low real interest rates, as well as greater fiscal expenditures, should keep expansion at around the same level. However, growth has not been strong enough to

lift employment sufficiently, mainly because of a declining investment-to-GDP ratio. Improvements in the investment climate are needed to spur economic expansion, increase employment generation, and provide public resources for social programs.

### *Singapore*

Growth in 2006 hit 7.9%, well above the economy's trend rate for a third year running. External demand was the main driver, although domestic demand, especially investment, also picked up. The pace of growth is expected to decelerate in 2007 to a still-strong but more sustainable rate of 6.0%. Closer links with global economic networks and structural reforms have contributed to the healthy performance, but also led to widening income gaps.

### *Thailand*

Strong exports drove a pickup in economic growth to 5.0% last year, since domestic demand was damped by several factors including rising interest rates and inflation in the first half, flooding, and political uncertainties for much of the year. Inflationary pressures eased in the second half of 2006, paving the way for the central bank to start lowering rates early in 2007. Economic growth is projected to slow to 4.0% this year, and the outlook for 2008 depends heavily on elections being held and on the incoming Government providing a clear and credible economic program.

### *Viet Nam*

This economy maintained a rapid rate of growth in 2006, estimated at 8.2% according to the Government. It was supported by robust exports, rising consumption spending, and strong investment. Inflation also stayed high, averaging 7.5%. Membership of the World Trade Organization from January 2007 has added impetus to development and market-oriented reforms. Provided that further progress is made on structural reforms, brisk growth of just over 8% is projected this year and next.

### **Development challenges**

Southeast Asian economies face a number of challenges to sustainable growth, social development, and poverty reduction. While countries across the subregion have improved their fiscal performance, spending on social and physical infrastructure has lagged. In Indonesia, Malaysia, and Thailand, where debt ratios are at manageable levels, fiscal policy has more scope for increased expenditures on social and physical infrastructure. In the Philippines, although progress in fiscal consolidation has been significant, the debt level remains high and, consequently, the shift toward development expenditures is likely to be more gradual.

Recent success in raising revenues as a share of GDP in the Philippines and the smaller economies of Cambodia and the Lao PDR needs to be prolonged to ensure that these governments achieve an adequate level of public spending on development.

Institutional reforms to reduce the costs of doing business and to improve the investment environment remain a challenge in most of

Southeast Asia's economies. Optimism in financial markets is yet to spill over into the real sector in Indonesia and, especially, the Philippines where investment has declined as a share of GDP in the past few years. Key priorities should be improving the provision of infrastructure, chiefly power, water, and transport, including an adequate regulatory framework for private sector participation; reducing the costs of complying with regulations in customs, trade, and (particularly in Indonesia) labor markets; and enhancing the delivery of public services.

Concerns caused by decentralization in Indonesia and political uncertainties in Thailand underscore the importance of ensuring predictable policies on which investors can base long-term decisions. Malaysia and Thailand need to enhance the skills of their workforces to move up the value-added chain in production. In Viet Nam, where investment is high as a share of GDP, the key challenge is to raise the efficiency of capital, with reforms of state-owned enterprises and banks, development of capital markets, and regulations to ensure transparency and accountability.

Among the smaller economies, Cambodia's main challenge is to diversify its sources of growth, given the economy's high dependence on clothing and tourism. Reforms in agriculture, notably in land management, as well as legal and judicial moves to improve the environment for private sector activity, are key priorities.

The discovery of apparently significant oil and gas reserves has raised the prospects of substantial revenues for the Cambodian Government in the medium term. These revenues could provide a much-needed boost to social spending and infrastructure. However, appropriate policies to guard against the "natural resource curse" and to enhance transparency and accountability in the use of these resources need to be put in place. Similar policies are necessary in the Lao PDR and Myanmar, which also benefit from large receipts from natural resources. They, too, have a need to promote the development of agriculture and rural small businesses to lift more people out of poverty.

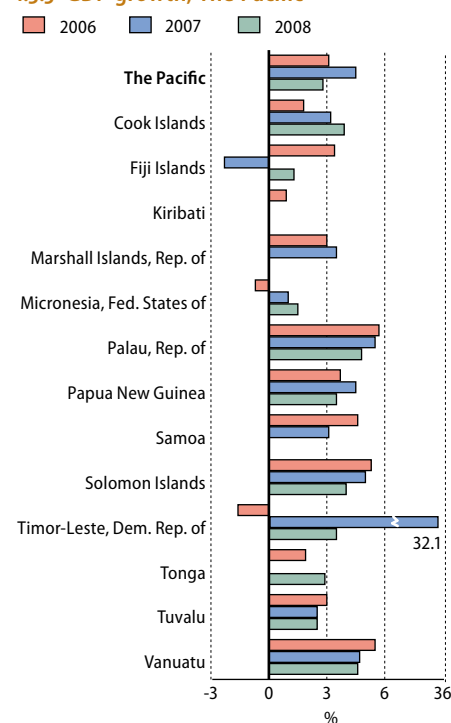
Vulnerability to natural disasters and the rising incidence of communicable diseases, such as avian flu, pose another important challenge to subregional economies. This underscores the importance of building into the planning and budgeting processes precautions to mitigate the effects of natural disasters and to manage them once they occur. Information dissemination and putting in place measures for prompt action are also important to curtail the spread of communicable diseases.

## The Pacific

### Subregional performance

Aggregate economic growth in the Pacific islands was a modest 3.1% in 2006 (Figure 1.3.5), improving from average growth of about 2% over the previous 5 years. Stronger growth in the two biggest Pacific economies—Papua New Guinea and Fiji Islands—lifted the subregional aggregate. In terms of numbers of economies, however, growth picked up in only half of them, and two economies—the Federated States of Micronesia and Timor-Leste—contracted.

1.3.5 GDP growth, The Pacific



Sources: Asian Development Outlook database; staff estimates.

[Click here for figure data](#)

Where gains in growth were achieved, they mainly reflected contributions from favorable mineral and commodity prices, aid flows, income from fishing license fees and tourism, and receipts from trust funds. High prices for natural gas and oil assisted the energy exporters, Papua New Guinea and Timor-Leste, but also strained the external balances and put upward pressure on inflation in other countries.

The subregional inflation rate accelerated by about 1 percentage point to 3.3%.

### Subregional prospects

Aggregate growth is forecast to rise to 4.5% this year, essentially because Papua New Guinea's expansion will strengthen further while Timor-Leste is projected to rebound from recession. However, the economy of the Fiji Islands is likely to contract in 2007, and growth will slow in about half the Pacific economies. External conditions are mostly favorable, so that tourism receipts, export revenues, remittances, and incomes from trust funds should be reasonable. The outcome for some countries will depend partly on fishing license fees and farm production, which are affected by weather conditions.

In a subregion where the climate for private sector development is generally unfavorable, countries that create more hospitable conditions for the creation of small and medium businesses are likely to be rewarded with stronger performances in growth and employment generation. Subregional inflation in 2007 is forecast to edge higher to 3.5%.

### Country highlights

#### *Fiji Islands*

Growth rebounded to 3.4% in 2006 because of a pickup in sugar production, expansion in construction, and growth in services stimulated by consumption demand. However, exports were weak and the current account deficit widened, placing pressure on foreign reserves. The country's gold mine closed late in the year. Even before the Government was removed from office by a military coup in December, the outlook for 2007 was a concern because fiscal pressures required a reining-in of the public sector. After the coup, several donors suspended most new aid proposals. Tourist arrivals are expected to fall. Recession is now forecast for this year, followed by a modest recovery.

#### *Papua New Guinea*

Rising global prices for export commodities and strong supply responses from the agriculture and minerals sectors lifted economic growth to 3.7% in 2006. Formal private sector employment rose by nearly 5%. The outlook is for faster expansion of 4.5% this year, based on stronger mineral production and construction activity. The agriculture, forestry, and fisheries sectors are also expanding, which benefits a broad span of the population, given that the minerals sector is not labor intensive. Inflation is expected to remain moderate at about 3%, if sound fiscal and monetary policies remain in place. Moving to higher levels of growth requires the resolution of problems of law and order, poor infrastructure, and inadequate service delivery.



### *Democratic Republic of Timor-Leste*

Revenues from oil and gas surged in 2006, increasing the national petroleum fund and foreign reserves. However, non-oil GDP is estimated to have contracted, after an extended outbreak of civil unrest. A sharp rebound in non-oil GDP is projected this year, based on increased spending by the Government and by international personnel deployed in the country for peacekeeping and to assist in elections. Growth could get a further boost from additional funding for infrastructure from the United States Millennium Challenge Account. This will also require an improvement in the public sector's ability to execute budget projects.

### *Small Pacific countries*

Republic of Palau, Samoa, Solomon Islands, and Vanuatu recorded relatively high growth in the range of 4.6–5.7% last year. Palau's high growth was supported by tourism and donor-funded large capital projects. In Samoa, expansion was led by construction and services, buttressed by remittances. Solomon Islands overcame the impact of civil unrest to record stronger growth. Log production, fisheries, and palm oil contributed. Vanuatu's expansion was supported by tourism-related services. These four economies are forecast to register slightly lower growth rates in 2007.

The Republic of Marshall Islands and Tuvalu grew by 3.0% last year. In the Marshall Islands, the United States Compact grant was the main source of income, and much of it went into infrastructure and public sector employment. The Tuvalu economy was bolstered both by increased public expenditures on higher inflows of aid, and by remittances and offshore earnings.

The Cook Islands and Tonga experienced disappointing 2006 growth of just under 2%. Lower production in agriculture and a decline in construction hurt the Cook Islands, but the economy will pick up in 2007. Tonga was weakened by a poor season for the squash crop, slower construction activity, and civil unrest late in the year. In 2007, Tonga's economy is expected to be flat, as reductions in the public service and damage caused by the unrest are offset by the start of urban reconstruction. Nauru's economy is forecast to contract this year because of public sector cuts. In the Federated States of Micronesia, economic activity contracted last year partly because aid was reduced, but a resumption of growth, at low levels, is forecast for this year. Growth in Kiribati, which depends heavily on Government spending, faded to less than 1% in 2006.

### *Civil unrest*

Last year will be remembered in the Pacific islands for outbreaks of civil and political unrest. The underlying causes—including high levels of youth unemployment—in most cases remain to be addressed.

The first civil unrest for 2006 broke out in Solomon Islands. Following general elections in April, riots erupted in the capital, Honiara, in reaction to the announcement of the new prime minister. Serious damage to property was sustained in the Chinatown area. The Regional Assistance Mission to Solomon Islands, established in 2003 as a Pacific Islands Forum initiative, was reinforced with police and army personnel,

and law and order was quickly restored. Subsequently, the military component of the Regional Assistance Mission was scaled down and urban reconstruction commenced. In Timor-Leste, civil unrest began in the capital Dili in April and continued for some months. About 2,200 houses were burned. The Government requested external assistance and more than 2,000 international personnel were deployed. This restored a degree of stability.

In the Fiji Islands, tensions between the Government and the military became evident by October. The open threat of a coup by the military caused international concern. Australia and New Zealand made evacuation plans for their citizens. On 5 December, the Government was removed in a coup led by the military commander, who subsequently presided over the establishment of an interim government. Several donor countries suspended most new aid proposals.

In Tonga, a pro-democracy demonstration in November sparked a riot that led to burning and looting of many businesses in the capital Nuku'alofa, and the loss of life. Again, law and order was quickly restored with external assistance. But in Tonga, and more generally in most countries that experience such civil unrest, political and social divisions usually deepen, and business confidence is undermined.

The impacts are being felt differently in the affected countries, and the speed of recovery will be varied. In general, countries with mineral resources and sufficient foreign reserves are better insulated from the adverse impacts. Solomon Islands and Timor-Leste fall into this category. Fiji Islands and Tonga face more severe fiscal constraints and some of their industries are in decline. Any continuance of unrest could severely affect such economies, particularly impacting key income-generating sectors, such as tourism and foreign investment.

### Development challenges

The challenge for the majority of the Pacific island governments is to facilitate private sector-led and more self-reliant economies that can generate employment. Constraints to private development include governance problems, policy uncertainty, investment restrictions, and traditional communal land ownership.

Regional initiatives like the Pacific Plan, approved in October 2005 and endorsed by 13 Pacific island governments, will support development objectives of the national authorities. The Pacific Plan pursues the goals of sustainable development, economic growth, and good governance, and an action plan has been formulated to achieve these goals. However, the subregion is struggling to implement many of the proposals, partly because of limited public service capacities.

There is a risk that countries with mineral resources come to depend on incomes from exporting those resources, and neglect sectors such as agriculture and small and medium business development. Global prices for energy and minerals are not guaranteed to remain at high levels. Moreover, resources are depleted over time. Sustained growth cannot be based solely on exports of minerals. Implementing structural reforms, sustainable fiscal policies, and prudent monetary policy will be necessary to facilitate faster economic growth and to generate employment.

# Ten years after the crisis: The facts about investment and growth

## Introduction

Ten years have passed since Asia's twin currency and banking crises. In many ways, an air of normality has returned. Per capita incomes in the crisis economies now surpass their precrisis peaks, social indicators are improving, and the region is again enjoying growth that is the envy of many parts of the developing world (Figure 1.4.1).

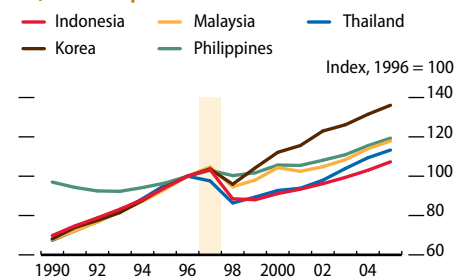
But despite welcome recovery, the effect of the crisis has not been completely erased. Growth has settled on a lower trajectory. Comparing the period 2000–2006 with 1990–1996, growth has slipped by an average of 2.5% a year in the five countries that were most directly affected (Indonesia, Korea, Malaysia, Philippines, and Thailand). The persistence of such a gap implies large permanent losses of income compared with precrisis trends. Indeed, if the impacts of the crisis on income levels are to prove transitory, a period of faster than “normal” growth would be required to compensate for the output “lost” during the crisis years.

An important question, then, is what explains the slowing of output growth: Is the deceleration simply an artifact of the precrisis boom and a shift to something more sustainable? Or is it symptomatic of deeper constraints that may be preventing output from matching its potential? This chapter of the *Asian Development Outlook 2007* looks more closely at these questions by examining the experiences of the five countries that were in the front line of the crisis.

Data on the evolution of growth in the five crisis countries are presented in the next section, *Has the crisis slowed growth?* These confirm that “trend” growth has fallen relative to precrisis “norms.” A growth accounting framework is then used to dissect growth in the third section, *Proximate causes of slower growth*. In only two of the five countries has there been a slowing in the rate of growth of employment and the impact of this on GDP growth has probably been quite small. A sharp deceleration in the rate of fixed capital formation, particularly by the private sector, is likely to have had a more pronounced impact on output growth. On a number of measures, investment rates now seem “too low.”

In the following section, *Why investment has tumbled*, possible reasons for the decline in investment are aired. Some of the factors that held investment back immediately following the crisis have receded. For example, it seems unlikely that financing constraints are important or that there is still significant underutilized capacity. Likewise, the idea that investment has been redirected from the crisis countries to competitive

1.4.1 Per capita GDP



Source: World Bank, *World Development Indicators* online database, downloaded 12 February 2007.

[Click here for figure data](#)

export platforms in the People's Republic of China (PRC) and Viet Nam does not bear closer scrutiny.

Another idea is that “optimal” investment rates have come down. In the precrisis period, countries relied too heavily on investment for growth, and to a significant extent investment spending was wasted (see, e.g., Crafts 1999). But as a result of extensive policy and institutional reforms, saving is possibly now being allocated more efficiently, generating faster growth for a given investment rate. Although it is possible that the “optimal” investment rate is lower, this would not explain why output growth as well as investment is in a lower gear.

Perhaps the crisis has shaken beliefs about the ability of countries to sustain growth over the long term? Certainly, governments have lowered their ambitions on growth (as outlined in various planning documents) and, through rapid reserves accumulation, have revealed strong precautionary instincts. Likewise, private sector investors, rattled by losses and allergic to risks, and perhaps taking their cue from government, may have scaled back on what once would have been considered viable projects. There is also evidence to suggest that private investors have been busy fortifying their financial defenses by reallocating surpluses from “hard” investments to capital reserves and other liquid assets.

As expectations and confidence can exercise a decisive impact on behavior and outcomes, the penultimate section, *Risk, uncertainty, and investment behavior*, asks whether there is any evidence to support the idea that perceptions of uncertainty and risk have increased.

The last section presents conclusions, and suggests that the challenge of lifting investment and investor confidence lies in lighter but more effective regulation, improved governance, exposing sheltered activities to more competition, and building modern and efficient financial systems.

## Has the crisis slowed growth?

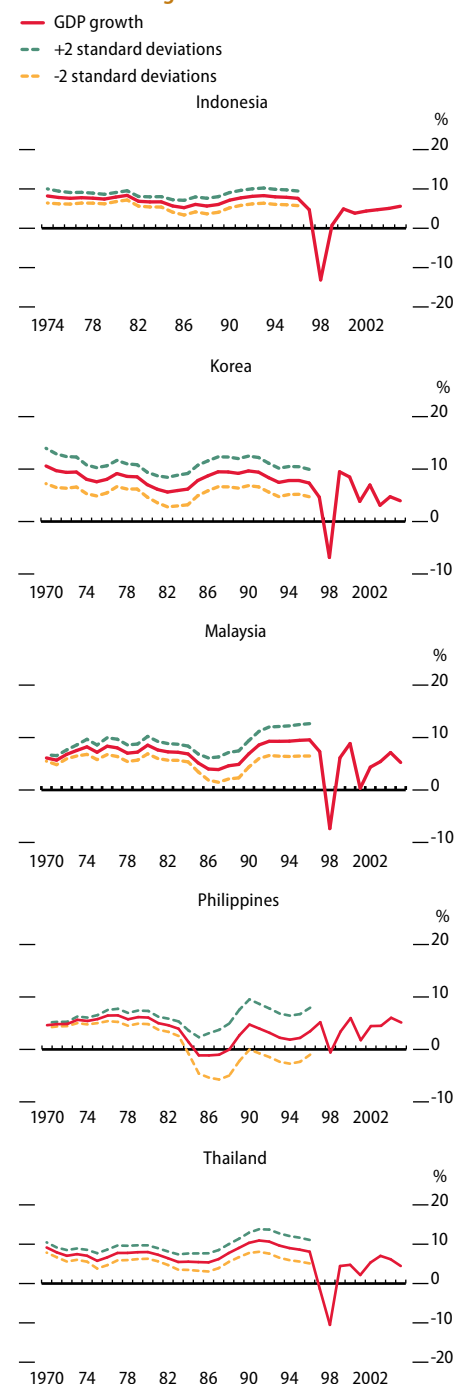
To answer this question, GDP growth rates are compared before and after that watershed. Trend growth in any precrisis year is defined as the unweighted average of annual year-on-year growth for the current and past 4 years. A 5-year average is a rather basic indicator of a trend, but is readily interpretable and transparent.

Estimated precrisis trends are shown in the panels of Figure 1.4.2. The trends are bounded by intervals that are two standard deviations wide. The intervals around trend growth provide an indication of the volatility of growth in the sample period, with wide intervals signifying greater volatility.

For the period 1997–2005, the graphs show actual growth rates, not trend rates. The reason is that it is difficult to identify a postcrisis trend that filters out the violent changes in growth that occurred during the crisis. Nevertheless, the graphs allow an informal judgment about whether the postcrisis experience “fits” with observed trends prior to the crisis.

In Indonesia, growth in each year from 2000 to 2005 is uniformly lower than estimated trends dating back to 1987. If 1986 is excluded, observed postcrisis growth rates are lower than trend estimates dating back to the early 1970s. Growth rates from 2000 to 2005 are also two or more standard deviations below the estimated trends in each year from

### 1.4.2 Precrisis trends and postcrisis realizations of growth



Note: All trends and standard deviations are calculated beginning in 1965, except Indonesia, where a 1970 base is used to eliminate the impacts of the economic dislocation that occurred in the mid-1960s.

Source: World Bank, *World Development Indicators* online database, downloaded 12 February 2007.

[Click here for figure data](#)

1991 to 1996. These comparisons suggest that Indonesia's postcrisis growth experience does not readily fit with the precrisis pattern.

The evolution of Korea's growth rate is somewhat more complicated. Indeed, as a country whose per capita income is approaching that of rich countries in North America and Europe, and whose economic structure is maturing, Korea's potential growth rate would in any case be expected to moderate gradually. Perhaps there is some evidence of this in the data spanning the late 1980s and first part of the 1990s.

Also, unlike the other countries, Korea's growth bounced back quickly after the dislocation of the crisis, exceeding earlier norms. But since 2001, growth has drifted down. In 4 out of the 5 years from 2001 to 2005, annual growth was less than 5%. The last such episode of relatively slow growth was in the mid-1960s. On this metric, postcrisis growth does not fit the precrisis experience, but slowing most probably reflects lower potential at elevated income levels.

The data for Malaysia are similar to those for Indonesia. Even peak postcrisis growth in Malaysia is lower than estimated trends going back to 1992, and for most years it is far below trend. Much the same is true if the comparison is with the 1970s and the early 1980s. The apparent similarity with the mid-1980s is because the Malaysian economy contracted in 1985. So far, there is little evidence of postcrisis growth rates trending up.

Historically, growth in the Philippines has languished, buffeted by political and other shocks. Not only was there little evidence of "exuberance" in the Philippines prior to the crisis, the impact of the crisis on growth (if not the exchange rate) was delayed until 1998. And the resulting contraction was not in any sense unusual. The Philippine economy had shrunk in the mid-1980s and again in the early 1990s. Even in its more stable periods, per capita growth has only occasionally exceeded 3% a year. In recent times, the Philippines has, albeit with some undulations, reestablished growth rates comparable with the averages of the 1970s.

Two factors complicate an assessment of whether Thailand's postcrisis growth experience "fits" the precrisis pattern. First, trend growth was actually decelerating through the 1990s, after double-digit expansion in the late 1980s. Second, actual growth dipped in 1996, not in 1997 (or 1998) as in the other crisis countries. Thailand was first into the crisis, but not first out. If the growth acceleration of the late 1980s and the steady (though slowing) growth of the 1990s are seen as an aberration, then the postcrisis experience is similar to the 1970s, when Thailand expanded at a leisurely pace. But a reversion to 1970s' norms is probably not a relevant benchmark for gauging recovery. Judged against more contemporary experience, Thailand's postcrisis growth record has been ordinary.

The conclusions suggested by this simple descriptive approach are broadly supported by more sophisticated statistical methods. Using Bai-Perron tests, Jones and Olken (2005) identify growth decelerations for Thailand in 1995 and Indonesia in 1996, but no evidence of the subsequent accelerations that would be needed to restore precrisis trends. Berg et al. (2006), following a similar strategy, detect structural slowing in Korea in 1996 and in Thailand in 1995. In the case of Thailand, the slowdown is followed by an acceleration in 2000, but no acceleration is found for Korea. Finally, Cerra and Saxena (2005) conclude that there is evidence



of permanent output losses in the crisis countries, which have not been compensated by higher than “normal” growth rates.

Ten years on, it would seem that the crisis has had a lasting impact on output levels and, possibly, on growth rates too. But it would be hazardous to extrapolate and suggest that these shifts are permanent. Future trajectories are likely to be shaped by a variety of institutional and policy factors. Also, as Korea’s experience illustrates, there are other forces that pull growth and output levels. Indeed, had the crisis not occurred, investment and growth rates in Korea would probably have decelerated of their own volition.

## Proximate causes of slower growth

One way of dissecting growth is to identify how changes in the application of labor, human capital, physical capital, and technology have influenced its path. Changes in output growth can occur only if there has been a change in one or more of these components.

### Employment

Figure 1.4.3 shows average growth of the labor force and employment for the periods 1990–1995 and 2000–2005. In all countries but Thailand, the growth of the labor force slowed between the pre- and postcrisis periods. In the Philippines and Thailand, the growth of employment accelerated between the two periods, barely changed in Indonesia, and slowed in Korea and Malaysia.

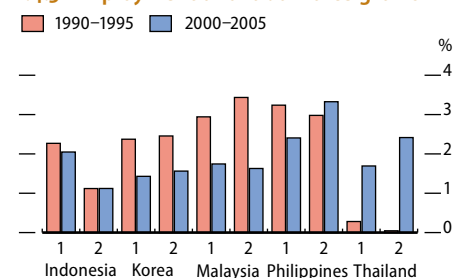
Clearly, this mixed picture cannot explain a general trend of slowing growth. Estimated labor shares in national income tend to be quite low in the crisis countries (some as low as 0.35). Taken at face value, a low labor share suggests that it would take quite large changes in employment or labor force growth to move growth rates by the observed magnitudes. Malaysia is the country where employment and labor force growth change most between the pre- and postcrisis periods: the rate of employment growth drops by 1.8 percentage points. This possibly could account for anything in the range of 0.7–0.9 percentage points of GDP growth a year, depending on the true labor share.

In the other countries, imputations would give much lower impacts, and in the Philippines and Thailand would suggest accelerating rather than slowing GDP growth. But unraveling causality is not straightforward. Labor force participation rates (and of course employment) are sensitive to economic conditions, which in turn will be influenced by growth and policies. In Malaysia, for example, where effects seem big, the gap between employment and labor force growth rates has, possibly, been influenced by policies on temporary workers and immigration.

### Human capital

Measuring the quality of labor is fraught with difficulty. Estimates of average years of education or educational attainments do not capture critical factors linked to quality (see the chapter *Education and structural change in four Asian countries*, also in Part 1). Leaving this shortcoming to one side, attempts to estimate the contribution of human capital to

1.4.3 Employment and labor force growth



1 = labor force; 2 = employment.

Sources: CEIC Data Company Ltd.; Bank of Thailand, available: [www.bot.or.th](http://www.bot.or.th); both downloaded 6 March 2007.

[Click here for figure data](#)

growth using growth accounting methods have come up with estimates that are generally quite small (Young 1995, Collins and Bosworth 1996). If these estimates are considered reliable, it would require an implausibly abrupt slowing of human capital accumulation, or even reversals, to account for the shifts in aggregate growth that have been observed in the crisis countries. Human capital's impact on the deceleration in growth is unlikely to have been big.

### Productivity growth

Technological progress is usually measured by growth in total factor productivity (TFP). TFP growth captures how much additional output can be generated for a given set of labor, human capital, and physical capital inputs. It is well known that estimates of TFP growth require a large number of assumptions and that they can be contaminated by errors in measurement of other inputs. For these reasons, TFP estimates should be considered with caution. Even for the same countries over the same time period, estimates of TFP growth often vary widely (see, e.g., Crafts 1999).

At an aggregate level, the effect of the crisis on TFP growth is likely to have been negative. There are at least two reasons for this. First, given significant fixed costs of capital investment and of hiring and firing of workers, it is likely that firms initially adjusted capacity utilization rates (see *Capacity utilization*, below) and workers' hours in response to lower demand. Second, as workers who lost their jobs moved into informal activity and back to agricultural work, this would have registered in declining aggregate productivity. Estimates of TFP growth by APO (2004) confirm that TFP growth collapsed during the crisis, but also suggest that TFP growth has since reverted to earlier trends (Figure 1.4.4). Taken at face value, these estimates imply that slower technical progress is an unlikely cause of the deceleration of growth.

### Fixed capital

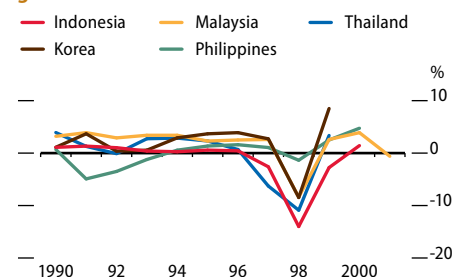
If changes in labor force growth, human capital accumulation, and TFP growth cannot easily account for the observed deceleration of output growth, it follows that capital accumulation has slowed. Slower capital accumulation requires either a lower ratio of fixed investment to output, or a decline in capital productivity, or both.

Figure 1.4.5 plots fixed investment rates. It is clear that investment rates declined steeply in the wake of the crisis. This experience fits with a much broader international pattern in which growth decelerations have been tied with declining investment ratios (Hausmann, Rodrik, and Velasco 2005; Rogers 2003; Attanasio, Picci, and Scorcu 2000). Having fallen, investment ratios have been broadly flat, showing little inclination to return to the levels seen in the precrisis period. In fact, declining capital productivity in Indonesia, Korea, Malaysia, and Thailand would require higher investment rates to deliver the same growth. Only in the Philippines might rising capital productivity have allowed investment rates to come down without pinching growth.

### Summary

In accounting for lower growth in the postcrisis period, it is possible that demographic factors and changes in employment growth play a role, but

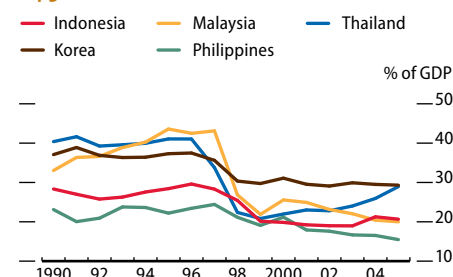
**1.4.4 Evolutions of total factor productivity growth**



Source: Asian Productivity Organization (2004).

[Click here for figure data](#)

**1.4.5 Fixed investment rates**



Source: World Bank, *World Development Indicators* online database, downloaded 12 February 2007.

[Click here for figure data](#)

a minor one and one that is differentiated by country. Changes in the rate of accumulation of human capital or in total factor productivity seem unlikely explanations. In all countries, investment rates have fallen and, except in the Philippines, impacts on growth are unlikely to have been compensated by higher capital productivity. In the next section, possible explanations for the fall in the fixed investment rate are canvassed.

## Why investment has tumbled

### Is investment too low?

Are fixed investment rates too low? If they are, what are the possible explanations for their fall? It may be that elevated investment rates prior to the crisis reflected asset price bubbles and that correction has now brought investment back to realistic levels.

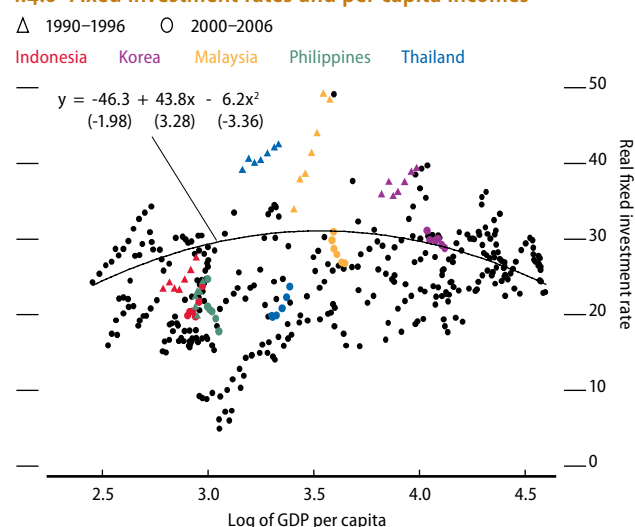
Figure 1.4.6 shows a scatter-plot of investment rates and per capita incomes pooling historical data for East and Southeast Asia. This panel suggests that investment rates follow a quadratic trend, first rising with per capita income and then tapering off. Clearly, there is substantial variation around predicted levels. Hong Kong, China stands out as an economy that grew quickly with comparatively modest investment outlays. At the other end of the scale, the PRC's investment rates are unusually high.

The figure contrasts pre- and postcrisis observations for Indonesia, Korea, Malaysia, Philippines, and Thailand. Controlling for per capita incomes, precrisis investment rates easily exceed their “predicted” levels and, with the exception of Korea, postcrisis investment rates fall below them. Chinn and Ito (2005), Eichengreen (2006), and IMF (2005) all provide evidence pointing to the conclusion that postcrisis investment rates are “too low.” But Korea may be an exception. Its per capita incomes are approaching a level at which investment rates would be expected to drift down naturally, and postcrisis investment rates are not too far from values that would be predicted on the basis of broader experience.

Perhaps the tumble in investment rates can be explained by factors unrelated to, but coincident with, the crisis? Two possibilities merit attention: a fall in the real price of capital goods, and shifts in the composition of output. It is unlikely that falling capital goods prices explain the decline in the investment ratio. Although the real price of capital goods (measured against the GDP deflator) has fallen, this effect has been small (Kramer 2006). Investment rates still drop sharply in the postcrisis period after controlling for changes in relative prices.

The impact of changes in economic structure on the investment ratio is not easy to disentangle. One way to look at the links is through changes in sector contributions to growth, and through changes in incremental capital-output ratios (ICORs). If output shares and growth are shifting toward sectors with low ICORs, this would bring the aggregate investment rate down. But this perspective implies an element

### 1.4.6 Fixed investment rates and per capita incomes



Notes: The trend line was computed using 1990–1996 and 2000–2006 data for the PRC; Hong Kong, China; Indonesia; Japan; Korea; Malaysia; Philippines; Singapore; Taipei, China; Thailand; and Viet Nam. The colored triangles and dots identify data for the five countries most affected by the crisis for 1990–1996 and 2000–2006, respectively. The black dots represent data for the remaining years and the rest of the economies.

Sources: World Bank, *World Development Indicators* online database; Taipei, China data were from <http://eng.stat.gov.tw/public/Data/78298434471.xls> and <http://eng.stat.gov.tw/public/Data/782317224771.xls>; both downloaded on 12 February 2007.

[Click here for figure data](#)

investment, not the other way round. Nevertheless, Figure 1.4.7 shows the sector makeup of changes in growth comparing 1990–1996 to 2000–2005.

Comparing growth in the pre- and postcrisis periods, industry and services account for most of the change. Except in Korea and Thailand, agriculture and services add more to growth, buffering the overall negative impact of the crisis. In Indonesia and Malaysia, the contribution of services to growth has overtaken that of industry. The reverse is true for Korea. Services contribution registered the largest increase in the Philippines in the postcrisis period. In Thailand, there were no shifts in the ranking of sector contributions.

It would be difficult to distill from this any general conclusions about the impact that sector shifts may have had on the investment ratio. But in a world where ICORs link changes in output to accumulation, slower growth will of itself lower the investment ratio. If industry has a higher ICOR than either agriculture or services, then growth decelerations in industry will matter most for the investment ratio. Looking at the data through this lens is certainly interesting, but still leaves the puzzle as to why growth rates have fallen overall.

### Public investment

It is also useful to establish the extent to which the decline in fixed investment rates is caused by falling public sector investment. Everhart and Sumlinski (2001) have estimated public and private components of aggregate investment ratios for a number of countries. In this dataset, public investment includes not only the capital spending of central government, but also of state and local governments, as well as capital spending of public enterprises. Figure 1.4.8 shows the percentage-point changes in public sector investment ratios for Indonesia, Korea, Malaysia, Philippines, and Thailand from 1997 to 2000 (the latest available data point). Only in Thailand was there a significant drop in public investment by 2000.

National accounts data for the pre- and postcrisis periods paint a slightly different picture. In Malaysia, public sector investment rates partially compensated for the fall in private investment, but in Thailand, public investment rates also dropped, but by far less than the fall in private investment.

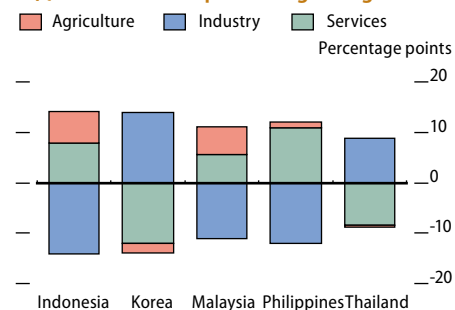
### Constraints on private investment

Mindful of the fact that public investment was not immune to the crisis, the remainder of the discussion focuses on factors that might have constrained private sector investment. Hausmann, Pritchett, and Rodrik (2005) suggest that low levels of investment are likely the result of either financing difficulties or low expected returns. If finance is a constraint, this could be because domestic finance is hobbled by low saving or poor financial intermediation, or because international capital is wary of country risks. But if the problem is low expected returns, a much broader range of candidate explanations presents itself.

### Loanable funds

While real credit contracted sharply after the crisis, there is now little evidence of credit constraints. Outside the Philippines, where savings

1.4.7 Sector makeup of changes in growth

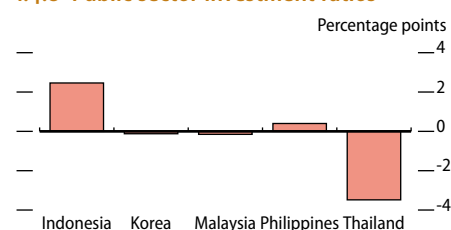


Note: Data for Malaysia and Korea are up to 2004 only.

Source: World Bank, *World Development Indicators* online database, downloaded 12 February 2007.

[Click here for figure data](#)

1.4.8 Public sector investment ratios



Note: Change calculated between 1997 and 2000, except for Indonesia and Korea, which is between 1997 and 1999.

Source: Everhart and Sumlinski (2001).

[Click here for figure data](#)

rates have been low for decades, domestic savings rates have remained high (Figure 1.4.9) and real interest rates are low by historical standards (Figure 1.4.10). Bank balance sheets have also strengthened greatly. Capital-adequacy ratios are up, nonperforming loan ratios are down, and banks have returned to profitability. Likewise, credit risks are lower, as corporate finances are now in better shape and property and other asset prices have recovered. International investors are again snapping up local equities. In short, there is little evidence of the generalized symptoms that would normally be present if finance was a problem.

This is not to say that there are no localized constraints on credit availability, perhaps for small businesses, or that some firms are not still handicapped by high levels of debt (see, e.g., Kramer 2006 and Lim and Kim 2005). As will be explained a little later, it is also most unlikely that investment is being held back by low levels of retained earnings.

### Expected returns

If financing is not a problem, it is possible that lower investment rates reflect a fall in expected returns. Expected returns will be influenced by a wide constellation of factors including productivity levels, the availability and cost of complementary factors, and competitive pressures. Investor beliefs and deeper institutional factors, while less tangible, are also likely to be important.

### Capacity utilization

The dip in investment rates that came on the heels of the crisis was hardly surprising. Sagging incomes and demand left firms with large amounts of underutilized capacity, which dragged equipment investment down. Construction activity collapsed as office property vacancies swelled. But nearly 10 years after the crisis, capacity utilization and property vacancy rates have more or less returned to “normal” levels (Figures 1.4.11 and 1.4.12), though Indonesia is still lagging. In the other countries, existing capacity may be sufficient to cope with temporary surges in demand but not with sustained expansion of output over several years.

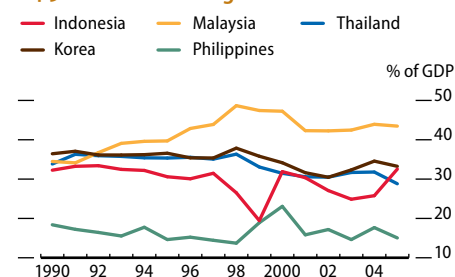
### Complementary factors

Bottlenecks in the supply of complementary factors can impede private investment. A large number of studies have pointed to the difficulties created by poor infrastructure and its impact on the costs of business (ADB, JBIC, and World Bank 2005). Infrastructure gaps have possibly widened in some of the crisis countries over the past decade and have added to business costs. But this should not be pushed too far as an explanation of why private investment spending ratios have dipped. Countries with relatively good infrastructure (Korea and Malaysia) as well as those with comparatively poor infrastructure (Indonesia and the Philippines) have seen their investment rates fall. Skill shortages might be another constraint on investment, particularly in Malaysia and Thailand.

### Investment diversion

Another popular explanation for the fall in investment rates is that the crisis countries are no longer as attractive as they once were as investment destinations. In particular, the emergence of the PRC, and to an extent

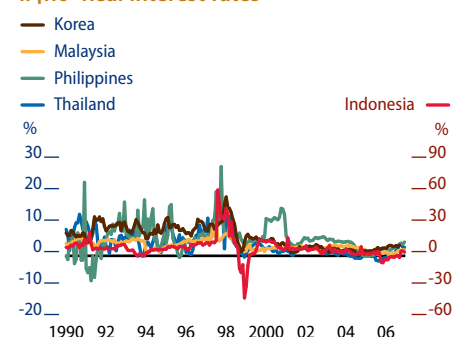
#### 1.4.9 Domestic savings rates



Source: World Bank, *World Development Indicators* online database, downloaded 12 February 2007.

[Click here for figure data](#)

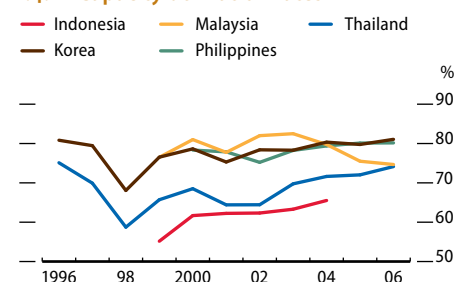
#### 1.4.10 Real interest rates



Source: International Monetary Fund, *International Financial Statistics* online database, downloaded 12 February 2007.

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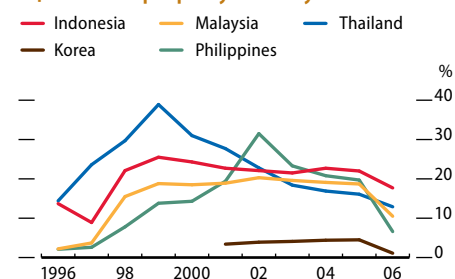
#### 1.4.11 Capacity utilization rates



Source: CEIC Data Company Ltd., downloaded 8 February 2007.

[Click here for figure data](#)

#### 1.4.12 Office property vacancy rates



Source: Jones Lang LaSalle, *Asia Pacific Property Digest*, various issues.

[Click here for figure data](#)



Viet Nam, as competitive export platforms has led to a diversion of investment flows. Figure 1.4.13 shows total foreign direct investment (FDI) flows over the period 1997–2005. Although there is some decline in the share of crisis countries through to 2003, this has been subsequently reversed. It is very likely that the PRC would have emerged as a competitive export platform even if the crisis had not occurred. The PRC cannot have a comparative advantage in everything, and even in sectors where it is an efficient producer, it seems that many investors prefer to diversify geographically rather than concentrate their FDI portfolio in the PRC (*Economist* 2007).

Eichengreen and Tong (2005) provide compelling evidence of complementarity in “vertical” FDI in East and Southeast Asia. Mutually beneficial spillovers are observed in industries that trade intensively in intermediate goods and parts (such as electronics). But for those industries (such as consumer goods and car parts) in which other countries directly compete with the PRC, there is some evidence of competition in other markets.

### Summary

Although some evidence suggests that precrisis investment rates were “too high,” postcrisis investment rates (outside Korea) now appear to be “too low.” Infrastructure bottlenecks (Indonesia and Philippines) and shortages of skilled labor (Malaysia and to a lesser degree Thailand) may have held private investment in check. But it is difficult to detect persuasive evidence of credit constraints, capacity overhang, or a blanket diversion of FDI to the PRC hampering investment.

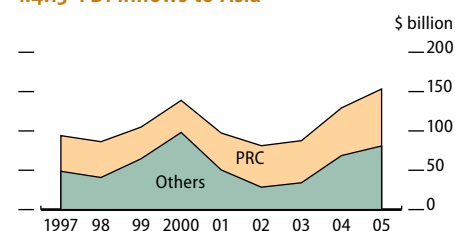
In the next section, the question is asked whether increased risks or uncertainty may have slowed growth and lowered investment rates.

## Risk, uncertainty, and investment behavior

The idea that beliefs can have a significant impact on investment spending is of course a very old one, vividly captured by Keynes’ allusion to “animal spirits.” Box 1.4.1 explains how risk and uncertainty may influence investment. An individual investor faces many potential sources of uncertainty and risk: the macroeconomic outlook; the policy and regulatory environment; and the “institutional arrangements” that protect people, secure property rights, and determine the overall quality of governance. In addition, foreign investors may be concerned about transfer risks, expropriation, and other factors.

The crisis bequeathed numerous policy and institutional changes (Rocha 2007). New governments came to power in Indonesia, Korea, Philippines (a bit later), and Thailand. Macroeconomic policies were recalibrated; currencies became more flexible and most central banks refocused their sights on inflation. Steps were taken to strengthen financial sectors, and to improve regulation and competition, including allowing greater foreign equity in sectors that had hitherto been off limits. And a raft of institutional changes followed, including new laws, the creation of new organizations intended to improve oversight and regulation, and shifts in the boundaries of decision making (e.g., decentralization). Regionalism acquired fresh impetus and initiatives

1.4.13 FDI inflows to Asia



Source: United Nations Conference on Trade and Development, *World Investment Report 2006* database, available: [http://stats.unctad.org/fdi/ReportFolders/ReportFolders.aspx?CS\\_referer=&CS\\_ChosenLang=en](http://stats.unctad.org/fdi/ReportFolders/ReportFolders.aspx?CS_referer=&CS_ChosenLang=en), downloaded 5 January 2007.

[Click here for figure data](#)



### 1.4.1 Risk, uncertainty, and investment

A risk normally refers to a hazard that leads to loss. In economics, the term “risk” is sometimes also used to refer to chance occurrences that result in gain (so-called “upside risks”). Risks can be assigned a probability of their occurrence. Since risks are predictable, they can be managed. By contrast, uncertainty refers to states that are unpredictable or indeterminate and that may lie outside the realm of experience. It is not possible to assign a probability to something that is uncertain, or to manage uncertainty, or even to prepare for it.

While the distinction between risk and uncertainty is important, it is seldom retained in empirical research where risk and uncertainty are treated synonymously and are equated with statistical measures of volatility. Broadly, that is the approach followed here.

The economics of investment decisions in conditions of uncertainty suggests that an increase in the level of uncertainty may either increase or decrease the level of investment. An increase in economic uncertainty may raise the chances of a favorable outcome and trigger a positive investment decision. But this theoretical result is much less likely where firms cannot easily reverse investment decisions or where they face fixed costs—see e.g., Harris, Nguyen, and Scaramozzino (2006). These circumstances are typical of developing countries where financial and asset markets are less developed.

When investment decisions cannot be easily reversed,

increased uncertainty may create a benefit to waiting, as waiting should allow a clearer picture of likely outcomes. As a consequence, investments may be delayed or canceled.

The empirical evidence on the impact of uncertainty on investment suggests that the effects are usually negative (Asteriou and Price 2005; Lensink, Bo, and Sterken 1999; and Ramey and Ramey 1995). These and other studies are based on aggregate data using cross-country panels and concentrate on risks in the economic environment.

In a path-breaking study, Brunetti and Weder (1997) looked at a variety of measures of institutional uncertainty and traced impacts on investment. Looking at information for over 60 countries, they found that the rule of law, corruption, and real exchange rate volatility have significant effects on total investment spending. Alesina and Perotti (1996) had earlier found that social and political instability had a negative effect on investment.

Micro-level evidence is more difficult to come by. But in a recent study, Harris, Nguyen, and Scaramozzino (2006) examine the impact of uncertainty on the investment behavior of Thai firms over the period 1994–2002. They measure uncertainty using historical information on the volatility of firms’ own stock prices, and find that heightened uncertainty reduces investment (having controlled for other possible influences), but that this effect is modulated when investment decisions are reversible.

sprang up to fortify common, regional-level financial defenses; accelerate the development of regional capital markets; and improve economic monitoring, transparency, and information sharing.

But the crisis also taught private investors hard lessons about the consequences of discounting risks. Bankruptcies and widespread financial distress followed the crisis. Having been caught badly off guard once, investors are now possibly much more cautious than before. Indeed, new institutional arrangements may themselves have added to uncertainty. Even positive changes have adjustment costs and institutional changes are often slow. Moreover, the removal of implicit and explicit guarantees and subsidies increased competitive pressures, and weakening insider control may have increased risks for some.

In the public sector, the crisis was a sharp reminder of the importance of matching institutional progress and capabilities (particularly in the financial world) with expansion of the real sector. As a consequence, policy makers’ aspirations have now been lowered with sights set on growth rates that are more modest than those touted before the crisis. A sharp accumulation of foreign exchange reserves is another indicator of a heightened sense of caution.

Trying to measure these effects with any sense of precision and to disentangle their impacts on behavior is not possible. But information on macroeconomic forecasts, equity prices, corporate balance sheets, country

risk assessments, and measures of the quality of country governance may signal how moods have changed. Although such evidence is largely circumstantial, and perceptions can diverge from reality, these data may nevertheless suggest important changes in the background conditions that affect economic activity. While micro-survey data for risks and business conditions are also now available, they do not go back to before the crisis (Box 1.4.2).

### 1.4.2 Microbusiness data

The *Global Competitiveness Report 2006–2007* (World Economic Forum 2006), the *Doing Business* surveys (World Bank various years), and the *Investment Climate* reports (World Bank various years) provide a rich seam of information about the institutional and regulatory environments within which businesses operate.

Although the *Global Competitiveness Reports* go back to the 1990s, the information they provide is not readily comparable over long periods as samples and questions change. The *Doing Business* and *Investment Climate* reports both postdate the crisis, and so do not provide a benchmark with which to compare recent performance. The *Global Competitiveness Reports* and the *Doing Business* surveys rely on expert opinions and views, whereas the *Investment Climate* reports draw on large sample surveys of businesses.

The crisis countries fall into two broad categories when seen through the optic of these large international surveys. Korea, Malaysia, and Thailand tend to compare favorably on many indicators; Indonesia and the Philippines tend to lag.

In the *Doing Business* surveys, Korea, Malaysia, and Thailand rank in the top 30 countries in the world, with Indonesia and the Philippines trailing at ranks 135 and 126 (out of 175 countries), respectively.

In the most recent *Global Competitiveness Report*, Korea ranks 24, Malaysia 26, and Thailand 35. Indonesia ranks

number 50 and the Philippines is number 71 out of 125 countries.

While there is broad agreement in the surveys about Korea, Malaysia, and Thailand, the differences in (percentile) ranks for Indonesia and the Philippines are quite large. This may reflect differences in the objectives and scope of the surveys, with the *Doing Business* results focusing on a narrower range of quantitative indicators that are directly related to the costs of starting and operating a business. By contrast, the *Global Competitiveness Report* covers a wide array of indicators, including measures of governance, social achievements and capabilities, institutions, and the environment.

*Investment Climate* reports are available for Indonesia, Malaysia, Philippines, and Thailand (but not Korea). These were completed in 2004 and 2005. Each report is based on survey information collected from firms, which is analyzed with a view to identifying impediments to investment. Judged from an international perspective, Malaysia and Thailand offer comparatively hospitable conditions for business, showing little hint of the convulsions they experienced during the crisis.

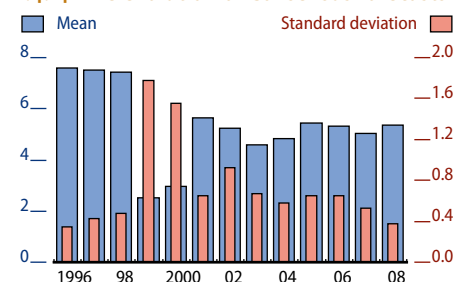
On the other hand, Indonesia and the Philippines compare unfavorably and are perceived to have weaknesses across the board. These results are certainly interesting, but as snapshots they do not allow a judgment about the underlying dynamics.

## Macroeconomic forecasts

Consensus Economics has published forecasts of selected macroeconomic indicators for Indonesia, Korea, Malaysia, and Thailand since 1995. By examining these data it may be possible to assess the degree of confidence that “experts” have in the outlook. If, for example, forecasts of growth move lower and the dispersion of these forecasts widens, this might indicate that risks to the outlook have increased.

In Figure 1.4.14, the evolution of Consensus Economics forecasts for GDP growth from January 1995 (the forecast for “1996”) through to January 2007 (the forecast for “2008”) are shown together with the standard deviation of the forecasts. The figure shows simple averages of mean forecasts and standard deviations. The impacts of the crisis are immediately apparent in the sharp drop-off in forecasts of average growth

1.4.14 The evolution of Consensus forecasts



Note: Data are 1-year ahead average forecasts for Indonesia, Korea, Malaysia, and Thailand; i.e., the forecast for 1996 was made in January 1995.

Source: Consensus Economics Inc., *Asia Pacific Consensus Forecasts*, various issues.

[Click here for figure data](#)

that occurred in January 1998. Relative to the years before the crisis, it is clear that private sector forecasters have lowered their sights, and are yet to raise them. Equally striking is the increased dissonance in the outlook that starts in January 1998 and is present through to January 2005. This could be interpreted as evidence that not only were private sector forecasters less optimistic than before the crisis, they were also much less certain.

### Equity values

Equity prices are often used as a barometer of investors' views of long-term growth and market prospects. Figure 1.4.15 presents data on real equity prices. These have been calculated both in domestic currency and in US dollar terms. In domestic currency units, real price indexes are defined as the benchmark index (measured relative to a 1990 base), divided by the consumer price index. The US dollar indexes convert the local indexes at market exchange rates, and are then divided by the US consumer price index. While the US dollar index is affected by exchange rate movements, capital flows and exchange rates are influenced by investor confidence, too.

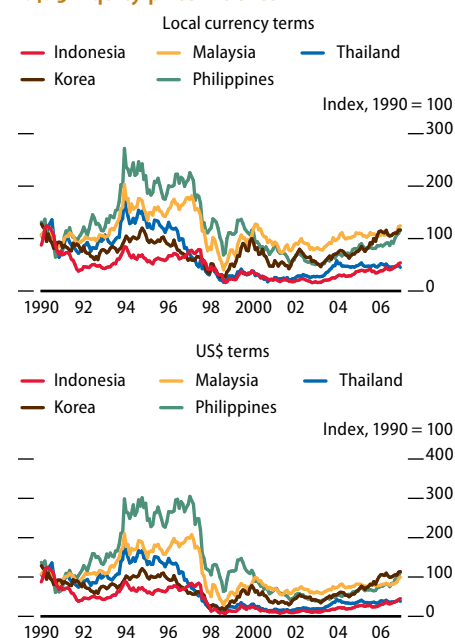
In domestic currency units, real equity prices in 2006 exceed values in 1990 only in Korea and Malaysia, while in US dollar terms, only Korea's equities have appreciated. Dollar prices in Indonesia and Thailand are less than 40% of their 1990 level and prices in Malaysia and the Philippines are about 15% lower. This might be taken as evidence that confidence in long-term growth prospects in the crisis countries has ebbed, leading to lower investment rates and slower growth (e.g., Lee and McKibbin 2006).

Equity prices have, admittedly, some limitations as a measure of investor beliefs about long-term growth prospects, and are just as likely to be influenced by short-term prospects for gains as by the long-term outlook. Certainly, surges in emerging market equity prices in 2006, which have continued through the first months of 2007, appear to reflect speculative positions taken by investors hunting for yield in highly liquid international markets. But to the extent that this has raised prices, it suggests that the present comparisons may exaggerate beliefs about long-term prospects. If, instead, comparisons are made between 1990 and 2005, all markets (including Korea) show lower prices in US dollar terms relative to a 1990 benchmark. These trends suggest that beliefs about potential growth may have been downgraded or that the risk premium may have been raised.

### Corporate balance sheets

Debt-equity ratios prior to the crisis had reached dangerously high levels and left debtor firms exposed to interest rate and market risks. A difficult process of debt resolution and workouts followed, but with the majority of the work being completed within 5 years. The data in Figure 1.4.16 capture trends in debt-equity ratios from 2002 to 2006. The ratios in this figure are expressed in ratios of the market value of debt to the market value of capitalization for all listed companies in each market. The sharp declines in debt-equity ratios over this period suggest a sustained effort within the corporate sector to protect against risks and fortify financial defenses by bringing debt exposure down. Figure 1.4.17 shows the evolution of credit (as a percentage of GDP) to the private sector over the period 1995–2005.

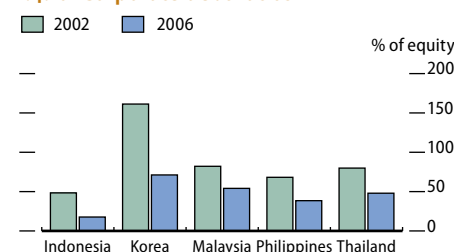
#### 1.4.15 Equity price indexes



Sources: CEIC Data Company Ltd.; International Monetary Fund, *International Financial Statistics* online database, both downloaded 12 February 2007.

[Click here for figure data](#)

#### 1.4.16 Corporate debt ratios

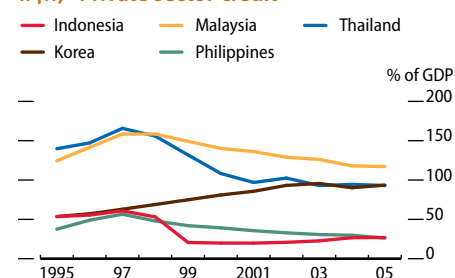


Note: In market value terms.

Source: <http://pages.stern.nyu.edu/~adamodar/>, downloaded 16 February 2007.

[Click here for figure data](#)

#### 1.4.17 Private sector credit



Sources: International Monetary Fund, *International Financial Statistics* online database; World Bank, *World Development Indicators* online database; both downloaded 2 March 2007.

[Click here for figure data](#)

## 1.4.1 Economist Intelligence Unit business environment ratings

	Indonesia		Korea		Malaysia		Philippines		Thailand	
	1995	2002	1995	2002	1995	2002	1995	2002	1995	2002
Overall business environment rating	6.4	5.5	6.6	6.7	6.5	6.8	5.9	5.8	6.5	6.7
Market opportunities rating	7.0	6.6	7.9	7.9	6.7	6.3	8.2	5.5	7.0	6.9
Macroeconomic environment rating	5.8	7.9	6.7	9.3	6.4	8.1	5.6	6.9	6.2	9.4
Labour market rating	6.2	5.6	5.7	5.7	6.5	6.2	5.7	6.9	6.0	6.6
Political environment rating	5.2	3.9	6.7	6.5	5.7	6.9	4.7	4.9	5.2	6.3
Infrastructure rating	4.3	3.9	5.9	6.2	4.8	5.1	3.6	2.8	4.6	4.4
Policy towards private enterprise rating	7.8	3.5	8.4	6.3	6.9	5.8	6.5	5.2	7.5	5.2
Tax regime rating	8.6	6.1	5.8	6.8	7.0	7.6	5.9	6.9	7.5	7.2
Financing rating	7.8	4.4	7.4	5.5	7.1	7.0	6.6	5.5	6.9	5.9
Foreign trade and exchange regime rating	6.5	7.8	6.2	6.6	7.2	8.3	6.1	7.2	7.2	8.3
Policy environment for foreign investment rating	4.3	4.9	6.6	6.1	5.7	7.2	5.5	6.1	5.6	7.2

Note: The ratings run from 1 to 10, 1 being low and 10 being high.

Source: Economist Intelligence Unit, "Market Indicators and Forecasts" online database, downloaded 9 March 2007.

Except in Korea, credit-to-GDP ratios have fallen relative to the precrisis period and would be consistent with heightened prudence. As credit to the household sector has been brisk in some countries, these data probably overstate flows of credit to the business sector.

## Economist Intelligence Unit business rating and risk indicators

There is a wide variety of data on the business environment and risks. The Economist Intelligence Unit (EIU) has been collating these data for the crisis countries over an extended period. Unfortunately, EIU does not provide measures of the reliability of these indicators, which rest largely on the judgments of in-country analysts and experts. Table 1.4.1 presents EIU business environment ratings. These ratings are centered 5-year averages, so the score for 1995 covers the period 1993–1997 and the rating for 2002, the period 2000–2004. These are used as approximations for the pre- and postcrisis periods. The more heavily shaded cells indicate where

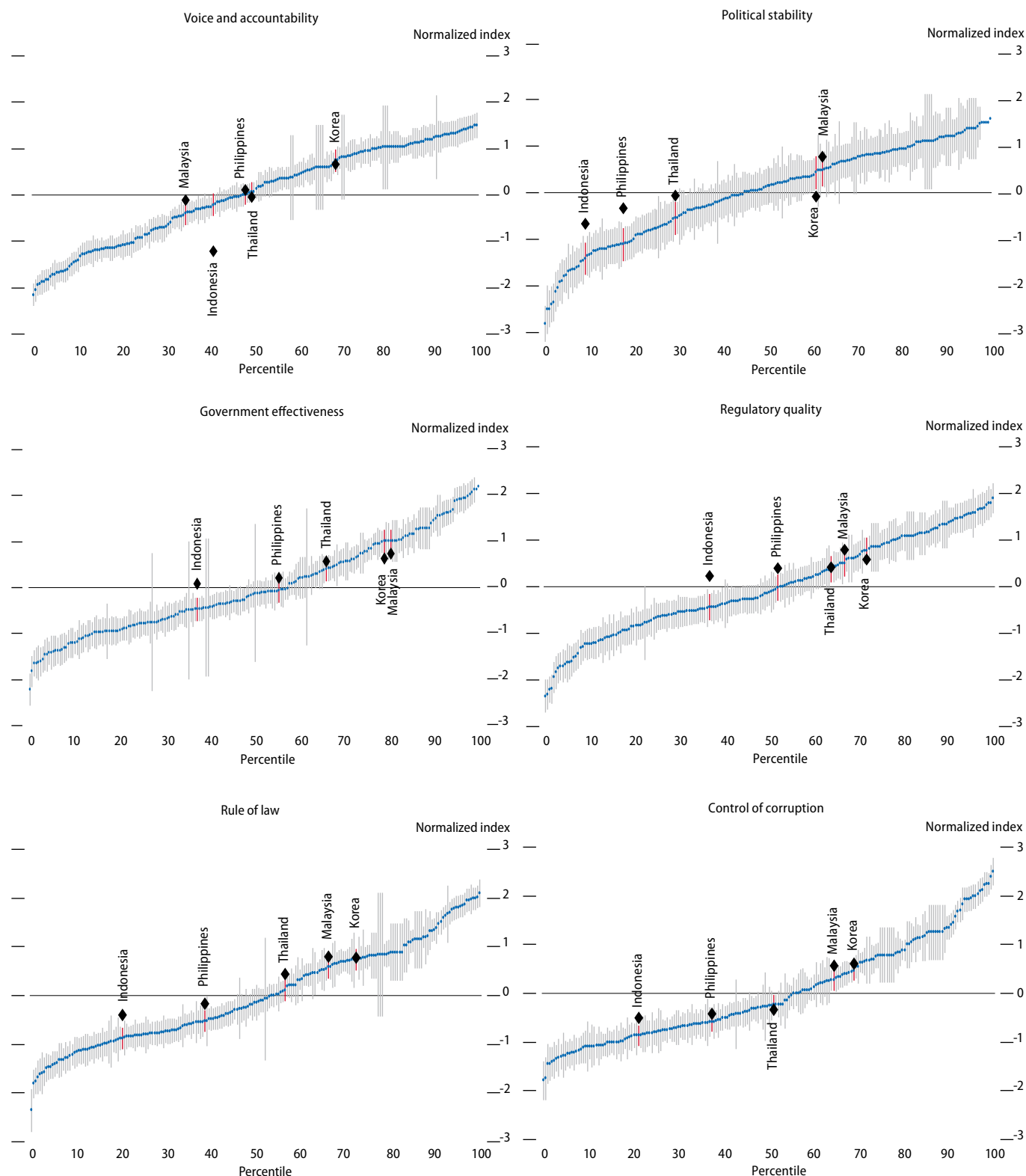
## 1.4.2 Economist Intelligence Unit political and institutional environment ratings

	Indonesia		Korea		Malaysia		Philippines		Thailand	
	1997	Post-crisis	1997	Post-crisis	1997	Post-crisis	1997	Post-crisis	1997	Post-crisis
<b>Overall risk score</b>	51.6	59.9	24.5	26.7	36.7	31.4	48.9	49.3	46.4	39.9
<b>Overall: Political risk</b>	61.4	79.2	27.3	41.6	38.6	49.0	43.2	66.2	43.2	53.6
Overall: Political instability risk	65.0	82.1	15.0	40.0	30.0	48.6	30.0	72.9	30.0	45.7
Overall: Political inefficacy risk	58.3	76.8	37.5	42.9	45.8	49.4	54.2	60.7	54.2	60.1
<b>Overall: Economic policy risk</b>	41.8	50.9	20.5	21.1	32.3	29.9	41.2	44.3	30.3	35.2
Overall: Monetary policy risk	47.2	62.7	22.2	31.8	41.7	29.0	41.7	46.0	47.2	43.7
Overall: Fiscal policy risk	20.0	39.3	5.0	16.4	20.0	38.6	5.0	63.6	10.0	37.1
Overall: Exchange rate policy risk	32.1	23.5	14.3	13.3	42.9	23.5	53.6	21.4	50.0	17.3
Overall: Trade policy risk	75.0	73.2	50.0	17.9	12.5	21.4	62.5	51.8	12.5	42.9
Overall: Regulatory policy risk	31.3	58.9	6.3	28.6	50.0	41.1	43.8	36.6	31.3	35.7
<b>Overall: Economic structure risk</b>	47.0	58.6	24.0	27.6	41.0	29.7	48.2	46.8	46.1	36.8
Overall: Global environment risk	43.8	63.4	25.0	43.8	50.0	59.8	43.8	64.3	43.8	56.3
Overall: Economic growth risk	10.7	62.8	14.3	32.1	17.9	40.3	42.9	49.5	25.0	49.0
Overall: Current account risk	57.1	27.6	42.9	7.6	75.0	10.7	57.1	21.4	75.0	12.3
Overall: Debt structure risk	56.3	59.8	6.3	1.8	6.3	0.0	31.3	41.1	12.5	12.5
Overall: Financial structure risk	78.6	89.8	35.7	69.4	67.9	53.6	71.4	70.4	85.7	68.4
<b>Overall: Liquidity risk</b>	60.0	53.9	27.5	18.2	35.0	18.2	65.0	42.1	70.0	36.1

Note: The ratings run from 1 to 100, 1 being low risk and 100 being high risk.

Source: Economist Intelligence Unit, "Market Indicators and Forecasts" online database, downloaded 9 March 2007.

## 1.4.18 Kaufmann, Kraay, and Mastruzzi governance ratings, 1996 and 2005



Note: The blue dotted line presents estimates for the 2005 governance ratings for each of the more than 200 countries in the worldwide sample, arranged by the percentile rank of countries from the lowest (worst) to the highest (best) rating. The thin black vertical lines represent the 90% confidence interval around the estimated 2005 ratings for each country. Black diamonds identify the corresponding ratings in 1996 for the five countries most directly affected by the crisis. These observations are (vertically) aligned with the 2005 percentile rankings for ease of comparison. A black diamond above (below) the blue dotted line indicates deterioration (improvement) in the governance rating for that country from 1996 to 2005. The 2005 confidence intervals for each of the five countries is identified by the red vertical lines.

Source: Kaufmann, Kraay, and Mastruzzi (2006).

[Click here for figure data](#)

scores deteriorate over the comparison period. The checkered pattern of ratings speaks for itself, but it is noticeable that on “policy towards private sector enterprise” and on “financing,” EIU ratings get worse in all countries. If these expert opinions or perceptions are widely shared, it would suggest that the environment for investment in the postcrisis period is now less favorable than before the crisis.

EIU also produces ratings that cover political as well as economic risks. Table 1.4.2 (above) presents these data. They, too, show a seesaw pattern, with improvements in some areas and regression in others.

## Governance indicators

Many empirical studies have found that the quality of governance has an important effect on investment and on economic growth (Aron 2000). The measurement of governance quality and performance is an inexact science though, and a wide variety of sources have been used to examine linkages to investment. The most comprehensive and reliable source of information is the so-called “KK” indicators, which were first released by Kaufmann, Kraay, and Lobatón (1999a and b).

The newly released KK survey data (Kaufmann, Kraay, and Mastruzzi [KKM] 2006) updates indicators to 2005, and revises earlier estimates to take account of new information and the inclusion of a larger number of countries in later samples. Consistent and revised data are available for 1996, 1998, 2000, and for 2002–2005.

Drawing together information from over 200 different sources, the KK indicators measure governance performance in six separate dimensions: voice and accountability; political stability; government effectiveness; regulatory quality; the rule of law; and control of corruption. The KK scores are distributed normally around a mean of zero with a standard deviation of one. This means that virtually all scores lie in a range from -2.5 to +2.5, with larger values signifying a better score. Estimates of the accuracy of the indicators are also available and these suggest that accuracy has improved.

A particularly useful feature of the KK indicators is that they allow international comparisons on a consistent basis. In Figure 1.4.18 a comparison of ratings on each indicator for each country in 1996 and 2005 is shown. The vertical lines show the 90% confidence intervals constructed using estimated standard errors from 2005. It is striking that out of 30 comparisons, governance ratings have fallen in 22 cases. For all countries, other than Korea, raw scores fall in three or more dimensions. On regulatory and corruption indicators there is a general pattern of deterioration, with only two exceptions (Thailand on corruption, Korea on regulation). Korea stands out as having improved in four of six possible categories. If ranks are compared across time, ranks fall in 28 cases. In 1996, the crisis countries were in the top half of all countries in 21 out of the 30 indicator values, but by 2005 they ranked in the top half in 17 indicators.

But are these changes in governance performance statistically significant? Of the 22 cases where governance scores get worse, 15 differences lie outside a 90% confidence interval using 2005 standard errors. In 4 of the 8 cases of improvement, ratings lie outside the 90%



confidence interval. *T*-tests of the statistical significance of differences suggest that 5 differences are significant at 90% (1 of which is an improvement). At a 75% confidence level, this number rises to 8.

A stricter measure still of the significance of differences is whether each of the paired scores lie outside each other's 90% (or 75%) confidence intervals. KKM (2005) observe that this test emulates a test for differences using a dynamic unobserved components estimator. At the 90% confidence interval, out of 30 comparisons, there are only 3 pairs that meet this criteria (including 1 improvement) and at the 75% interval this rises to 9 pairs (including 3 improvements).

KKM (2005) note that in the global sample, the proportions of changes in ratings that lie outside each other's 90% (75%) confidence interval is quite small. In the global sample, only 8.5% of changes qualify at the 90% confidence interval and 19.3% at 75% confidence interval. In the sample of crisis countries, the corresponding numbers are 10% and 30%. On balance, the KK measures suggest deterioration both absolutely and in terms of comparisons with other countries. However, it is possible that some of the observed changes may have occurred by chance.

## Conclusion

Real equity prices, EIU risk indicators, and KK governance indicators all point in the same broad direction, and suggest that firms and investors may now be more circumspect than a decade ago. Elevated precautionary behavior is also suggested by rapidly falling debt-equity ratios and slow growth of real credit to the private sector. And at least until 2004, there would also appear to have been more dissonance about the macroeconomic outlook than before.

But the crisis countries show significant differences in circumstances. The decline in Korea's investment rate and a lower growth trajectory is consistent with the maturation that occurs as income levels approach those of the richest countries in the world. Controlling for per capita income, Korea's postcrisis investment rates and growth may not be unusual.

In the case of Malaysia and Thailand, postcrisis growth and investment rates are possibly "too low." Although the evidence suggests that the overall business climate in both countries compares favorably internationally, increased uncertainty may have led investors to sit on the sidelines to wait for clearer direction. It is also possible that bottlenecks in the supply of complementary factors, particularly skilled technical and scientific workers, may have clipped growth.

The picture for Indonesia and the Philippines is somewhat different. Although performance on macroeconomic management has improved, their investment climate ratings and governance performance generally compare unfavorably in a wide international setting. There is also evidence of regression on a number of indicators, especially those related to economic regulation. It may be that earlier reforms need more time to gain traction, but the presence of deeply embedded institutional constraints, including high levels of corruption, may slow progress even then.

Looking ahead, Indonesia, Malaysia, Philippines, and Thailand all have ambitions to lift their growth rates, but not quite to the lofty heights

that were envisaged a decade ago. Indonesia's Medium-Term Development Plan aims to rack growth up to 7.6% by 2009 and anticipates a steady rise in the ratio of investment to GDP. Malaysia's Ninth Five-Year Plan sets a target of 6% growth over 2006–2010, an acceleration of 1.5% a year relative to the outcome during the Eighth Plan. In the Philippines, the National Economic Development Authority has set its sights on a GDP growth rate of 7–8% by 2009. By that time, investment in fixed capital is expected to be growing at a much faster clip of around 14–15% a year. Thailand, too, anticipates an acceleration of growth to around 6% which, it is anticipated, will be accompanied by strong investment growth.

But what needs to be done to encourage investment, and accelerate growth on a sustainable basis?

Macroeconomic policy appears to offer little maneuver for stimulating investment. Policy interest rates are now more firmly set with inflation prospects in sight in Indonesia, Philippines, and Thailand. Even in Malaysia, which has no formal adherence to “inflation targeting,” prospects for inflation are a significant concern in charting monetary policy. If the inflationary pressures were to retreat further, allowing policy rates to come down, this could stimulate investment, but real interest rates are already low by historical standards (Figure 1.4.10).

Fiscal options are also somewhat constrained. Infrastructure spending plans, particularly in Malaysia and Thailand, will have to be assessed in the context of other priorities and domestic debt levels that are still quite high. One possibility might be to deploy some portion of low-yielding foreign exchange reserves to help finance the import content of investment projects. Because a critical element in any assessment of country risk and uncertainty is the macroeconomic environment, continued adherence to prudent policies is what will help investment most.

Improvements in the investment climate are clearly needed, but priorities differ by country. The successful migration to higher-productivity industrial and services activities depends critically on having a pool of versatile workers with the right skills. In both Malaysia and Thailand businesses complain loudly of bottlenecks in the supply of workers with relevant skills. In Malaysia, the presence of a growing number of unemployed graduates alongside increasing vacancies for technical and managerial workers suggests that there is a mismatch between what is being taught at upper-secondary and tertiary levels and what firms need. Investment in quality and relevance, including high-quality business-oriented vocational training, is what is needed. Success in building a modern knowledge economy will depend critically on better educated teachers and relevant curricula. Thailand performs poorly on various infrastructure indicators.

Malaysia and Thailand also need to improve their regulatory environments. Labor market regulations, customs procedures, and ordinary bureaucratic requirements are widely cited as sources of uncertainty. In Malaysia, these burdens fall disproportionately on the largest and best performing firms, and the growth of the services sector is hobbled by lack of competition. In Thailand, tax, customs, labor, and ownership regulations are regarded as problematic by the business community. Improvement in these areas and in the quality of enforcing laws would reduce the risks and costs for business investors.

For Indonesia and the Philippines, where improvements have already taken place in the macroeconomic policy environment, the key to sustaining growth is likely to lie in improving the quality and performance of key institutions that influence investor perceptions about uncertainties, risks, and the costs of doing business. Clearly, useful advice needs refinement and has to be tailored to the country context, though in both countries (outside the financial sector) lighter regulation—but with much improved implementation—is required.

The *Investment Climate* report for Indonesia identifies “risks” as the leading concern among investors. Policy and regulatory risks are singled out. Although clarity on policy has improved, regulatory risks remain a problem. A second significant concern is the costs of doing business, which include the costs of corruption, as well as poor contract enforcement and regulation. Indonesia ranks poorly by international standards, and has seen no improvement in the past decade. Poor infrastructure also raises business costs in the country.

In the Philippines, too, governance issues are to the fore. Contract enforcement, corruption, and crime and security are of particular concern. The *Investment Climate* report suggests that added and avoidable costs in the Philippines place it at a disadvantage to the PRC. Poor infrastructure, particularly in power and transportation, add most to costs. Generally, the institutions of government are weak and this has slowed the pace of progress. Complex rules and regulations do not adequately address competition issues and continue to create fertile ground for rent seeking. In a variety of dimensions, prospects for raising investment and accelerated growth will depend on the capacity of institutions to move ahead and implement the changes that are required to reduce uncertainty and risk.

Finally in all countries, although a pickup in investment may not be sufficient for faster growth, it will help growth to accelerate if new investments raise aggregate productivity. Fundamental to this will be the ability of financial systems to direct resources to the best projects. This will not only require continuing improvements in banking regulation and supervision, but also the expansion of capital markets that price risks efficiently, improve information flows, and enhance liquidity. The opening of sectors that are still sheltered from competition (especially in services) could also help lift investment and growth. Lying at the intersection of these difficult challenges will be more effective institutions and improved governance.

## References

- Alesina, Alberto and Roberto Perotti. 1996. "Income distribution, political instability, and investment." *European Economic Review* 40(6):1203–28.
- Aron, Janine. 2000. "Growth and Institutions: A Review of the Evidence." *The World Bank Research Observer* 15(1):99–135.
- Asian Development Bank (ADB), Japan Bank for International Cooperation (JBIC), and World Bank. 2005. *Connecting East Asia: A New Framework for Infrastructure*. Washington, DC.
- Asian Productivity Organization (APO). 2004. *Total Factor Productivity Growth: Survey Report*. Tokyo.
- Asteriou, Dimitrios and Simon Price. 2005. "Uncertainty, Investment and Economic Growth: Evidence from a Dynamic Panel." *Review of Development Economics* 9(2):277–88.
- Attanasio, Orazio P., Lucio Picci, and Antonello Scorcu. 2000. "Saving, Growth and Investment: A macroeconomic analysis using a panel of countries." *The Review of Economics and Statistics* 82(2):182–211.
- Berg, Andrew, Carlos Leite, Jonathan D. Ostry, and Jeromin Zettelmeyer. 2006. "What Makes Growth Sustained?" Manuscript, January. Washington, DC: International Monetary Fund.
- Brunetti, Aymo and Beatrice Weder. 1997. *Investment and Institutional Uncertainty: A Comparative Study of Different Uncertainty Measures*. Washington, DC: World Bank.
- Cerra, Valerie and Sweta Chaman Saxena. 2005. "Did Output Recover from the Asian Crisis?" *IMF Staff Papers* 52(1):1–23.
- Chinn, Menzie D. and Hiro Ito. 2005. "Current Account Balances, Financial Development and Institutions: Assaying the World 'Savings Glut.'" *NBER Working Paper* No. 11761, November. Cambridge, Massachusetts.
- Collins, Susan M. and Barry P. Bosworth. 1996. "Economic Growth in East Asia: Accumulation versus Assimilation." *Brookings Papers on Economic Activity* 2:135–203.
- Crafts, Nicholas. 1999. "East Asian Growth Before and After the Crisis." *IMF Staff Papers* 46(2):139–66.
- Economist*. 2007. "The problem with Made in China." 13 January, pp.68–70.
- Eichengreen, Barry and Hui Tong. 2005. "Is China's FDI Coming at the Expense of Other Countries?" *NBER Working Paper* No. 11335, May. Cambridge, Massachusetts.
- Eichengreen, Barry. 2006. "Global Imbalances: The Blind Men and the Elephant." *Issues in Economic Policy* No. 1. Washington, DC: The Brookings Institution.
- Everhart, Stephen S. and Mariusz A. Sumlinski. 2001. "Trends in Private Investment in Developing Countries: Statistics for 1970–2000 and the Impact on Private Investment of Corruption and the Quality of Public Investment." *International Finance Corporation Discussion Paper* No. 44. Washington, DC.
- Harris, Laurence, Tho Dinh Nguyen, and Pasquale Scaramozzino. 2006. "Uncertainty and Investment in an East Asian Economy: A Firm Level Study of Thailand." *Discussion Paper* No. 63, April. The School of Oriental and African Studies, University of London, Centre for Financial and Management Studies.
- Hausmann, Ricardo, Dani Rodrik, and Andrés Velasco. 2005. "Growth Diagnostics." Manuscript, March. John F. Kennedy School of Government, Harvard University, Cambridge, Massachusetts.

- Hausmann, Ricardo, Lant Pritchett, and Dani Rodrik. 2005. "Growth Accelerations." Manuscript, August. John F. Kennedy School of Government, Harvard University, Cambridge, Massachusetts and World Bank, Washington, DC.
- International Monetary Fund (IMF). 2005. "Global Imbalances: A Saving and Investment Perspective." *World Economic Outlook*, September 2005, pp. 91–124. Washington, DC.
- Jones, Benjamin F. and Benjamin A. Olken. 2005. "The Anatomy of Start-Stop Growth." *NBER Working Paper* No. 11528, July. Cambridge, Massachusetts.
- Kaufmann, Daniel, Aart Kraay, and Massimo Mastruzzi. 2005. "Governance Matters IV: Governance Indicators for 1996–2004." Manuscript, May. Washington, DC, World Bank.
- . 2006. "Governance Matters V: Governance Indicators for 1996–2005." Manuscript, September. Washington, DC, World Bank.
- Kaufmann, Daniel, Aart Kraay, and Pablo Zoido-Lobaton. 1999a. "Aggregating Governance Indicators." *World Bank Policy Research Working Paper* No. 2195. Washington, DC.
- . 1999b. "Governance Matters." *World Bank Policy Research Working Paper* No. 2196. Washington, DC.
- Kramer, Charles. 2006. "Asia's Investment Puzzle." *Finance and Development* 43(2):June.
- Lee, Jong-Wha and Warwick J. McKibbin. 2006. "Domestic Investment and External Imbalances in East Asia." *Brookings Discussion Papers in International Economics* No. 172, September. Cambridge, Massachusetts.
- Lensink, Robert, Hong Bo, and Elmer Sterken. 1999. "Does Uncertainty Affect Economic Growth? An Empirical Analysis." *Weltwirtschaftliches Archiv* 135:379–96.
- Lim, Kyung-Mook and Dong-Suk Kim. 2005. "Recent Facility Investment Trends." *Quarterly Economic Outlook*. July. Seoul: Korea Development Institute.
- Ramey, Garey and Valerie A. Ramey. 1995. "Cross-Country Evidence on the Link between Volatility and Growth." *American Economic Review* 85(5):1138–51.
- Rocha, Bruno. 2007. "At Different Speeds: Recovering from the Asian Crisis." *ADB Institute Discussion Paper* No. 60. February. Tokyo.
- Rogers, Mark. 2003. "A Survey of Economic Growth." *The Economic Record* 79(244):112–35.
- Young, Alwyn. 1995. "The Tyranny of Numbers: Confronting the Statistical Realities of the East Asian Growth Experience." *Quarterly Journal of Economics* 110(3):641–80.

# Uncoupling Asia: Myth and reality

## Introduction

Traditionally, developing Asia has been viewed as a region that relies heavily on exports for growth. As an important corollary of this, it has been considered vulnerable to external demand shocks. Developing Asia—more precisely the economies of East and Southeast Asia<sup>1</sup>—have registered average growth of 6.5% a year over the last decade. These economies now account for 9.9% of world gross domestic product (GDP) measured in real US dollar terms, compared with 30.6% for the United States (US), 14.0% for Japan, and 24.9% for the 25 countries of the European Union (EU-25). (The US, Japan, and EU are referred to henceforth as the G3 economies or simply G3.)

The fast-growing Asian region and its potentially large spending power raise the hope that its own growing demand may help it both weather the adverse consequences of a US slowdown and ease the impact of a global downturn. Indeed, the visible slowing in the US economy in the second half of 2006 notwithstanding, the continued strength of Asian exports has been marked. This has set off heated debate on whether or not the Asian economy is uncoupling from the global business cycle on the back of its rapidly growing domestic economy and the strengthening of intra-Asian economic ties.

“Uncoupling” can be defined as the emergence of a business-cycle dynamic that is relatively independent of global demand trends and that is driven mainly by autonomous changes in internal demand. Proponents of the “uncoupling Asia” view base their arguments on the emergence of a strong regional economy that is increasingly independent from changing economic conditions in the world’s major industrial countries.

A major reason, some believe, that Asia’s business cycle is uncoupling is the emergence of the People’s Republic of China (PRC) with a consumer market of 1.3 billion. Trade growth between the PRC and the countries of East and Southeast Asia has been extremely rapid in the last decade and this is also seen as possibly replacing industrial country consumer demand. (See the chapter, *Trade and structural change in East and Southeast Asia: Implications for growth and industrialization*, also in Part 1.)

Despite the emergence of the PRC economy and the increase in the Asian region’s share in global production and trade, evidence presented in this chapter of *Asian Development Outlook 2007* indicates that the rise in intra-Asian economic interdependence through investment and trade is being *driven* by the globalization process. For example, much



intra-Asian trade is conducted by multinational corporations (MNCs) and their affiliates in the form of intrafirm and intra-industry trade that involves fragmentation of production. The production networks in Asia respond to global demands from consumers outside the region rather than being independent of them. Therefore, the G3 economies are still an important source of external demand for Asia, and so the region remains vulnerable to shocks coming from this quarter. Analysis of business-cycle co-movements, both within Asia and between G3 and Asia, generally affirms the linkage between growth in G3 and Asia, indicating that the regional integration process in Asia is intimately linked to global economic activity.

The following sections investigate the structure of Asian trade both in terms of inter- and intraregional trade linkages. In the next section, *Is intra-Asian trade growth driven by independent regional demand?*, a close relationship between Asian exports and final demand from the G3 economies is demonstrated. Although Asia's direct exposure to G3 is on a decline, final demand from G3 plays an important role underneath the surface of rising intra-Asian trade. Much of this trade is dominated by intra-industry and intrafirm shipments of intermediate goods that are eventually consumed outside the region. Although production sharing arrangements across Asia have given a strong push to regional economic and trade integration since the 1990s, such integration is structurally linked to the international business networks of MNCs.

The PRC has a special role to play. At the center of MNCs' regional supply networks, it is important in boosting both intra- and interregional trade. But this nexus role has deepened economic interdependence between the PRC and the rest of Asia as well as between the PRC and G3.

The penultimate section, *Is Asia's business cycle gaining independence?*, examines whether, and to what extent, ongoing regional integration has affected the degree of dependence of the Asian economy on G3 business cycles. The patterns of Asian business cycles changed quite significantly before and after the Asian crisis of 1997–98, reflecting structural changes in the regional economy. Evidence based on correlation analysis of business cycles supports the view that Asia's increasing trade openness and economic integration, within itself and with G3, have led to higher degrees of both inter- and intraregional business cycle synchronization. There is clear evidence pointing to increasing business cycle co-movements among Asian economies, particularly between the PRC and the rest of Asia. But there is no mutual exclusivity between inter- and intraregional economic integration—it is not one or the other. In fact, deepening regional integration appears to reinforce Asia's integration into the world economy. For this reason, Asia remains exposed to cyclical downturns in the G3 economies.

In *Conclusions*, some policy issues are discussed in light of the global nature of Asia's regional integration. The Asian economy remains sensitive to business cycles in the G3 economies, giving rise to an important policy agenda for Asia's economies, both at the regional and national level. To the extent that regionalization is tied to globalization, Asia's economic activity is also exposed to global competition. Globalization of MNCs' production networks underlines the region's need

for greater economic flexibility to maintain strong productivity growth and global competitiveness.

## Is intra-Asian trade growth driven by independent regional demand?

### The final destination of intra-Asian trade

Asia is undergoing a process of rapid economic expansion accompanied by growing regional trade, investment, and financial linkages. Since the 1990s in particular, growth in intra-Asian trade has been remarkable (Figure 1.5.1). Trade is often an important channel through which economic shocks can be transmitted from one country to another, but it may not be the whole story. Indeed, export-driven growth tends to make a country's economy vulnerable to the cyclical movements in economic activity of major trading partners. The rapid expansion of intraregional trade may indicate that Asian countries are strengthening their mutual economic ties. At the same time, the relative decline in Asia's trade with the rest of the world suggests Asia's reliance on external trading partners might be diminishing.

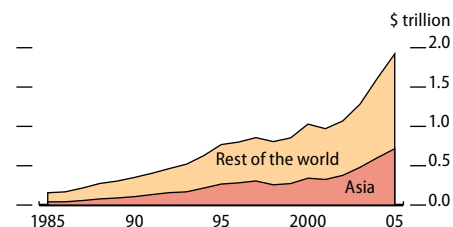
Overall, Asia's reliance on external demand remains strong. The export-to-GDP ratio has continued to trend upward, reaching nearly 55% of GDP in 2005 (Figure 1.5.2) compared with the world average of 28.5%. The incremental export-to-GDP ratio, measured by the year-on-year increment in exports over that in GDP, has also been on an upward trend. Steady increases of both ratios illustrate the importance of the export sector as the engine of growth in developing Asia.

Asia's increasing trade openness has been accompanied by significant progress in the diversification of its export base. Figure 1.5.3 shows the composition of Asian exports by destination. The share of intraregional trade in total exports rose from 26.2% in 1985 to 37.3% in 2005. The geographic composition of Asia's export market has become much less concentrated, with the share of the single largest market, the US, at only 17.6% in 2005, down from 23.2% in 1985. Japan and the EU-25 now account for 25.8% of Asia's total export market, much larger than the US share. But taken together, the G3 economies (the major export destination of global exports) account for only 43.3% of Asia's total exports, down from 53.2% two decades ago.

Greater diversification in the geographic composition of Asian exports suggests that an external demand shock stemming from a downturn in G3 could be mitigated to some extent by stronger growth in the rest of Asia's export markets, including Asia itself. This increasing degree of trade diversification, along with strong growth in intra-Asian trade, is often taken as evidence of an increase in Asia's resilience to a slowing of growth in the world's major economies.

However, changing demand conditions in these economies—particularly the US—appear to remain a dominant factor in Asia's export growth. Figure 1.5.4 demonstrates a close relationship between US non-oil import growth and that of Asian exports. G3 non-oil imports are also included for the period where data are available. US non-oil

### 1.5.1 Destinations for Asian exports

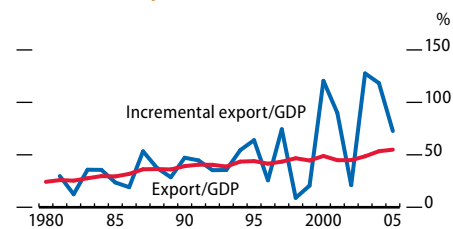


Note: Asia comprises People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; and Thailand.

Source: International Monetary Fund, *Direction of Trade Statistics* CD, January 2007.

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### 1.5.2 Asian export ratios

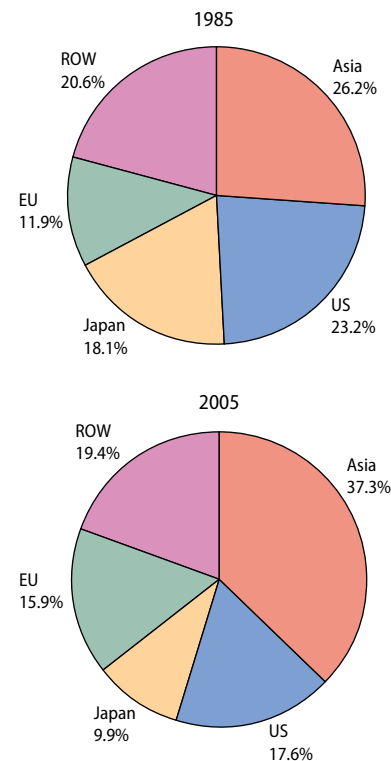


Note: Asia comprises People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; and Thailand.

Source: Oxford Economics, *Quarterly Model*, February 2007.

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### 1.5.3 Composition of Asian exports



ROW = rest of the world.

Note: Asia comprises People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; and Thailand.

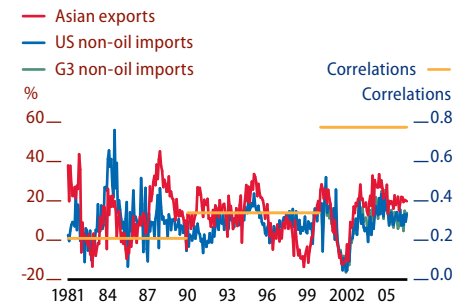
Source: International Monetary Fund, *Direction of Trade Statistics* CD, January 2007.

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imports account for nearly 50% of total G3 non-oil imports and are highly synchronized with movements of G3 non-oil imports. Consequently, the correlation between Asian exports and G3 non-oil imports is also quite significant. Although the share of G3 markets in terms of Asia's total export market is on a decline, the figure indicates that the relationship in growth rates rather than levels has strengthened over time. The decadal correlations between growth rates of US non-oil imports and Asian exports confirm that this linkage has been significant and tighter in the first years of this century.

Underlying this strong linkage is the nature of intra-Asian trade. A notable feature of such trade is that it is driven by vertical integration of production chains, whose final output is destined for final demand outside the region (see the chapter *Trade and structural change in East and Southeast Asia: Implications for growth and industrialization*). Figure 1.5.5 shows a breakdown of Asian exports in terms of exports that are destined for other countries within the region and of exports that leave the region, on the basis of the input-output structure of global

#### 1.5.4 Correlations between growth in Asian exports and G3 non-oil imports

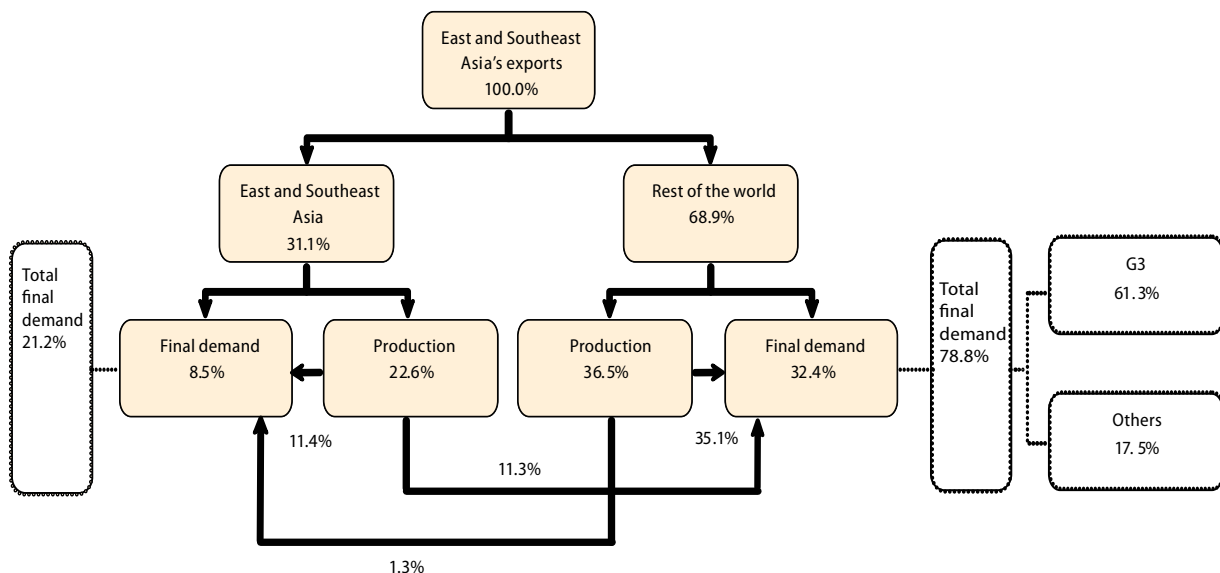


Note: Asia comprises People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; and Thailand.

Sources: International Monetary Fund, *Direction of Trade Statistics* CD, January 2007; US Census Bureau, available: [www.census.gov](http://www.census.gov); CEIC Data Company Ltd.; Eurostat, available: <http://epp.eurostat.ec.europa.eu>; all downloaded 28 February 2007.

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#### 1.5.5 Share of exports from East and Southeast Asia



Source: Staff estimates.

production and trade. Intra-Asian trade is then factored into the region's final demand and what is used in the production process. A similar decomposition is made in the trade among the rest of the world. On both ends are reported total final demand by different regions, which take into account the trade in intermediate goods in the production process.

The decomposition, which is based on the latest release of the Global Trade Analysis Project database,<sup>2</sup> shows that more than 70% of intra-Asian trade consists of intermediate goods used in production, and of this, half is driven by final demand outside Asia. Consequently, about 61.3% of total Asian exports (instead of 43% of total exports as shown in Figure 1.5.3) is eventually consumed in G3 countries.

Within Asia, the PRC is the largest driver of regional exports, but its final demand accounted for only 6.4% of total Asian trade, which was

only half the contribution from Japan and slightly below a quarter of that from the US.<sup>3</sup> The results show that the G3 economies are still the main ultimate export destinations for final goods leaving Asia, when taking into account the share of intermediate goods trade that is for assembly and production within the region but that is eventually shipped out of the region.

This is confirmed by other sources. The Monetary Authority of Singapore (2003) estimates that only about 22% of total Asian exports are eventually absorbed by the region's domestic demand, based on the 1995 Asian Input-Output table (AIO table). According to Citigroup (2006), based on the newly released 2000 AIO table, only 11% of Asian exports are now destined for consumption within Asia. Meng et al. (2006) also conclude that, comparing the 2000 AIO table with the 1995 AIO table, the dependence of Asian production on overseas markets strengthened rather than weakened. Using a slightly different approach, Goldman Sachs (2002) estimates that Asia's domestic demand accounts for only one fifth of Asia's total export growth. Rough estimates based on these sources indicate that about 60% of Asia's total exports are ultimately headed for G3.

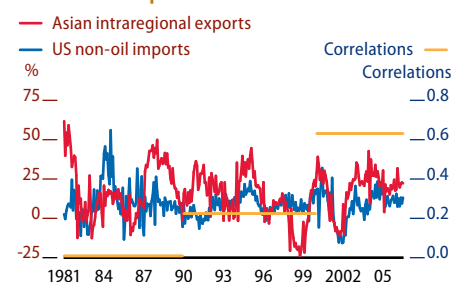
Figure 1.5.6 highlights the significance of G3 demand as final demand for intraregional trade by demonstrating that intraregional trade dynamics are tightly associated with the US non-oil import cycle. In the same vein, the relationship between Asia's private domestic demand and Asian imports has weakened, despite rising intraregional trade. Figure 1.5.7 shows that the correlation between Asia's private demand and its imports has trended downward.

As intra-Asian trade originates from demand outside the region, growth of intraregional trade's share in total Asian exports does not automatically lead to Asia's insulation from an external demand shock. On the contrary, the extent to which intraregional trade is dictated by intrafirm and intra-industry processing and assembly through vertically integrated production chains determines how vulnerable the Asian economy can be to a shock, particularly an industry-specific one emanating from major demand destinations. For example, the last US slowdown in 2001–2002 originated in the information technology (IT) industry, and its ripple effects through the global IT industry to Asian manufacturers was a vivid example of such vulnerability. The next section explores the structure of intra-industry trade within Asia.

### Vertical supply networks and the role of the People's Republic of China

Figure 1.5.8 shows that intra-industry trade has been rising in Asia's trade with the rest of the world, along with increasing intraregional trade since the 1990s.<sup>4</sup> Beneath this picture lie intricately interconnected supply chains among Asian economies. ADB (2006) reports that strong growth in intrafirm and intra-industry trade through MNCs' vertical supply networks has boosted intra- and interregional Asian trade. It suggests that regional production sharing networks established by MNCs to take advantage of specific local conditions and low-cost labor might have been an underlying force behind intraregional trade in intermediate goods destined for final consumption outside the region. Fukao et al. (2003) provide supporting evidence, namely that Asian affiliates of Japanese

### 1.5.6 Correlations between growth in Asian intraregional exports and US non-oil imports

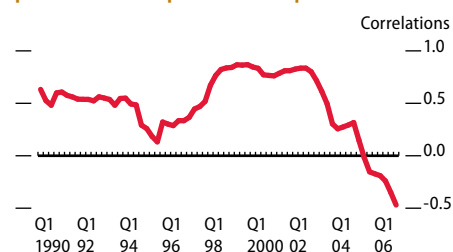


Note: Asia comprises People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; and Thailand.

Sources: International Monetary Fund, *Direction of Trade Statistics* CD, January 2007; US Census Bureau, available: [www.census.gov](http://www.census.gov), downloaded 28 February 2007.

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### 1.5.7 Correlations between Asian private consumption and imports

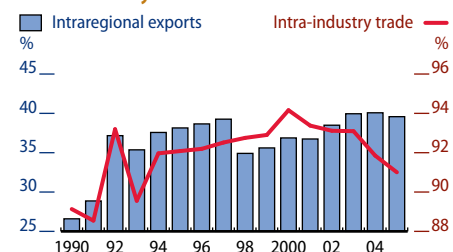


Note: Asia comprises People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; and Thailand.

Source: Oxford Economics, *Quarterly Model*, February 2007.

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### 1.5.8 Asian intraregional exports and intra-industry trade



Note: Asia comprises People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; and Thailand.

Source: United Nations, *Commodity Trade Statistics* database, downloaded 28 February 2007.

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### 1.5.1 Sales by destination of foreign manufacturing subsidiaries of Japanese and US firms, by location, 1999 (share in total sales)

Destination	Location of operation					
	East Asia (excl. Japan)	PRC	Japan	Europe	US	All econ- omies
US subsidiaries						
Local market	39.6	50.4	90.1	56.7	-	57.7
Exports	60.4	49.6	9.9	43.3	-	42.3
Japanese subsidiaries						
Local market	48.2	47.0	-	60.1	90.4	70.0
Exports	51.8	53.0	-	39.9	9.6	30.0

Source: Fukao et al. (2003).

and US firms export more than 50% of their products to destinations outside Asia, much higher than the export-sales ratios for other locations (Table 1.5.1). The subsidiaries of US firms in Japan export only about 10% of sales, similar to the share of exports in total sales by Japanese subsidiaries operating in the US.

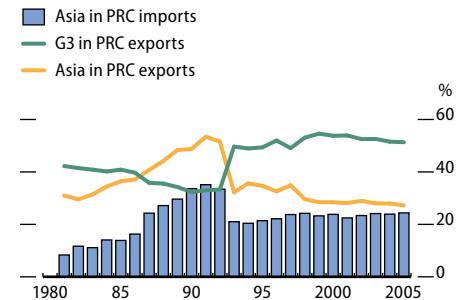
The PRC appears to be at the center of this growing intrafirm and intra-industry trade as the region's main production base. The country's accession to the World Trade Organization (WTO) in 2001 has also played a catalytic role in its emergence as a major player on the world trading scene. With its strong commitment to implementation of WTO agreements, the PRC has removed trade barriers in virtually all product markets and further opened its market to foreign companies. In just two decades between 1985 and 2005, the PRC's exports (imports) grew from \$27.3 billion (\$42.5 billion) to \$762.3 billion (\$660.2 billion).

During this period of rapid growth, the pattern of PRC trade changed significantly (Figure 1.5.9). In the 1980s, the share of Asian neighbors in the PRC's total exports rose steadily, while that of G3 markets declined (similar to the export pattern of the rest of Asia, as previously mentioned). However, since the 1990s, the share of G3 markets has started to increase in terms of total PRC exports, reaching over 50% by 2005. Meanwhile, the PRC continued to import more from the rest of Asia in the 1990s, even with the declining share of Asian neighbors in its total exports.

Figure 1.5.10 shows that the growth rates of PRC exports to G3 have been highly correlated with those of PRC imports from the rest of Asia since the late 1990s. The basic pattern of PRC trade can be characterized as increasing exports to the global economy, while importing more intermediate goods from the rest of Asia. This trend is particularly pronounced in the electronics and automobile industries. For example, 15.5% of the PRC's total exports consisted of machinery and transportation equipment in 1992. By 2005, this figure had risen to 46.2%. In the same period, the share of machinery and transportation equipment in the PRC's total non-oil imports increased from 39.7% to 48.4%.

There is little doubt that foreign direct investment (FDI) has played an important role in promoting Asian growth via encouraging intra- and interregional trade of host countries. Growth in FDI inflows to the region has been substantial, rising from \$21.3 billion in 1990 to \$151.3 billion in

### 1.5.9 Shares in PRC trade

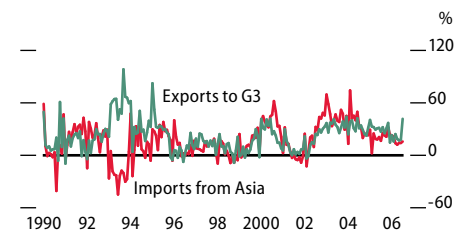


Note: Asia comprises People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; and Thailand.

Source: International Monetary Fund, *Direction of Trade Statistics* CD, January 2007.

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### 1.5.10 Growth in PRC trade



Note: Asia comprises People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; and Thailand.

Source: International Monetary Fund, *Direction of Trade Statistics* CD, January 2007.

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2005. But the pattern of FDI flows to Asia is quite different from those to the rest of the world. As noted previously, foreign affiliates in Asia established by FDI inflows tend to export a large share of sales, whereas FDI flows to other regions tend to serve local demand by getting around trade barriers protecting firms that compete in local markets.

This reflects the fact that the rapid expansion of FDI inflows to Asia has been closely associated with the establishment of regional production networks by MNCs (Fukao et al. 2003, Kawai and Urata 2004). Eichengreen and Tong (2005) also find that rapid growth in FDI inflows to the PRC has positive spillovers to other Asian economies, as these form part of the same global production networks. Indeed, the rise of the PRC as Asia's main assembly and production center appears to have influenced the region's cross-border investment flows as well. Growth in FDI inflows to the PRC has been marked and, more importantly, the share of FDI flows from regional economies to the PRC has been noteworthy (Figure 1.5.11).

As the PRC emerges as an important nexus between intra- and interregional trade and financial linkages for Asia, economic interdependence arises between the PRC and the rest of Asia as well as between the PRC and G3. To the extent that rapid growth in trade and investment has been a driving force behind PRC growth, a sharp fall in exports and a subsequent reduction in FDI may present a significant downside risk to the PRC economy, and thus to the rest of Asia. Because the PRC imports a large share of intermediate goods from the rest of Asia to serve final demand from G3, a slowdown in the G3 economies could have a negative impact on PRC exports and consequently PRC imports from the rest of Asia.

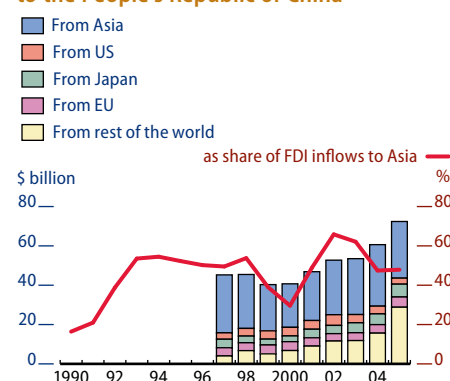
At the same time, to the extent that FDI flows are related to intrafirm and intraregional trade to serve external demand, FDI flows are likely to be responsive to the prospect of export growth. In turn, a sharp and prolonged reduction in external demand might also hold back FDI inflows to the region.

## Is Asia's business cycle gaining independence?

This section sets out to identify some stylized facts about Asian business cycles and examine their co-movements both within the region and with G3 business cycles. An interesting question is whether, and to what extent, the region's strong growth and tightening trade linkages have affected the dynamics of Asia's business cycles in relation to each other and to the rest of the world.

Traditionally, business cycles are characterized as periodic phases of expansion and contraction in economic activity (Burns and Mitchell 1946). In the traditional approach, the business cycle is defined over movements or changes in the level of an important economic variable, such as GDP or employment. Although recessions (defined as two consecutive quarters of contraction in GDP) have become less frequent, the business cycle approach may be used to examine changes in growth rates to understand turning points of an economy. Business cycles can be also defined as "movements about the trend" in output accompanied by "co-movements" of the deviations from the trend among different

**1.5.11 Foreign direct investment inflows to the People's Republic of China**



Note: Asia comprises People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; and Thailand.

Sources: National Bureau of Statistics, *China Statistical Yearbook*, various issues; United Nations Conference on Trade and Development, *World Investment Report 2006*.

[Click here for figure data](#)



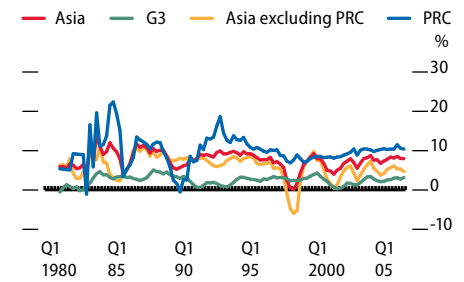
economic variables (Lucas 1977). Following modern business cycle theory, the cyclical components in economic activity can be extracted for the business cycles, using the appropriate statistical filtering techniques (Box 1.5.1).

### Changing patterns of Asian business cycles

Figures 1.5.12 and 1.5.13 illustrate the movements of real GDP of Asian and G3 economies in terms of, respectively, growth rates and cyclical components. Both figures show that Asian business cycles are generally the more volatile, but also that their amplitude has narrowed visibly over time.

Judging from the patterns of growth fluctuations, Asian business cycles tend to have longer expansionary periods followed by relatively shorter but much sharper contractions than those of G3. These patterns are much more pronounced in most of the 1990s, when Asia experienced an extended period of rapid growth prior to the crisis. Strong growth, accompanied by generally positive macroeconomic indicators, also made

1.5.12 GDP growth



Note: Asia comprises People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; and Thailand.

Source: Oxford Economics, *Quarterly Model*, February 2007.

[Click here for figure data](#)

### 1.5.1 Measuring business cycles

The appropriate measurement of business cycles is essential to establish stylized facts about cyclical movements. Empirically, however, separating the trend from the cyclical components of a series is highly controversial. The potential rate of trend growth is unobservable and has to be inferred from actual output data by adopting a detrending procedure. But there is no consensus on how best to decompose a series into its trend and cyclical components. Although business cycles are sensitive to the specific method adopted, no single methodology has been universally accepted as superior.

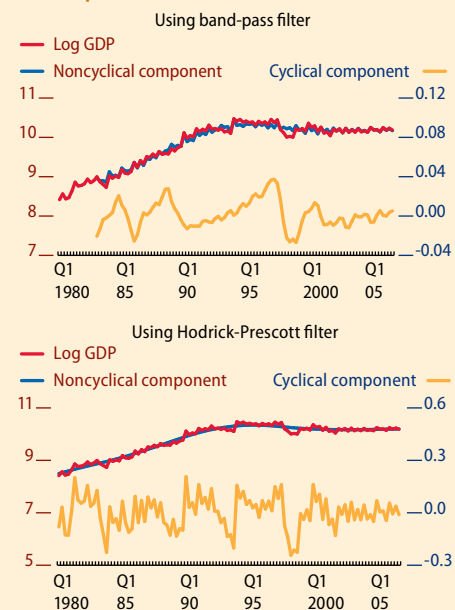
Typically, a decomposition methodology that is widely used applies time-series techniques to allow a stochastic (time-varying) trend. The most frequently used procedure is the method developed by Hodrick and Prescott (1981). The Hodrick-Prescott (HP) filter is a smoothing method that suppresses short-term fluctuations in a time series. Once the trend component is obtained, the residuals of the actual data from the smoothed series represent the business cycle.

Another popular method is the band-pass filter introduced by Baxter and King (1995). This is based on the idea that business cycles may be defined as movements of a certain periodic fluctuation. The band-pass filter eliminates both long-term trends (of more than 32 quarters) and high-frequency fluctuations (of less than 6 quarters) while retaining only the cyclical components of a series. This approach is often preferred to the HP filter, as the series is free of highly irregular short-term fluctuations (the residual series from the HP filter is not). The band-pass filter is also the filter of choice in this chapter. As its moving-average procedure produces no values for the

first and last 12 quarters, data series have been extended to 2009 using the latest short-term economic projections from the Oxford Economics Global Model to generate the business cycle up to 2006.

The box figure illustrates results of using these two filtering methods for the Asian economy.

Decomposition of Asian GDP



Note: Asia comprises People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; and Thailand.

Source: Oxford Economics, *Quarterly Model*, February 2007.

Asia a magnet for foreign capital during this period. With more open capital markets since the early 1990s, capital inflows to the region have risen sharply, further boosting economic activity.

Interestingly, this period appears to present a case for Asia's uncoupling, since Asian business cycles seem fairly detached from those of G3 through most of the 1990s. Movements in the cyclical components paint broadly similar pictures. The relatively long span of expansion followed by a sharp contraction in the 1990s is even more visible in the cyclical component. It is also clear that the upturn phase was relatively unaffected by the G3 cycle.

These patterns of Asia's business cycles have changed quite significantly in the postcrisis period. Although exhibiting still higher volatility than those in G3, Asia's business cycles have become much more stable. Even more interestingly, they resemble those of G3 in that they become more periodic in terms of upturns and downturns. A notable exception to this new pattern is the PRC: it appears to beat the business cycle by continuing robust growth regardless of ups and downs of both regional and international economies.

The visibly reduced amplitude of Asian business cycles in the postcrisis period may be attributed to the resumption of strong growth and development reinforced by a strengthened institutional framework and reforms to establish efficient financial markets in the crisis-afflicted countries. Although reforms have yet to be completed in some areas, significant progress has been made in banking supervision and regulation. Countries have made efforts to introduce more market discipline in the overall financial system, through enhanced governance and market transparency.

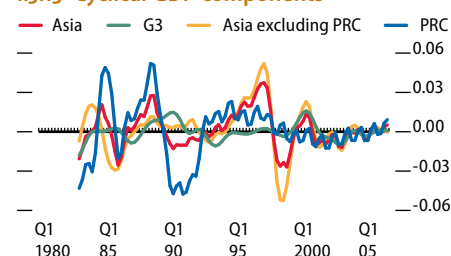
Better economic policies in the crisis countries may have also contributed to macroeconomic stabilization, while underpinning strong growth. Four of the five economies have adopted inflation targeting since the crisis. The first mover in this direction was the Republic of Korea in 1998, followed by Indonesia in 1999, Thailand in 2000, and the Philippines in 2001 (see Cavoli and Rajan 2006). Inflation targeting has increased the degree of freedom in foreign exchange policies to mitigate the impact of external shocks, while enhancing the effectiveness of monetary policy responding to cyclical fluctuations.

Improved fiscal positions with more effective public debt management since the crisis have also allowed room for appropriate fiscal policies. To this end, fiscal reforms are under way in many countries, especially the strengthening of institutional frameworks for public debt management and taxation, which will further enhance the functioning of automatic stabilizers.

### Regional and international business cycle synchronization

Tables 1.5.2 and 1.5.3 report the correlation coefficients of the Asian business cycles with each other and with G3 for the precrisis (1983–1996) and postcrisis (1999–2006) periods. The crisis period is omitted intentionally. The previous analysis on business cycles suggests significant differences in co-movements both within Asia, and between Asia and G3, before and after the crisis. The Asian crisis is also perhaps the most significant common shock for Asia, leading to positive correlations for

1.5.13 Cyclical GDP components



Note: Asia comprises People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; and Thailand.

Source: Oxford Economics, *Quarterly Model*, February 2007.

[Click here for figure data](#)

the crisis period. But the same event is also likely to damp the correlation between the Asian and G3 business cycles. In order to see clearly the synchronicity of Asian business cycles without the crisis effect, the correlations for the pre- and postcrisis periods are reported separately.

The correlation analysis of the cyclical components shows that the correlations of Asian business cycles increased markedly, both with each other and with the G3 cycle, between the pre- and postcrisis periods. Table 1.5.2 presents the average of the bilateral correlations between all the pairs of nine Asian economies in the sample over the two periods. If the Asian business cycles co-move, the average of the bilateral correlations would be high. A similar approach is taken to calculate the average correlations for the Asian economies excluding the PRC.

For both Asia and Asia excluding the PRC, the average correlations rose significantly. This may reflect greater intraregional integration. In both periods, the average correlation for Asia excluding the PRC is higher than that for Asia, reflecting the PRC's independent cyclical behavior from the rest of the region. Interestingly, however, the average correlation grew much faster among the Asian economies including the PRC than excluding the PRC. This clearly indicates that the PRC business cycle is increasingly moving in tandem with the rest of Asia.

Similarly, Table 1.5.3 reports the correlations between Asia and G3. Asian business cycles are much more synchronized with those of G3 in the postcrisis period. Again, the correlation between Asia excluding the PRC and G3 is higher than that between Asia and G3, and may be attributed to a generally independent business cycle of the PRC relative to G3.

In view of the PRC's generally independent dynamics, its business cycle correlations with the rest of Asia and G3 are shown in Table 1.5.4. As expected, the correlations of the PRC cycle with both regional and international economies are low, although both correlations have become positive in the postcrisis period, pointing to an increasing synchronization with those economies. This reflects the fact that the PRC's rapid growth has been driven so far largely by domestic factors: the major force has been intensive capital accumulation combined with the release of massive amounts of labor from the agriculture sector (see Woo 1998). Nevertheless, the results also suggest that the PRC is rapidly integrating with the region, while using its regional economic ties as a platform for global integration.

Figure 1.5.14 illustrates the evolution of the average correlation coefficients for Asia and for Asia excluding the PRC, using 5-year rolling windows. For example, the correlation average in 2006 is calculated as the average of the bilateral correlations for each pair of all the Asian economies over a 5-year period ending in 2006. The average correlation among the Asian economies rose sharply from nearly zero in 1991 (for the period 1987–1991) to over 0.5 in 1996 (for the period 1992–1996). The latter period largely coincides with the expansion phase of the Asian economy in the 1990s, prior to the crisis. It is noteworthy that this phase was also accompanied by strong growth in intraregional trade (Figure 1.5.8 above), reflecting rapid regional economic integration.

The correlation trend for international business cycle co-movements also confirms generally high synchronicity between the Asian business cycle and the G3 cycle in the postcrisis period (Figure 1.5.15). What is

#### 1.5.2 Intraregional business cycle correlation (nine Asian economies)

	Precrisis	Postcrisis
Asia	0.33	0.48
Asia excluding PRC	0.43	0.54

Source: Oxford Economics, *Quarterly Model*, February 2007.

#### 1.5.3 Interregional business cycle correlation

	Precrisis	Postcrisis
Asia–G3	0.06	0.62
Asia excluding PRC–G3	0.09	0.68

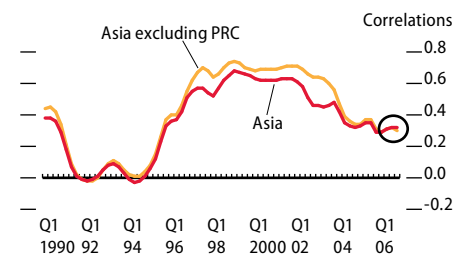
Source: Oxford Economics, *Quarterly Model*, February 2007.

#### 1.5.4 Business cycle correlation with the People's Republic of China

	Precrisis	Postcrisis
Asia excluding PRC	-0.03	0.27
G3	-0.07	0.14

Source: Oxford Economics, *Quarterly Model*, February 2007.

#### 1.5.14 Average intraregional business cycle correlations



Note: Asia comprises People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; and Thailand.

Source: Oxford Economics, *Quarterly Model*, February 2007.

[Click here for figure data](#)

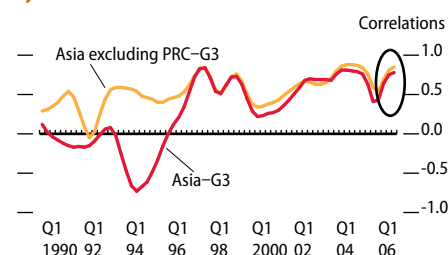
interesting here is that the correlations between Asian and G3 cycles were negative between 1993 (for the period 1989–1993) and 1995 (1991–1995). The latter period again largely coincides with the strong expansion phase in Asia. As suggested in the previous section, Asian business cycles seemed to have experienced an “uncoupling” from those of G3 during the precrisis period of rapid growth in the 1990s. Robust economic expansion and strengthening regional ties may have contributed to the region’s resilience through ups and downs of the G3 business cycles.

Is this “uncoupling” in the 1990s repeating itself in the recent period? It is unclear if the same pattern is emerging on the basis of these figures. There are similarities in general economic conditions. Although registering slightly slower growth compared to the fast precrisis expansion phase in the 1990s, most Asian economies have resumed relatively strong growth since then. More importantly, it has become much more stable (as seen in the previous section). There have also been renewed increases in intra-Asian trade and regional integration. However, cyclical co-movements between Asia and G3 have visibly strengthened since the crisis, while business cycle synchronicity among Asian economies has weakened.

A simple causality test<sup>5</sup> between G3 and Asian business cycles shows that G3 cyclical movements precede Asia’s. Table 1.5.5 reports the results of a Granger causality test between G3 and Asian business cycles for the precrisis (1983–1996) and postcrisis (1999–2006) periods. The test has been performed for both directions between G3 and Asian business cycles using quarterly data with different lags from 4 quarters (or 1 year) to 12 quarters (or 3 years). Test results are often sensitive to the number of lags used. Here the reported results are for the tests using at least a 1-year lag, because domestic factors tend to dominate business cycles in periods shorter than 1 year. Thus the transmission effect of external shocks may be offset by spurious common domestic factors.

The test results suggest that, in the postcrisis period, movements in the G3 cycle “Granger-cause” movements in the Asian business cycle at 2- and 3-year lags (but not the other way round). The results also show

**1.5.15 Average interregional business cycle correlations**



Note: Asia comprises People’s Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; and Thailand.

Source: Oxford Economics, *Quarterly Model*, February 2007.

[Click here for figure data](#)

### 1.5.5 Granger causality test results

	Precrisis period null hypothesis		Postcrisis period null hypothesis	
Number of lags (years)	G3 business cycles do not Granger-cause Asian business cycles	Asian business cycles do not Granger-cause G3 business cycles	G3 business cycles do not Granger-cause Asian business cycles	Asian business cycles do not Granger-cause G3 business cycles
1	1.75	4.73*	3.83*	3.69*
2	2.18	1.39	11.18*	1.62
3	3.90*	1.65	10.95*	2.25

\* Indicates significance of F-statistics at the 5% level for a rejection of the null.

Note: The results report F-statistics, which form the basis for which the null hypothesis is accepted or rejected. In terms of the actual numbers reported, a higher number represents greater statistical significance, thus leading to rejection of the null. For example, in column 2 with a 1-year lag, the test statistic (F-stat) is 1.75, which is statistically insignificant, thus leading to non-rejection of the null that G3 business cycles do not Granger-cause Asian business cycles. However, in column 3 with a 1-year lag, the test statistic is 4.73, which is statistically significant, thus implying a rejection of the null that Asian business cycles do not Granger-cause G3 business cycles.

Source: Staff calculations.

dramatic increases in the explanatory power and statistical significance for the direction of cyclical influence from G3 to Asia when the pre- and postcrisis periods are compared. This suggests that Asian business cycles have become more responsive to the cyclicality of G3 in the postcrisis period.

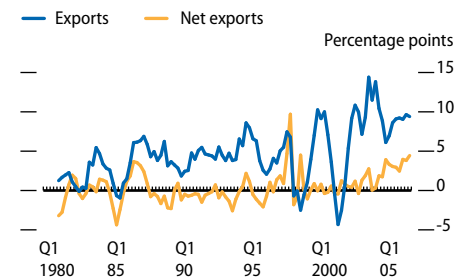
A significant departure from the 1990s' pattern may be explained by Asia's renewed export-led growth since the crisis. Despite some notable efforts to strengthen domestic demand in the postcrisis period, evidence suggests that Asia's reliance on exports for growth remains significant. Figure 1.5.16 illustrates the contribution of exports and net exports to GDP growth since the 1980s. ADB (2005) also finds that Asia's export-oriented growth strategy is sustained, if not further strengthened, in the postcrisis period, based on demand-side growth accounting. As intraregional trade is to serve external demand, not regional demand, Asia's export-led growth should result in greater interdependence between Asia and its G3 trading partners.

The dynamics of regional economic and trade integration are also evolving. To the extent that the PRC functions as an assembly and production center for the rest of Asia, the trade linkages would be more direct and stronger between the PRC and each member of the rest of Asia than the cross-relationships among the rest of Asia. Indeed, for the 5-year period 2002–2006, the average correlation for Asia including the PRC is higher than that for Asia excluding the PRC (Figure 1.5.14 above). This reflects the PRC's integration into the regional economy, facilitated by vertical specialization in the rest of Asia. With rapid technological advances, production processes can be further divided and taken up by different countries based on their comparative advantages. While vertical specialization and scale economies will continue to help raise the region's productivity, this may also leave the individual countries exposed to different subsector shocks, as well as to economic shocks originating within the region, particularly the PRC.

The correlation analysis presents positive evidence for greater synchronization among Asian business cycles. There is also clear evidence pointing to increasing business cycle synchronization between the PRC and the rest of Asia. However, a marked feature of Asia's regional integration is its global nature. In many respects, Asia's regionalization is a force behind its globalization, just as its successful integration with the global economy has been a key driver of regional integration through stimulating the region's trade and financial flows.

Recent years have thrown up no evidence pointing to Asia's uncoupling from G3 cycles. In the postcrisis period, strengthening regional ties appear to reinforce business cycle co-movements between Asia and G3. Underlying this interdependence is the structure of rising intra-Asian trade, which is centered on the PRC as a production base. The tighter intra-industry trade linkages between the PRC and each of the other Asian economies might have contributed to the higher business cycle synchronization between the PRC and the rest of Asia. But the cyclicality of the Asian economy remains sensitive to movements in G3.

**1.5.16 Contributions to Asian GDP growth**



Note: Asia comprises People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; and Thailand.

Source: Oxford Economics, *Quarterly Model*, February 2007.

[Click here for figure data](#)



## Conclusions

Exactly a decade after the financial crisis, the Asian economy is enjoying rapid growth. Over the past decade, Asia has maintained an annual average growth rate of 6.5%. Underpinning this performance has been the strength of the emerging PRC, adding more than two full percentage points to Asian growth during the period. This remarkable economic performance has elicited much enthusiasm for rising regionalization and related optimism for the region's independent business cycle dynamics.

The findings of this chapter may surprise those who believe that stronger intraregional trade integration is evidence of uncoupling. There is no evidence pointing to Asia's uncoupling—structurally or cyclically. A renewed process of rapid economic growth and development has been accompanied by increasing economic integration, both within Asia and between G3 and Asia.

Regionalization of economic activities has gained strong momentum through progress in sharing of production processes across the region. Increased vertical specialization and the rise in intra-industry trade have led to strong ties among Asian economies, but this regional integration remains structurally linked to final demand from major industrial countries.

However, regionalization that is tied to globalization is potentially a transmission channel for a global shock. Increased trade openness and economic integration with the global economy could induce greater business cycle synchronization among the regional economies by exposing them all to a common global shock. Further, strong regional economic integration could propagate a shock rapidly across regional economies.

To the extent that Asian business cycles are sensitive to the vagaries of external demand, it is important for Asian economies to maintain sound macroeconomic conditions and ensure coherent policy management. A stable macroeconomic environment—of low inflation and prudent fiscal balances with modest levels of debt—provides an important backdrop for sustaining high growth. It also allows room for policy makers to take measures of macroeconomic stabilization when necessary.

Greater economic interdependence and tighter trade linkages between Asian economies also require greater cooperation in trade, finance, and exchange rate policies at the regional level. As economic and financial shocks travel rapidly from a country to its trading partners through increased trade and financial linkages, it is to all Asian economies' benefit that, nationally, they maintain sound macroeconomic conditions with prudent economic management. Synchronization of real growth and inflation in the region should also generate regional common interests to ensure close cooperation in macroeconomic and exchange rate policies.

Globalization, including the rapid relocation of production networks across borders, underscores the region's need for greater economic flexibility. Along with increasing openness to trade, globalization has allowed greater factor mobility, particularly MNCs that can choose the most cost-efficient locations, facilitating both vertical specialization and a tightly webbed regional production network across borders. The rise in intra-industry trade and trade integration has a positive impact on economic growth by promoting efficiency and productivity growth.



But easier relocation of production and greater factor mobility imply that Asian economies should ensure a high degree of flexibility in both product and factor markets to maintain their regional and global competitiveness. Further structural reforms will have to move forward to improve overall economic flexibility and competitiveness.

Such reforms should include the successful completion of corporate and financial sector restructuring by deepening the reforms on governance and legal infrastructure, creating an investment-friendly environment through minimizing unnecessary regulatory barriers in business activities, encouraging private incentives toward more dynamic market economies, opening domestic markets to international competition, and creating a level playing field across all sectors. This will also help attract FDI.

Continued rapid growth of the PRC, and its deeper integration with the regional and global economies, will continue to shape opportunities and challenges for other countries. For those competing head to head with the PRC, and who are now seeing their market shares (and/or terms of trade) eroded, sustaining growth will depend on their success in promoting economic agility and carving out new areas of competitive advantage (see Part 3, *Growth amid change*). For primary commodity producers that sell to the PRC, or for those countries that can profitably manufacture the consumer durables demanded by the PRC's quickly expanding middle class or the equipment needed to support its industrialization, the PRC's growth is likely to prove directly beneficial. Likewise, further fragmentation and refinement of supply chain activities should ultimately strengthen complementarities among the economies of East and Southeast Asia, though the gains are unlikely to be automatic and will depend on the capacity to adjust and to develop new capabilities. Finally, the logic of fast growth in a country as vast as the PRC, as well as a rebalancing of spending towards domestic consumption, foreshadows not just a more prominent role for regional incomes in forging closer regional integration but also the emergence of developing Asia as an additional engine of global demand.

## Endnotes

- 1 “Asia” generally refers to nine economies in East and Southeast Asia, namely: People’s Republic of China (PRC); Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; and Thailand.
- 2 The latest Global Trade Analysis Project database (version 6.2) corresponds to the world economy in 2001. The database provides “detailed bilateral trade characterizing economic linkages among regions, together with individual country input-output databases which account for inter-sectoral linkages within regions” (Hertel 1998, p. 2). The latest version disaggregates the world economy into 87 regions (including all the nine economies in East and Southeast Asia in this chapter) and 57 sectors.
- 3 The role of PRC’s final demand in Asia’s exports would likely be bigger if more recent data were used.
- 4 The intra-industry trade index is based on the Grubel-Lloyd methodology, using SITC 2-digit data from the United Nations *Commodity Trade Statistics* database. Using the share of industry  $i$  in terms of total industry trade as a weight, the intra-industry trade between countries A and B is calculated as (see OECD 2002):

$$ITT_{AB} = \sum_i \left[ \frac{(X_i + M_i) - |X_i - M_i|}{(X_i + M_i)} \right] \cdot \left[ \frac{(X_i + M_i)}{\sum_i (X_i + M_i)} \right] \cdot 100$$

While the ratio takes a value between 0 and 100, with a higher number associated with greater intra-industry trade in theory, this ratio tends to increase with the level of aggregation in terms of both the number of countries and product classes in the sample.

- 5 The Granger causality test is simply to see if lagged values of one variable (X) have any statistically significant information on future values of the other variable (Y) given the lagged values of Y. If it does, X is said to “Granger-cause” Y.

## References

- Asian Development Bank. 2005. "Export or Domestic Demand-led Growth in Developing Asia." *Asian Development Outlook 2005*. Hong Kong, China.
- . 2006. "Routes for Asia's Trade." *Asian Development Outlook 2006*. Hong Kong, China.
- Baxter, M. and R. G. King. 1995. "Measuring Business Cycles Approximate Band-Pass Filters for Economic Time Series." *NBER Working Paper* No. 5022. Massachusetts: National Bureau of Economic Research.
- Burns, A. F. and W. C. Mitchell. 1946. *Measuring Business Cycles*. New York: National Bureau of Economic Research.
- Cavoli, T. and R. Rajan. 2006. "Inflation Targeting Arrangements in Asia: Exploring the Role of the Exchange Rate." *SCAPE Working Paper* No. 2006/03. National University of Singapore, Singapore Centre for Applied and Policy Economics. Available: <http://nt2.fas.nus.edu.sg/ecs/pub/wp-scape/0603.pdf>.
- Citigroup. 2006. *Asia Macro Views*. 4 September.
- Eichengreen, B. and H. Tong. 2005. "Is China's FDI Coming at the Expense of Other Countries?" *NBER Working Paper* No. 11335. National Bureau of Economic Research.
- Fukao, K., H. Ishido, and K. Ito. 2003. "Vertical Intra-Industry Trade and Foreign Direct Investment in East Asia." *Journal of the Japanese and International Economies* 17(4):468–506.
- Goldman Sachs. 2002. "Asia's Brave New Business Cycle Part II: Intra-Regional Trade." Asia-Pacific Economics Analyst Issue No: 2002/15.
- Hertel, T. 1998. "Introduction to the GTAP Data Base." In R. A. McDougall, A. Elbehri, and T. P. Truong (eds.) *Global Trade Assistance and Protection: The GTAP 4 Data Base*. Center for Global Trade Analysis, Purdue University, Chapter 1.
- Hodrick, R. J. and E. Prescott. 1981. "Post-War US Business Cycles: An Empirical Investigation." *Discussion Paper* 451. Northwestern University, Center for Mathematical Studies in Economics and Management Science.
- Kawai, M. and S. Urata 2004. "Trade and Foreign Direct Investment in East Asia." In G. de Brouwer and M. Kawai (eds.) *Exchange Rate Regimes in East Asia*. London: RoutledgeCurzon, pp. 15–102.
- Lucas, R. E. Jr. 1977. "Understanding Business Cycles." In K. Brunner and A. Meltzer (eds.) *Stabilization of the Domestic and International Economy*. North-Holland: Carnegie-Rochester Conference Series on Public Policy 5:7–29.
- Meng, B., H. Sato, J. Nakamura, N. Okamoto, H. Kuwamori, and S. Inomata. 2006. "Interindustrial Structure in the Asia-Pacific Region: Growth and Integration, by Using 2000 AIO Table." IDE Discussion Paper No. 50. Tokyo: Institute of Developing Economies-Japan External Trade Organization. Available: [http://www.ide.go.jp/English/Publish/Dp/pdf/050\\_meng.pdf](http://www.ide.go.jp/English/Publish/Dp/pdf/050_meng.pdf).
- Monetary Authority of Singapore. 2003. *Macroeconomic Review*. January.
- Organisation for Economic Co-operation and Development (OECD). 2002. "Intra-Industry and Intra-Firm Trade and the Internationalisation of Production." *OECD Economic Outlook* 71. Paris.
- Woo, W. 1998. "Chinese Economic Growth: Sources and Prospects." In Fouquin, M. and F. Lemoine (eds.) *The Chinese Economy*. London: Economica.

# Trade and structural change in East and Southeast Asia: Implications for growth and industrialization

## Introduction

East and Southeast Asian economies have been among the most dynamic participants in global trade, particularly trade in manufactures, led initially by Japan, then by the newly industrialized economies (NIEs) of Hong Kong, China; Korea; Singapore; and Taipei, China, and more recently by the People's Republic of China (PRC) and five members of the Association of Southeast Asian Nations (ASEAN-5—Indonesia, Malaysia, Philippines, Thailand, and Viet Nam). In contrast, India and South and Central Asia have not yet made much of an impact and to date remain small players in global manufacturing trade.<sup>1</sup>

The latter half of the 20th century for the first time provided a worldwide institutional framework for open trade under the auspices of the General Agreement on Tariffs and Trade (GATT) and its successor the World Trade Organization (WTO). At the same time that global tariffs were being cut in successive rounds of GATT/WTO negotiations, more and more countries experimented with bilateral and regional preferential trade agreements, particularly after the completion of the Uruguay Round in 1995.

The *Asian Development Outlook 2006* (ADB 2006) provided a detailed discussion of the global trend toward bilateralism in trade and some forward-looking estimates of the possible impact of various liberalization scenarios for the Asian region. It found that the region's trade opportunities could best be obtained through the combination of unilateral reforms and multilateral, nondiscriminatory reduction of trade barriers. Deeper integration in the region could also provide additional scope for growth provided it was done in a manner that avoided emergence of hub-and-spoke systems that are based upon bilateral agreements with inconsistent coverage and rules.

This chapter provides a review of trade and structural change in the region and examines the state of regional integration in manufacturing trade using recent historical data with a focus on East and Southeast Asia. The key issues addressed include the role trade plays in facilitating structural change and industrial development, the rising share of intraregional trade and intra-industry trade, and the controversies relating to the role of the PRC regarding the impacts of Asia's giant on manufacturing competition for foreign direct investment (FDI) and trade. It also addresses the question of whether East and Southeast Asian trade and growth are uncoupling from global trade and growth.

## Patterns of trade in East and Southeast Asia and the world, 1995–2004

Japan, followed by the NIEs, first adopted export-oriented manufacturing as a growth strategy in the 1960s. Trade growth was rapid as the world economy expanded with recovery in Western Europe and strong growth in the United States (US).

Japan itself recorded double-digit real rates of growth from 1960 up until the first oil shock of 1973. During this period of rapid growth, industrial structure also changed as exports shifted away from labor-intensive to more sophisticated products. Japan's movement into higher technology exports opened the way for the NIEs to themselves adopt an export-oriented manufacturing growth strategy. These economies were able to expand production and exports in labor-intensive industries such as apparel and footwear in the 1960s and then to develop more capital-intensive industries following Japan in the 1970s and 1980s.

A third wave of trade-led industrial growth then began to take hold as Southeast Asian economies adopted export-oriented policies in the mid-1970s and early 1980s, with rapid growth in exports of labor-intensive manufactures. By the mid-1980s, the ASEAN countries started exporting electrical and nonelectrical machinery and other more sophisticated products. Finally, the PRC and Viet Nam emerged as fast-growing exporters of labor-intensive manufactures in the late 1980s and early 1990s. International trade provided an environment conducive to rapid industrial growth and transformation of the predominantly agricultural economies of East and Southeast Asia into modern industrial economies in a remarkably short period of time by historical standards. Openness to trade is still a catalyst for further industrial growth in East and Southeast Asia today as the following sections will demonstrate.

World trade shares of East and Southeast Asia are presented by Harmonized System (HS) chapter categories for 1995 and 2004 (the latest year that data are available) in Appendix Table A1.6.1.<sup>2</sup>

The major HS chapter categories are given in Table 1.6.1. These categories' shares in total world trade for 1995 and 2004 are shown in Table 1.6.2.<sup>3</sup> The most striking changes in shares in the current dollar value of global trade over the decade are in HS 27 (mineral fuels) with a huge jump from under 7% to over 10% and in HS 28–38 (chemicals and allied products) with an increase to nearly 11% from 9.5%. Other than minerals (HS 25–26), the only categories to show increases are in machinery sectors: HS 85 (electrical machinery), HS 86–89 (transportation machinery), and HS 90–91 (precision instruments). It should be kept in mind that the declining shares of HS 50–60 (textiles) and HS 61–63 (apparel) are likely to be artificial as most of these products remained under global quotas during the period in question, despite integration of about half the tariff lines under the Agreement on Textiles and Clothing (GATT 1994) over the period in question.<sup>4</sup> Machinery sectors (HS 84, HS 85, and HS 86–89) were by far the most important in terms of world trade shares with 38% in 1995 and 39% in 2004.

The East and Southeast Asian region shows a remarkable concentration in these machinery sectors over 1995–2004. The share of East and Southeast Asia in world exports rose from 31% to 35% in HS 84;

### 1.6.1 Harmonized System categories

HS 01–05	Live animals (meat, fish, poultry, livestock)
HS 06–10	Unprocessed fruit and vegetable products
HS 11–24	Processed agricultural products (food, beverages and tobacco)
HS 25–26	Mineral products (including cement)
HS 27	Mineral fuels (including petroleum and coal)
HS 28–38	Chemicals and allied industries (organic and inorganic chemicals)
HS 39–40	Plastic and rubber products (articles of plastic, articles of rubber)
HS 41–43	Leather products (articles of leather, manufactures of fur)
HS 44–46	Wood and cork (articles of wood, cork and straw)
HS 47–49	Pulp and paper (including printed matter of paper)
HS 50–60	Textiles (natural and manmade fiber yarn and fabric, carpets)
HS 61–63	Apparel (including other made-up textile articles)
HS 64–67	Footwear, headgear and umbrellas (including articles of human hair)
HS 68–70	Articles of stone, glass and ceramic products
HS 71	Gems and jewelry (including precious stones and precious metals, and coin)
HS 72–83	Base metals (articles of base metal)
HS 84	Nonelectrical machinery (including plant and capital equipment, office machinery and computers)
HS 85	Electrical machinery (including television receivers, sound recorders and reproducers, and telecommunications equipment)
HS 86–89	Transportation machinery (vehicles and parts)
HS 90–91	Precision instruments (optical, medical, measuring equipment)
HS 92	Musical instruments (parts and accessories)
HS 93	Arms and ammunition (parts and accessories)
HS 94–97	Miscellaneous manufactures (furniture, toys, sports equipment and art)

from 48% to 54% in HS 85 and from 21% to 22% in HS 86–89. East and Southeast Asia also managed to increase the share of exports in three of the other main expanding sectors: HS 25–26 from 10% to 11%; HS 28–38 from 16% to 17%; and HS 90–91 from 33% to 36%. Hence, it can be seen that aside from HS 27 (mineral fuels), East and Southeast Asia have concentrated their exports on the fastest growing segments of global trade over the most recent decade. Export shares of East and Southeast Asia in world trade have also increased in HS 50–63 (from 38% to 39% for textiles and from 42% to 43% in apparel). Figure 1.6.1 shows that East and Southeast Asia have lifted their share of world exports over the decade from 25% to almost 28% when Japan is included and from 17% to 21% when Japan is excluded. The increase in the PRC exports relative to world trade has been particularly impressive over 1995–2004.

Import shares of East and Southeast Asia are shown in Figure 1.6.2 and are roughly constant when Japan is included but rise from about 17% to 18% when Japan is excluded. The PRC share in world imports nearly doubled over 1995–2004, from 3% to 6%. The share of East and Southeast Asia in world imports of electrical machinery (HS 85) increased sharply over 1995–2004 from 34% to 39%. There was also a sharp jump in the share of the region in world imports of precision instruments from 26% to 34%. The world import share of the region in nonelectrical machinery (HS 84) also increased modestly from 23% to 24%. In contrast, the share of the region in world imports of transportation goods fell very sharply from 12% to 8% (9% to 6% excluding Japan) reflecting the relatively slow growth of imports in the region (Table 1.6.3) of around 2% annually. Only the PRC experienced high import growth in transport equipment during 1995–2004 within the region. Still the period has seen the emergence of the region as a supplier of markets outside the region of transportation equipment.

These data on world export and import market shares of East and Southeast Asia indicate that the region has a huge surplus on the trade account in the balance of payments and this surplus has built up following the recovery from the Asian financial crisis of 1997–1998. The ASEAN-5 countries' decline in world import share is mirrored by their increase in world export share and move from deficit to surplus in 2004 compared with 1995. The PRC shows a similar pattern of shift from trade deficit to surplus. The NIEs increase the surplus of export shares over import shares in global trade. These surpluses help explain the large increase in foreign exchange reserve holdings of East and Southeast Asia.

The PRC has become a dominant force in global trade in labor-intensive manufactures (HS 50–60 [textiles], HS 61–63 [apparel], HS 64–67 [footwear, headgear and umbrellas]) but has also become a player in HS 84 (nonelectrical machinery) and HS 85 (electrical machinery) (especially in office and computing equipment) and HS 90–91 (precision instruments). Japan remains a dominant player in HS 86–89 (transportation equipment).

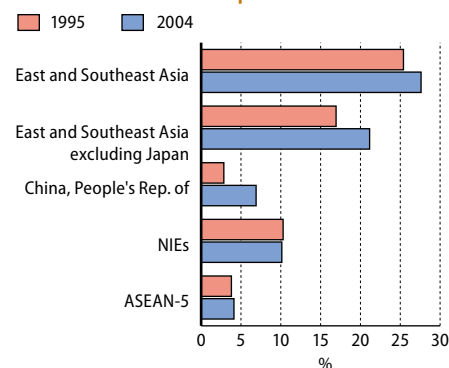
Growth in world trade by HS chapter categories and growth in East and Southeast Asia (1995–2004), measured as compound annual growth rates are shown in Table 1.6.3. Setting aside mineral fuels, growth over the period is fastest in manufacturing sectors: (1) HS 28–38 (chemicals); (2) HS 85 (electrical machinery); (3) HS 90–91 (precision instruments); and (4) HS 86–89 (transport equipment). The PRC has double-digit growth

### 1.6.2 Shares in world trade by HS category, 1995 and 2004

HS category	1995	2004
01–05	2.78	2.06
06–10	3.26	2.39
11–24	2.96	2.38
25–26	1.32	1.41
27	6.81	10.35
28–38	9.48	10.81
39–40	1.03	0.97
41–43	0.60	0.43
44–46	1.35	1.05
47–49	2.54	1.76
50–60	3.39	2.17
61–63	3.84	3.62
64–67	0.82	0.62
68–70	0.86	0.72
71	0.84	0.82
72–83	7.21	6.86
84	14.86	14.46
85	12.13	13.45
86–89	11.11	11.27
90–91	3.15	3.32
92	0.59	0.50
93	0.14	0.06
94–97	4.69	4.49

Source: Statistics Canada, World Trade Analyzer.

### 1.6.1 Share of world exports

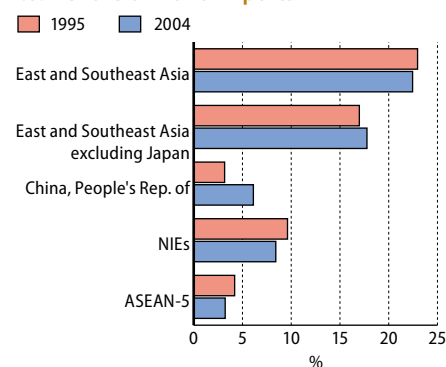


Note: ASEAN-5 comprises Indonesia, Malaysia, Philippines, Thailand, and Viet Nam.

Source: Statistics Canada, World Trade Analyzer.

[Click here for figure data](#)

### 1.6.2 Share of world imports



Note: ASEAN-5 comprises Indonesia, Malaysia, Philippines, Thailand, and Viet Nam.

Source: Statistics Canada, World Trade Analyzer.

[Click here for figure data](#)



## 1.6.3 Growth in trade by HS category

HS category	Growth in world trade	Japan	PRC	NIEs	ASEAN-5	East and Southeast Asia	East and Southeast Asia excl. Japan
<b>Imports</b>							
01-05	3.22	-2.03	11.46	2.46	4.58	0.38	4.26
06-10	3.12	0.57	0.24	-0.39	1.31	0.38	0.25
11-24	4.17	0.44	9.26	-1.72	3.85	2.42	3.26
25-26	7.48	3.29	22.44	6.06	3.03	9.03	12.25
27	11.80	7.01	25.28	9.72	9.77	10.21	12.64
28-38	8.28	4.67	13.37	4.16	4.35	6.72	7.19
39-40	6.02	2.41	14.94	1.21	4.43	5.23	6.04
41-43	2.81	-1.86	8.50	1.14	0.32	3.78	4.15
44-46	3.73	-2.87	8.67	-4.33	-1.88	-1.48	0.43
47-49	2.45	-2.48	10.43	-2.91	1.42	1.31	2.28
50-60	1.55	-3.49	3.18	-2.73	0.69	-0.07	0.26
61-63	6.00	2.58	8.96	5.26	6.72	4.17	5.90
64-67	3.51	0.37	13.14	3.66	8.20	2.29	4.50
68-70	4.62	3.70	11.26	3.58	-1.06	3.85	3.88
71	6.34	-7.97	26.61	6.55	0.76	3.46	6.87
72-83	6.14	2.19	13.81	4.62	2.27	5.59	6.36
84	6.40	6.73	13.79	5.49	1.54	6.87	6.90
85	7.95	7.31	21.44	7.60	5.63	9.56	9.89
86-89	6.89	2.37	13.18	-0.43	-1.26	2.19	2.13
90-91	7.35	6.53	23.39	7.94	4.89	10.29	11.26
92	4.65	5.11	19.63	1.30	1.08	4.59	4.40
93	-2.90	0.25	5.61	-0.27	-22.31	-3.28	-4.96
94-97	6.19	3.17	8.03	3.28	3.24	3.78	4.09
<b>All sectors</b>	<b>6.72</b>	<b>3.88</b>	<b>14.83</b>	<b>5.15</b>	<b>3.64</b>	<b>6.45</b>	<b>7.25</b>
<b>Exports</b>							
01-05		5.20	7.51	-5.75	2.11	1.95	1.82
06-10		1.28	7.68	-4.19	2.65	3.07	3.12
11-24		1.92	2.81	-3.29	5.94	3.06	3.12
25-26		12.93	14.77	0.66	6.25	8.18	7.05
27		0.78	12.70	11.64	8.22	9.70	10.18
28-38		6.14	12.93	8.92	13.07	8.97	10.34
39-40		3.70	20.52	4.11	4.29	5.32	6.05
41-43		-2.91	13.66	2.43	0.02	4.23	4.47
44-46		0.19	16.41	-5.39	-2.03	1.14	1.15
47-49		2.94	14.16	1.70	8.79	5.33	5.97
50-60		0.19	9.85	-1.14	2.15	2.10	2.34
61-63		2.64	12.16	0.45	3.95	6.30	6.34
64-67		-9.63	10.94	-4.92	3.83	3.72	3.75
68-70		1.58	14.01	1.03	7.68	5.32	7.65
71		4.98	12.01	11.97	-1.46	8.07	8.28
72-83		3.56	16.74	5.73	10.13	7.77	9.76
84		1.61	34.14	6.16	12.92	8.12	12.21
85		2.26	25.75	9.83	8.24	9.37	11.86
86-89		5.04	21.79	10.88	9.63	7.47	12.53
90-91		4.68	18.76	8.95	10.66	8.25	11.30
92		3.17	14.33	10.24	8.94	8.11	10.78
93		1.58	-11.81	9.31	-8.12	4.48	5.89
94-97		2.32	15.66	0.75	5.27	6.32	6.71
<b>All sectors</b>		<b>3.56</b>	<b>17.73</b>	<b>6.53</b>	<b>7.71</b>	<b>7.71</b>	<b>9.38</b>

Note: Table shows compounded annual growth rates between 1995 and 2004.

Source: Statistics Canada, World Trade Analyzer.

across the machinery sectors with imports growing alongside exports suggesting trade in parts and components may be expanding rapidly. Growth rates of some machinery exports of the NIEs and ASEAN-5 are double digits as well suggesting complementary growth with PRC exports in these sectors. Export growth of East and Southeast Asia in these categories thus surpassed growth in world trade (Figure 1.6.3).

It is important to ascertain the relative importance and roles of intermediate and components trade versus final demand growth in this dynamic Asian trade (see below). Growth rates of exports of labor-intensive manufactures from East and Southeast Asia (excluding Japan) also exceeded world trade growth in these sectors, indicating that East and Southeast Asia continued to gain market share in these segments (Figure 1.6.4). This performance was related to the entry of the PRC into WTO in late 2001 and to Viet Nam's emergence at the same time. Viet Nam concluded a bilateral trade agreement (BTA) with the United

States in late 2001 that facilitated entry of its clothing exports into the large US market.

National import and export baskets of East and Southeast Asia are shown in detail in HS categories in Appendix Table A.1.6.2 (% share of total imports and exports for each country/customs territory). Shares of electrical and nonelectrical machinery in imports and exports are rising in most East and Southeast Asian countries. Korea shows dynamic gains in export share of transport equipment as does Japan. Despite PRC dominance in world exports of textiles and clothing, these sectors have become less important in the PRC's national export basket indicating that the PRC is evolving in line with the previously observed pattern of industrial development of Japan, the NIEs, and ASEAN by moving into higher skill and technology exports. This again reinforces the view that international trade is facilitating industrialization and structural change in the region. Asia is well-positioned given the rapid global growth in the machinery sectors and the recent freeing up of trade in textiles and apparel.<sup>5</sup>

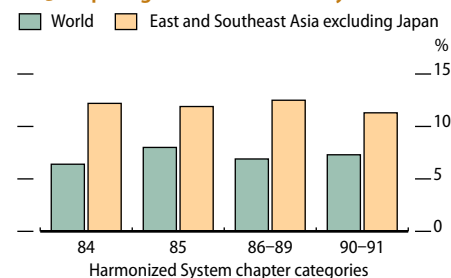
The parallel rise in imports and exports in electrical machinery (HS 85) and nonelectrical machinery (HS 84) in East and Southeast Asia underscores the rising importance of intraregional trade in intermediate parts and components. The Philippines; Malaysia; Singapore; Hong Kong, China; and Taipei, China all have very high import and export shares in HS 84 and HS 85, with the Philippines having more than three quarters of total exports in just these two sectors. In contrast, Viet Nam has a low but fast growing share of exports in HS 84 and HS 85 (1% in 1995 up to close to 7% in 2004) but has even higher import shares of HS 84 and HS 85. Indonesia, like Viet Nam, has fairly low shares of electrical and nonelectrical machinery in its export basket, but the shares have grown rapidly and the combined sectors' share rose from 7% to 16% of total exports between 1995 and 2004.

Viet Nam has high and rising shares of exports in HS 61–63 (apparel) and HS 64–67 (footwear, headgear and umbrellas), reflecting the importance of labor-intensive manufactures in its export basket. Viet Nam also has a relatively high share of HS 50–60 (textiles) in its import basket (9% in both years) reflecting its reliance on imported yarns and fabrics to support its export of apparel. Viet Nam also has among the highest share of mineral fuels (HS 27) in its export basket in the region (with about 20% in 1995 and 21% in 2004). In contrast to Viet Nam, Indonesia had a drop in its share of mineral fuels in exports from over 25% in 1995 to under 18% in 2004. Viet Nam also had the largest share of unprocessed agricultural exports in its export basket but these shares (over 31% for HS 01–10 in 1995) were down very sharply in 2004, reflecting the rapid growth of manufacturing there.

## The role of intraregional trade

It was shown above that East and Southeast Asia (excluding Japan) experienced more rapid growth in trade (both imports and exports) than the world economy over 1995–2004. Intra-Asian trade has grown at the same pace as trade with the world between 1995 and 2004 implying that it also has been highly dynamic. The emergence of the PRC has proven the most dynamic element in intraregional trade growth in 1995–2004.

### 1.6.3 Export growth in machinery sectors

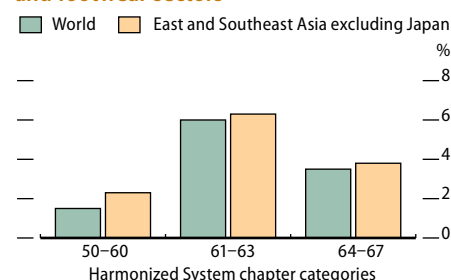


84 = Nonelectrical machinery; 85 = Electrical machinery; 86–89 = Transportation machinery; 90–91 = Precision instruments.

Source: Statistics Canada, World Trade Analyzer.

[Click here for figure data](#)

### 1.6.4 Export growth in textile, clothing, and footwear sectors



50–60 = Textiles; 61–63 = Clothing; 64–67 = Footwear, headgear, and umbrellas.

Source: Statistics Canada, World Trade Analyzer.

[Click here for figure data](#)

The PRC's growth has been both as an importer and an exporter. The PRC growth in trade with Japan, the NIEs, and ASEAN-5 was 14% per year over the period 1995 to 2004 (Table 1.6.4) implying a more than tripling in the value of trade between the PRC and the other countries in the region (Table 1.6.5) from \$199 billion in 1995 to \$655 billion in 2004. Moreover, the PRC has imported more than it exports within the region, implying that its global trade is dependent on access to world markets outside the region, given its overall trade surplus. This pattern of rapid expansion of intraregional trade based on the PRC as an assembly point for final products destined for the markets of Europe and the Americas (and elsewhere outside the region) indicates that far from decoupling from globalization, the region is becoming more oriented toward the global economy than ever before.

Intraregional trade doubled in value between 1995 and 2004 from \$651 billion to \$1,296 billion. Intraregional trade shares (over 60%) in both years in East and Southeast Asia including Japan (Table 1.6.6) are as high as in the EU despite the relatively limited institutional basis for regional integration in Asia. Apart from the ASEAN free trade agreement, other regional and bilateral initiatives have only recently been negotiated within the region and are still quite limited in their impact on the direction of trade. Hence, the growth in intra-Asian trade and its trade growth with the world have been largely driven by market forces rather than by discriminatory trade agreements.

If the growth of intraregional trade has been very rapid, does this provide a case for the view that greater regional integration efforts will enable Asia to break its dependence on final demand in industrial countries? Or is it the case that intraregional trade is being driven by global integration with final demand for exports of East and Southeast Asia largely lying outside the region for the key manufacturing sectors?

#### 1.6.4 Growth of intra-Asian trade, all sectors, 1995–2004

Exporter/importer	Japan	PRC	NIEs	ASEAN-5	East and Southeast Asia	East and Southeast Asia excluding Japan
Japan	-	16.3	2.8	0.5	4.9	-
PRC	12.9	-	13.9	19.0	14.0	14.5
NIEs	2.7	12.8	5.8	3.9	7.6	8.6
ASEAN-5	4.3	21.8	4.8	12.1	7.5	8.9
East and Southeast Asia	6.4	14.2	6.5	5.0	8.0	-
East and Southeast Asia excluding Japan	-	13.6	8.4	7.4	-	9.8

Source: Statistics Canada, World Trade Analyzer.

#### 1.6.5 Intra-Asian trade, all sectors (\$ billion), 1995 and 2004

Exporter/importer	Japan	PRC	NIEs	ASEAN-5	East and Southeast Asia	East and Southeast Asia excluding Japan
<b>1995</b>						
Japan	-	23	113	53	189	-
PRC	29	-	51	6	85	57
NIEs	51	85	77	59	272	221
ASEAN-5	36	6	49	13	104	68
East and Southeast Asia	116	114	290	131	651	-
East and Southeast Asia excluding Japan	-	91	177	78	-	346
Total market	314	167	344	221	1,047	733
<b>2004</b>						
Japan	-	90	144	55	289	-
PRC	86	-	164	29	278	193
NIEs	65	252	128	84	528	464
ASEAN-5	53	36	75	36	200	147
East and Southeast Asia	204	377	511	204	1,296	-
East and Southeast Asia excluding Japan	-	288	367	148	-	803
Total market	443	579	796	305	2,123	1,680

Source: Statistics Canada, World Trade Analyzer.

#### 1.6.6 Intra-Asian trade, all sectors (% share of world total), 1995 and 2004

Exporter/importer	Japan	PRC	NIEs	ASEAN-5	East and Southeast Asia	East and Southeast Asia excluding Japan
<b>1995</b>						
Japan	-	13.80	32.76	23.90	18.03	-
PRC	9.13	-	14.74	2.69	8.16	7.74
NIEs	16.26	50.91	22.30	26.86	26.01	30.19
ASEAN-5	11.55	3.69	14.30	5.75	9.98	9.30
East and Southeast Asia	36.94	68.40	84.10	59.21	62.17	-
East and Southeast Asia excluding Japan	-	54.60	51.34	35.30	-	47.23
Total market	100.00	100.00	100.00	100.00	100.00	100.00
<b>2004</b>						
Japan	-	15.46	18.15	18.11	13.62	-
PRC	19.33	-	20.61	9.36	13.10	11.46
NIEs	14.64	43.45	16.06	27.57	24.89	27.59
ASEAN-5	12.02	6.27	9.43	11.69	9.44	8.76
East and Southeast Asia	45.99	65.19	64.25	66.74	61.05	-
East and Southeast Asia excluding Japan	-	49.73	46.10	48.62	-	47.81
Total market	100.00	100.00	100.00	100.00	100.00	100.00

Source: Statistics Canada, World Trade Analyzer.

One way to address these issues is to simply compare the share of East and Southeast Asia in world imports and world exports to verify that markets outside the immediate region are still essential in providing the demand growth for the region's overall exports. Recall that world exports and imports are identical in the database. This implies that a region with export shares greater than import shares in its world trade has a global trade surplus.

Furthermore, by definition intraregional trade, like world trade, when summed up must balance (imports and exports within the region or the world are equal when summed across members). Then it follows that extraregional trade of a region with a global trade surplus must be in surplus and that external demand from outside the region is important in final demand for the region's global exports. For example in HS 61–63 (apparel), the region's imports from the world were \$39.2 billion (\$17.4 billion if Japan is excluded) with a world share of 19% in 1995 but exports to the world were \$84.6 billion (\$83.6 billion excluding Japan) or 42% of the world total. This implies that exports were largely dependent on external demand.

In 2004 the region's share of imports of HS 61–63 amounted to less than 17% of the world total (\$56.5 billion; \$29.2 billion excluding Japan) while exports rose to \$146.7 billion (\$145.3 billion excluding Japan) or 43% of world total—implying that final demand outside the region was the driving force in the expansion of exports. In the case of HS 85 (electrical machinery) the share of East and Southeast Asia in world imports increased from 34% to 39% yet the region's export share in the world increased by more, from 48% to 54%, so even on the margin it was external final demand outside the region that was most important for growth. Similarly in nonelectrical machinery (HS 84) the import share rose moderately from 23% to 24% over the period but the share in world exports rose sharply from 31% to 35%. For each of these sectors, external final demand had to be relied upon for export expansion between 1995 and 2004.

## **Intra-industry trade in manufactures**

Intra-industry trade—trade in which a country simultaneously imports and exports similar products (defined as belonging to the same Standard International Trade Classification (SITC) 3-digit product group) is an indicator of the sophistication of consumer markets and industrial development (OECD 2002). As barriers to trade and investment are reduced, multinational enterprises increasingly engage in production activities across a range of locations seeking to apply their firm's assets with location-specific advantages, including abundance of particular types of resources or a favorable geographic position.

More open economies are likely to have a high ratio of intra-industry trade in manufactures, particularly in sophisticated and technology-intensive products like chemicals, office machinery, transport equipment, and electronics. Increased variety and choice in production and consumption is associated with intra-industry trade. In theory intra-industry trade in similar but differentiated products takes place in markets characterized by monopolistic competition (many producers and consumers, consumer tastes favor variety, and firms have

some market power) as opposed to perfect competition where firms produce homogeneous products and are price-takers and consumers are indifferent between firms supplying the homogeneous product. Intra-industry trade may also arise where fragmentation of the production process in order to minimize costs across locations is taking place. Intra-industry trade (IIT) is measured by an index designed by Grubel and Lloyd (1975) varying in value between zero and one:

$$ITT_i = 1 - \frac{|X_i - M_i|}{(X_i + M_i)}$$

If the country only imports or exports products in sector *i*, the second term on the right side of the equation is equal to one and the whole expression collapses to zero signifying pure inter-industry trade. Similarly, if the country simultaneously imports and exports the same amounts of products in sector *i*, the second term is zero and the whole expression is equal to one, signifying pure intra-industry trade.

Intra-industry trade in East and Southeast Asian manufacturing is evaluated by factor intensity between 1995 and 2004 (Table 1.6.7) using SITC 3-digit product categories. There are four types of manufacturing industries: unskilled labor-intensive; natural resource-intensive; human capital-intensive; and technology-intensive.

Trade-weighted values of the IIT index have been calculated for each group of manufactured products for Japan, PRC, NIEs, ASEAN-5, East and Southeast Asia, and East and Southeast Asia excluding Japan. These are weighted by the amount of trade in each of the 3-digit product groups compared with the sum of trade in the product group as a whole. The summary IIT indexes for natural resource-intensive, technology-intensive, and human capital-intensive manufactures are quite large and rising over the period 1995–2004. The exception is unskilled labor-intensive manufactures, where the IIT indexes generally fell. This reflects predominantly a decline in intra-industry trade in textiles. The reasons for this decline are beyond the immediate scope of this report but may reflect declines in PRC imports of intermediate textiles associated with the rapidly increasing capacity in textile production that has occurred since it joined WTO (Anson and Brocklehurst 2006). One may distinguish between horizontal IIT in which countries import and export products at a similar level of processing with vertical IIT where countries import and export goods at differing levels of processing. The latter is thought to take place where production is fragmented so that each manufacturing operation in the value chain takes place in the lowest cost or most advantageous location. The IIT in technology-intensive and human capital-intensive products in East and Southeast Asia most likely is of the vertical type associated with the rise in trade in machinery parts and components.

**1.6.7 Grubel-Lloyd intra-industry trade indexes, 1995 and 2004**

	Year	Labor-intensive manufacturing	Natural resource-intensive manufacturing	Human-capital intensive manufacturing	Technology-intensive manufacturing
Japan	1995	0.38	0.78	0.40	0.46
	2004	0.34	0.71	0.37	0.60
China, People's Rep. of	1995	0.47	0.51	0.75	0.58
	2004	0.32	0.74	0.73	0.64
NIEs	1995	0.60	0.82	0.85	0.80
	2004	0.65	0.80	0.76	0.81
ASEAN-5	1995	0.47	0.63	0.36	0.63
	2004	0.47	0.71	0.67	0.78
East and Southeast Asia	1995	0.68	0.80	0.72	0.84
	2004	0.58	0.85	0.68	0.85
East and Southeast Asia excl. Japan	1995	0.58	0.80	0.77	0.77
	2004	0.48	0.88	0.77	0.81

Source: Statistics Canada, World Trade Analyzer.

## The rise of trade in parts and components in machinery sectors

Trade in intermediate products has become very important for East and Southeast Asian trade in electrical machinery, transportation equipment, and nonelectrical machinery. This phenomenon may be observed by looking at more detailed SITC 4-digit products within these sectors. For example, in electrical machinery the number one 4-digit product group traded is SITC 7649 (parts of apparatus of division 76—electrical machinery) in the imports and exports of Japan, PRC, NIEs, and ASEAN-5 taken individually and as a whole. Whereas trade in intermediates accounts for one half of world trade in electrical machinery in 2004, it accounts for 56% of imports and 60% of exports of East and Southeast Asia (including Japan). Growth of trade in SITC 7649 in East and Southeast Asia has exceeded 14% a year between 1995 and 2004 compared with 12% globally.

Growth of exports has been even more dynamic—if one excludes Japan, the growth rate of exports is nearly 18% in East and Southeast Asia. Thus, the share of trade in parts and components in this one 4-digit category in East and Southeast Asia rose from 50% of imports of electrical machinery and 45% of exports of electrical machinery to 57% and 61% of such imports and exports, respectively. In global trade the shares increased from 38% to 50% over the same time period indicating that East and Southeast Asia trade even more intensively in these intermediate goods than does the rest of the world. These figures actually understate the importance of trade in intermediate goods as certain other 4-digit SITC groups (i.e., SITC 7757 and SITC 7783 are aggregates of parts and final goods that cannot be broken down further in the data).

In transportation equipment, SITC 7849 (other parts and accessories of motor vehicles) is the leading 4-digit product group in the imports of transport equipment in PRC, NIEs, and ASEAN-5 individually and is the second largest category in Japan. SITC 7849 is the second largest category within transportation equipment exports in Japan and the NIEs and is the largest category in both the PRC and ASEAN-5. The share of SITC 7849 in total imports of transportation machinery in East and Southeast Asia rose to 43% in 2004 from 28% in 1995 (excluding Japan the increase was from 33% to 46%). In terms of exports, the share of SITC 7849 was constant over the period at 23%, but if Japan is excluded the increase was from 17% in 1995 to 27% in 2004. In global trade the share of SITC 7849 actually fell from 27% to 26%. Growth in exports of SITC 7849 in East and Southeast Asia excluding Japan was 20% per year over 1995–2004 compared with global growth of 7% per year.

It is more difficult to disaggregate trade in intermediate products in the other machinery sectors. However, within nonelectrical machinery, SITC categories 7414, 7492, 7591, 7499, and 7139 consist wholly or partially of parts and components and accounted for 17% of exports of East and Southeast Asia (excluding Japan) in 2004 compared with 15% in 1995. Growth in exports of these 4-digit product groups from East and Southeast Asia excluding Japan exceeded world growth in each category.

The PRC is a real source of growth of intraregional trade and is known as the assembly point of final goods for export to third markets



outside the region. The growth in intraregional trade in electrical machinery parts and components (SITC 7649) has been most rapid with the PRC (Table 1.6.8). The value of this trade in terms of PRC imports increased fourfold between 1995 and 2004 (from \$5.1 billion to \$25.4 billion—see Table 1.6.9). The share of the region in the total amount of East and Southeast Asian trade in electrical machinery parts and components rose from 84% to 86% over this period and from 63% to 72% if Japan is excluded (Table 1.6.10). The integration of the region in parts and components trade is driven however, by final demand outside the region. This can be seen in the aggregate data for HS 85 with exports to the world rising from \$307.5 billion in 1995 to \$688.5 billion in 2004 compared with imports rising from \$215.5 billion in 1995 to \$490.0 billion in 2004.

At the individual product level, dependence on final demand outside the region also appears to loom large in electrical machinery. For example, SITC 774 (electrical apparatus for medical purposes) is a fast rising export sector with exports from East and Southeast Asia to the world rising from \$0.7 billion in 1995 to \$1.8 billion in 2004 but intraregional share actually fell from 26% in 1995 to 22% in 2004, implying extraregional demand was critical for export expansion in this type of final good.

In transportation equipment, growth in intraregional trade in automotive and vehicular parts and components (SITC 7849) has also been most rapid in the PRC (Table 1.6.11). Intra-Asian trade in vehicular components doubled in value between 1995 and 2004 (rising from \$7.0 billion in 1995 to \$14.9 billion in 2004—Table 1.6.12).

Intraregional trade in East and Southeast Asia as a share of East and Southeast Asia's global trade in SITC 7649 rose from 59% in 1995 to 65% in 2004 (Table 1.6.13). The most significant final demand product in the transportation machinery sector at the

#### 1.6.8 Growth of intra-Asian trade: Electrical machinery parts and components (SITC 7649), 1995–2004

Exporter\importer	Japan	PRC	NIEs	ASEAN-5	East and Southeast Asia	East and Southeast Asia excluding Japan
Japan	-	18.9	4.5	(2.2)	6.0	-
PRC	23.6	-	32.0	37.9	30.0	32.4
NIEs	8.8	19.1	9.8	4.0	12.5	13.0
ASEAN-5	7.9	45.0	0.0	8.1	5.2	4.0
East and Southeast Asia	13.4	19.5	12.4	5.0	13.1	-
East and Southeast Asia excluding Japan		19.6	15.3	7.2	-	15.2

Source: Statistics Canada, World Trade Analyzer.

#### 1.6.9 Intra-Asian trade: Electrical machinery parts and components (SITC 7649) (\$000), 1995 and 2004

Exporter\importer	Japan	PRC	NIEs	ASEAN-5	East and Southeast Asia	East and Southeast Asia excluding Japan
<b>1995</b>						
Japan	-	745,947	4,350,156	1,650,792	6,746,895	-
PRC	748,606	-	1,419,578	92,528	2,260,712	1,512,106
NIEs	1,502,023	4,312,381	3,869,722	3,351,760	13,035,886	11,533,863
ASEAN-5	1,181,742	36,537	2,769,200	329,912	4,317,391	3,135,649
East and Southeast Asia	3,432,371	5,094,865	12,408,656	5,424,992	26,360,884	-
East and Southeast Asia excluding Japan	-	4,348,918	8,058,500	3,774,200	-	16,181,618
Total market	5,972,511	7,868,311	9,393,819	8,283,293	31,517,934	25,545,423
<b>2004</b>						
Japan	-	3,533,424	6,481,482	1,348,845	11,363,751	-
PRC	5,056,522	-	17,303,201	1,663,198	24,022,921	18,966,399
NIEs	3,208,235	20,794,825	8,983,998	4,752,485	37,739,543	34,531,308
ASEAN-5	2,338,339	1,032,787	2,770,534	662,903	6,804,563	4,466,224
East and Southeast Asia	10,603,096	25,361,036	35,539,215	8,427,431	79,930,778	-
East and Southeast Asia excl. Japan	-	21,827,612	29,057,733	7,078,586	-	57,963,931
Total market	12,190,940	28,944,100	40,706,065	10,675,982	92,517,087	80,326,147

Source: Statistics Canada, World Trade Analyzer.

#### 1.6.10 Intra-Asian trade: Electrical machinery parts and components (SITC 7649) (% share of world total), 1995 and 2004

Exporter\importer	Japan	PRC	NIEs	ASEAN-5	East and Southeast Asia	East and Southeast Asia excluding Japan
<b>1995</b>						
Japan	-	9.48	46.31	19.93	21.41	-
PRC	12.53	-	15.11	1.12	7.17	5.92
NIEs	25.15	54.81	41.19	40.46	41.36	45.15
ASEAN-5	19.79	0.46	29.48	3.98	13.70	12.27
East and Southeast Asia	57.47	64.75	132.09	65.49	83.64	-
East and Southeast Asia excluding Japan	-	55.27	85.79	45.56	-	63.34
Total market	100.00	100.00	100.00	100.00	100.00	100.00
<b>2004</b>						
Japan	-	12.21	15.92	12.63	12.28	-
PRC	41.48	-	42.51	15.58	25.97	23.61
NIEs	26.32	71.84	22.07	44.52	40.79	42.99
ASEAN-5	19.18	3.57	6.81	6.21	7.35	5.56
East and Southeast Asia	86.98	87.62	87.31	78.94	86.40	-
East and Southeast Asia excluding Japan	-	75.41	71.38	66.30	-	72.16
Total market	100.00	100.00	100.00	100.00	100.00	100.00

Source: Statistics Canada, World Trade Analyzer.

SITC 4-digit level is passenger motor cars for transport of passengers and goods (SITC 7810). The amount of trade in passenger cars by country in the region grew by 9% per year over 1995–2004 (Table 1.6.14), or by 18% if Japan is excluded. The value of trade more than doubled from \$3.9 to \$8.8 billion (Table 1.6.15). However, intraregional trade in passenger cars accounted for only 21% of the total in 1995 and rose to around 41% in 2004, implying that the greatest share of final demand for motor cars produced in the region still lay outside the region (Table 1.6.16) even though growth in final demand within the region was strong in this case.

It is particularly clear that final demand in the PRC has been a motive force for expansion in intraregional trade in motor cars with PRC accounting for \$3.2 billion in 2004—a tenfold increase over the value of trade in 1995 (Table 1.6.15). Auto exports from Japan and the NIEs to the PRC made huge gains between 1995 and 2004. By way of contrast, exports from the PRC of final passenger cars to East and Southeast Asia were just \$12 million in 1995 and grew to \$49 million in 2004 and these accounted for 37% of all cars exported by the PRC in 1995 but just 13% in 2004—again indicating that final demand outside the region was predominant. This indicates that the PRC plays a role as both an assembler and exporter of final demand goods in some sectors but serves as a major source of final demand in others.

In considering the role of the PRC in the region's trade and industrialization, it is important to keep in mind the rise in intra-industry trade (based largely upon intrafirm trade of multinational enterprises and their affiliates in the region and beyond) and to understand the PRC's own industrial transition toward more sophisticated manufactures despite its apparent dominance in labor-intensive industries. The PRC imports capital equipment and components in machinery (HS 84–85) from within

#### 1.6.11 Growth of intra-Asian trade: Other parts and accessories of motor vehicles (SITC 7849), 1995–2004

Exporter\importer	Japan	PRC	NIEs	ASEAN-5	East and Southeast Asia	East and Southeast Asia excluding Japan
Japan	-	32.5	(0.1)	0.1	4.1	-
PRC	36.7	-	19.1	27.4	29.6	22.5
NIEs	11.6	18.9	8.4	8.5	14.2	14.7
ASEAN-5	29.5	53.7	17.3	24.8	25.5	23.8
East and Southeast Asia	23.5	24.5	2.2	3.8	8.8	-
East and Southeast Asia excluding Japan	-	19.4	12.8	16.8	-	17.1

Source: Statistics Canada, World Trade Analyzer.

#### 1.6.12 Intra-Asian trade: Other parts and accessories of motor vehicles (SITC 7849) (in \$000), 1995 and 2004

Exporter\importer	Japan	PRC	NIEs	ASEAN-5	East and Southeast Asia	East and Southeast Asia excluding Japan
<b>1995</b>						
Japan	-	204,834	2,294,285	2,981,531	5,480,650	-
PRC	49,738	-	49,634	26,088	125,460	75,722
NIEs	185,237	484,193	180,191	280,680	1,130,301	945,064
ASEAN-5	68,315	2,003	55,983	129,434	255,735	187,420
East and Southeast Asia	303,290	691,030	2,580,093	3,417,733	6,992,146	-
East and Southeast Asia excl. Japan	-	486,196	285,808	436,202	-	1,208,206
Total market	1,926,526	1,892,966	3,946,387	4,058,327	11,824,206	9,897,680
<b>2004</b>						
Japan	-	2,573,019	2,282,347	3,018,418	7,873,784	-
PRC	827,237	-	240,214	230,556	1,298,007	470,770
NIEs	495,840	2,293,580	373,358	583,068	3,745,846	3,250,006
ASEAN-5	699,294	95,693	234,541	952,010	1,981,538	1,282,244
East and Southeast Asia	2,022,371	4,962,292	3,130,460	4,784,052	14,899,175	-
East and Southeast Asia excl. Japan	-	2,389,273	848,113	1,765,634	-	5,003,020
Total market	4,695,064	8,055,204	4,959,877	5,304,336	23,014,481	18,319,417

Source: Statistics Canada, World Trade Analyzer.

#### 1.6.13 Intra-Asian trade: Other parts and accessories of motor vehicles (SITC 7849) (% share of world total), 1995 and 2004

Exporter\importer	Japan	PRC	NIEs	ASEAN-5	East and Southeast Asia	East and Southeast Asia excluding Japan
<b>1995</b>						
Japan	-	10.82	58.14	73.47	46.35	-
PRC	2.58	-	1.26	0.64	1.06	0.77
NIEs	9.62	25.58	4.57	6.92	9.56	9.55
ASEAN-5	3.55	0.11	1.42	3.19	2.16	1.89
East and Southeast Asia	15.74	36.51	65.38	84.22	59.13	-
East and Southeast Asia excluding Japan	-	25.68	7.24	10.75	-	12.21
Total market	100.00	100.00	100.00	100.00	100.00	100.00
<b>2004</b>						
Japan	-	31.94	46.02	56.90	34.21	-
PRC	17.62	-	4.84	4.35	5.64	2.57
NIEs	10.56	28.47	7.53	10.99	16.28	17.74
ASEAN-5	14.89	1.19	4.73	17.95	8.61	7.00
East and Southeast Asia	43.07	61.60	63.12	90.19	64.74	-
East and Southeast Asia excluding Japan	-	29.66	17.10	33.29	-	27.31
Total market	100.00	100.00	100.00	100.00	100.00	100.00

Source: Statistics Canada, World Trade Analyzer.

the region that are greater than its own intraregional exports of these items. However, its global exports in these sectors exceed its global imports indicating that it is reliant on external demand as an assembly point for final goods within the production chain of the multinationals. Thus, one can make the case that the PRC, far from being responsible for “de-industrialization” is providing a complementary role to the rest of the region. These issues are examined in the following section.

## The challenge of the PRC for industrialization in Southeast Asia

It is sometimes argued that industrial development in the PRC is different from previous industrializations in East and Southeast Asia. The former pattern of industrial development—the “flying geese” pattern where Japan was in the lead and after beginning with development of manufacturing of processed products and labor-intensive goods such as textiles, clothing, and footwear, subsequently moved into more capital-intensive and sophisticated industries allowing first the NIEs and then the ASEAN-5 to follow suit—in this view is no longer valid. The shriller members of this chorus (NCTO 2004), for example fear that the PRC will completely dominate world production and trade in labor-intensive manufactures (textiles, apparel, footwear, travel goods) and will deprive smaller developing countries the option of moving into manufacturing as a result. Others fear that the PRC will simultaneously dominate all types of manufacturing, including those at mid- and high-levels of technology. De-industrialization of Southeast Asian nations resulting from the PRC’s entry into WTO (in late 2001) and

### 1.6.14 Growth of intra-Asian trade: Passenger cars (SITC 7810), 1995–2004

Exporter\importer	Japan	PRC	NIEs	ASEAN-5	East and Southeast Asia	East and Southeast Asia excluding Japan
Japan	-	33.6	6.2	(3.5)	5.2	-
PRC	51.7	-	18.7	(4.3)	16.8	14.9
NIEs	24.4	26.1	8.7	7.2	14.6	14.5
ASEAN-5	44.9	7.0	25.8	43.5	36.8	36.4
East and Southeast Asia	35.5	29.4	7.7	2.7	9.3	-
East and Southeast Asia excluding Japan	-	25.9	13.5	14.6	-	17.7

Source: Statistics Canada, World Trade Analyzer.

### 1.6.15 Intra-Asian trade: Passenger cars (SITC 7810) (\$000), 1995 and 2004

Exporter\importer	Japan	PRC	NIEs	ASEAN-5	East and Southeast Asia	East and Southeast Asia excluding Japan
<b>1995</b>						
Japan	-	124,229	1,027,231	1,916,991	3,068,451	-
PRC	170	-	8,398	3,522	12,090	11,920
NIEs	5,213	188,888	160,505	445,419	800,025	794,812
ASEAN-5	3,019	2,711	31,147	31,351	68,228	65,209
East and Southeast Asia	8,402	315,828	1,227,281	2,397,283	3,948,794	-
East and Southeast Asia excl. Japan	-	191,599	200,050	480,292	-	871,941
Total market	9,870,655	1,085,831	3,646,370	3,802,067	18,404,923	8,534,268
<b>2004</b>						
Japan	-	1,684,735	1,761,775	1,390,586	4,837,096	-
PRC	7,240	-	39,158	2,362	48,760	41,520
NIEs	37,314	1,520,472	339,598	829,825	2,727,209	2,689,895
ASEAN-5	85,036	4,996	246,380	811,065	1,147,477	1,062,441
East and Southeast Asia	129,590	3,210,203	2,386,911	3,033,838	8,760,542	-
East and Southeast Asia excl. Japan	-	1,525,468	625,136	1,643,252	-	3,793,856
Total market	7,759,686	5,258,810	4,922,321	3,602,937	21,543,754	13,784,068

Source: Statistics Canada, World Trade Analyzer.

### 1.6.16 Intra-Asian trade: Passenger cars (SITC 7810) (% share of world total), 1995 and 2004

Exporter\importer	Japan	PRC	NIEs	ASEAN-5	East and Southeast Asia	East and Southeast Asia excl. Japan
<b>1995</b>						
Japan	-	11.44	28.17	50.42	16.67	-
PRC	0.00	-	0.23	0.09	0.07	0.14
NIEs	0.05	17.40	4.40	11.72	4.35	9.31
ASEAN-5	0.03	0.25	0.85	0.82	0.37	0.76
East and Southeast Asia	0.09	29.09	33.66	63.05	21.46	-
East and Southeast Asia excl. Japan	-	17.65	5.49	12.63	-	10.22
Total market	100.00	100.00	100.00	100.00	100.00	100.00
<b>2004</b>						
Japan	-	32.04	35.79	38.60	22.45	-
PRC	0.09	-	0.80	0.07	0.23	0.30
NIEs	0.48	28.91	6.90	23.03	12.66	19.51
ASEAN-5	1.10	0.10	5.01	22.51	5.33	7.71
East and Southeast Asia	1.67	61.04	48.49	84.20	40.66	-
East and Southeast Asia excl. Japan	-	29.01	12.70	45.61	-	27.52
Total market	100.00	100.00	100.00	100.00	100.00	100.00

Source: Statistics Canada, World Trade Analyzer.

improving access to capital inflows and markets abroad are particular concerns (McKibbin and Woo 2003).

The more optimistic about the emergence of the PRC make almost equally fallacious arguments—to the extent of claiming that Asia can soon jettison its reliance on US consumer spending (and to a lesser extent, spending by Western European and Japanese consumers) because of the phenomenal growth in the PRC. Uncoupling of Asia from the US and EU in this view will be occurring rapidly as Asia shifts its focus in favor of fast-growing insatiable demand in the 1.3 billion strong PRC consumer market.

A careful analysis based upon the data paints a much more nuanced view of the role that the PRC is likely to take (assuming it avoids the disastrous collapse predicted for it by pundits such as Gordon Chang). The data presented in this section tend to support this more nuanced view—the PRC may take some of the lunch from Southeast Asia this afternoon but is likely to need to invite the same countries to dine with it in the evening. That is, the PRC prowess in labor-intensive manufacturing may lead it to gain market share in trade and FDI at the expense of countries such as Thailand, Indonesia, Viet Nam, and the Philippines. However, rapid growth in the PRC economy will also depend on increased imports of raw materials and intermediate inputs from Southeast Asia as well as capital equipment and technology from the NIEs. Eichengreen and Tong (2005) argue that the trade and FDI impact of the PRC's emergence will be negative for producers in low-income countries in Southeast Asia that specialize in labor-intensive manufactures and other consumer goods but positive for high-income countries in East Asia that export high-technology components and capital goods.

McKibbin and Woo (2003) estimate that if the PRC's membership in WTO increases its attractiveness as a destination for FDI, this is likely to come at the expense of Southeast Asia and result in losses in GDP of significant amounts for Thailand, Malaysia, Philippines, and Indonesia—unless these countries can rapidly upgrade their human resources in order to move more rapidly into sophisticated manufacturing where productivity growth is likely. Srinivasan (2006) makes the argument that competition for resources between the PRC and India will provide a large dividend for exporters in some of the poorer countries and regions of the world and that any negative effects (such as congestion in demand for shipping) will be short term.

The real danger is that the PRC's success (followed by emergence of India in complementary activities) might set off a protectionist backlash that will have negative global repercussions. Srinivasan (2006) cites the “blatantly protectionist response” of the EU and US to competition from the PRC in their textile and clothing industries as well as threats by US politicians to impose an across the board discriminatory tariff against products from the PRC unless the authorities there revalue the yuan. In addition, threats of increased use of antidumping measures appear to be legitimate as the EU has moved to impose antidumping duties on footwear from the PRC and the US on staple fiber exports from the PRC. Overall, the PRC's impact on the region and the world economy is positive and this is likely to continue, provided the PRC can constantly implement economic and political reforms necessary to sustain growth. A successful revival and conclusion to the Doha Round negotiations

in WTO would go a long way toward reducing protectionist threats to sustained growth in the region.

Does the rapid rise of manufacturing in the PRC led by booming exports of assembled machinery products and labor-intensive consumer goods imply that the rest of East and Southeast Asia will be displaced as manufacturing centers and as hosts for FDI? Data on global production shares show that the PRC doubled its share from 3.5% in 1994 to 7.0% in 2003, yet the NIEs and ASEAN-5 also increased their share in world production from 7.0% to 9.0% over the same decade (*The Economist* 2007). And as has been documented above, ASEAN-5 was able to lift its export share in world markets over roughly the same period, hardly lending support to the argument that the PRC poses a threat. In fact, *The Economist* argues that the PRC is losing favor relative to Southeast Asia as a manufacturing location and FDI host, as multinationals are adopting a “PRC plus one” strategy in which they invest in the PRC and in at least one ASEAN country simultaneously.

A recently released study for the World Bank (Winters and Yusuf 2007) also provides support for the nuanced view of assorted complementary and competitive impacts of the PRC on the exports and manufacturing competitiveness of ASEAN countries. Empirical data also tend to support the view of a complementary role for the PRC vis-à-vis ASEAN trade and manufacturing. For example, recent data show that ASEAN increased its market share in the US apparel market, in 2006 from 2005, to 19.3% from 17.3% in value and to 18.9% from 16.7% in volume.<sup>6</sup> In particular, low-income ASEAN members, such as Cambodia, Indonesia, and Lao People’s Democratic Republic, have done well in expanding their market shares in the US clothing market.

This indicates that the PRC is not closing off opportunities for low-income countries to enter the manufacturing process along the lines of the traditional “flying geese” pattern. Critical to this process is openness to trade and FDI, market-friendly policies, and institutional reforms at customs and tax departments (and elsewhere) so that export-oriented growth may take root and then bloom.

## Conclusion

The main findings of this chapter, based upon the empirical analysis of recent trade data, are broadly encouraging for the future prospects of the economies of East and Southeast Asia. Fundamentally, the processes of regional integration and regional cooperation are binding these economies closer together as trade and cross-border investments are mutually reinforcing. The key message from earlier sections is that globalization is the driving force behind increasing regional integration in Asia. Final demand emanating from outside the region is still crucial in the expansion of exports of manufactures from East and Southeast Asia. This is shown to be the case in traditional labor-intensive goods and in more sophisticated products, such as electrical machinery and motor cars. Thus, the economies of East and Southeast Asia are definitely not uncoupling from global markets, indeed they have become ever more closely linked with the large markets of the industrial economies.

East and Southeast Asia have concentrated their export manufactures



in the fastest-growing industries in world trade and this has allowed them to enhance their manufacturing capabilities in more sophisticated products while expanding their market shares. The rising trade shares of developing Asia in world trade underscores the fact that trade growth is indeed influenced by the composition of what countries export.

The pattern of trade and structural change in developing Asia has consistently followed the “flying geese” pattern and this remains the case for the PRC and emerging economies such as Indonesia and Viet Nam. The process of industrialization is being fostered by the rise in intra-industry trade. Although such trade has been stagnant or declining in traditional labor-intensive manufacturing (textiles, clothing, and footwear), it has been on the rise in more dynamic industrial branches, including in technology-intensive and human capital-intensive manufacturing sectors, as well as in natural resource-intensive products.

Most of the economies in the region initially stimulated openness by setting up special economic zones, export processing zones, and industrial bonded zones that encourage FDI and provide export-oriented firms with imported inputs free of tax and duty. Eventually they went further in cutting tariffs and opening the entire economy to trade and investment.

Within East and Southeast Asia, there has been explosive growth in trade in intermediate products—especially in parts and components of electrical machinery and transportation equipment centered on the PRC as the assembly point for final goods. The fact that intra-Asian trade has flourished indicates that multinational enterprises in the region tend to have high propensities to engage in vertical production sharing and have much higher export-sales ratios than in other parts of the world. The PRC has a nuanced impact on the process of industrialization elsewhere in the region. Southeast Asia competes in world markets with the PRC in labor-intensive manufacturing but the PRC is largely complementary to the rest of East and Southeast Asia in natural resource-based products and human capital- and technology-intensive manufactures.

Policy implications are as follows:

- Market access to third country markets, especially in North America and Europe, is vital to further export expansion in East and Southeast Asia and this means a successful and ambitious Doha Round is in the interest of the region.
- Globalization, technological change and competition requires the East and Southeast Asian economies to employ resources flexibly with ease of entry and exit.
- Countries may initiate the process of structural change by adopting or simulating open-economy policies that impart market discipline to firms and investors.
- Liberalization of trade and investment on a unilateral basis is still the most important route for reaping the gains from trade in the region and bilateral initiatives have not had much impact.
- Productivity improvements at the firm level have helped to ensure competitiveness and will continue to be essential to further develop global and regional integration through trade.
- Second generation reforms aimed at developing markets and institutions that are missing, incomplete, or inefficient are necessary to generalize open economy policies in the PRC and Southeast Asian economies.



## Endnotes

- 1 Although India is becoming a significant global supplier of services, particularly those associated with information technology outsourcing (Winters and Yusuf 2007), services are not covered in this chapter.
- 2 Data from World Trade Analyzer of Statistics Canada in Standard International Trade Classification format were mapped into HS chapter categories using a concordance from Jon Haveman: [www.haveman.org](http://www.haveman.org).
- 3 World imports are equal to world exports in the World Trade Analyzer database.
- 4 The Agreement on Textiles and Clothing (ATC) ended the system of global quotas on December 31, 2004. See ADB (2006), pp. 36–57 for an in-depth analysis of textiles and apparel trade in the region.
- 5 The United States and European Communities have both placed renewed quota restrictions on certain textile and clothing products from the PRC beginning in late 2005 (ADB 2006). These restrictions will be in place through 2008 and, although they are to be progressively loosened, they will limit the ability of the PRC to increase its shares of these items.
- 6 Data from the United States Office of Textiles and Apparel: <http://www.OTEXA.ita.doc.gov/>.

## References

- Anson, Robin and Guillaume Brocklehurst. 2006. *World Markets for Textile Machinery, 2006: Part 2-Fabric Manufacture*. Textiles Intelligence. December.
- Asian Development Bank. 2006. "Routes for Asia's Trade." *Asian Development Outlook 2006*. Hong Kong, China.
- Eichengreen, Barry and Hui Tong. 2005. "How China is Reorganizing the World Economy." Paper prepared for the inaugural meeting of the Asian Economic Policy Panel. Tokyo. 22 October 2005.
- General Agreement on Tariffs and Trade (GATT). 1994. *Agreement on Textiles and Clothing*. Geneva.
- Grubel, Herbert G. and Peter Lloyd. 1975. *Intra-Industry Trade: The Theory and Measurement of International Trade in Differentiated Products*. London: Basingstoke.
- McKibbin, Warwick J. and Wing Thy Woo. 2003. "The Consequences of China's WTO Accession on its Neighbors." *Working Papers in Trade and Development* No. 2003/17. Canberra: The Australian National University, Division of Economics, Research School of Pacific and Asian Studies. August.
- National Council of Textile Organizations (NCTO). 2004. *The China Threat to World Textile and Apparel Trade*. Washington, DC. July 15.
- Organisation for Economic Co-operation and Development (OECD). 2002. "Intra-Industry and Intra-Firm Trade and the Internationalisation of Production." In *Economic Outlook* No. 71, Chapter 6, pp. 159–70. Paris.
- Srinivasan, T. N. 2006. "China, India and the World Economy." *Stanford Center for International Development Working Paper* No. 286. 3 July.
- The Economist*. 2007. "The Problem with Made in China." January 13, pp. 68–70.
- Winters, L. Alan and Shahid Yusuf, editors. 2007. *Dancing with Giants: China, India and the Global Economy*. Washington, DC and Singapore: The World Bank and Institute of Policy Studies.

### A.1.6.1 Structure of trade in East and Southeast Asia (% share of world total), 1995 and 2004

HS category	Japan	China, People's Rep. of	NIEs	ASEAN-5	East and Southeast Asia
<b>1995 imports</b>					
28-38	4.52	4.57	9.13	4.28	22.50
39-40	4.10	2.53	6.63	3.20	16.47
41-43	3.01	12.89	19.31	4.41	39.62
44-46	19.03	2.87	7.38	1.88	31.16
47-49	3.85	2.78	6.79	2.97	16.39
50-60	3.50	11.53	15.16	5.17	35.35
61-63	10.73	0.87	7.24	0.51	19.34
64-67	6.06	0.14	3.95	0.35	10.51
68-70	3.65	2.17	8.94	4.56	19.32
71	8.11	0.47	11.79	3.34	23.72
72-83	4.97	3.59	9.73	5.61	23.90
84	3.57	4.24	10.04	5.58	23.43
85	4.78	3.68	17.42	7.86	33.73
86-89	2.82	1.22	4.80	3.31	12.15
90-91	6.20	3.04	13.72	3.40	26.36
92	6.25	1.54	11.58	3.77	23.13
93	4.96	0.05	7.73	5.12	17.87
94-97	5.44	1.54	7.20	1.71	15.89
<b>1995 exports</b>					
28-38	5.93	1.99	7.13	1.32	16.37
39-40	11.47	1.45	8.18	13.39	34.49
41-43	0.99	3.12	17.65	2.09	23.86
44-46	0.16	1.99	3.13	14.58	19.87
47-49	1.86	0.71	3.72	1.75	8.05
50-60	4.48	6.87	22.68	3.48	37.51
61-63	0.53	14.79	19.48	7.02	41.82
64-67	0.18	14.77	22.60	11.54	49.09
68-70	10.68	4.18	6.52	2.95	24.33
71	0.59	1.18	3.71	3.02	8.51
72-83	7.60	3.12	8.23	1.41	20.36
84	14.76	1.17	12.24	2.50	30.67
85	15.97	2.84	21.41	7.92	48.14
86-89	15.45	0.65	4.21	0.72	21.03
90-91	17.24	2.64	11.49	1.61	32.99
92	11.94	2.48	12.13	2.09	28.65
93	0.54	0.14	0.65	0.14	1.48
94-97	3.11	6.54	16.03	4.19	29.88
<b>2004 imports</b>					
28-38	3.33	6.91	6.44	3.07	19.75
39-40	3.00	5.23	4.37	2.80	15.39
41-43	1.98	20.92	16.67	3.54	43.11
44-46	10.53	4.36	3.56	1.14	19.60
47-49	2.47	5.45	4.18	2.72	14.82
50-60	2.21	13.31	10.29	4.79	30.61
61-63	7.99	1.21	6.80	0.54	16.53
64-67	4.60	0.32	4.01	0.51	9.44
68-70	3.37	3.77	8.17	2.76	18.07
71	2.21	2.26	12.00	2.06	18.53
72-83	3.53	6.72	8.55	4.02	22.82
84	3.67	7.76	9.30	3.67	24.39
85	4.53	10.61	16.91	6.46	38.52
86-89	1.91	2.03	2.54	1.62	8.10
90-91	5.79	10.66	14.42	2.76	33.62
92	6.50	5.13	8.64	2.76	23.02
93	6.61	0.12	9.84	0.69	17.25
94-97	4.19	1.80	5.61	1.33	12.92
<b>2004 exports</b>					
28-38	4.96	2.90	7.52	1.94	17.33
39-40	9.40	4.59	6.94	11.55	32.47
41-43	0.59	7.70	17.07	1.63	27.00
44-46	0.12	5.62	1.37	8.72	15.83
47-49	1.95	1.89	3.49	3.01	10.33
50-60	3.97	13.94	17.81	3.68	39.40
61-63	0.40	24.59	12.00	5.89	42.87
64-67	0.05	27.57	10.52	11.87	50.01
68-70	8.19	9.06	4.77	3.82	25.83
71	0.53	1.88	5.91	1.52	9.84
72-83	6.10	7.34	7.95	1.96	23.35
84	9.75	9.42	12.00	4.27	35.44
85	9.81	11.20	25.01	8.11	54.13
86-89	13.21	2.11	5.86	0.90	22.08
90-91	13.75	6.56	13.13	2.11	35.56
92	10.50	5.51	19.38	2.99	38.38
93	0.81	0.06	1.90	0.09	2.85
94-97	2.23	14.10	9.98	3.88	30.19

Source: Statistics Canada, World Trade Analyzer.

## A.1.6.2 Composition of trade: East and Southeast Asia (% share to total imports/exports), 1995 and 2004

HS category	Japan	PRC	Korea, Rep. of	Taipei, China	Hong Kong, China	Singapore	Indonesia	Malaysia	Philippines	Thailand	Viet Nam
<b>1995 imports</b>											
01-05	8.57	0.86	1.41	1.71	2.35	1.17	1.01	1.14	2.45	1.25	0.97
06-10	4.05	2.38	2.24	2.29	1.55	1.25	5.02	2.10	3.23	0.80	2.42
11-24	3.48	3.49	2.33	2.71	2.34	1.82	3.73	1.75	4.99	1.45	7.98
25-26	2.84	1.85	2.44	1.18	0.78	0.54	1.61	0.84	2.11	0.47	1.38
27	15.60	3.66	14.08	3.77	2.17	8.37	5.43	2.18	10.02	6.39	9.47
28-38	7.18	13.68	9.91	12.54	8.57	5.86	14.64	6.48	10.32	9.75	15.91
39-40	0.71	0.82	0.82	0.74	0.56	0.77	0.97	0.74	0.87	0.65	1.18
41-43	0.30	2.44	1.61	0.86	1.91	0.11	1.38	0.22	0.48	0.72	1.01
44-46	4.32	1.23	1.79	1.48	0.69	0.38	0.22	0.15	0.66	1.36	0.17
47-49	1.64	2.22	2.08	2.24	1.89	0.99	2.53	1.55	1.93	1.65	1.70
50-60	1.99	12.34	4.13	2.58	10.69	1.65	6.65	2.86	5.21	3.37	9.39
61-63	6.91	1.05	1.18	1.45	6.14	1.49	0.50	0.49	0.62	0.28	1.10
64-67	0.83	0.04	0.15	0.23	0.60	0.26	0.02	0.10	0.13	0.03	0.05
68-70	0.53	0.59	0.96	0.85	0.75	0.67	0.65	1.17	0.80	0.89	0.74
71	1.14	0.13	0.10	0.16	2.72	0.43	0.04	0.21	0.01	1.81	0.25
72-83	6.00	8.16	9.27	9.98	5.54	5.48	10.08	7.87	8.58	12.01	7.42
84	8.88	19.89	18.56	15.31	10.65	18.99	24.15	18.72	14.85	20.97	14.62
85	9.71	14.08	13.48	22.47	21.26	31.38	7.90	36.27	19.30	17.63	8.91
86-89	5.24	4.26	4.19	7.79	5.42	5.37	8.65	7.63	8.10	10.24	9.44
90-91	3.27	3.03	4.77	4.07	5.18	3.63	1.77	2.94	2.07	2.72	2.11
92	0.62	0.29	0.46	0.38	0.59	1.39	0.16	0.43	0.23	0.96	0.42
93	0.12	0.00	0.20	0.27	0.00	0.05	0.34	0.07	0.33	0.16	0.00
94-97	4.27	2.28	1.69	2.41	5.27	3.93	1.62	1.75	2.34	2.02	2.36
<b>1995 exports</b>											
01-05	0.17	3.68	1.36	2.91	0.75	0.64	3.85	0.92	2.94	9.01	10.61
06-10	0.12	3.27	0.71	0.56	0.71	1.16	3.02	0.70	4.07	6.98	20.93
11-24	0.24	2.17	0.43	0.29	1.73	2.18	3.99	7.58	6.03	3.45	2.67
25-26	0.26	0.80	0.31	0.31	0.52	0.31	4.13	0.37	1.70	0.55	0.31
27	0.62	3.58	1.99	0.21	0.97	6.91	25.52	7.01	1.51	0.73	19.55
28-38	6.65	6.62	7.15	7.58	6.28	5.27	3.59	3.06	1.98	4.01	0.74
39-40	1.39	0.52	1.35	0.90	0.33	0.88	4.85	2.67	0.27	5.14	1.47
41-43	0.07	0.66	1.47	1.10	1.28	0.09	0.23	0.07	0.03	0.84	0.28
44-46	0.03	0.95	0.13	0.54	0.57	0.35	11.13	6.32	1.00	0.72	1.40
47-49	0.56	0.64	0.95	0.87	1.18	0.53	3.20	0.51	0.50	0.74	0.07
50-60	1.80	8.17	10.20	9.70	7.99	1.30	5.89	1.66	1.15	3.56	1.33
61-63	0.24	19.94	5.03	3.67	15.44	1.38	8.25	3.20	7.20	10.09	18.61
64-67	0.02	4.22	1.00	0.73	4.26	0.11	4.43	0.15	0.89	3.70	9.71
68-70	1.09	1.26	0.27	0.78	0.70	0.37	0.64	0.60	0.52	0.82	0.82
71	0.06	0.35	0.02	0.03	0.83	0.13	0.03	0.14	0.04	2.10	0.31
72-83	6.48	7.88	8.11	7.82	4.21	3.33	3.06	2.71	3.26	2.33	0.66
84	25.92	6.10	9.68	24.08	9.72	31.34	1.95	13.50	2.92	14.28	0.59
85	22.89	12.07	29.85	19.65	20.87	32.92	5.39	38.80	56.22	16.67	0.52
86-89	20.28	2.54	12.83	3.37	1.21	1.84	1.05	2.83	1.38	2.40	0.33
90-91	6.42	2.92	1.47	2.31	6.23	3.00	0.49	1.62	0.36	2.06	0.17
92	0.84	0.52	1.11	0.52	0.53	0.70	0.23	0.41	0.07	0.40	0.01
93	0.01	0.01	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01
94-97	1.72	10.76	2.60	8.39	13.05	2.62	4.30	3.52	4.73	8.42	2.82
<b>2004 imports</b>											
01-05	5.06	0.66	1.63	0.97	1.57	0.98	1.94	1.24	1.66	1.17	1.42
06-10	3.02	0.70	1.53	1.34	0.79	0.79	3.55	1.72	2.18	1.00	1.79
11-24	2.57	2.23	1.42	1.66	0.93	1.12	4.06	1.98	3.20	1.99	3.95
25-26	2.69	3.30	3.33	1.44	0.23	0.22	1.38	0.88	1.27	0.84	0.45
27	20.37	8.03	20.63	3.85	2.43	14.85	18.37	5.70	10.25	6.01	11.12
28-38	7.68	12.20	9.08	12.78	6.18	6.43	15.74	7.53	7.59	11.52	13.67
39-40	0.62	0.83	0.61	0.49	0.40	0.55	1.02	0.82	0.85	0.76	0.86
41-43	0.18	1.46	0.53	0.38	1.82	0.08	0.40	0.13	0.12	0.60	2.27
44-46	2.36	0.75	0.70	0.64	0.31	0.14	0.32	0.24	0.37	0.40	0.95
47-49	0.93	1.56	0.98	1.19	0.81	0.53	2.57	1.16	1.42	1.27	1.68
50-60	1.02	4.71	1.88	0.96	5.41	0.65	5.40	1.25	3.33	2.70	9.33
61-63	6.17	0.71	1.67	1.12	5.88	1.35	0.61	0.52	0.56	0.51	1.29
64-67	0.61	0.03	0.20	0.17	0.52	0.17	0.04	0.15	0.12	0.07	0.02
68-70	0.52	0.44	0.91	0.93	0.58	0.40	0.57	0.62	0.59	0.68	0.50
71	0.38	0.30	0.04	0.12	3.11	0.42	0.01	0.08	0.03	1.84	0.19
72-83	5.17	7.54	9.24	10.53	4.69	4.32	9.16	6.95	4.60	11.67	11.93
84	11.32	18.33	12.29	17.76	15.83	19.66	14.38	17.02	11.31	19.99	15.58
85	13.01	23.31	19.03	25.83	32.14	30.63	6.25	37.17	42.53	21.13	8.23
86-89	4.59	3.74	2.90	4.37	2.24	5.12	7.70	4.97	3.66	5.93	7.90
90-91	4.11	5.79	5.27	8.58	5.20	4.39	1.30	3.55	2.09	3.39	2.08
92	0.69	0.42	0.50	0.39	0.37	0.86	0.18	0.36	0.32	0.79	0.18
93	0.08	0.00	0.14	0.14	0.00	0.03	0.02	0.01	0.01	0.02	0.00
94-97	4.01	1.32	1.71	1.77	5.21	2.15	1.50	1.86	1.55	2.08	2.16
<b>2004 exports</b>											
01-05	0.19	1.63	0.47	0.70	0.34	0.32	2.84	0.65	1.24	4.39	7.93
06-10	0.10	1.47	0.33	0.20	0.22	0.48	1.86	0.57	2.43	4.30	7.11
11-24	0.20	0.64	0.48	0.16	0.50	0.95	8.13	6.40	2.31	1.90	0.62
25-26	0.56	0.64	0.23	0.28	0.19	0.21	4.72	0.27	0.75	0.54	0.63
27	0.48	2.42	4.16	1.39	0.27	9.83	17.94	11.52	1.04	2.65	21.23
28-38	8.30	4.55	9.03	7.70	4.83	11.59	6.30	5.61	1.81	6.01	1.13
39-40	1.41	0.64	1.19	0.77	0.22	0.41	4.52	1.56	0.37	4.23	1.59
41-43	0.04	0.48	0.54	0.41	1.62	0.07	0.25	0.03	0.02	0.32	0.27
44-46	0.02	0.85	0.04	0.15	0.27	0.09	5.09	2.78	0.38	0.79	0.73
47-49	0.53	0.48	0.86	0.46	0.67	0.31	4.40	0.56	0.33	0.83	0.23
50-60	1.33	4.38	4.37	4.24	5.25	0.39	4.93	0.96	0.63	1.94	1.14
61-63	0.22	12.90	1.68	1.44	11.48	1.12	7.47	1.94	3.56	4.88	18.81
64-67	0.01	2.48	0.06	0.16	2.02	0.09	1.95	0.19	0.07	0.84	15.48
68-70	0.91	0.95	0.40	0.42	0.30	0.21	0.89	0.42	0.26	0.92	0.96
71	0.07	0.22	0.01	0.02	1.52	0.20	0.01	0.01	0.03	1.00	0.11
72-83	6.48	7.30	7.56	8.00	3.26	2.12	4.70	3.51	2.16	2.98	1.28
84	21.84	19.75	15.25	18.89	14.86	21.10	6.30	19.18	17.49	17.48	2.59
85	20.43	21.85	28.76	34.78	33.12	38.04	9.56	34.34	58.51	20.29	4.34
86-89	23.05	3.44	18.82	2.48	0.76	1.71	1.63	1.08	3.75	4.56	1.16
90-91	7.08	3.16	2.37	5.65	5.74	3.46	0.37	2.47	0.65	2.33	0.47
92	0.81	0.40	0.53	1.68	0.41	1.46	0.54	0.59	0.11	0.14	0.03
93	0.01	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
94-97	1.55	9.17	1.68	3.49	9.62	2.01	4.31	3.52	1.94	5.14	7.31

Source: Statistics Canada, World Trade Analyzer.

